Spring
2017

The MIT Press

Introducing our New Editor in Physical Sciences, Engineering, and Mathematics

DEAR FRIENDS,

Good publishing is like good conversation: it creates vibrant intellectual communities, ignites debate, and spreads new knowledge. For over fifty years, the MIT Press has been a leading light in academic publishing and the only university press rooted at the intersection of science, technology, art, and design. Welcome to our Spring 2017 list. It has been an incredible first year for me as Director, and I couldn't be more pleased with the selection of titles herein, across the wide but focused range of topics that you have come to know us for.

I especially want to draw your attention to our growing list of "translational" books in the sciences—books that open world-changing research to a broad reading public while honoring the complexity of their subject matter. With this focus, we were delighted to welcome this year our new editor in physical sciences, engineering, and mathematics, Dr. Jermey Matthews. Originally trained as a researcher in chemical engineering, Jermey joined the MIT Press after working for several years as a science writer and the book reviewer at *Physics Today* magazine. It is therefore fitting that our new list features several books on physics, among them Harry Collins's *Gravity's Kiss* and Don Lemons's *Drawing Physics*. The first tells the gripping story of the discovery of gravitational waves; the second offers a visual tutorial in elementary physics, explaining basic concepts with drawings and short texts. We are also delighted to reissue Richard Feynman's seminal 1974 book, *The Character of Physical Law*, with a new foreword by Frank Wilczek. As information explodes and media channels multiply, the award winning MIT Press does much more than reduce the signal-to-noise ratio. The Press gives voice to the most credible and creative minds in order to advance our understanding of the world, its greatest challenges, and one another. In so doing, it opens the academy to a global reading public eager to learn from exceptional scholars, artists, and scientists, such as the authors you see represented on our Spring 2017 list.

Enjoy!
Amy Brand

CONTENTS

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Front cover: Detail from brochure, UNLV Special Collection. From *The Strip* by Stefan Al.

science

Gravity's Kiss
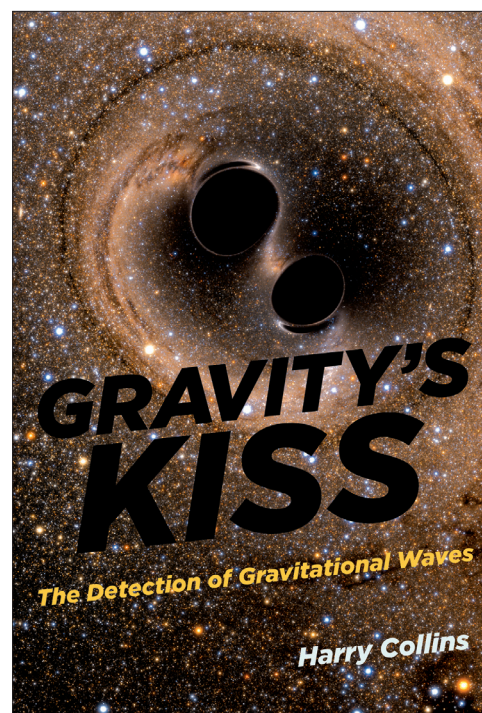
The Detection of Gravitational Waves

Harry Collins

Scientists have been trying to confirm the existence of gravitational waves for fifty years. Then, in September 2015, came a "very interesting event" (as the cautious subject line in a physicist's email read) that proved to be the first detection of gravitational waves. In *Gravity's Kiss*, Harry Collins—who has been watching the science of gravitational wave detection for forty-three of those fifty years and has written three previous books about it—offers a final, fascinating account, written in real time, of the unfolding of one of the most remarkable scientific discoveries ever made.

Predicted by Einstein in his theory of general relativity, gravitational waves carry energy from the collision or explosion of stars. Dying binary stars, for example, rotate faster and faster around each other until they merge, emitting a burst of gravitational waves. It is only with the development of extraordinarily sensitive, highly sophisticated, detectors that physicists can now confirm Einstein's prediction. This is the story that Collins tells.

Collins, a sociologist of science who has been embedded in the gravitational wave community since 1972, traces the detection, the analysis, the confirmation, and the public presentation and reception of the dis-covery—from the first email to the final published paper and the response of professionals and the public. Collins shows that science today is collaborative, far-flung (with the physical location of the participants hardly mattering), and sometimes secretive, but still one of the few institutions that has integrity built into it.

Harry Collins is Distinguished Research Professor of Sociology and Director of the Centre for the Study of Knowledge, Expertise, and Science at Cardiff University. He is the author of *Changing Order*, *Gravity's Shadow*, *Gravity's Ghost*, *Gravity's Ghost and Big Dog*, and other books. He is the coauthor of *Bad Call: Technology's Attack on Referees and Umpires and How to Fix It* (MIT Press).

A fascinating account, written in real time, of the unfolding of a scientific discovery: the first detection of gravitational waves.
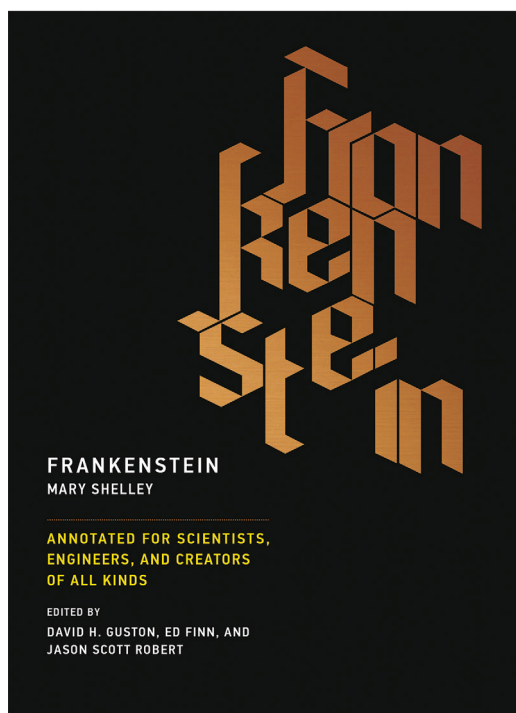
Frankenstein

Annotated for Scientists, Engineers,
and Creators of All Kinds

Mary Shelley

edited by David H. Guston, Ed Finn, and Jason Scott Robert
introduction by Charles E. Robinson

Mary Shelley's *Frankenstein* has endured in the popular imagination for two hundred years. Begun as a ghost story by an intellectually and socially precocious eighteen-year-old author during a cold and rainy summer on the shores of Lake Geneva, the dramatic tale of Victor Frankenstein and his stitched-together creature can been read as the ultimate parable of scientific hubris. Victor, "the modern Prometheus," tried to do what he perhaps should have left to Nature: create life. Although the novel is most often discussed in literary-historical terms—as a seminal example of romanticism or as a groundbreaking early work of science fiction—Mary Shelley was keenly aware of contemporary scientific developments and incorporated them into her story. In our era of synthetic biology, artificial intelligence, robotics, and climate engineering, this edition of *Frankenstein* will resonate forcefully for readers with a background or interest in science and engineering, and anyone intrigued by the fundamental questions of creativity and responsibility. This edition of *Frankenstein* pairs the original 1818 version of the manuscript—meticulously line-edited and amended by Charles E. Robinson, one of the world's preeminent authorities on the text—with annotations and essays by leading scholars exploring the social and ethical aspects of scientific creativity raised by this remarkable story. The result is a unique and accessible edition of one of the most thought-provoking and influential novels ever written.

David H. Guston is Professor and Founding Director of the School for the Future of Innovation in Society at Arizona State University, where he also serves as Codirector of the Consortium for Science, Policy, and Outcomes. **Ed Finn** is Founding Director of the Center for Science and the Imagination at Arizona State University, where he is also Assistant Professor with a joint appointment in the School of Arts, Media, and Engineering and the Department of English. **Jason Scott Robert** is Lincoln Chair in Ethics, Associate Professor in the School of Life Sciences, and Director of the Lincoln Center for Applied Ethics at Arizona State University.

Essays by
Elizabeth Bear, Cory Doctorow, Heather E. Douglas, Josephine Johnston, Kate MacCord, Jane Maienschein, Anne K. Mellor, Alfred Nordmann

FRANKENSTEIN
MARY SHELLEY

ANNOTATED FOR SCIENTISTS, ENGINEERS, AND CREATORS OF ALL KINDS

EDITED BY
DAVID H. GUSTON, ED FINN, AND JASON SCOTT ROBERT

The original 1818 text of Mary Shelley's classic novel, with annotations and essays highlighting its scientific, ethical, and cautionary aspects.

May
6 1/2 x 9, 488 pp.
15 illus.

$19.95T/£14.95 paper
978-0-262-53328-7

There, Margaret, the sun is for ever visible; its broad disk just skirting the horizon, and diffusing a perpetual splendour. There—for with your leave, my sister, I will put some trust in preceding navigators—there snow and frost are banished; and, sailing over a calm sea, we may be wafted to a land surpassing in wonders and in beauty every region hitherto discovered on the habitable globe. Its productions and features may be without example, as the phænomena of the heavenly bodies undoubtedly are in those undiscovered solitudes. What may not be expected in a country of eternal light? I may there discover the wondrous power which attracts the needle;[3] and may regulate a thousand celestial observations, that require only this voyage to render their seeming eccentricities consistent for ever. I shall satiate my ardent curiosity[4] with the sight of a part of the world never before visited,

3. When Victor talks about the "wondrous power [of] the needle," he talks about magnetism and its very first application in a compass. For centuries, people ascribed magical powers to magnetite and lodestones, until William Gilbert (1540–1603) first discovered the basic features of magnetism and the fact that Earth itself is a weak magnet. The links between electricity and magnetism were a major subject of scientific investigation during Mary's lifetime, and a number of expeditions departed for the North and South Poles in the hopes of discovering the secrets of the planet's magnetic field.
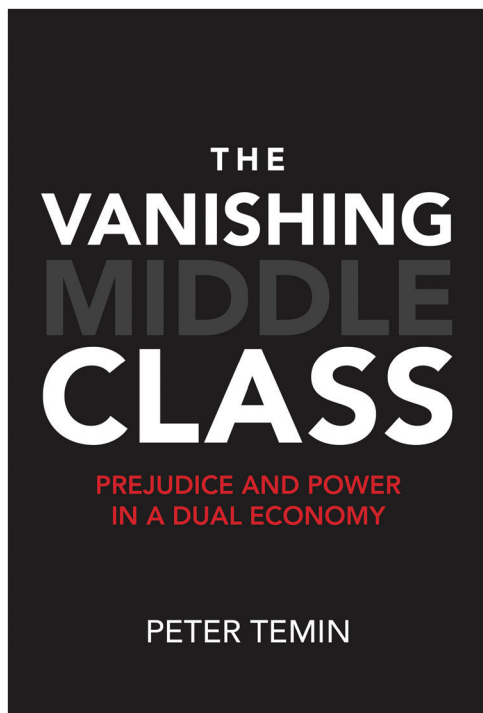
Nicole Herbots.

4. For moderns, this comment may seem self-evident, if a little florid. But such Promethean ambition does not characterize all historical periods or all cultures or all individuals; rather, it reflects the interesting combination of curiosity, ambition, and historical perspective that coevolved with the European exploration of science and a profoundly multicultural world. Mary was writing at the close of the Age of Discovery, during which Europeans rounded the southern tip of Africa, "discovered" and colonized the New World, and circumnavigated the globe. Polar exploration was one remaining feat. It was also the age of romanticism, the paintings of Caspar David Friedrich (1774–1840) and Eugène Delacroix (1798–1863), as well as the music of Ludwig van Beethoven (1770–1827) and Hector Berlioz (1803–1869). This eagerness for exploration is express in "Ulysses," the poem written in 1833 by Alfred, Lord Tennyson (1809–1892):

> I cannot rest from travel: I will drink
> Life to the lees: All times I have enjoy'd
> Greatly, have suffer'd greatly, both with those
> That loved me, and alone, on shore, and when
> Thro' scudding drifts the rainy Hyades
> Vext the dim sea: I am become a name;
> For always roaming with a hungry heart.
>
> I am a part of all that I have met;
> Yet all experience is an arch wherethro'
> Gleams that untravell'd world whose margin fades
> For ever and forever when I move. (Tennyson 2004, XXX)

The irony, at least to modern sensibilities, is that this romantic language befits the pursuit of art, not the rational pursuit of science.

Braden Allenby.

The Vanishing Middle Class

Prejudice and Power in a Dual Economy

Peter Temin

The United States is becoming a nation of rich and poor, with few families in the middle. In this book, MIT economist Peter Temin offers an illuminating way to look at the vanishing middle class. Temin argues that American history and politics, particularly slavery and its aftermath, play an important part in the widening gap between rich and poor. Temin employs a well-known, simple model of a dual economy to examine the dynamics of the rich/poor divide in America, and outlines ways to work toward greater equality so that America will no longer have one economy for the rich and one for the poor.

Many poorer Americans live in conditions resembling those of a developing country—substandard education, dilapidated housing, and few stable employment opportunities. And although almost half of black Americans are poor, most poor people are not black. Conservative white politicians still appeal to the racism of poor white voters to get support for policies that harm low-income people as a whole, casting recipients of social programs as the Other—black, Latino, not like us. Moreover, politicians use mass incarceration as a tool to keep black and Latino Americans from participating fully in society. Money goes to a vast entrenched prison system rather than to education. In the dual justice system, the rich pay fines and the poor go to jail.

Peter Temin is Professor of Economics Emeritus at MIT. He is the coauthor of *Keynes: Useful Economics for the World Economy* (MIT Press) and of *The Leaderless Economy*.

Why the United States has developed an economy divided between rich and poor and how racism helped bring this about.

science

The Digital Mind

How Science Is Redefining Humanity

Arlindo Oliveira

What do computers, cells, and brains have in common? Computers are electronic devices designed by humans; cells are biological entities crafted by evolution; brains are the containers and creators of our minds. But all are, in one way or another, information-processing devices. The power of the human brain is, so far, unequaled by any existing machine or known living being. Over eons of evolution, the brain has enabled us to develop tools and technology to make our lives easier. Our brains have even allowed us to develop computers that are almost as powerful as the human brain itself. In this book, Arlindo Oliveira describes how advances in science and technology could enable us to create digital minds.

Exponential growth is a pattern built deep into the scheme of life, but technological change now promises to outstrip even evolutionary change. Oliveira describes technological and scientific advances that range from the discovery of laws that control the behavior of the electromagnetic fields to the development of computers. He calls natural selection the ultimate algorithm, discusses genetics and the evolution of the central nervous system, and describes the role that computer imaging has played in understanding and modeling the brain. Having considered the behavior of the unique system that creates a mind, he turns to an unavoidable question: Is the human brain the only system that can host a mind? If digital minds come into existence—and, Oliveira says, it is difficult to argue that they will not—what are the social, legal, and ethical implications? Will digital minds be our partners, or our rivals?

Arlindo Oliveira is President of Instituto Superior Técnico (Técnico Lisboa), where he is also Professor in the Computer Science and Engineering Department.

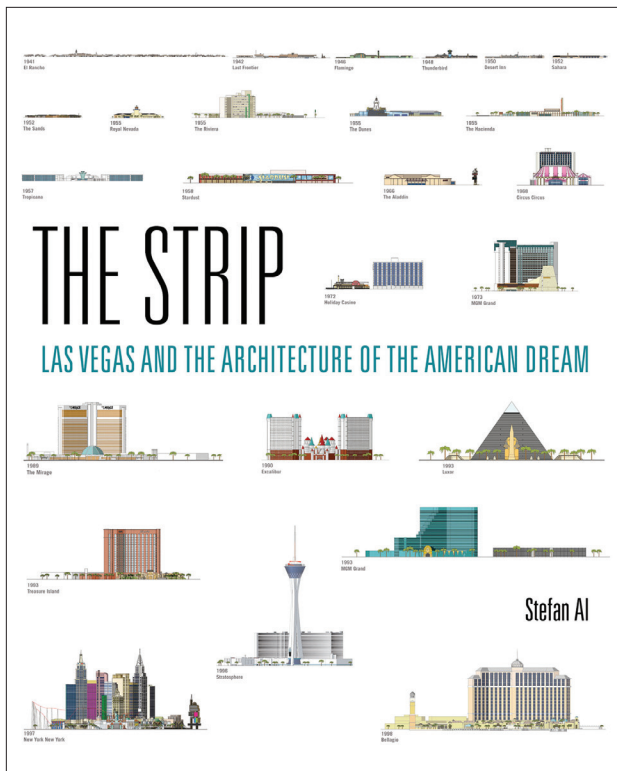**How developments in science and technology may enable the emergence of purely digital minds—intelligent machines equal to or greater in power than the human brain.**

March
6 x 9, 336 pp.
48 illus.

$29.95T/£22.95 cloth
978-0-262-03603-0

The Strip

Las Vegas and the Architecture
of the American Dream

Stefan Al

The Las Vegas Strip has impersonated the Wild West, with saloon doors and wagon wheels; it has decked itself out in midcentury modern sleekness. It has illuminated itself with twenty-story-high neon signs, then junked them. After that came Disney-like theme parks featuring castles and pirates, followed by replicas of Venetian canals, New York skyscrapers, and the Eiffel Tower. (It might be noted that forty-two million people visited Las Vegas in 2015—ten million more than visited the real Paris.) More recently, the Strip decided to get classy, with casinos designed by famous architects and zillion-dollar collections of art. Las Vegas became the "implosion capital of the world" as developers, driven by competition, got rid of the old to make way for the new—offering a non-metaphorical definition of "creative destruction." In *The Strip*, Stefan Al examines the many transformations of the Las Vegas Strip, arguing that they mirror transformations in America itself. *The Strip* is not, as popularly supposed, a display of architectural freaks but representative of architectural trends and a record of social, cultural, and economic change.

Al tells two parallel stories. He describes the feverish competition of Las Vegas developers to build the snazziest, most tourist-grabbing casinos and resorts—with a cast of characters including the mobster Bugsy Siegel, the eccentric billionaire Howard Hughes, and the would-be political kingmaker Sheldon Adelson. And he views the Strip in a larger social context, showing that it has not only reflected trends but also magnified them and sometimes even initiated them. Generously illustrated with stunning color images throughout, *The Strip* traces the many metamorphoses of a city that offers a vivid projection of the American dream.

Stefan Al, a Dutch architect and urban designer, is Associate Professor of Urban Design at the University of Pennsylvania. His books include *Villages in the City* and *Mall City*.

The transformations of the Strip—from the fake Wild West to neon signs twenty stories high to "starchitecture"—and how they mirror America itself.

Tap

Unlocking the Mobile Economy

Anindya Ghose

Let's say you're out of something, or you need something, or you want something. Then, seemingly out of the blue, an ad or an offer pops up on your phone to say that very thing is now available at the next store on your right. Did the store read your mind? No. Rather, it drew on data you had tapped into your phone. In *Tap*, Anindya Ghose welcomes us to the mobile marketing revolution of smartphones, smarter companies, value-seeking consumers, and personalized, curated offers. Drawing on his extensive research in the United States, Europe and Asia, and a variety of real-world examples from different industries around the globe, Ghose investigates what consumers do with their smartphones and how businesses can use knowledge of this data trail to improve their products and services.

Two-way street interaction between consumers and firms, Ghose says, creates a feeling of intimacy and connection that benefits both customers and businesses. Research shows that people are willing to exchange their information for relevant value. But companies should strike a balance; the smartphone should play the role of a personal concierge, not a stalker.

Ghose explains the best way to harness the power of mobile data and deliver value to consumers. He identifies nine forces that drive purchasing decisions—among them saliency, crowdedness, trajectory, and weather—and examines these forces separately and in combination, drawing on consumers' responses in the real world. *Tap* offers an eye-opening illustration of the future of mobile.

Anindya Ghose, a globally recognized authority on the mobile economy, is Professor of Information, Operations, and Management Science at New York University's Leonard N. Stern School of Business, where he codirects the Masters of Business Analytics Capstone program. His opinion pieces and research have been featured on the BBC, CNBC, MSNBC, NPR, NBC, and in *The Economist*, the *New York Times*, and the *Wall Street Journal*.

How the smartphone can become a personal concierge (not a stalker) in the mobile marketing revolution of smarter companies, value-seeking consumers, and curated offers.

May
6 x 9, 232 pp.
11 illus.

$29.95T/£22.95 cloth
978-0-262-03627-6

NINE FORCES THAT DRIVE PURCHASING DECISIONS

Context: What's Going On?

Location: Why Geography Matters

Time: It's On Your Side
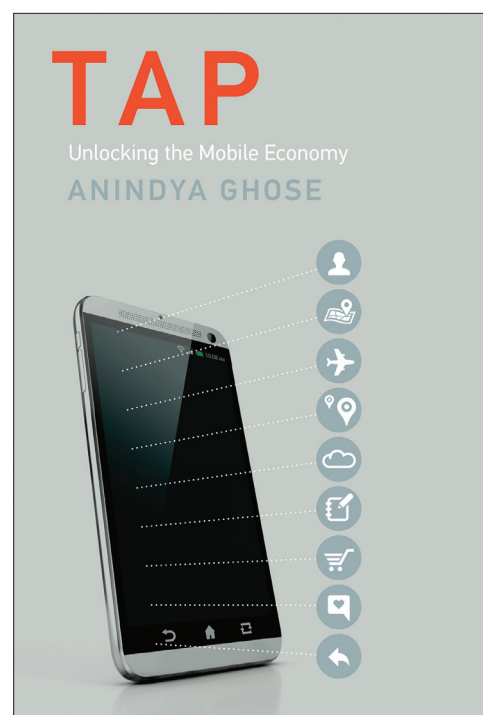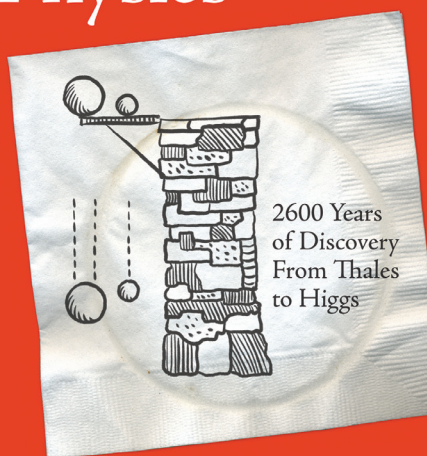
Saliency: Can You See Me Now?

Crowdedness: Why Scarcity of Space Matters

Trajectory: Watch Where You're Walking

Social Dynamics: You Are Who You're With

Weather: Creating the Perfect Storm

Tech Mix: Solving Wanamaker's Riddle

science

Drawing Physics

2600 Years of Discovery from Thales to Higgs

Don S. Lemons

Humans have been trying to understand the physical universe since antiquity. Aristotle had one vision (the realm of the celestial spheres is perfect), and Einstein another (all motion is relativistic). More often than not, these different understandings begin with a simple drawing, a pre-mathematical picture of reality. Such drawings are a humble but effective tool of the physicist's craft, part of the tradition of thinking, teaching, and learning passed down through the centuries. This book uses drawings to help explain fifty-one key ideas of physics accessibly and engagingly. Don Lemons, a professor of physics and author of several physics books, pairs short, elegantly written essays with simple drawings that together convey important concepts from the history of physical science.

Lemons proceeds chronologically, beginning with Thales' discovery of triangulation, the Pythagorean monocord, and Archimedes' explanation of balance. He continues through Leonardo's description of "earth-shine" (the ghostly glow between the horns of a crescent moon), Kepler's laws of planetary motion, and Newton's cradle (suspended steel balls demonstrating by their collisions that for every action there is always an equal and opposite reaction). Reaching the twentieth and twenty-first centuries, Lemons explains the photoelectric effect, the hydrogen atom, general relativity, the global greenhouse effect, Higgs boson, and more. The essays place the science of the drawings in historical context—describing, for example, Galileo's conflict with the Roman Catholic Church over his teaching that the sun is the center of the universe, the link between the discovery of electrical phenomena and the romanticism of William Wordsworth, and the shadow cast by the Great War over Einstein's discovery of relativity.

Readers of *Drawing Physics* with little background in mathematics or physics will say, "Now I see, and now I understand."

Don S. Lemons is Emeritus Professor of Physics at Bethel College in North Newton, Kansas.

Drawings and short essays offer engaging and accessible explanations of key ideas in physics, from triangulation to relativity and beyond.

March
5 3/8 x 8, 264 pp.
81 illus.

$27.95T cloth
978-0-262-03590-3

For sale in North America only.

science

Is the Universe a Hologram? and Other Questions

Conversations with Leading Scientists

Adolfo Plasencia

foreword by Tim O'Reilly

Science today is more a process of collaboration than moments of individual "eurekas." This book recreates that kind of synergy by offering a series of interconnected dialogues with leading scientists who are asked to reflect on key questions and concepts about the physical world, technology, and the mind. These thinkers offer both specific observations and broader comments about the intellectual traditions that inform these questions; doing so, they reveal a rich seam of interacting ideas.

The persistent paradox of our era is that in a world of unprecedented access to information, many of the most important questions remain unsolved. These conversations (conducted by a veteran science writer, Adolfo Plasencia) reflect this, with scientists addressing such issues as intelligence, consciousness, global warming, energy, technology, matter, the possibility of another earth, changing the past, and even the philosophical curveball, "is the universe a hologram?"

The dialogues discuss such fascinating aspects of the physical world as the function of the quantum bit, the primordial cosmology of the universe, and the wisdom of hewn stones. They offer optimistic but reasoned views of technology, considering convergence culture, algorithms, "Beauty ≠ Truth," the hacker ethic, AI, and other topics. And they offer perspectives from a range of disciplines on intelligence, discussing subjects that include the neurophysiology of the brain, affective computing, collaborative innovation, and the wisdom of crowds.

Adolfo Plasencia, a blogger, writer, and columnist on science and technology, hosted the Spanish television program *Tecnópolis* for more than six years. He cofounded the MITUPV Exchange, a joint initiative of MIT and the Polytechnic University of Valencia (UPV).

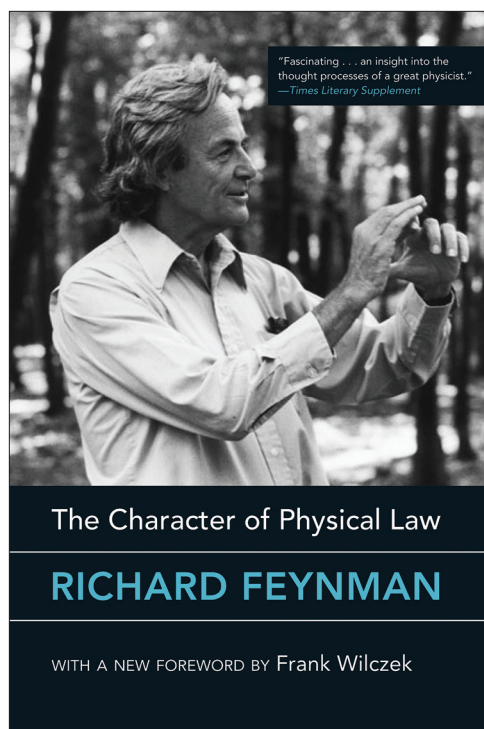**Questions about the physical world, the mind, and technology in conversations that reveal a rich seam of interacting ideas.**

May
6 x 9, 528 pp.
35 illus.

$29.95T/£22.95 cloth
978-0-262-03601-6

CONVERSATIONS WITH

Hal Abelson, Ricardo Baeza-Yates, John Perry Barlow, Javier Benedicto, José Bernabéu, Michail Bletsas, Jose M. Carmena, David Casacuberta, Yung Ho Chang, Ignacio Cirac, Gianluigi Colalucci, Avelino Corma, Bernardo Cuenca Grau, Javier Echeverria Ezponda, José Hernández-Orallo, Hiroshi Ishii, Pablo Jarillo-Herrero, Yung Ho Chang, Henry Jenkins, Anne Margulies, Mario J. Molina, Tim O'Reilly, John Ochsendorf, Paul Osterman, Alvaro Pascual-Leone, Rosalind W. Picard, Howard Rheingold, Alejandro W. Rodriguez-Wong, Israel Ruiz, Sara Seager, Richard Stallman, Antonio Torralba, Bebo White, José María Yturralde

physics

The Character of Physical Law

Richard Feynman
with a new foreword by Frank Wilczek

Richard Feynman was one of the most famous and important physicists of the second half of the twentieth century. Awarded the Nobel Prize for Physics in 1965, celebrated for his spirited and engaging lectures, and briefly a star on the evening news for his presence on the commission investigating the explosion of the space shuttle Challenger, Feynman is best known for his contributions to the field of quantum electrodynamics. *The Character of Physical Law*, drawn from Feynman's famous 1964 series of Messenger Lectures at Cornell, offers an introduction to modern physics—and to Feynman at his witty and enthusiastic best.

In this classic book (originally published in 1967), Feynman offers an overview of selected physical laws and gathers their common features, arguing that the importance of a physical law is not "how clever we are to have found it out" but "how clever nature is to pay attention to it." He discusses such topics as the interaction of mathematics and physics, the principle of conservation, the puzzle of symmetry, and the process of scientific discovery. A foreword by 2004 Physics Nobel laureate Frank Wilczek updates some of Feynman's observations—noting, however, "the need for these particular updates enhances rather than detracts from the book." In *The Character of Physical Law*, Feynman chose to grapple with issues at the forefront of physics that seemed unresolved, important, and approachable.

Richard Feynman (1918–1988), awarded the Nobel Prize in Physics in 1965 for work on quantum electrodynamics, was Professor of Theoretical Physics at CalTech. He was the author of *QED: The Strange Theory of Light and Matter*, *Surely You're Joking, Mr. Feynman! Adventures of a Curious Character*, and other books. **Frank Wilczek**, awarded the Nobel Prize for Physics in 2004, is Herman Feshbach Professor of Physics at MIT.

The Character of Physical Law is a very special book. . . . much more than an exposition of facts and ideas. It is also a character study. The character is a most remarkable one: Feynman himself. His playful, curious spirit animates the text, while his essential honesty and humanity pervade it. It is also a work of literature, full of memorable phrases.
—from the foreword by Frank Wilczek

"Fascinating . . . an insight into the thought processes of a great physicist."
—*Times Literary Supplement*

The Character of Physical Law

RICHARD FEYNMAN

WITH A NEW FOREWORD BY Frank Wilczek

An introduction to modern physics and to Richard Feynman at his witty and enthusiastic best, discussing gravitation, irreversibility, symmetry, and the nature of scientific discovery.

February
5 1/2 x 8 1/4, 184 pp.

$17.95T paper
978-0-262-53341-6

For sale in North America, South America, and Asia only.

global studies | politics

Extraction Empire

Sourcing the Scales, Systems, and States
of Canada's Global Resource Empire

**edited by Pierre Bélanger
and Nina-Marie Lister**

Extraction is the process and practice that defines Canada, at home and abroad. Of the nearly 20,000 mining projects in the world from Africa to Latin America, more than half are Canadian operated. Not only does the mining economy employ close to 400,000 people in Canada, it contributed $57 billion CAD to Canada's GDP in 2014 alone. Globally, more than 75 percent of the world's mining firms are based in Canada. The scale of these statistics naturally extends the logic of Canada's historical legacy as state, nation, and now, as global resource empire. Canada, once a far-flung northern outpost of the British Empire, has become an empire in its own right.

This book examines both the historic and contemporary Canadian culture of extraction, with essays, interviews, archival material, and multimedia visualizations. The essayists and interviewees—who include such prominent figures as Naomi Klein and Michael Ignatieff—come from a range of fields, including geography, art, literature, architecture, science, environment, and business. All consider how Canadian life came to be mediated through mineral extraction. When did this empire emerge? How far does it reach? Who gains, who loses? What alternatives exist? On the 150th anniversary of the creation of Canada by Queen Victoria's Declaration of Confederation, it is time for Canada to re-examine and reimagine its imperial role throughout the world, from coast to coast, from one continent to another.

Pierre Bélanger, a landscape architect and urbanist, is Associate Professor of Landscape Architecture at Harvard University's Graduate School of Design and the coauthor of *Ecologies of Power: Countermapping the Logistical Landscapes and Military Geographies of the U.S. Department of Defense* (MIT Press) and *Landscapes of Infrastructure*. **Nina-Marie Lister**, an ecologist and urban planner, is Graduate Program Director and Associate Professor in the School of Urban and Regional Planning at Ryerson University, Toronto, and the coauthor of *Projective Ecologies*.

Interviews, Archives, and Essays

A Tribe Called Red, Chief Allan Adam, Chris Alton, David Chancellor, Glen S. Coulthard, Alain Denault, Eriel Deranger, Alex Golub, James Hopkins, Genevieve Ennis Hume, Michael Ignatieff, Harold Innis, Naomi Klein, Kari Levitt, Doug Morrison, Rene Muga, Peter Munk, Joan Murray, Alessandra Ponte, Moura Quayle, Olga Semenovych, Anna Tsing, David Tuccaro, Frank Underhill, John van Nostrand, Maurice Strong, Mel Watkins, Sean Willy, Suzanne Zeller

**How Canada became
an empire in its own right
and how Canadian life
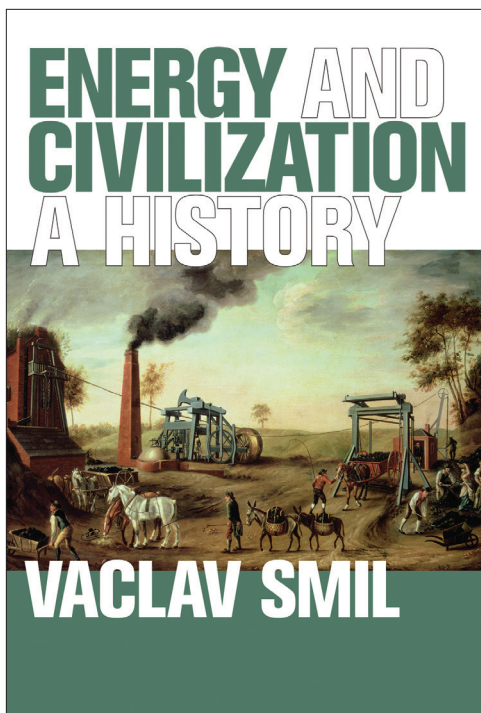came to be mediated through
mineral extraction.**

May
7 11/25 x 9 17/25, 740 pp.
627 illus., color throughout

$49.95T/£37.95 paper
978-0-262-53382-9

Also available

Ecologies of Power
**Countermapping the Logistical
Landscapes and Military Geographies
of the U.S. Department of Defense**
Pierre Bélanger and Alexander Arroyo

2016, 978-0-262-52939-6
$39.95T/£29.95 paper

history | environment

Energy and Civilization

A History

Vaclav Smil

Energy is the only universal currency; it is necessary for getting anything done. The conversion of energy on Earth ranges from terra-forming forces of plate tectonics to cumulative erosive effects of raindrops. Life on Earth depends on the photosynthetic conversion of solar energy into plant biomass. Humans have come to rely on many more energy flows—ranging from fossil fuels to photovoltaic generation of electricity—for their civilized existence. In this monumental history, Vaclav Smil provides a comprehensive account of how energy has shaped society, from pre-agricultural foraging societies through today's fossil fuel–driven civilization.

Humans are the only species that can systematically harness energies outside their bodies, using the power of their intellect and an enormous variety of artifacts—from the simplest tools to internal combustion engines and nuclear reactors. The epochal transition to fossil fuels affected everything: agriculture, industry, transportation, weapons, communication, economics, urbanization, quality of life, politics, and the environment. Smil describes humanity's energy eras in panoramic and interdisciplinary fashion, offering readers a magisterial overview. This book is an extensively updated and expanded version of Smil's *Energy in World History* (1994). Smil has incorporated an enormous amount of new material, reflecting the dramatic developments in energy studies over the last two decades and his own research over that time.

Vaclav Smil is Distinguished Professor Emeritus at the University of Manitoba. He is the author of forty books, including *Power Density: A Key to Understanding Energy Sources and Uses* and *Made in the USA: The Rise and Retreat of American Manufacturing*, both published by the MIT Press. In 2010 he was named by *Foreign Policy* as one of the Top 100 Global Thinkers. In 2013 Bill Gates wrote on his website that "there is no author whose books I look forward to more than Vaclav Smil."

"Smil is one of my favorite authors. The term 'polymath' was made for people like him. . . . I learn more by reading Vaclav Smil than just about anyone else."
—**Bill Gates,** *The Gates Notes*

A comprehensive account of how energy has shaped society throughout history, from pre-agricultural foraging societies through today's fossil fuel–driven civilization.

May
6 x 9, 536 pp.
113 illus.

$39.95T/£29.95 cloth
978-0-262-03577-4

digital culture

What Algorithms Want

Imagination in the Age of Computing

Ed Finn

We depend on—we believe in—algorithms to help us get a ride, choose which book to buy, execute a mathematical proof. It's as if we think of code as a magic spell, an incantation to reveal what we need to know and even what we want. Humans have always believed that certain invocations—the marriage vow, the shaman's curse—do not merely describe the world but make it. Computation casts a cultural shadow that is shaped by this long tradition of magical thinking. In *What Algorithms Want*, Ed Finn considers how the algorithm—in practical terms, "a method for solving a problem"—has its roots not only in mathematical logic but also in cybernetics, philosophy, and magical thinking.

Finn argues that the algorithm deploys concepts from the idealized space of computation in a messy reality, with unpredictable and sometimes fascinating results. Drawing on sources that range from Neal Stephenson's *Snow Crash* to Diderot's *Encyclopédie*, from Adam Smith to the *Star Trek* computer, Finn explores the gap between theoretical ideas and pragmatic instructions. He examines the development of intelligent assistants like Siri, the rise of algorithmic aesthetics at Netflix, Ian Bogost's satiric Facebook game *Cow Clicker*, and the revolutionary economics of Bitcoin. He describes Google's goal of anticipating our questions, Uber's cartoon maps and black box accounting, and what Facebook tells us about programmable value, among other things.

If we want to understand the gap between abstraction and messy reality, Finn argues, we need to build a model of "algorithmic reading" and scholarship that attends to process, spearheading a new experimental humanities.

Ed Finn is Founding Director of the Center for Science and the Imagination at Arizona State University, where he is also Assistant Professor with a joint appointment in the School of Arts, Media, and Engineering and the Department of English.
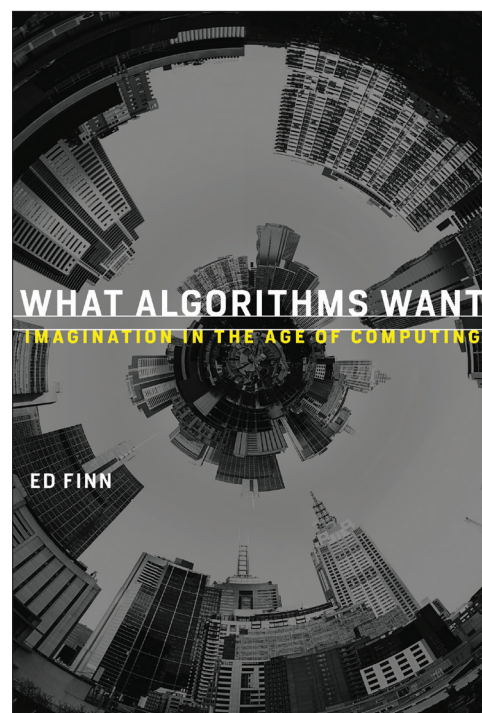
The gap between theoretical ideas and messy reality, as seen in Neal Stephenson, Adam Smith, and *Star Trek*.

March
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17 illus.

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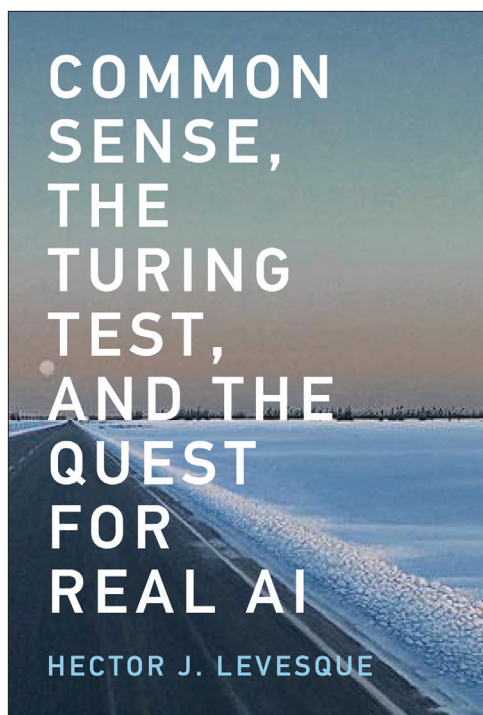
Common Sense, the Turing Test, and the Quest for Real AI

Hector J. Levesque

What can artificial intelligence teach us about the mind? If AI's underlying concept is that thinking is a computational process, then how can computation illuminate thinking? It's a timely question. AI is all the rage, and the buzziest AI buzz surrounds *adaptive machine learning*: computer systems that learn intelligent behavior from massive amounts of data. This is what powers a driverless car, for example. In this book, Hector Levesque shifts the conversation to "good old fashioned artificial intelligence," which is based not on heaps of data but on understanding commonsense intelligence. This kind of artificial intelligence is equipped to handle situations that depart from previous patterns—as we do in real life, when, for example, we encounter a washed-out bridge or when the barista informs us there's no more soy milk.

Levesque considers the role of language in learning. He argues that a computer program that passes the famous Turing Test could be a mindless zombie, and he proposes another way to test for intelligence—the Winograd Schema Test, developed by Levesque and his colleagues. "If our goal is to understand intelligent behavior, we had better understand the difference between making it and faking it," he observes. He identifies a possible mechanism behind common sense and the capacity to call on background knowledge: the ability to represent objects of thought symbolically. As AI migrates more and more into everyday life, we should worry if systems without common sense are making decisions where common sense is needed.

Hector J. Levesque is Professor Emeritus in the Department of Computer Science at the University of Toronto. He is the author of *The Logic of Knowledge Bases* and *Thinking as Computation: A First Course* (both published by the MIT Press).

What artificial intelligence can tell us about the mind and intelligent behavior.

March
5 3/8 x 8, 192 pp.
3 illus.

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literature | history

Walking in Berlin

A Flaneur in the Capital

Franz Hessel

with an essay by Walter Benjamin
translated by Amanda DeMarco

Franz Hessel (1880–1941), a German-born writer, grew up in Berlin, studied in Munich, and then lived in Paris, where he moved in artistic and literary circles. His relationship with the fashion journalist Helen Grund was the inspiration for Henri-Pierre Roche's novel *Jules et Jim* (made into a celebrated 1962 film by François Truffaut). In collaboration with Walter Benjamin, Hessel reinvented the Parisian figure of the flaneur. This 1929 book—here in its first English translation—offers Hessel's version of a flaneur in Berlin.

In *Walking in Berlin*, Hessel captures the rhythm of Weimar-era Berlin, recording the seismic shifts in the German culture of that time. Nearly all of the essays take the form of a walk or outing, focusing on either a theme or part of the city, and many end at a theater, cinema, or club. Hessel deftly weaves the past with the present, walking through the city's history as well as its neighborhoods. Even today, his walks in the city, from the Alexanderplatz to Kreuzberg, can guide would-be flaneurs.

Walking in Berlin is a lost classic, known mainly because of Hessel's connection to Benjamin but now introduced to readers of English. *Walking in Berlin* was a central model for Benjamin's *Arcades Project* and remains a classic of "walking literature" that ranges from Surrealist perambulation to Situationist "psychogeography." This MIT Press edition includes the complete text in translation as well as Benjamin's essay on *Walking in Berlin*, "The Flaneur's Return," written as a review of the book's original edition.

Franz Hessel, Berlin-born son of a Jewish banking family, was a writer and translator, translating works by Casanova, Stendhal, and Balzac, as well as collaborating with Walter Benjamin on a translation of Proust's *À la recherche du temps perdu* into German. Hessel died in early 1941, shortly after his release from an internment camp.
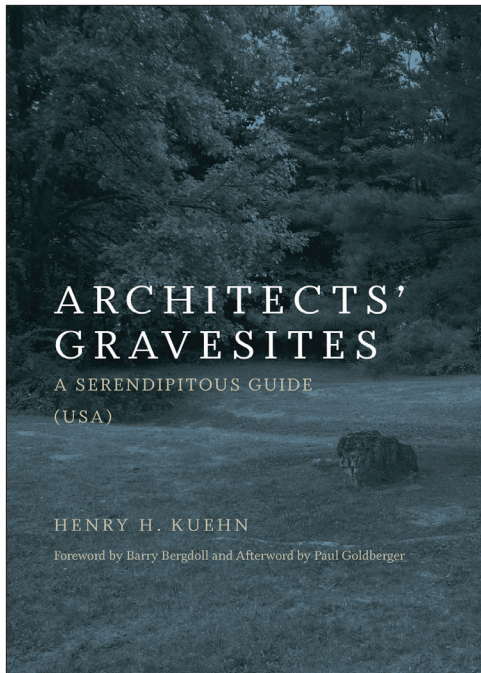
"An absolutely epic book, a walking remembrance."
—Walter Benjamin

The first English translation of a lost classic that reinvents the flaneur in Berlin.

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architecture | history | travel

Architects' Gravesites

A Serendipitous Guide (USA)

Henry H. Kuehn
foreword by Barry Bergdoll
afterword by Paul Goldberger

All working architects leave behind a string of monuments to themselves in the form of buildings they have designed. But what about the final spaces that architects themselves will occupy? Are architects' gravesites more monumental—more architectural—than others? This unique book provides an illustrated guide to more than 200 gravesites of famous architects, almost all of them in the United States. Led by our intrepid author, Henry Kuehn, we find that most graves of architects are not monumental but rather modest, that many architects did not design their final resting places, and that a surprising number had their ashes scattered.

Architects' Gravesites offers an alphabetical listing, from Alvar Aalto and Dankmar Adler (Louis Sullivan's partner) to Frank Lloyd Wright and Minoru Yamasaki (designer of the Word Trade Center's twin towers). Each entry includes a brief note on the architect's career and a color photograph of the site. For example, Ludwig Mies van der Rohe is buried in Chicago under a simple granite slab designed by his architect grandson; Louise Bethune, the first American woman to become a professional architect, is buried under a headstone inscribed only with her husband's name (a plaque honoring her achievements was installed later); Philip Johnson's ashes were spread in his rose garden, with no marker, across the street from his famous Glass House; and the grave of Pierre L'Enfant in Arlington National Cemetary offers a breathtaking view of Washington, D.C., the city he designed.

Architects' Gravesites is an architectural guide like no other, revealing as much about mortality as about monumentality.

Henry H. Kuehn, a leading executive in the medical industry before his retirement, has a longstanding interest and involvement in architecture, working with the Society of Architectural Historians and the Chicago Architecture Foundation.

An illustrated guide to the monumental and non-monumental final resting places of famous architects from Alvar Aalto to Frank Lloyd Wright.

April
6 1/4 x 8 3/4, 120 pp.
213 color photographs

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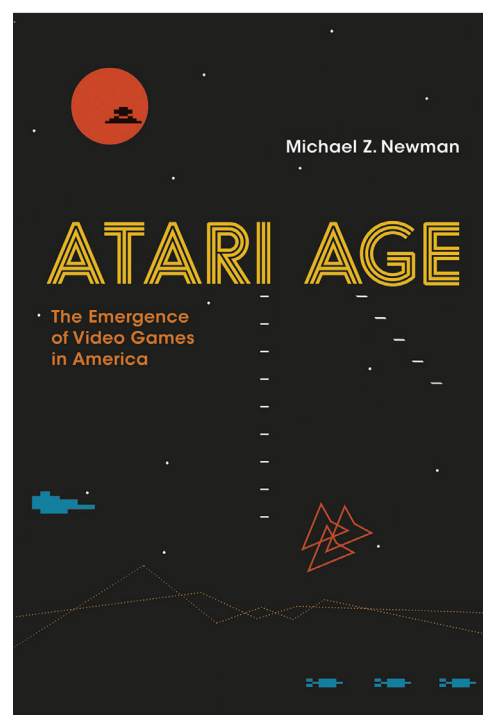*game studies | popular culture*

Atari Age

The Emergence of Video Games in America

Michael Z. Newman

Beginning with the release of the Magnavox Odyssey and *Pong* in 1972, video games, whether played in arcades and taverns or in family rec rooms, became part of popular culture, like television. In fact, video games were sometimes seen as an improvement on television because they spurred participation rather than passivity. These "space-age pinball machines" gave coin-operated games a high-tech and more respectable profile. In *Atari Age*, Michael Newman charts the emergence of video games in America from ball-and-paddle games to hits like *Space Invaders* and *Pac-Man*, describing their relationship to other amusements and technologies and showing how they came to be identified with the middle class, youth, and masculinity.

Newman shows that the "new media" of video games were understood in varied, even contradictory ways. They were family fun (but mainly for boys), better than television (but possibly harmful), and educational (but a waste of computer time). Drawing on a range of sources—including the games and their packaging; coverage in the popular, trade, and fan press; social science research of the time; advertising and store catalogs; and representations in movies and television—Newman describes the series of cultural contradictions through which the identity of the emerging medium worked itself out. Would video games embody middle-class respectability or suffer from the arcade's unsavory reputation? Would they foster family togetherness or allow boys to escape from domesticity? Would they make the new home computer a tool for education or just a glorified toy? Then, as now, many worried about the impact of video games on players, while others celebrated video games for familiarizing kids with technology essential for the information age.

Michael Z. Newman is Associate Professor in the Department of Journalism, Advertising, and Media Studies at the University of Wisconsin–Milwaukee.

The cultural contradictions of early video games: a medium for family fun (but mainly for middle-class boys), an improvement over pinball and television (but possibly harmful).

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40 illus.

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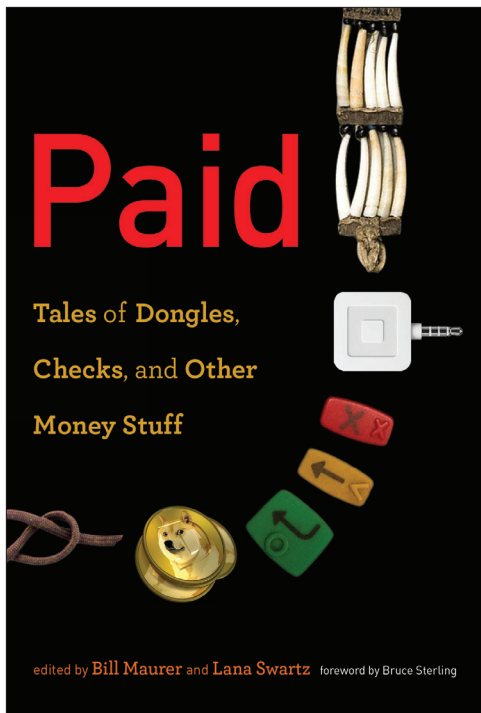
cultural studies | technology

Paid
Tales of Dongles, Checks, and Other Money Stuff

edited by Bill Maurer and Lana Swartz
foreword by Bruce Sterling

Museums are full of the coins, notes, beads, shells, stones, and other objects people have exchanged for millennia. But what about the debris, the things that allow a transaction to take place and are left in its wake? How would a museum go about curating our scrawls on electronic keypads, the receipts wadded in our wallets, that vast information infrastructure that runs the card networks? This book is a catalog for a museum exhibition that never happened. It offers a series of short essays, paired with striking images, on these often ephemeral, invisible, or unnoticed transactional objects—money stuff.

Although we've been told for years that we're heading toward total cashlessness, payment is increasingly dependent on *things*. Consider, for example, the dongle, a clever gizmo that processes card payments by turning information from a card's magnetic stripe into audio information that can be read by a smart phone's headphone jack. Or dogecoin, a meme of a smiling, bewildered dog's interior monologue that fueled a virtual currency similar to Bitcoin. Or go further back and contemplate the paper currency printed with leaves by Benjamin Franklin to foil counterfeiters, or even further back to consider khipu, Incan records kept in knotted string.

Paid's authors describe these payment-adjacent objects so engagingly that for a moment, financial leftovers seem more interesting than finance. *Paid* encourages us to take a moment to look at the nuts and bolts of our everyday transactions by remembering the stuff that surrounds them.

Bill Maurer is Dean of the School of Social Sciences at the University of California, Irvine. He is the author of *How Would You Like to Pay: How Technology Is Changing the Future of Money* and other books. **Lana Swartz** is Assistant Professor of Media Studies at the University of Virginia.

Contributors
Bernardo Bátiz-Lazo, Maria Bezaitis, Finn Brunton, Lynn H. Gamble, David Graeber, Jane I. Guyer, Keith Hart, Sarah Jeong, Alexandra Lippman, Julien Mailland, Scott Mainwaring, Bill Maurer, Taylor C. Nelms, Rachel O'Dwyer, Michael Palm, Lisa Servon, David L. Stearns, Bruce Sterling, Lana Swartz, Whitney Anne Trettien, Gary Urton

Stories about objects left in the wake of transactions, from cryptocurrencies to leaf-imprinted banknotes to records kept with knotted string.

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74 color illus., 11 black & white illus.

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Infrastructures series

current affairs | food

Big Hunger

The Unholy Alliance between Corporate America
and Anti-Hunger Groups

Andrew Fisher

foreword by Saru Jayaraman

Food banks and food pantries have proliferated in response to an economic emergency. The loss of manufacturing jobs combined with the recession of the early 1980s and Reagan administration cutbacks in federal programs led to an explosion in the growth of food charity. This was meant to be a stopgap measure, but the jobs never came back, and the "emergency food system" became an industry. In *Big Hunger*, Andrew Fisher takes a critical look at the business of hunger and offers a new vision for the anti-hunger movement.

From one perspective, anti-hunger leaders have been extraordinarily effective. Food charity is embedded in American civil society, and federal food programs have remained intact while other anti-poverty programs have been eliminated or slashed. But anti-hunger advocates are missing an essential element of the problem: economic inequality driven by low wages. Reliant on corporate donations of food and money, anti-hunger organizations have failed to hold business accountable for offshoring jobs, cutting benefits, exploiting workers and rural communities, and resisting wage increases. They have become part of a "hunger industrial complex" that seems as self-perpetuating as the more famous military-industrial complex.

Fisher lays out a vision that encompasses a broader definition of hunger characterized by a focus on public health, economic justice, and economic democracy. He points to the work of numerous grassroots organizations that are leading the way in these fields as models for the rest of the anti-hunger sector. It is only through approaches like these that we can hope to end hunger, not just manage it.

Andrew Fisher has worked in the anti-hunger field for twenty-five years, as the executive director of national and local food groups, and as a researcher, organizer, policy advocate, and coalition builder. He has led successful efforts to gain passage of multiple pieces of federal food and nutrition legislation.
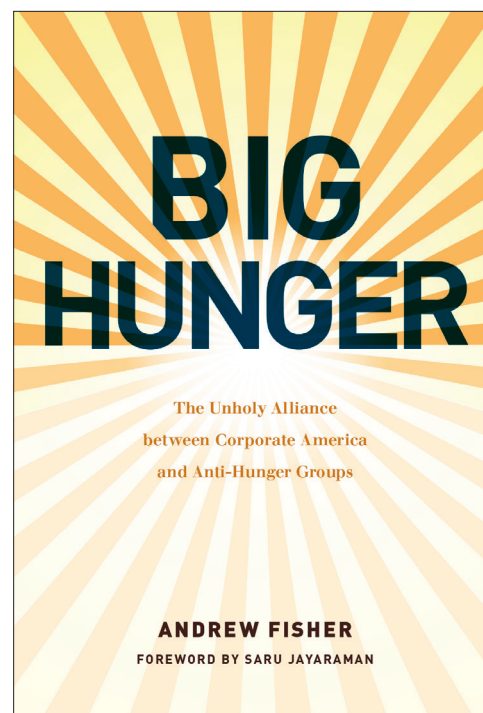
How to focus anti-hunger efforts not on charity but on the root causes of food insecurity, improving public health, and reducing income inequality.

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6 x 9, 328 pp.

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Food, Health, and the Environment series

Knowledge for Sale

The Neoliberal Takeover of Higher Education

Lawrence Busch

A new philosophy of higher education has taken hold in institutions around the world. Its supporters disavow the pursuit of knowledge for its own sake and argue that the only knowledge worth pursuing is that with more or less immediate market value. Every other kind of learning is downgraded, its budget cut. In *Knowledge for Sale*, Lawrence Busch challenges this market-driven approach.

The rationale for the current thinking, Busch explains, comes from neoliberal economics, which calls for reorganizing society around the needs of the market. The market-influenced changes to higher education include shifting the cost of education from the state to the individual, turning education from a public good into a private good subject to consumer demand; redefining higher education as a search for the highest-paying job; and turning scholarly research into a competition based on metrics including number of citations and value of grants. Students, administrators, and scholars have begun to think of themselves as economic actors rather than seekers of knowledge.

Arguing for active resistance to this takeover, Busch urges us to burst the neoliberal bubble, to imagine a future not dictated by the market, a future in which there is a more educated citizenry and in which the old dichotomies—market and state, nature and culture, and equality and liberty—break down. In this future, universities value learning and not training, scholarship grapples with society's most pressing problems rather than quick fixes for corporate interests, and democracy is enriched by its educated and engaged citizens.

Lawrence Busch is University Distinguished Professor of Sociology at Michigan State University and the author of *Standards: Recipes for Reality* (MIT Press).

How free-market fundamentalists have shifted the focus of higher education to competition, metrics, consumer demand, and return on investment, and why we should change this.

digital culture

Hamlet on the Holodeck

The Future of Narrative in Cyberspace

UPDATED EDITION

Janet H. Murray

"I want to say to all the hacker-bards from every field—gamers, researchers, journalists, artists, programmers, scriptwriters, creators of authoring systems . . . please know that I wrote this book for you."
—*Hamlet on the Holodeck*, from the author's introduction to the updated edition

Janet Murray's *Hamlet on the Holodeck* was instantly influential and controversial when it was first published in 1997. Ahead of its time, it accurately predicted the rise of new genres of storytelling from the convergence of traditional media forms and computing. Taking the long view of artistic innovation over decades and even centuries, it remains forward-looking in its description of the development of new artistic traditions of practice, the growth of participatory audiences, and the realization of still-emerging technologies as consumer products. This updated edition of a book the *New Yorker* calls a "cult classic" offers a new introduction by Murray and chapter-by-chapter commentary relating Murray's predictions and enduring design insights to the most significant storytelling innovations of the past twenty years, from long-form television to artificial intelligence to virtual reality.

Murray identifies the powerful new set of expressive affordances that computing offers for the ancient human activity of storytelling and considers what would be necessary for interactive narrative to become a mature and compelling art form. Her argument met with some resistance from print loyalists and postmodern hypertext enthusiasts, and it provoked a foundational debate in the emerging field of game studies on the relationship between narrative and video games. But since *Hamlet on the Holodeck*'s publication, a practice that was largely speculative has been validated by academia, artistic practice, and the marketplace. In this substantially updated edition, Murray provides fresh examples of expressive digital storytelling and identifies new directions for narrative innovation.

Janet H. Murray is Ivan Allen College Dean's Professor in the School of Literature, Communication, and Culture at Georgia Institute of Technology. She is the author of *Inventing the Medium: Principles of Interaction Design as a Cultural Practice* (MIT Press).
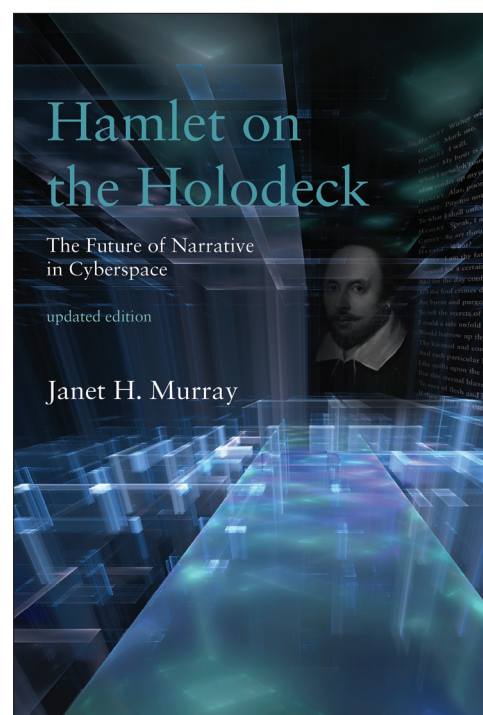
An updated edition of the classic book on digital storytelling, with a new introduction and expansive chapter commentaries.

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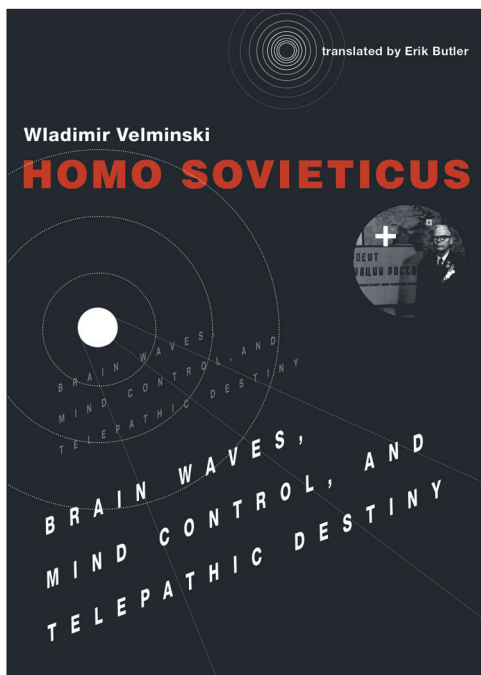
Homo Sovieticus

Brain Waves, Mind Control, and Telepathic Destiny

Wladimir Velminski

translated by Erik Butler

In October 1989, as the Cold War was ending and the Berlin Wall about to crumble, television viewers in the Soviet Union tuned in to the first of a series of unusual broadcasts. "Relax, let your thoughts wander free . . ." intoned the host, the physician and clinical psychotherapist Anatoly Mikhailovich Kashpirovsky. Moscow's Channel One was attempting mass hypnosis over television, a therapeutic session aimed at reassuring citizens panicked over the ongoing political upheaval—and aimed at taking control of their responses to it. Incredibly enough, this last-ditch effort to rally the citizenry was the culmination of decades of official telepathic research, cybernetic simulations, and coded messages undertaken to reinforce ideological conformity. In *Homo Sovieticus*, the art and media scholar Wladimir Velminski explores these scientific and pseudoscientific efforts at mind control.

In a fascinating series of anecdotes, Velminski describes such phenomena as the conflation of mental energy and electromagnetism; the investigation of aura fields through the "Aurathron"; a laboratory that practiced mind control methods on dogs; and attempts to calibrate the thought processes and physical movements of laborers. "Scientific" diagrams from the period accompany the text. In all of the experimental methods for implanting thoughts into a brain, Velminski finds political and metaphorical contaminations. These apparently technological experiments in telepathy and telekinesis were deployed for purely political purposes. The history described in *Homo Sovieticus* offers bizarre, intriguing insights into the uses and potential abuses of our engagement with technology.

Wladimir Velminski is a Head of the Project History and Theory of Media Regimes in Eastern Europe in the Department of Media Studies at the Bauhaus University Weimar. Previously, Velminski worked at Humboldt-Universität zu Berlin, at the Universität Zürich, and at ETH Zürich.

How Soviet scientists and pseudoscientists pursued telepathic research, cybernetic simulations, and mass hypnotism over television to control the minds of citizens.

information science

Information and Society

Michael Buckland

We live in an information society, or so we are often told. But what does that mean? This volume in the MIT Press Essential Knowledge series offers a concise, informal account of the ways in which information and society are related and of our ever-increasing dependence on a complex multiplicity of messages, records, documents, and data. Using information in its everyday, nonspecialized sense, Michael Buckland explores the influence of information on what we know, the role of communication and recorded information in our daily lives, and the difficulty (or ease) of finding information. He shows that all this involves human perception, social behavior, changing technologies, and issues of trust.

Buckland argues that every society is an "information society"; a "non-information society" would be a contradiction in terms. But the shift from oral and gestural communication to documents, and the wider use of documents facilitated by new technologies, have made our society particularly information intensive. Buckland describes the rising flood of data, documents, and records, outlines the dramatic long-term growth of documents, and traces the rise of techniques to cope with them. He examines the physical manifestation of information as documents, the emergence of data sets, and how documents and data are discovered and used. He explores what individuals and societies do with information; offers a basic summary of how collected documents are arranged and described; considers the nature of naming; explains the uses of metadata; and evaluates selection methods, considering relevance, recall, and precision.

Michael Buckland is Emeritus Professor in the School of Information at the University of California, Berkeley, and Codirector of the Electronic Cultural Atlas Initiative there.
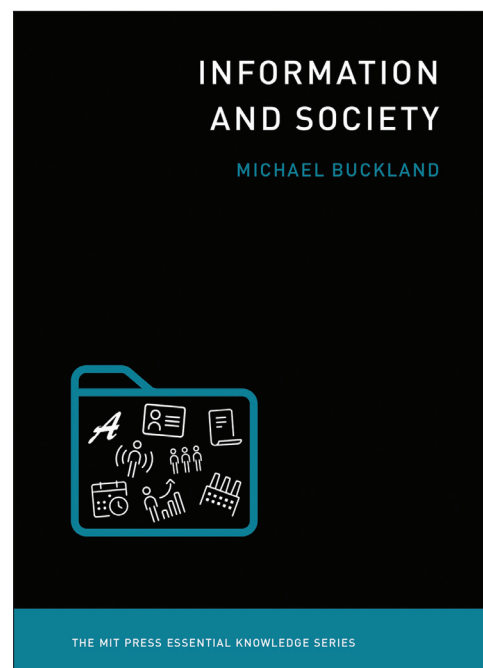
A short, informal account of our ever-increasing dependence on a complex multiplicity of messages, records, documents, and data.

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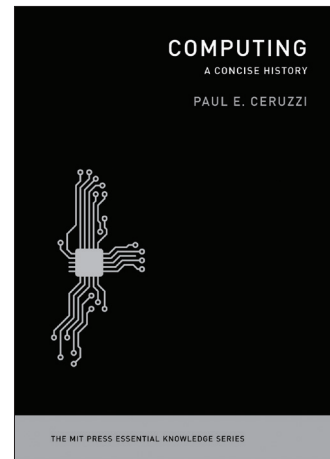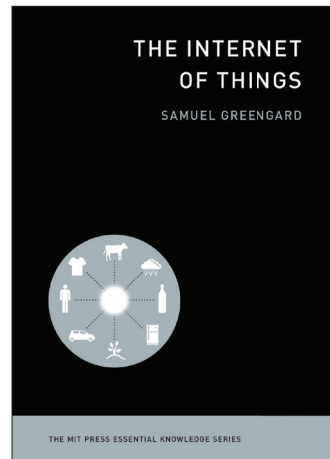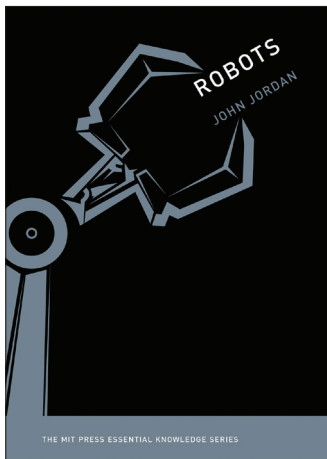
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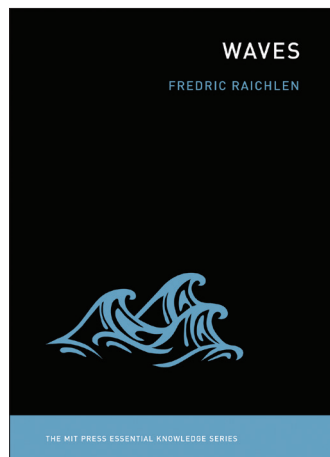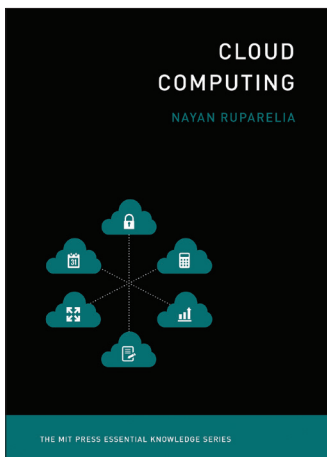Limor Shifman
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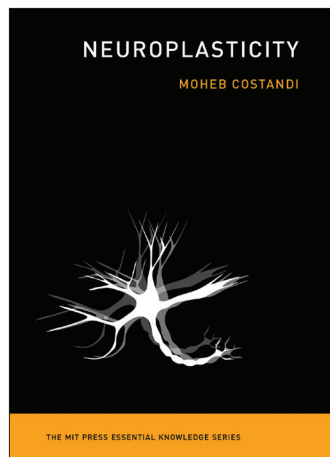
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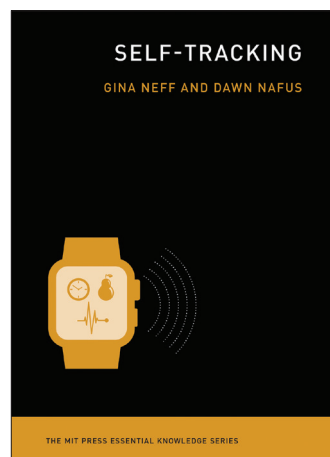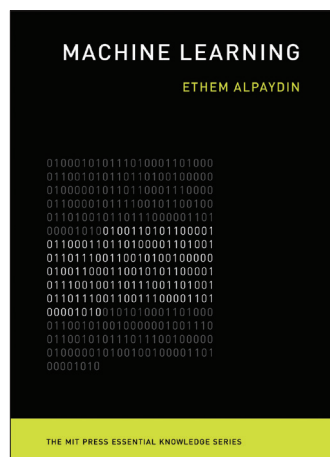
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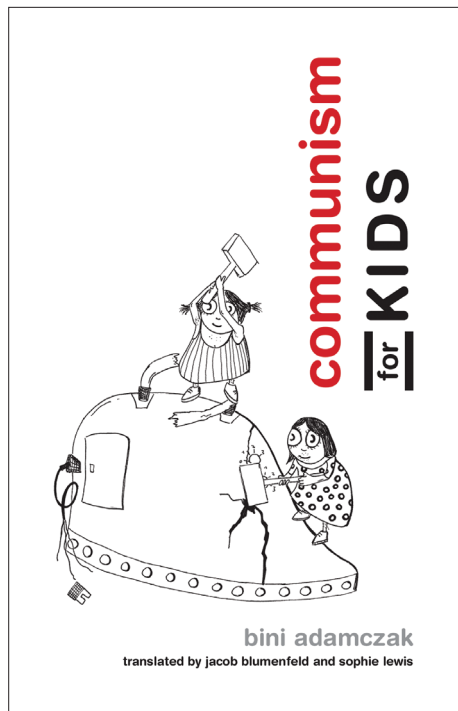Peter Suber
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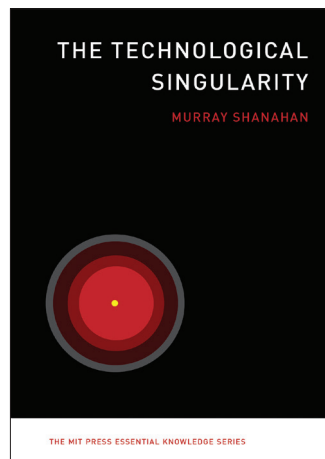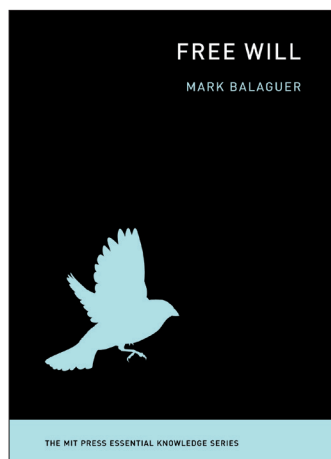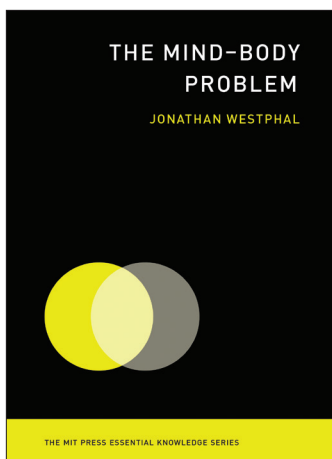
The Technological Singularity
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politics

Communism for Kids

Bini Adamczak
translated by Jacob Blumenfeld and Sophie Lewis

Every morning, before it's even time to go to school, people get up to go to the factory or office. Many only go in the afternoon and many more only begin at night; some are even allowed, nowadays, to decide for themselves when they go to work. Others work at home, clearing the breakfast table and ironing clothes. But this doesn't matter, since in any case, they all have to work. As soon as people reach the gate of a factory, or the doorway to an office, a clerk greets them and asks: "Do you want to work for our factory or our office?" And what can the people say? Most likely, they're not interested in working and would much rather have stayed in bed a bit longer or met up with friends for breakfast. But they better keep that to themselves, because they know that they can only afford breakfast if they have a job.
—from *Communism for Kids*, Chapter 4, "What Is Work?"

Once upon a time, people yearned to be free of the misery of capitalism. How could their dreams come true? This little book proposes a different kind of communism, one that is true to its ideals and free from authoritarianism. Offering relief for many who have been numbed by Marxist exegesis and given headaches by the earnest pompousness of socialist politics, it presents political theory in the simple terms of a children's story, accompanied by illustrations of lovable little revolutionaries experiencing their political awakening.

It all unfolds like a story, with jealous princesses, fancy swords, displaced peasants, mean bosses, and tired workers–not to mention a Ouija board, a talking chair, and a big pot called "the state." Before they know it, readers are learning about the economic history of feudalism, class struggles in capitalism, different ideas of communism, and more. Finally, competition between two factories leads to a crisis that the workers attempt to solve in six different ways (most of them borrowed from historic models of communist or socialist change). Each attempt fails, because true communism is not so easy after all. But it's also not that hard. At last, the people take everything into their own hands and decide for themselves how to continue. Happy ending? Only the future will tell. With an epilogue that goes deeper into the theoretical issues behind the story, this book is perfect for all ages and all who desire a better world.

Bini Adamczak, a Berlin-based social theorist and artist, writes on political theory, queer politics, and the past future of revolutions.

Communism, capitalism, work, crisis, and the market, described in simple storybook terms and illustrated by drawings of little cartoon revolutionaries.

March
4 1/2 x 7, 112 pp.
24 illus.

$12.95T/£9.50 paper
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political theory

On Hitler's *Mein Kampf*
The Poetics of National Socialism

Albrecht Koschorke
translated by Erik Butler

Hitler's *Mein Kampf* was banned in Germany for almost seventy years, kept out of print by the accidental copyright holder, the Bavarian Ministry of Finance. In December 2015, the first German edition of *Mein Kampf* since 1946 appeared, with Hitler's text surrounded by scholarly commentary apparently meant to act as a kind of *cordon sanitaire*. And yet the dominant critical assessment (in Germany and elsewhere) of the most dangerous book of the twentieth century is that it is boring, unoriginal, jargon-laden, badly written, embarrassingly rabid, and altogether ludicrous. (Even in the 1920s, the consensus was that the author of such a book had no future in politics.) How did the unreadable *Mein Kampf* manage to become so historically significant? In this book, German literary scholar Albrecht Koschorke attempts to explain the power of Hitler's book by examining its narrative strategies.

Koschorke argues that *Mein Kampf* cannot be reduced to an ideological message directed to all readers. By examining the text and the signals that it sends, he shows that we can discover for whom Hitler strikes his propagandistic poses and who is excluded. Koschorke parses the borrowings from the right-wing press, the autobiographical details concocted to make political points, the attack on the Social Democrats that bleeds into an anti-Semitic conspiracy theory, the contempt for science, and the conscious attempt to trigger outrage.

A close reading of National Socialism's definitive text, Koschorke concludes, can shed light on the dynamics of fanaticism. This lesson of *Mein Kampf* still needs to be learned.

Albrecht Koschorke is Professor of German Literature and Literary Studies at the University of Konstanz. He was a Vesting Professor at the University of Chicago from 2004 to 2009.

> **Untimely Meditations offers a series of short, provocative essays from a new generation of German philosophers and theorists—missives from a vibrant, untethered, and international post-Wall "Berlin School."**
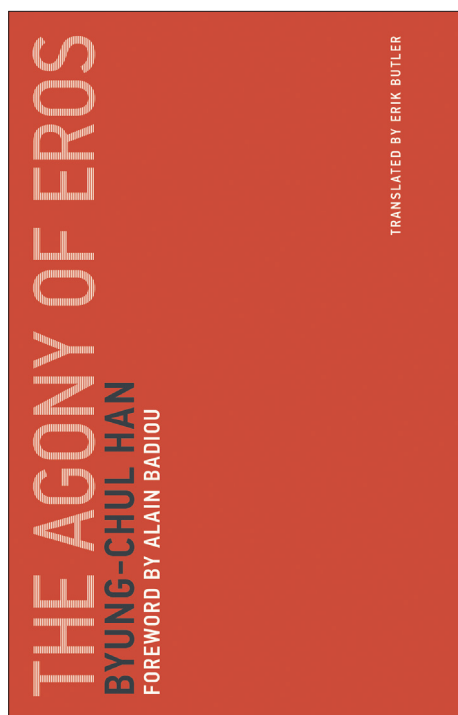
An examination of the narrative strategies employed in the most dangerous book of the twentieth century and a reflection on totalitarian literature.

March
4 1/2 x 7, 88 pp.

$13.95T/£9.50 paper
978-0-262-53333-1

Untimely Meditations series

philosophy

The Agony of Eros

Byung-Chul Han

foreword by Alan Badiou
translated by Erik Butler

This remarkable essay, an intellectual experience of the first order, affords one of the best ways to gain full awareness of and join in one of the most pressing struggles of the day: the defense, that is to say—as Rimbaud desired it—the "reinvention" of love.
—from the foreword by Alain Badiou

Byung-Chul Han is one of the most widely read philosophers in Europe today, a member of the new generation of German thinkers that includes Markus Gabriel and Armen Avanessian. In *The Agony of Eros*, a bestseller in Germany, Han considers the threat to love and desire in today's society. For Han, love requires the courage to accept self-negation for the sake of discovering the Other. In a world of fetishized individualism and technologically mediated social interaction, it is the Other that is eradicated, not the self. In today's increasingly narcissistic society, we have come to look for love and desire within the "inferno of the same."

Han offers a survey of the threats to Eros, drawing on a wide range of sources—Lars von Trier's film *Melancholia*, Wagner's *Tristan und Isolde*, *Fifty Shades of Grey*, Michel Foucault (providing a scathing critique of Foucault's valorization of power), Martin Buber, Hegel, Baudrillard, Flaubert, Barthes, Plato, and others. Han considers the "pornographication" of society, and shows how pornography profanes eros; addresses capitalism's leveling of essential differences; and discusses the politics of eros in today's "burnout society." To be dead to love, Han argues, is to be dead to thought itself.

Concise in its expression but unsparing in its insight, *The Agony of Eros* is an important and provocative entry in Han's ongoing analysis of contemporary society.

Byung-Chul Han, born in Seoul, is Professor of Philosophy and Cultural Studies at the Universität der Künste Berlin (UdK) and the author of more than twenty books.

An argument that love requires the courage to accept self-negation for the sake of discovering the Other.

March
4 1/2 x 7, 80 pp.

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philosophy

In the Swarm

Digital Prospects

Byung-Chul Han
translated by Erik Butler

The shitstorm represents an authentic phenomenon of digital communication.
—from *In the Swarm*

Digital communication and social media have taken over our lives. In this contrarian reflection on digitized life, Byung-Chul Han counters the cheerleaders for Twitter revolutions and Facebook activism by arguing that digital communication is in fact responsible for the disintegration of community and public space and is slowly eroding any possibility for real political action and meaningful political discourse. In the predigital, analog era, by the time an angry letter to the editor had been composed, mailed, and received, the immediate agitation had passed. Today, digital communication enables instantaneous, impulsive reaction, meant to express and stir up outrage on the spot. "The shitstorm," writes Han, "represents an authentic phenomenon of digital communication."

Meanwhile, the public, the senders and receivers of these communications, have become a digital swarm—not a mass, or a crowd, or Negri and Hardt's antiquated notion of a "multitude," but a set of isolated individuals incapable of forming a "we," incapable of calling dominant power relations into question, incapable of formulating a future because of an obsession with the present. The digital swarm is a fragmented entity that can focus on individual persons only in order to make them an object of scandal.

Han, one of the most widely read philosophers in Europe today, describes a society in which information has overrun thought, in which the same algorithms are employed by Facebook, the stock market, and the intelligence services. Democracy is under threat because digital communication has made freedom and control indistinguishable. Big Brother has been succeeded by Big Data.

Byung-Chul Han, born in Seoul, is Professor of Philosophy and Cultural Studies at the Universität der Künste Berlin (UdK) and the author of more than twenty books.

A prominent German thinker argues that—contrary to "Twitter Revolution" cheerleading—digital communication is destroying political discourse and political action.

philosophy

The Terror of Evidence

Marcus Steinweg

foreword by Thomas Hirschhorn
translated by Amanda DeMarco

Marcus Steinweg's capacity to implicate the other is beautiful, bright, precise, and logical, grounded in everyday questions, which to him are always big questions.
—from the foreword by Thomas Hirschhorn

The houses of philosophy need not be palaces.
—Marcus Steinweg, "House," *The Terror of Evidence*

This is the first book by the prolific German philosopher Marcus Steinweg to be available in English translation. *The Terror of Evidence* offers meditations, maxims, aphorisms, notes, and comments—191 texts ranging in length from three words to three pages—the deceptive simplicity of which challenges the reader to think. "Thinking means getting lost again and again," Steinweg observes. Reality is the ever-broken promise of consistency; "the terror of evidence" arises from the inconsistency before our eyes. Thinking is a means of coping with that inconsistency.

Steinweg is known for his collaborations with Thomas Hirschhorn and the lectures and texts he has provided for many of Hirschhorn's projects. This translation of *The Terror of Evidence* includes a foreword by Hirschhorn written especially for the MIT Press edition.

The subjects of these short texts vary widely. ("The table of contents is in itself excessive and ambitious," writes Hirschhorn.) They include pathos, passivity, genius, resentment, love, horror, catastrophe, and racism. And club sandwiches (specifically, Foucault's love for this American specialty), blow jobs, and dance. Also: "Two Kinds of Obscurantism," "Putting Words in Spinoza's Mouth," "Note on Rorty," and "Doubting Doubt." *The Terror of Evidence* can be considered a guidebook to thinking: the daily journey of exploration, the incessant questioning of reality that Steinweg sees as the task of philosophy.

Marcus Steinweg, an author and philosopher based in Berlin, teaches at the Universität der Künste Berlin (UdK) and is the coeditor of the journal *Inaesthetics*. Much of his work treats the intersections of philosophy and art.

"Steinweg: what a fitting name! It means both "stone road," which is to say hard and resistant (*locus lapidibus stratus*); or a road strewn with individual stones (*strada lastricata*), discontinuous reference points. The trail of breadcrumbs which allow him to find his way back. You can start from anywhere and you'll always get to where you need to be."
—Jean-Luc Nancy

Meditations, maxims, aphorisms, notes, and comments address topics that range from pathos and genius to careerism and club sandwiches.

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Untimely Meditations series

*contemporary art | Asian studies*

Thai Art
Currencies of the Contemporary
David Teh

Since the 1990s, Thai contemporary art has achieved international recognition, circulating globally by way of biennials, museums, and commercial galleries. Many Thai artists have shed identification with their nation; but "Thainess" remains an interpretive crutch for understanding their work. In this book, the curator and critic David Teh examines the tension between the global and the local in Thai contemporary art. Writing the first serious study of Thai art since 1992 (and noting that art history and criticism have lagged behind the market in recognizing it), he describes the competing claims to contemporaneity, as staked in Thailand and on behalf of Thai art elsewhere. He shows how the values of the global art world are exchanged with local ones, how they do and don't correspond, and how these discrepancies have been exploited.

How can we make sense of globally circulating art without forgoing the interpretive resources of the local, national, or regional context? Teh examines the work of artists who straddle the local and the global, becoming willing agents of assimilation yet resisting homogenization. He describes the transition from an artistic subjectivity couched in terms of national community to a more qualified, postnational one, against the backdrop of the singular but waning sovereignty of the Thai monarchy and sustained political and economic turmoil. Among the national currencies of Thai art that Teh identifies are an agricultural symbology, a Siamese poetics of distance and itinerancy, and Hindu-Buddhist conceptions of charismatic power. Each of these currencies has been converted to a legal tender in global art—signifying sustainability, utopia, the conceptual, and the relational—but what is lost, and what may be gained, in such exchanges?

David Teh, Assistant Professor in the Department of English Language and Literature at the National University of Singapore, is an independent curator and critic who has organized exhibits in Europe, Australia, and across Southeast Asia.
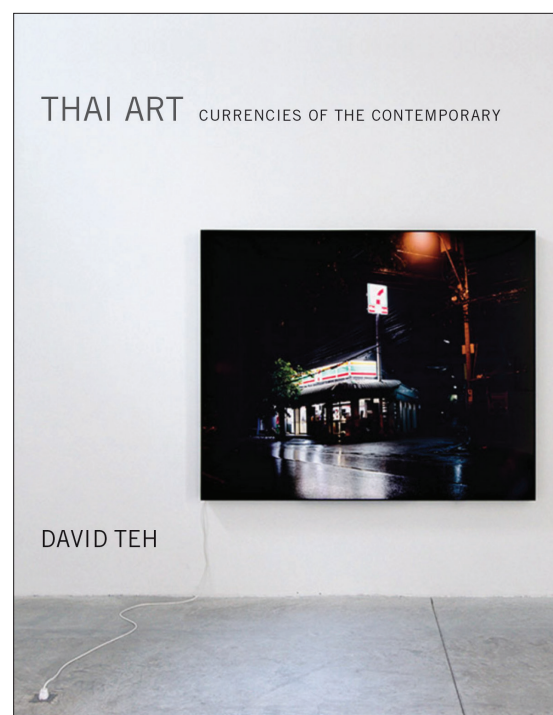
The interplay of the local and the global in contemporary Thai art, as artists strive for international recognition and a new meaning of the national.

March
7 x 9, 296 pp.
24 color illus., 25 black & white illus.

$32.95T/£24.95 cloth
978-0-262-03595-8

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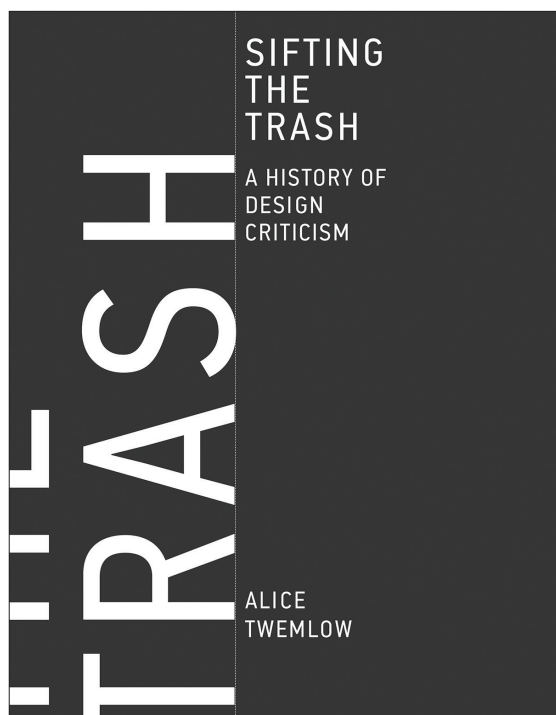
design | art criticism

Sifting the Trash
A History of Design Criticism
Alice Twemlow

Product design criticism operates at the very brink of the landfill site, salvaging some products with praise but consigning others to its depths through condemnation or indifference. When a designed product's usefulness is past, the public happily discards it to make room for the next new thing. Criticism rarely deals with how a product might be used, or not used, over time; it is more likely to play the enabler, encouraging our addiction to consumption. With *Sifting the Trash*, Alice Twemlow offers an especially timely reexamination of the history of product design criticism through the metaphors and actualities of the product as imminent junk and the consumer as junkie.

Twemlow explores five key moments over the past sixty years of product design criticism. From the mid-1950s through the 1960s, for example, critics including Reyner Banham, Deborah Allen, and Richard Hamilton wrote about the ways people actually used design, and invented a new kind of criticism. At the 1970 International Design Conference in Aspen, environmental activists protested the design establishment's lack of political engagement. In the 1980s, left-leaning cultural critics introduced ideology to British design criticism. In the 1990s, dueling London exhibits offered alternative views of contemporary design. And in the early 2000s, professional critics were challenged by energetic design bloggers. Through the years, Twemlow shows, critics either sifted the trash and assigned value or attempted to detect, diagnose, and treat the sickness of a consumer society.

Alice Twemlow, a writer, lecturer, and curator, is Co-head of the Masters Program in Design Curating and Writing at Design Academy Eindhoven, the Netherlands. From 2008 to 2016, she was Founding Chair of the Masters Program in Design Research, Writing, and Criticism at the School of Visual Arts in New York.

How product design criticism has rescued some products from the trash and consigned others to the landfill.

April
7 x 9, 320 pp.
42 color illus., 69 black & white illus.

$34.95T/£24.95 cloth
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art

Beyond Objecthood
The Exhibition as a Critical Form since 1968

James Voorhies

In 1968, Robert Smithson reacted to Michael Fried's influential essay "Art and Objecthood" with a series of works called non-sites. While Fried described the spectator's connection with a work of art as a momentary visual engagement, Smithson's non-sites asked spectators to do something more: to take time looking, walking, seeing, reading, and thinking about the combination of objects, images, and texts installed in a gallery. In *Beyond Objecthood*, James Voorhies traces a genealogy of spectatorship through the rise of the exhibition as a critical form—and artistic medium. Artists like Smithson, Group Material, and Michael Asher sought to reconfigure and expand the exhibition and the museum into something more active, open, and democratic, by inviting spectators into new and unexpected encounters with works of art and institutions. This practice was sharply critical of the ingrained characteristics long associated with art institutions and conventional exhibition-making; and yet, Voorhies finds, over time the critique has been diluted by efforts of the very institutions that now gravitate to the "participatory."

    Beyond Objecthood focuses on innovative figures, artworks, and institutions that pioneered the exhibition as a critical form, tracing its evolution through the activities of curator Harald Szeemann, relational art, and New Institutionalism. Voorhies examines recent artistic and curatorial work by Liam Gillick, Thomas Hirschhorn, Carsten Höller, Maria Lind, Apolonija Šušteršič, and others, at such institutions as Documenta, e-flux, Manifesta, and Office for Contemporary Art Norway, and he considers the continued potential of the exhibition as a critical form in a time when the differences between art and entertainment increasingly blur.

James Voorhies is Dean of Fine Arts at California College of the Arts, where he is Associate Professor of Contemporary Art.
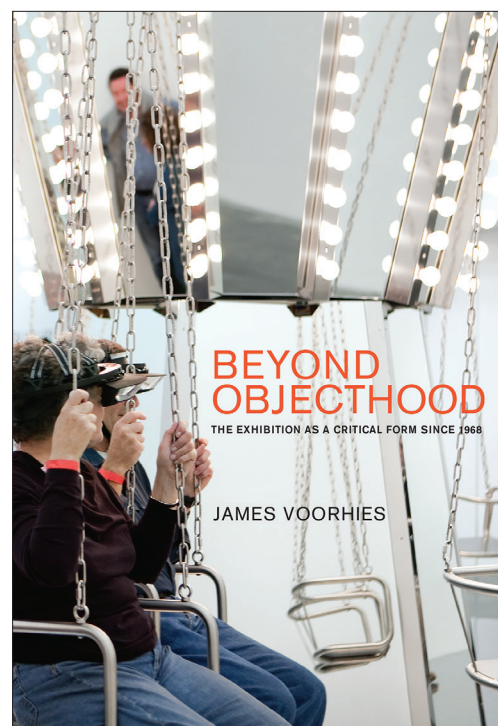
The rise of the exhibition as critical form and artistic medium, from Robert Smithson's antimodernist non-sites in 1968 to today's institutional gravitation toward the participatory.
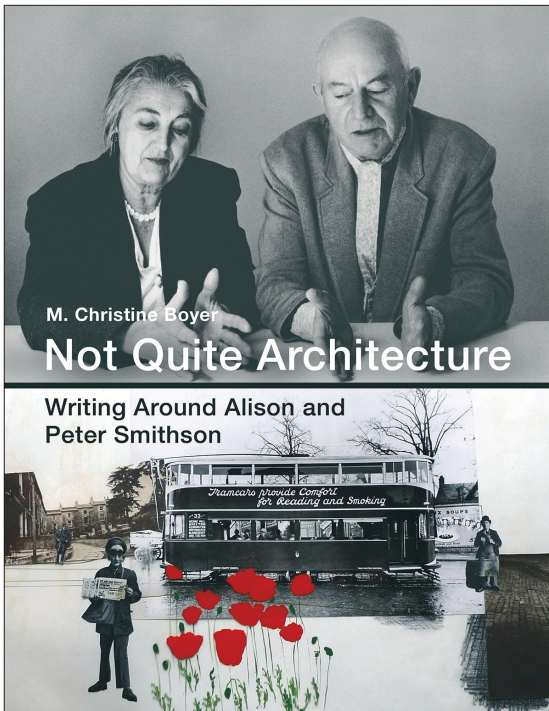
Not Quite Architecture

Writing Around Alison and Peter Smithson

M. Christine Boyer

The English architects Alison Smithson (1928–1993) and Peter Smithson (1923–2003) were ringleaders of the New Brutalism, active in CIAM and Team 10, and influential in English Pop Art. The Smithsons, who met as architecture students, built only a few buildings but wrote prolifically throughout their career, leaving a body of writings that consider issues in architecture and urbanism and also take up subjects that are "not quite architecture" (the name of a series of articles written by Alison Smithson for the *Architects' Journal*)—including fashion design, graphic communication, and children's tales. In this book, M. Christine Boyer explores the Smithsons' writings—books, articles, lectures, unpublished manuscripts, and private papers. She focuses on unpublished material, reading the letter, the scribbled note, the undelivered lecture, the scrapbook, the "magic box," as words in the language of modern architectural history—especially that of postwar England, where the Smithsons and other architects were at the center of the richest possible range of cultural encounters. Boyer is "writing around" the Smithsons' work by considering the cultural contexts in which they formed and wrote about their ideas.

Boyer explains that the Smithsons were intensely concerned with the responsibility of the architect to ensure the quality of place, to build with lyrical appropriateness. They reached back to the country landscapes of their childhood and, Boyer argues, mixed their brand of New Brutalism with the English Picturesque. The Smithsons saw architects as both inheritors and passers-on. Their writings offer juxtapositions and connections, resembling an association of interactive loops, ideas waiting to be transmuted into built form.

M. Christine Boyer is William R. Kenan Jr. Professor in the School of Architecture at Princeton University and the author of *Dreaming the Rational City*, *The City of Collective Memory* (both published by the MIT Press), *Le Corbusier: Homme de Lettres*, and other books.

An exploration of published and unpublished writings of Alison and Peter Smithson, considering them in the context of the debates and discourses of postwar architecture.

April
7 x 9, 488 pp.
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architecture | design | theater

Elastic Architecture

Frederick Kiesler and Design Research
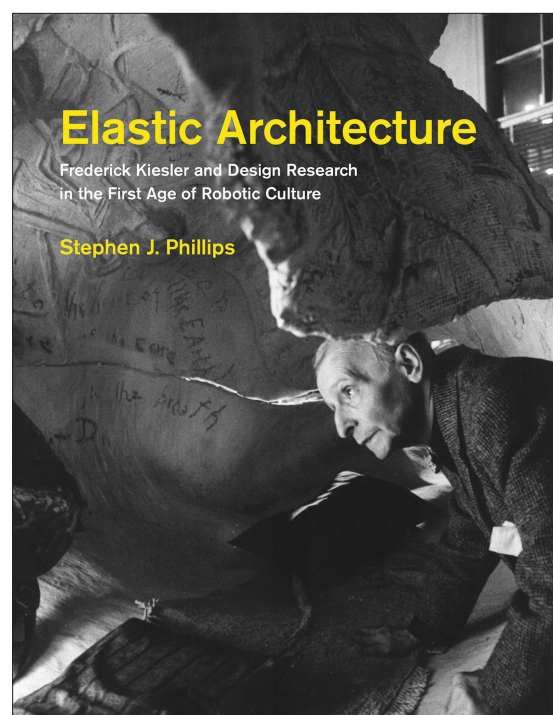in the First Age of Robotic Culture

Stephen J. Phillips

In 1960, the renowned architect Philip Johnson championed Frederick Kiesler, calling him "the greatest non-building architect of our time." Kiesler's ideas were difficult to construct, but as Johnson believed, "enormous" and "profound." Kiesler (1890–1965) went against the grain of the accepted modern style, rejecting rectilinear glass and steel in favor of more organic forms and flexible structures that could respond to the ever-changing needs of the body in motion.

In *Elastic Architecture*, Stephen Phillips offers the first in-depth exploration of Kiesler's innovative and multidisciplinary research and design practice. Phillips argues that Kiesler established a new career trajectory for architects not as master builders, but as research practitioners whose innovative means and methods could advance alternative and speculative architecture. Indeed, Kiesler's own career was the ultimate uncompromising model of a research-based practice.

Exploring Kiesler's formative relationships with the European avant-garde, Phillips shows how Kiesler found inspiration in the plastic arts, experimental theater, early animation, and automatons to develop and refine his spatial concept of the Endless. Moving from Europe to New York in the 1920s, Kiesler applied these radical Dadaist, constructivist, and surrealist practices to his urban display projects, which included shop windows for Saks Fifth Avenue. After launching his innovative Design Correlation Laboratory at Columbia and Yale, Kiesler went on to invent new houses, theaters, and galleries that were meant to move, shift, and adapt to evolutionary changes occurring within the natural and built environment.

As Phillips demonstrates vividly, although many of Kiesler's designs remained unbuilt, his ideas proved influential to later generations of architects and speculative artists internationally, including Archigram, Greg Lynn, UNStudio, and Olafur Eliasson.

Stephen J. Phillips is Professor of Architecture at California Polytechnic State University, Founding Director of the Cal Poly Los Angeles Metropolitan Program in Architecture and Urban Design, and Principal Architect at the firm Stephen Phillips Architects (SPARCHS).

Twentieth-century architect Frederick Kiesler's innovative multidisciplinary practice responded to the ever-changing needs of the body in motion, anticipating the research-oriented practices of contemporary art and architecture.

art | cultural studies
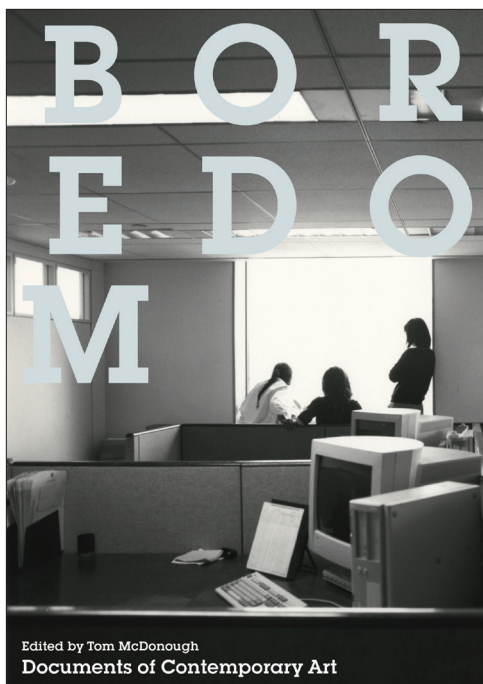
Boredom

edited by Tom McDonough

Without boredom, arguably there is no modernity. The current sense of the word emerged simultaneously with industrialization, mass politics, and consumerism. From Manet onwards, when art represents the everyday within modern life, encounters with tedium are inevitable. And starting with modernism's retreat into abstraction through subsequent demands placed on audiences, from the late 1960s to the present, the viewer's endurance of repetition, slowness or other forms of monotony has become an anticipated feature of gallery-going.

In contemporary art, boredom is no longer viewed as a singular experience; rather, it is contingent on diverse social identifications and cultural positions, and exists along a spectrum stretching from a malign condition to be struggled against to an something to be embraced or explored as a site of resistance. This anthology contextualizes the range of boredoms associated with our neoliberal moment, taking a long view that encompasses the political critique of boredom in 1960s France; the simultaneous aesthetic embrace in the United States of silence, repetition, or indifference in Fluxus, Pop, Minimalism and conceptual art; the development of feminist diagnoses of malaise in art, performance, and film; punk's social critique and its influence on theories of the postmodern; and the recognition, beginning at the end of the 1980s, of a specific form of ennui experienced in former communist states. Today, with the emergence of new forms of labor alienation and personal intrusion, deadening forces extend even further into subjective experience, making the divide between a critical and an aesthetic use of boredom ever more tenuous.

Tom McDonough is Associate Professor of Art History at Binghamton University, State University of New York. He is the author of *"The Beautiful Language of My Century": Reinventing the Language of Contestation in Postwar France, 1945–1968* (MIT Press).

Artists surveyed include

Chantal Akerman, Francis Alÿs, John Baldessari, Vanessa Beecroft, Bernadette Corporation, John Cage, Critical Art Ensemble, Merce Cunningham, Marcel Duchamp, Fischli & Weiss, Claire Fontaine, Dick Higgins, Jasper Johns, Donald Judd, Ilya Kabakov, Boris Mikhailov, Robert Morris, John Pilson, Sigmar Polke, Yvonne Rainer, Robert Rauschenberg, Ad Reinhardt, Gerhard Richter, Situationist International, Mierle Laderman Ukeles, Andy Warhol, Faith Wilding, Janet Zweig

Writers include

Ina Blom, Nicolas Bourriaud, Jennifer Doyle, Alla Efimova, Jonathan Flatley, Julian Jason Haladyn, The Invisible Committee, Jonathan D. Katz, Chris Kraus, Tan Lin, Sven Lütticken, John Miller, Agné Narušyté, Sianne Ngai, Peter Osborne, Patrice Petro, Christine Ross, Moira Roth, David Foster Wallace, Aleksandr Zinovyev

Boedom in modern and contemporary art: as something to be struggled against, embraced as an experience, or explored as a potential site of resistance.

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Documents of Contemporary Art series

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art | film

On the Eve of the Future
Selected Writings on Film

Annette Michelson

The celebrated critic and film scholar Annette Michelson saw the avant-garde filmmakers of the 1950s and 1960s as radically redefining and extending the Modernist tradition of painting and sculpture. In essays that were as engaging as they were influential and as lucid as they were learned, she set out to demonstrate the importance of the underappreciated medium of film. *On the Eve of the Future* collects more than thirty years' worth of those essys, focusing on her most relevant engagements with avant-garde production in experimental cinema, particularly with the movement known as American Independent Cinema.

This volume includes the first critical essay on Marcel Duchamp's film *Anemic Cinema*, the first investigation into Joseph Cornell's filmic practices, and the first major explorations of Michael Snow. It offers an important essay on Maya Deren, whose work was central to that era of renewal and reinvention, seminal critiques of Stan Brakhage, Hollis Frampton, and Harry Smith, and overviews of Independent Cinema. Gathered here for the first time, these texts demonstrate Michelson's pervasive influence as a writer and thinker and her role in the establishment of cinema studies as an academic field.

The postwar generation of Independents worked to develop radically new terms, techniques, and strategies of production and distribution. Michelson shows that the fresh new forms they created from the legacy of Modernism became the basis of new forms of spectatorship and cinematic pleasure.

Annette Michelson is Professor Emeritus in the Department of Cinema Studies at New York University. A founding editor of the journal *October*, she has written on art and cinema for more than five decades.

The first collection of Annette Michelson's influential writings on film, with essays on work by Marcel Duchamp, Maya Deren, Hollis Frampton, Martha Rosler, and others.

art
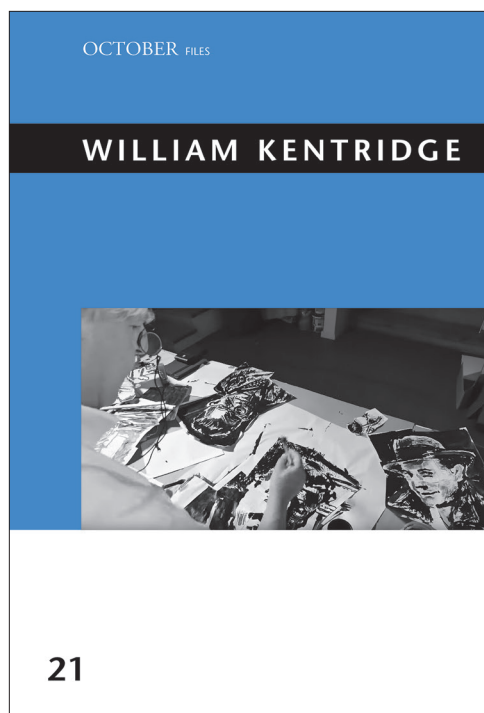
William Kentridge

edited by Rosalind E. Krauss

Since the 1970s, the South African artist William Kentridge has charted the turbulent terrain of his homeland in both personal and political terms. With erudition, absurdist humor, and an underlying hope in humankind, Kentridge's artwork has examined apartheid, humanitarian atrocities, aging, and the ambiguities of growing up white and Jewish in South Africa. This October Files volume brings together critical essays and interviews that explore Kentridge's work and shed light on the unique working processes behind his drawings, prints, stop-animation films, and theater works.

The texts include an interview with the artist Carolyn Christov-Bakargiev, curator of the first major retrospective of Kentridge's work; an essay by Andreas Huyssen on the role of shadow-play in Kentridge's film series *9 Drawing for Projection*; and investigations of Kentridge's work for opera and theater by Maria Gough, Joseph Leo Koerner, and Margaret Koster Koerner. An analysis by the influential art historian, Rosalind Krauss, the editor of this volume, argues that Kentridge's films are the result of a particularly reflexive drawing practice in which the marks on the page—particularly the smudges, smears, and erasures that characterize his stop-animations—define the act of drawing as a temporal medium. Krauss's understanding of Kentridge's work as embodying a fundamental tension between formal and sociological poles has been crucial to subsequent analyses of the artist's work, including the new essay by the anthropologist Rosalind Morris, who has collaborated with Kentridge on several projects.

Rosalind E. Krauss is University Professor in the Department of Art History at Columbia University, where, from 1995 to 2006, she held the Meyer Schapiro Chair in Modern Art and Theory. She is a founding editor of *October* and the author of *Passages in Modern Sculpture*, *The Originality of the Avant-Garde and Other Myths*, *The Optical Unconscious*, *Bachelors*, *Perpetual Inventory*, *Under Blue Cup* (all published by the MIT Press), and other books.

Essays and Interviews

Carolyn Christov-Bakargiev, Maria Gough, Andreas Huyssen, William Kentridge, Joseph Leo Koerner, Margaret Koster Koerner, Rosalind E. Krauss, Rosalind Morris

Critical texts and interviews that explore the drawings, animations, and theater work of the South African artist William Kentridge

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978-0-262-03617-7

October Files

art | global studies

Former West

Art and the Contemporary after 1989

edited by Maria Hlavajova and Simon Sheikh

What has become of the so-called West after the Cold War? Why hasn't the West simply become "former," as has its supposed counterpart, the "former East"? In this book, artists, thinkers, and activists explore the repercussions of the political, cultural, and economic events of 1989 on both art and the contemporary. The culmination of an eight-year curatorial research experiment, *Former West* imagines a world beyond our immediate condition.

The writings, visual essays, and conversations in *Former West*—more than seventy contributions with global scope—unfold a tangled cartography far more complex than the simplistic dichotomy of East vs. West. In fact, the Cold War was a contest not between two ideological blocs but between two variants of Western modernity. It is this conceptual "West-centrism" that a "formering" of the West seeks to undo.

The contributions revisit contemporary debates through the lens of a "former West." They rethink conceptions of time and space dominating the legacy of the 1989–1990 revolutions in the former East (complicated by notions of "former"), and critique historical periodization of the contemporary. The contributors map the political economy and social relations of the contemporary, consider the implications of algorithmic cultures and the posthuman condition, and discuss notions of solidarity—the difficulty in constructing a new "we" despite migration, the refugee crisis, and the global class recomposition. Can art institute the contemporary it envisions, and live as if it were possible?

Maria Hlavajova is Founding Director of BAK, basis voor actuele kunst, Utrecht, and Artistic Director of Former West (2008–2016). **Simon Sheikh** is a curator, writer, and Programme Director of MFA Curating at Goldsmiths College, University of London.

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Nancy Adajania, Edit András, Athena Athanasiou, Zygmunt Bauman, Dave Beech, Brett Bloom, Rosi Braidotti, Boris Buden, Susan Buck-Morss, Campus in Camps, Dipesh Chakrabarty, Chto Delat?/What is to be done?, Jodi Dean, Boaventura de Sousa Santos, Angela Dimitrakaki, Dilar Dirik, Marlene Dumas, Keller Easterling, Charles Esche, Okwui Enwezor, Silvia Federici, Mark Fisher, Federica Giardini and Anna Simone, Boris Groys, Gulf Labor Coalition, Stefano Harney, Graham Harwood, Sharon Hayes, Brian Holmes, Tung-Hui Hu, Wendy Hui Kyong Chun, Sami Khatib, Delaine Le Bas, Boaz Levin and Vera Tollmann, Lucy Lopez, Isabell Lorey, Sven Lütticken, Ewa Majewska, Suhail Malik, Artemy Magun, Teresa Margolles, Achille Mbembe, Laura McLean, Cuauhtémoc Medina, Sandro Mezzadra, Walter D. Mignolo, Aernout Mik, Angela Mitropoulos, Rastko Močnik, Nástio Mosquito, Rabih Mroué, Pedro Neves Marques, Peter Osborne, Matteo Pasquinelli, Andrea Phillips, Nina Power, Vijay Prashad, Gerald Raunig, Irit Rogoff, Naoki Sakai, Rasha Salti, Francesco Salvini, Georg Schöllhammer, Christoph Schlingensief, Susan Schuppli, Andreas Siekmann, Jonas Staal, Hito Steyerl, Mladen Stilinović, Paulo Tavares, Trịnh Thị Minh Hà, Mona Vătămanu, Marina Vishmidt, Marion von Osten, McKenzie Wark, Eyal Weizman
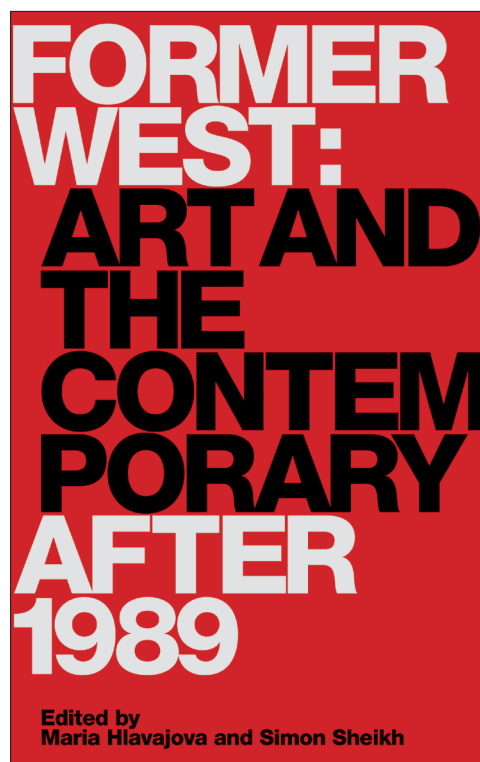
Explorations of the "formering" of the West in contemporary art in the post-communist, postcolonial, posthuman, post-ideological, and posthistorical era.
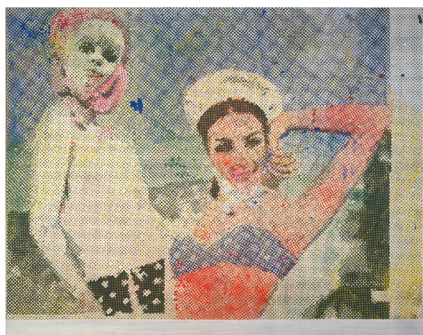
April
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100 color illus.

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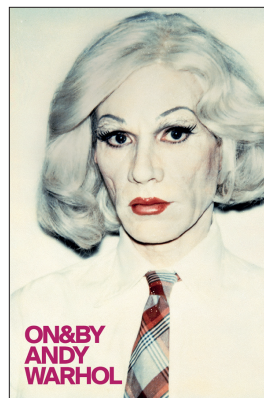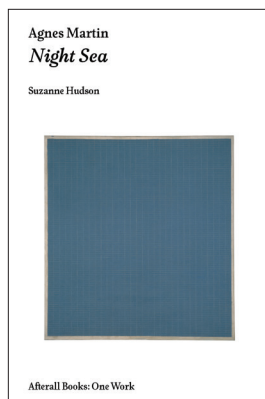
art

Sigmar Polke

Girlfriends

Stefan Gronert

The artist Sigmar Polke (1941–2010) worked across a broad range of media—including photography, painting, printmaking, sculpture, and film—and in styles that varied from abstract expressionism to Pop. This volume in Afterall's One Work series offers an illustrated exploration of *Freundinnen* (*Girlfriends* 1965/66), one of Polke's important early paintings. Taken from a found image of two young women, and using the raster dots also found in mass media reproductions, *Girlfriends* offers a statement about the use and social function of images.

Stefan Gronert approaches *Girlfriends* through its deliberate and elusive ambiguity, providing technical detail and historical background that allow some of the work's motivation and depth to become clearer. Gronert analyzes Polke's relationship to his tutors and peers, especially Gerhard Richter; describes the art-historical context in which Polke worked; and discusses some of the social and political issues to which *Girlfriends* refers. Considering such topics as the distinction between Polke and Alain Jacquet in their use of photographed material, between Polke's use of the raster technique and that of Roy Lichtenstein, and the feminist discourse of the time, Gronert draws on a variety of critical interpretations of Polke's work, including some material that has not yet been translated into English.

Stefan Gronert is Curator of Photography and New Media at Sprengel Museum Hannover. A lecturer in art history at the Braunschweig University of Art, he is the author of *Jeff Wall: Specific Pictures* and coeditor of *Gerhard Richter: Editions 1965-2013*.

An illustrated exploration of *Girlfriends* (1965/66), one of Sigmar Polke's important early paintings.

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literature

Book of Mutter

Kate Zambreno

Writing is how I attempt to repair myself, stitching back former selves, sentences. When I am brave enough I am never brave enough I unravel the tapestry of my life, my childhood.
—from *Book of Mutter*

Composed over thirteen years, Kate Zambreno's *Book of Mutter* is a tender and disquieting meditation on the ability of writing, photography, and memory to embrace shadows while in the throes—and dead calm—of grief. *Book of Mutter* is both primal and sculpted, shaped by the author's searching, indexical impulse to inventory family apocrypha in the wake of her mother's death. The text spirals out into a fractured anatomy of melancholy that includes critical reflections on the likes of Roland Barthes, Louise Bourgeois, Henry Darger, Theresa Hak Kyung Cha, Peter Handke, and others. Zambreno has modeled the book's formless form on Bourgeois's *Cells* sculptures—at once channeling the volatility of autobiography, pain, and childhood, yet hemmed by a solemn sense of entering ritualistic or sacred space.

Neither memoir, essay, nor poetry, *Book of Mutter* is an uncategorizable text that draws upon a repertoire of genres to write into and against silence. It is a haunted text, an accumulative archive of myth and memory that seeks its own undoing, driven by crossed desires to resurrect and exorcise the past. Zambreno weaves a complex web of associations, relics, and references, elevating the prosaic scrapbook into a strange and intimate postmortem/postmodern theater.

Kate Zambreno, the author of two novels, *O Fallen Angel* and *Green Girl*, and the work *Heroines* (Semiotext(e)), teaches in the writing programs at Columbia University and Sarah Lawrence College. She is at work on a series of books about time, memory, and the persistence of art, which includes *Book of Mutter* and the forthcoming *Drifts*.

"*Book of Mutter* is that rare text, which dares to face the immense power of the mother."
—Siri Hustvedt
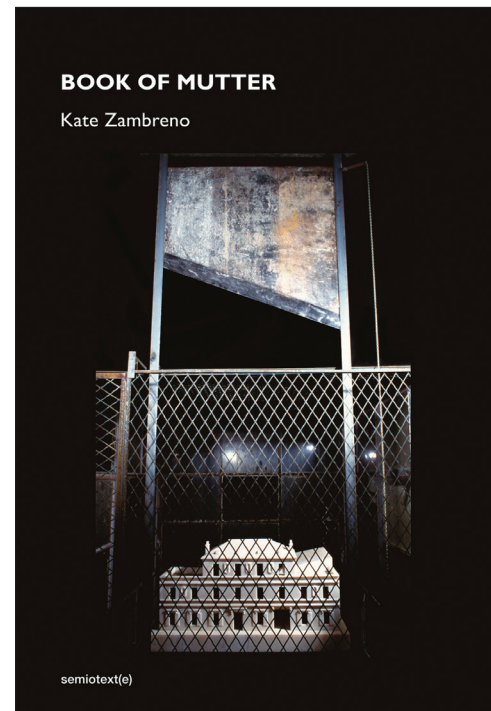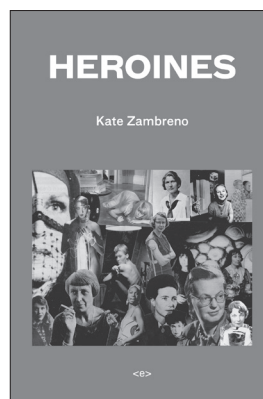
A fragmented, lyrical essay on memory, identity, mourning, and the mother.

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5 3/8 x 8, 184 pp.
3 illus.

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Native Agents series

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Heroines
Kate Zambreno
2012, 978-1-58435-114-6
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fiction

Another Morocco

Selected Stories

Abdellah Taïa
translated by Rachel Small

Tangier is a possessed city, haunted by spirits of different faiths. When we have literature in our blood, in our souls, it's impossible not to be visited by them.
—from *Another Morocco*

In 2006, Abdellah Taïa returned to his native Morocco to promote the Moroccan release of his second book, *Le rouge du tarbouche* (*The Red of the Fez*). During this book tour, he was interviewed by a reporter for the French-Arab journal *Tel Quel*, who was intrigued by the themes of homosexuality she saw in his writing. Taïa, who had not publically come out and feared the repercussions for himself and his family of doing so in a country where homosexuality continues to be outlawed, nevertheless consented to the interview and subsequent profile, "Homosexuel envers et contre tous" ("Homosexual against All Odds"). This interview made him the first openly gay writer to be published in Morocco.

Another Morocco collects short stories from Taïa's first two books, *Mon Maroc* (*My Morocco*) and *Le rouge du tarbouche*, both published before this pivotal moment. In these stories, we see a young writer testing the porousness of boundaries, flirting with strategies of revelation and concealment. These are tales of life in a working-class Moroccan family, of a maturing writer's fraught relationship with language and community, and of the many cities and works that have inspired him.

With a reverence for the subaltern—for the strength of women and the disenfranchised—these stories speak of humanity and the construction of the self against forces that would invalidate its very existence. Taïa's work is, necessarily, a political gesture.

Abdellah Taïa (born in 1973) is the author of six novels, including *Salvation Army* and *An Arab Melancholia*, both published by Semiotext(e), and *Infidels*. His novel *Le jour du roi*, about the death of Morocco's King Hassan II, won the 2010 Prix de Flore. He also directed and wrote the screenplay for the 2013 film adaptation of *Salvation Army*.
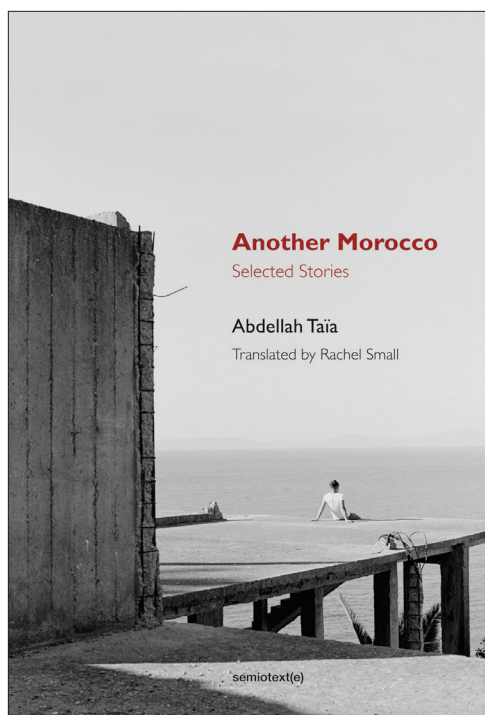
Tales of life in North Africa that flirt with strategies of revelation and concealment, by the first openly gay writer to be published in Morocco.

May
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Abdellah Taïa
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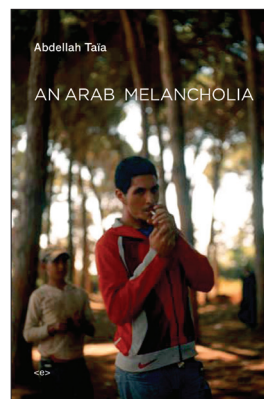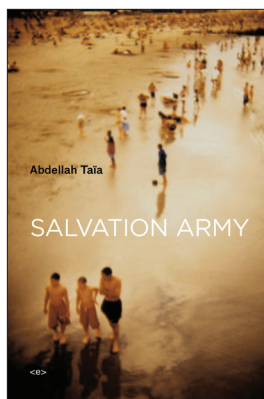
literature

Crazy for Vincent

Hervé Guibert
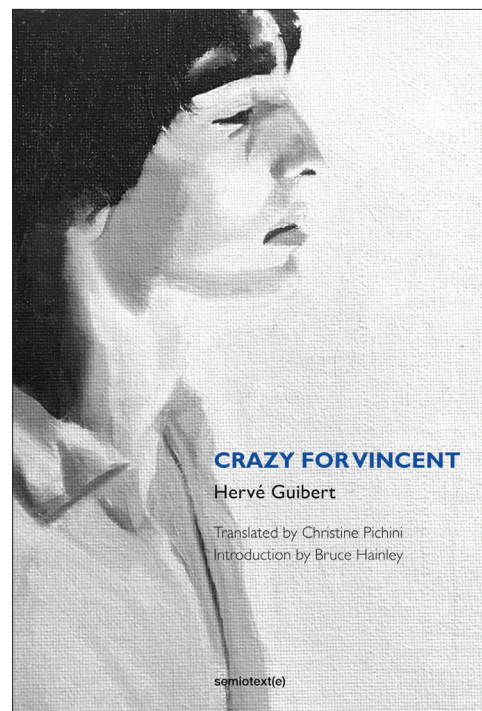
translated by Christine Pichini
introduction by Bruce Hainley

In the middle of the night between the 25th and 26th of November, Vincent fell from the third floor playing parachute with a bathrobe. He drank a liter of tequila, smoked Congolese grass, snorted cocaine. . .
—from *Crazy for Vincent*

Crazy for Vincent begins with the death of the figure it fixates upon: Vincent, a skateboarding, drug-addled, delicate "monster" of a boy in whom the narrator finds a most sublime beauty. By turns tender and violent, Vincent drops in and out of French writer and photographer Hervé Guibert's life over the span of six years (from 1982, when he first met Vincent as a fifteen-year-old teenager, to 1988). After Vincent's senseless death, the narrator embarks on a reconnaissance writing mission to retrieve the Vincent that had entered, elevated, and emotionally eviscerated his life, working chronologically backward from the death that opens the text. Assembling Vincent's fragmentary appearances in his journal, the author seeks to understand what Vincent's presence in his life had been: a passion? a love? an erotic obsession? or an authorial invention? A parallel inquiry could be made into the book that results: Is it diary, memoir, poem, fiction? Autopsy, crime scene, hagiography, hymn? *Crazy for Vincent* is a text the very nature of which is as untethered as desire itself.

Hervé Guibert was the author of more than twenty-five books, many of which redefined the genres of fiction, criticism, autobiography, and memoir. A photography critic for *Le Monde* from 1977 to 1985, he was also a photographer and filmmaker in his own right, and in 1980 published the photo-novel *Suzanne and Louise*, a book that combined photographic studies of his great-aunts with stories about them. In 1984 he was awarded a César for best screenplay in partnership with Patrice Chereau for *L'Homme Blessé*. Shortly before his death, he completed *La Pudeur ou L'impudeur*, a video work that chronicles the last days of his life living with AIDS. He died in 1991, at the age of 36.

Diary, memoir, poem, fiction? Autopsy, crime scene, hagiography, hymn? The chronicle of an obsessive love.

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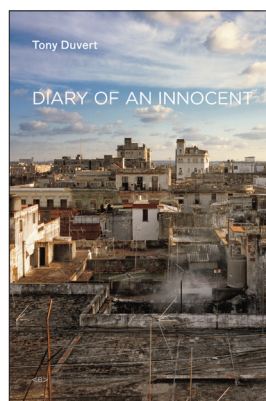
fiction

Three-Month Fever

The Andrew Cunanan Story

Gary Indiana

introduction by Christopher Glazek

It was suddenly chic to be "targeted" by Andrew. . . . It also became chic to claim a deep personal friendship *with* Versace, to infer that one might, but for a trick of fate, have been with Versace at the very moment of his "assassination," as it had once been chic to reveal one's invitation to Cielo Drive in the evening of the Tate slayings, an invitation only declined because of *car trouble* or a *previous engagement*. . .
—from *Three-Month Fever*

First published in 1999, Gary Indiana's *Three-Month Fever* is the second volume of his famed crime trilogy, now being republished by Semiotext(e). (The first, *Resentment*, reissued in 2015, was set in a Menendez trial-era L.A.) In this brilliant and gripping hybrid of narrative and reflection, Indiana considers the way the media's hypercoverage transformed Andrew Cunanan's life "from the somewhat poignant and depressing but fairly ordinary thing it was into a narrative overripe with tabloid evil."

"America loves a successful sociopath," Indiana explains. This sardonic and artful reconstruction of the brief life of the party boy who became a media sensation for shooting Gianni Versace is a spellbinding fusion of journalism, social commentary, and novelistic projection. By following Cunanan's notorious "trail of death," Indiana creates a compelling portrait of a brilliant, charismatic young man whose pathological lies made him feel more like other people—and more interesting than he actually was. Born in a working-class exurb of San Diego and educated at an elite private school, Cunanan strove to "blend in" with the upscale gay male scene in La Jolla. He ended up crazed and alone, eventually embarking on a three-month killing spree that took the lives of five men, including that of Versace, before killing himself in a Miami boathouse, leaving behind a range of unanswerable questions and unsolvable mysteries.

Gary Indiana is a novelist, playwright, critic, essayist, filmmaker, and artist. Hailed by *The Guardian* as "one of the most important chroniclers of the modern psyche," and by *The Observer* as "one of the most woefully underappreciated writers of the last 30 years," he has recently published a memoir, *I Can Give You Anything But Love*.

"Gary Indiana belongs to a special breed of American urban writers who take cool pleasure in dissecting the lives of the rich and ugly and is possibly the most jaded chronicler of them all. On a good day, he makes Bret Easton Ellis look like Enid Blyton, yet many, myself included, think he might have already written the Great America Novel(s)."
—**Christopher Fowler**, *The Independent*

A sardonic and artful reconstruction of the brief life of the party boy who became a media sensation for shooting Gianni Versace.

April
6 x 9, 296 pp.

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978-1-58435-198-6

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Resentment
Gary Indiana
2015, 978-1-58435-172-6
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philosophy

Aberrant Movements

The Philosophy of Gilles Deleuze

David Lapoujade
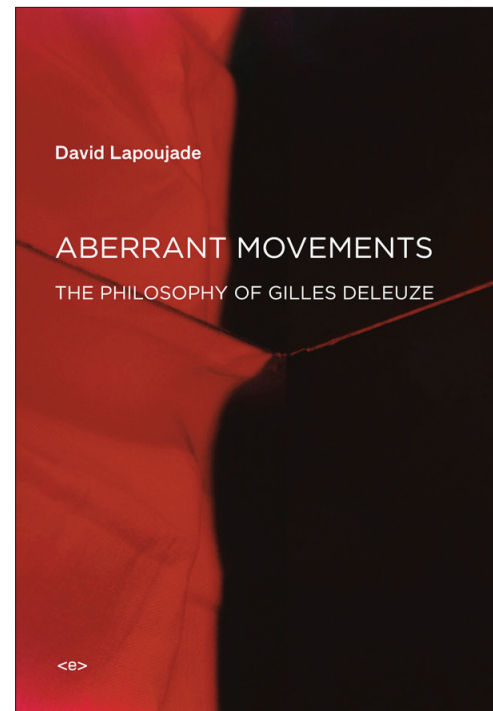translated by Joshua David Jordan

There is always something schizophrenic about logic in Deleuze, which represents another distinctive characteristic: a deep perversion of the very heart of philosophy. Thus, a preliminary definition of Deleuze's philosophy emerges: an *irrational logic of aberrant movements*.
—from *Aberrant Movements*

In *Aberrant Movements*, David Lapoujade offers one of the first comprehensive treatments of Deleuzian thought. Drawing on the entirety of Deleuze's work as well as his collaborations with Félix Guattari, from the "transcendental empiricism" of *Difference and Repetition* to the schizoanalysis and geophilosophy of *Anti-Oedipus* and *A Thousand Plateaus*, Lapoujade explores the central problem underlying the delirious coherence of Deleuze's philosophy: aberrant movements. These are the movements that Deleuze wrests from Kantian idealism, Nietzsche's eternal return, and the nonsense of Lewis Carroll; they are the schizophrenic processes of the unconscious and the nomadic line of flight traversing history—in short, the forces that permeate life and thought. Tracing and classifying their "irrational logics" represent the quintessential tasks of Deleuzian philosophy.

Rather than abstract notions, though, these logics constitute various modes of populating the earth—involving the human as much as the animal, physical, and chemical—and the affective, mental, and political populations that populate human thought. Lapoujade argues that aberrant movements become the figures in a combat against the forms of political, social, philosophical, aesthetic, and scientific organization that attempt to deny, counter, or crush their existence. In this study of a thinker whose insights, theoretical confrontations, and perverse critiques have profoundly influenced philosophy, literature, film, and art over the last fifty years, Lapoujade invites us to join in the discordant harmonies of Deleuze's work—and in the battle that constitutes the thought of philosophy, politics, and life.

David Lapoujade (born in 1964) is a French philosopher and a professor at the Université Paris-I Panthéon-Sorbonne. In addition to editing the posthumous collections of Deleuze's writings, *Desert Islands* and *Two Regimes of Madness* (both published in English by Semiotext(e)), he has written on pragmatism and the work of William James.

One of the first comprehensive treatments of Deleuzian thought.

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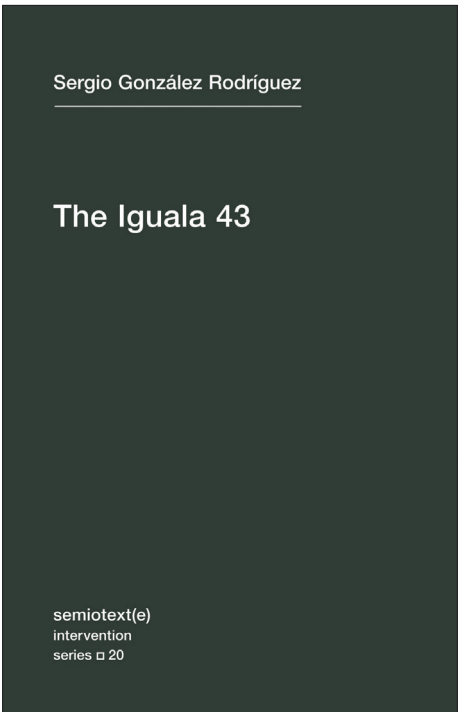
The Iguala 43

Sergio González Rodríguez
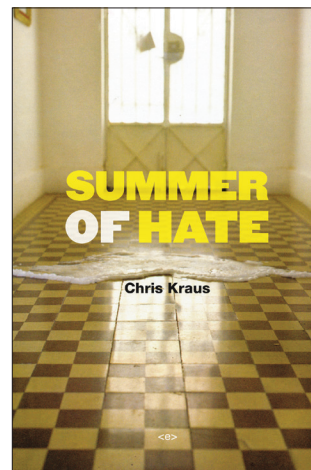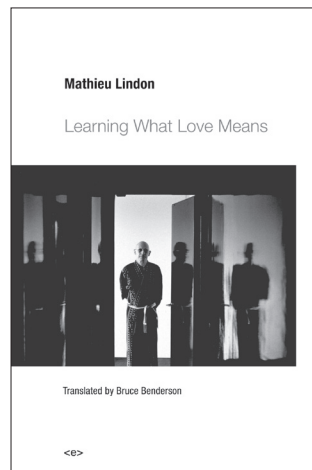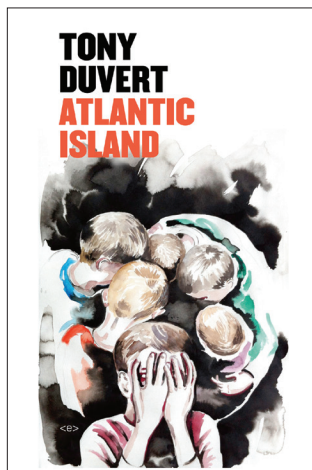translated by Joshua Neuhouser

The word "corruption" is insufficient for the magnitude of this evil.
—from *The Iguala 43*

On the night of September 26th, 2014, policemen attacked a group of student protestors in the Mexican town of Iguala. Forty-three of these students were then kidnapped and turned over to criminals who allegedly tortured and murdered them, and then burned their corpses. The families of the victims refused to accept the official story, which placed all blame on local actors and absolved the federal government of any culpability. The anger provoked by this atrocity, one of the most barbaric acts in recent times, divided Mexican society in two: on one side were those who unwaveringly supported the cause of the students and on the other those who accepted the government's "historic truth."

Written in memory of the forty-three students, this well-researched and powerfully argued book uncovers the agents, causes, and factors responsible for this unspeakable crime. It offers an interpretation of these events that goes beyond the artificial opposition between good and evil, between rulers and insurgents, and tries instead to understand the cruelty that normalizes atrocity.

González Rodríguez warns us that "this story has been repeated around the world, but we refuse to see it. If anyone doubts or denies this, then I challenge them to finish this book. When faced with the acceptance of horror, we must recover our lucidity and exercise our freedom to transform this tragic reality."

Sergio González Rodríguez is a writer, journalist and critic for the Mexico City newspaper *Reforma*. His works include *Bones in the Desert*, *The Flight*, and *The Femicide Machine* (Semiotext(e)).

A well-researched and powerfully argued account of the disappearance of forty-three students and an analysis of the cruelty that normalizes atrocity.

March
4 1/2 x 7, 152 pp.
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Mathieu Lindon

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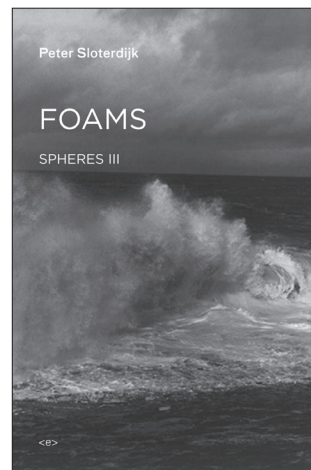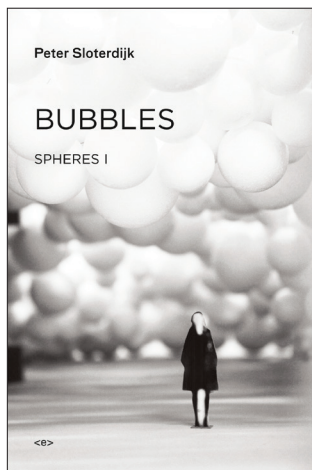
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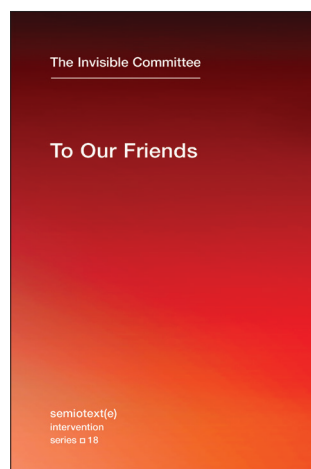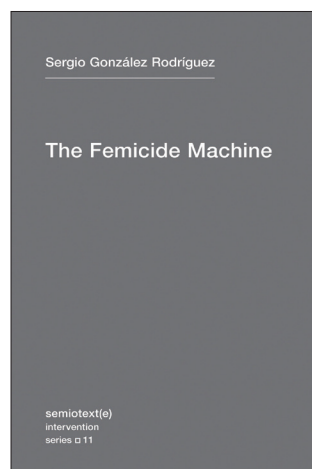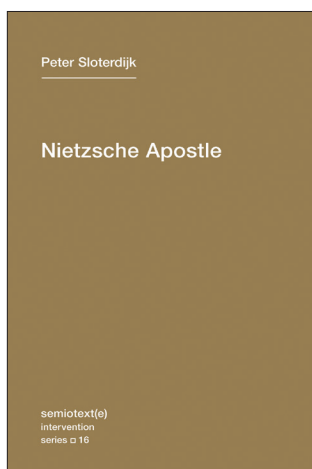
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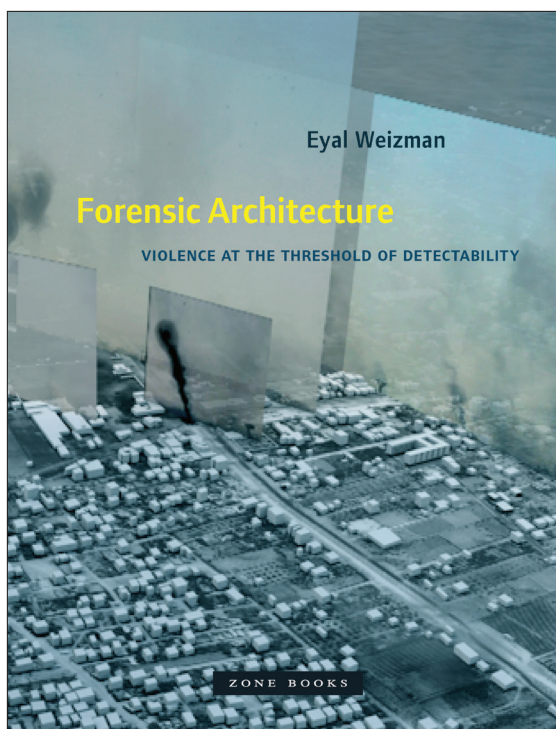
Forensic Architecture
Violence at the Threshold of Detectability
Eyal Weizman

In recent years, a little-known research group called Forensic Architecture has begun using novel research methods to undertake a series of investigations into human rights abuses. Today, the group provides crucial evidence for international courts and works with a wide range of activist groups, NGOs, Amnesty International, and the UN.

Forensic Architecture has created a new form of investigative practice, using architecture as an optical device to investigate armed conflicts and environmental destruction. In *Forensic Architecture*, Eyal Weizman, the group's founder, provides an in-depth introduction to the history, practice, assumptions, potentials, and double binds of this practice. Weizman has collected an extensive array of images, maps, and detailed documentation that records the intricate work the group has performed across the globe. Weizman offers Forensic Architecture case studies that include the analysis of the shrapnel fragments in a room struck by drones in Pakistan, the resolution of a contested shooting in the West Bank, the architectural reconstruction of a secret Syrian detention center from the memory of its survivors, a blow-by-blow account of a day-long battle in Gaza, and an investigation of environmental violence in the Guatemalan highlands. With these case studies, Weizman explains in image and text how the Forensic Architecture team uses its research and investigative methods to confront state propaganda and secrets and to expose ever-new forms of state violence.

Weizman's *Forensic Architecture*, stunning and shocking in its critical narrative, powerful images, and daring investigations, presents a new form of public truth, technologically, architecturally, and aesthetically produced.

Eyal Weizman is Professor of Spatial and Visual Cultures at Goldsmiths College, University of London, and a Global Scholar at Princeton University. A founder of Forensic Architecture, he is also a founding member of the architectural collective DAAR in Beit Sahour/Palestine. His books include *Mengele's Skull*, *The Least of All Possible Evils*, and *Hollow Land*.

A new form of investigative practice that uses architecture as an optical device to investigate armed conflicts and environmental destruction.

history of science

The Form of Becoming
Embryology and the Epistemology of Rhythm, 1760–1830

**Janina Wellmann**
translated by Kate Sturge

In *The Form of Becoming*, Janina Wellmann offers an innovative under-standing of the emergence around 1800 of the science of embryology and a new notion of development, one based on the epistemology of rhythm. She argues that between 1760 and 1830, the concept of rhythm became crucial to many fields of knowledge, including the study of life and living processes. She juxtaposes the history of rhythm in music theory, literary theory, and philosophy with the concurrent turn in biology toward understanding the living world in terms of rhythmic patterns, rhythmic movement, and rhythmic representations. Common to all these fields was their view of rhythm as a means of organizing time—and of ordering the development of organisms.

With *The Form of Becoming*, Wellmann, a historian of the social sciences, has written the first systematic study of visualization in embryology. Embryological development circa 1800 was imagined through the pictorial technique of the series, still prevalent in the field today. Tracing the origins of the developmental series back to seventeenth-century instructional graphics for military maneuvers, dance, and craft work, *The Form of Becoming* reveals the constitutive role of rhythm and movement in the visualization of developing life.

Janina Wellmann is a researcher at Leuphana Universität Lüneburg.

"Casting her net wide, Wellmann draws on the aesthetics of verse and music, the sciences of botany and embryol-ogy, and the practices of fencing and dance to show how a new kind of natural law and a new kind of visualization in series captured the patterned flow of development of life forms, morphology in motion."
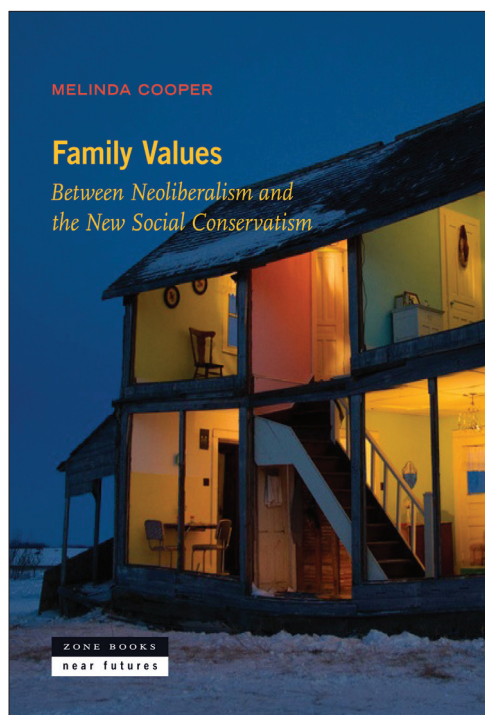—Lorraine Daston, coauthor of *Objectivity and Wonders and the Order of Nature: 1150–1750*
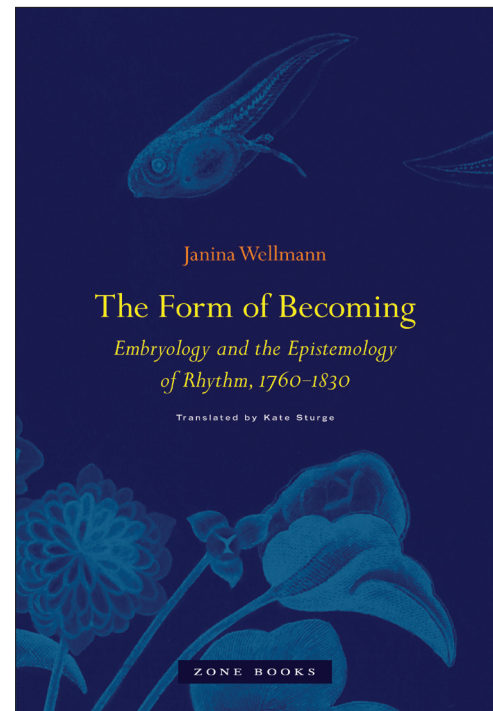
An examination of the constitutive role of rhythm and movement in the visualization of developing life.

March
6 x 9, 432 pp.
68 illus.

$34.95T/£24.95 cloth
978-1-935408-76-5

Distributed for Zone Books

political philosophy

Family Values
Between Neoliberalism and the New Social Conservatism
Melinda Cooper

Why was the discourse of family values so pivotal to the conservative and free-market revolution of the 1980s and why has it continued to exert such a profound influence on American political life? Why have free-market neoliberals so often made common cause with social conservatives on the question of family, despite their differences on all other issues?

In *Family Values*, Melinda Cooper shows how a sense of impending moral crisis infused the battles of the era, and that neoliberals and new conservatives formed their alliance in response to this perceived threat. They believed that the racial and sexual foundations of the postwar family were undergoing an ominous shift that was encouraged by the grand macroeconomic issues of the time—including inflation, budget deficits, and progressive tax reform. They unequivocally saw the reinvention of the family as the most appropriate solution to this crisis.

In a series of case studies ranging from the AIDS epidemic to Bill Clinton's welfare reform, from same-sex marriage to the student loan market, Cooper shows how the imperative of family responsibility was simultaneously federalized in welfare law and refashioned in the idiom of expanding household debt. Combining a sharp theoretical sensibility with close attention to social, political, and economic history, Cooper challenges received wisdom about the crisis of the 1970s and established accounts of neoliberalism.

Melinda Cooper is Associate Professor in the School of Social and Political Science at the University of Sydney, Australia. She is the author of *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era*.

An investigation of the roots of the alliance between free-market neoliberals and social conservatives.

March
6 x 8, 416 pp.

$29.95T/£22.95 cloth
978-1-935408-84-0

Distributed for Zone Books

"Melinda Cooper brings sharp feminist insights to clarify a range of topics in 'everyday neoliberalism' overlooked in the earlier literature. In particular, what is often retailed as an endorsement of 'gender freedom' turns out to be a return to an older poor law tradition of 'personal responsibility' thrust upon families by means of a retasked welfare system plus expansion of consumer credit. This history is vital for an understanding of the modern neoliberal order."
—Philip Mirowski, author of *Never Let a Serious Crisis Go to Waste*

philosophy

No One's Ways

An Essay on Infinite Naming

Daniel Heller-Roazen

Homer recounts how, trapped inside a monster's cave, with nothing but his wits to call upon, Ulysses once saved himself by twisting his name. He called himself *Outis*: "No One," or "Non-One," "No Man," or "Non-Man." The ploy was a success. He blinded his barbaric host and eluded him, becoming anonymous, for a while, even as he bore a name.

Philosophers never forgot the lesson that the ancient hero taught. From Aristotle and his commentators in Greek, Arabic, Latin, and more modern languages, from the masters of the medieval schools to Kant and his many successors, thinkers have exploited the possibilities of adding "non-" to the names of man. Aristotle is the first to write of "indefinite" or "infinite" names, his example being "non-man." Kant turns to such terms in his theory of the infinite judgment, illustrated by the sentence, "The soul is non-mortal." Such statements play major roles in the philosophies of Maimon, Fichte, Schelling, Hegel, and Hermann Cohen. They are profoundly reinterpreted in the twentieth century by thinkers as diverse as Carnap and Heidegger.

Reconstructing the adventures of a particle in philosophy, Heller-Roazen seeks to show how a grammatical possibility can be an incitement for thought. Yet he also draws a lesson from persistent examples. The philosophers' infinite names all point to one subject: us. "Non-man" or "soul," "Spirit" or "the unconditioned," we are beings who name and name ourselves, bearing witness to the fact that we are, in every sense, *unnamable*.

Daniel Heller-Roazen is the Arthur W. Marks '19 Professor of Comparative Literature and the Council of the Humanities at Princeton University. He is the author of *Echolalias: On the Forgetting of Language*, *The Inner Touch: Archaeology of a Sensation*, *The Enemy of All: Piracy and the Law of Nations*, and *The Fifth Hammer: Pythagoras and the Disharmony of the World*, all published by Zone Books.
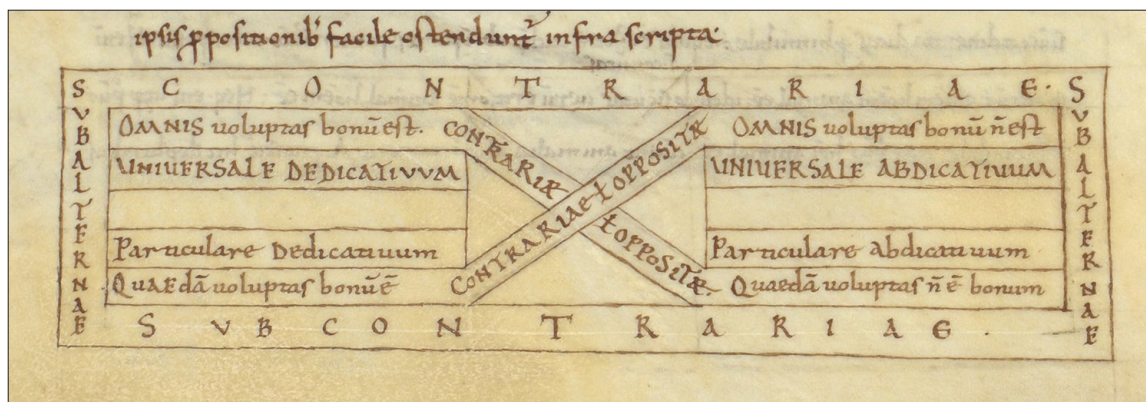
Apuleian Square of Opposition, ninth century (University of Pennsylvania Libraries, Lawrence J. Schoenberg Collection, LJS 101, fol 54v).

art | architecture

Public Space? Lost and Found

edited by Gediminas Urbonas, Ann Lui, and Lucas Freeman

June
8 1/2 x 11, 300 pp.
200 illus. in color and black & white

$40.00S/£29.95 cloth
978-0-9981170-0-3

Distributed for SA+P Press

The MIT Press is pleased to include the publications of the MIT School of Architecture and Planning among its distributed titles. These volumes present engaging and provocative perspectives on design, urbanism, and art.

Open House in York, Alabama.
Matthew Mazzotta, 2013.

"Public space" is a potent and contentious topic among artists, architects, and cultural producers. *Public Space? Lost and Found* documents how critical spatial practices have expanded the concept far beyond the physical confines of the city square. The book considers the role of aesthetic practices within the construction, identification, and critique of shared territories, and how artists or architects—the "antennae of the race"—can heighten our awareness of rapidly changing formulations of public space in the age of digital media, vast ecological crises, and civic uprisings.

Public Space? Lost and Found combines significant recent projects in art and architecture with writings by historians and theorists. Contributors investigate strategies for responding to underrepresented communities and areas of conflict through the work of Marjetica Potrč in Johannesburg and Teddy Cruz on the Mexico-U.S. border, among others. They explore our collective stakes in ecological catastrophe through artistic research such as Atelier d'architecture autogérée's hubs for community action and recycling in Colombes, France, Brian Holmes's theoretical investigation of new forms of aesthetic perception in the age of the Anthropocene. Inspired by artist and MIT professor Antoni Muntadas's early coining of the term "media landscape," contributors also look ahead, casting a critical eye on the fraught impact of digital media and the Internet on public space.

This book is the first in a new series of volumes produced by the MIT School of Architecture and Planning's Program in Art, Culture, and Technology.

Gediminas Urbonas, an artist, activist, and educator, is an Associate Professor in MIT's School of Architecture and Planning and Director of the MIT Program in Art, Culture, and Technology. **Ann Lui** is an Assistant Professor at the School of the Art Institute of Chicago. **Lucas Freeman** is Writer in Residence at the MIT Program in Art, Culture, and Technology.

Contributors

Atelier d'architecture autogérée (Constantin Petcou and Doina Petrescu), Dennis Adams, Ute Meta Bauer, Bik Van Der Pol (Liesbeth Bik and Jos van der Pol), Adrian Blackwell, Ina Blom, Néstor García Canclini, Beatriz Colomina, Teddy Cruz, Juan Herreros, Brian Holmes, Andrés Jaque, Caroline Jones, Coryn Kempster with Julia Jamrozik, György Kepes, Rikke Luther, Matthew Mazzotta, Metahaven (Daniel van der Velden and Vinca Kruk), Antoni Muntadas, Otto Piene, Marjetica Potrč, Gerald Raunig with Christoph Brunner, Adèle Naudé Santos, Nader Tehrani, Troy Therrien, Urbonas Studio, Angela Vettese, Mariel Villeré, Mark Wigley, Krzysztof Wodiczko

With responses from

Catherine D'Ignazio, Ana María León, Ana Miljački, Doris Sommer, Meejin Yoon

architecture

Designing MIT
Bosworth's New Tech

Mark M. Jarzombek

At the end of the nineteenth century, MIT occupied an assortment of laboratories, classrooms, offices, and student facilities scattered across Boston's Back Bay. In 1912, backed by some of the country's leading financiers and industrialists, MIT officials purchased an undeveloped tract of land in Cambridge. Largely on the basis of a recommendation from John D. Rockefeller, Jr., MIT hired the École des Beaux-Arts–trained architect William Welles Bosworth to build and design a new campus.

Designing MIT is the first book to detail Bosworth's challenges in the planning and construction of MIT's unique Cambridge campus. MIT professor of architecture Mark Jarzombek provides a fascinating sample of the architectural debates of the time. He examines the competing project proposals—including one from Ralph Adams Cram, noted for his gothic West Point campus—and describes how Bosworth found his classically oriented vision challenged by the engineer John Freeman, a proponent of Frederick W. Taylor's new principle of scientific management. Jarzombek shows that their conflict ultimately resulted in a far more innovative design than either of their individual approaches would have produced, one that employed new European concepts of industrialism, efficiency, and aesthetics in academic structures.

Generously illustrated with images from the MIT archives, the story of Bosworth's new "Tech" offers more than just insight into the planning of a campus. Fraught with artistic clashes, bureaucratic tangles, and contemporary politics, the story of MIT's design sheds light on the academic culture of the early twentieth century, the role of patronage in the world of architecture, and the history of the Beaux-Arts style in the United States.

Mark M. Jarzombek is Professor of the History and Theory of Architecture at MIT. He is coauthor of *A Global History of Architecture* and *Architecture of First Societies: A Global Perspective*.

A generously illustrated account of artistic clashes, bureaucratic tangles, and contemporary politics that accompanied the design and building of MIT's Cambridge campus.

political theory
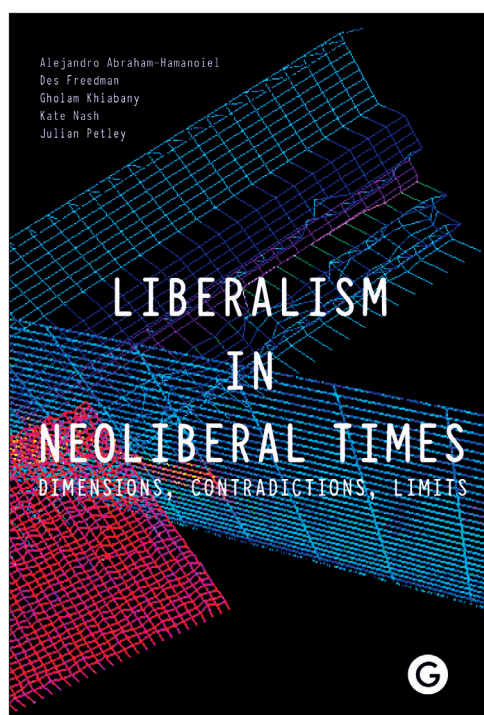
Liberalism in Neoliberal Times
Dimensions, Contradictions, Limits

edited by Alejandro Abraham-Hamanoiel, Des Freedman, Gholam Khiabany, Kate Nash, and Julian Petley

What does it mean to be a liberal in neoliberal times? This collection of short essays attempts to show how liberals and the wider concept of liberalism remain relevant in what many perceive to be a highly illiberal age. Liberalism in the broader sense revolves around tolerance, progress, humanitarianism, objectivity, reason, democracy, and human rights. Liberalism's emphasis on individual rights opened a theoretical pathway to neoliberalism, through private property, a classically minimal liberal state, and the efficiency of "free markets." In practice, neoliberalism is associated less with the economic deregulation championed by its advocates than the re-regulation of the economy to protect financial capital. *Liberalism in Neoliberal Times* engages with the theories, histories, practices, and contradictions of liberalism, viewing it in relation to four central areas of public life: human rights, ethnicity and gender, education, and the media. The contributors explore the transformations in as well as the transformative aspects of liberalism and highlight both its liberating and limiting capacities.

The book contends that liberalism—in all its forms—continues to underpin specific institutions such as the university, the free press, the courts, and, of course, parliamentary democracy. Liberal ideas are regularly mobilized in areas such as counterterrorism, minority rights, privacy, and the pursuit of knowledge. This book contends that while we may not agree on much, we can certainly agree that an understanding of liberalism and its emancipatory capacity is simply too important to be left to the liberals.

An exploration of the theories, histories, practices, and contradictions of liberalism today.

June
5 3/8 x 8, 184 pp.

$28.00S/£19.95 cloth
978-1-906897-40-6

Distributed for Goldsmiths Press

Alejandro Abraham-Hamanoiel is a postdoctoral researcher in the Department of Media and Communications at Goldsmiths, University of London. **Des Freedman** is Professor of Media and Communications at Goldsmiths, University of London. **Gholam Khiabany** is Reader in Media and Communications at Goldsmiths, University of London. **Kate Nash** is Professor of Sociology and Director of the Centre for the Study of Global Media and Democracy at Goldsmiths, University of London. **Julian Petley** is Professor of Screen Media and Journalism in the School of Arts at Brunel University.

Contributors
Alejandro Abraham-Hamanoiel, Patrick Ainley, Abdullahi An-Na'im, Michael Bailey, Haim Bresheeth, Başak Çalı, David Chandler, William Davies, Costas Douzinas, Natalie Fenton, Des Freedman, Roberto Gargarella, Priyamvada Gopal, Jonathan Hardy, John Holmwood, Ratna Kapur, Gholam Khiabany, Ray Kiely, Monika Krause, Deepa Kumar, Arun Kundnani, Colin Leys, Howard Littler, Kathleen Lynch, Robert W. McChesney, Nivedita Menon, Toby Miller, Kate Nash, Joan Pedro-Carañana, Julian Petley, Anne Phillips, Jonathan Rosenhead, Annabelle Sreberny, John Steel, Michael Wayne, Milly Williamson

media | public policy

The Death of Public Knowledge?

How Free Markets Destroy the General Intellect

edited by Aeron Davis

The Death of Public Knowledge? argues for the value and importance of shared, publicly accessible knowledge, and suggests that the erosion of its most visible forms, including public service broadcasting, education, and the network of public libraries, has worrying outcomes for democracy.

With contributions from both activists and academics, this collection of short, sharp essays focuses on different aspects of public knowledge, from libraries and education to news media and public policy. Together, the contributors record the stresses and strains placed upon public knowledge by funding cuts and austerity, the new digital economy, quantification and target-setting, neoliberal politics, and inequality. These pressures, the authors contend, not only hinder democracies, but also undermine markets, economies, and social institutions and spaces everywhere.

Covering areas of international public concern, these polemical, accessible texts include reflections on the fate of schools and education, the takeover of public institutions by private interests, and the corruption of news and information in the financial sector. They cover the influence over Greek media during recent EU negotiations, the role played by media and political elites in the Irish property bubble, the influence over government policy by corporate interests in the United States and Korea, and the squeeze on public service media in the United Kingdom, New Zealand, and the United States.

Individually and collectively, these pieces spell out the importance of maintaining public, shared knowledge in all its forms, and offer a rallying cry for doing so, asserting the need for strong public, financial, and regulatory support.

Aeron Davis is Professor of Political Communication and Codirector of the Political Economy Research Centre (PERC) at Goldsmiths, University of London.

Contributors

Toril Aalberg, Ian Anstice, Philip Augar, Rodney Benson, Aeron Davis, Des Freedman, Wayne Hope, Ken Jones, Bong-hyun Lee, Colin Leys, Andrew McGettigan, Michael Moran, Aristotelis Nikolaidis, Justin Schlosberg, Henry Silke, Roger Smith, Peter Thompson, Janine R. Wedel, Karel Williams, Kate Wright

A collection of short, sharp essays exploring the value of shared and accessible public knowledge in the face of its erosion.
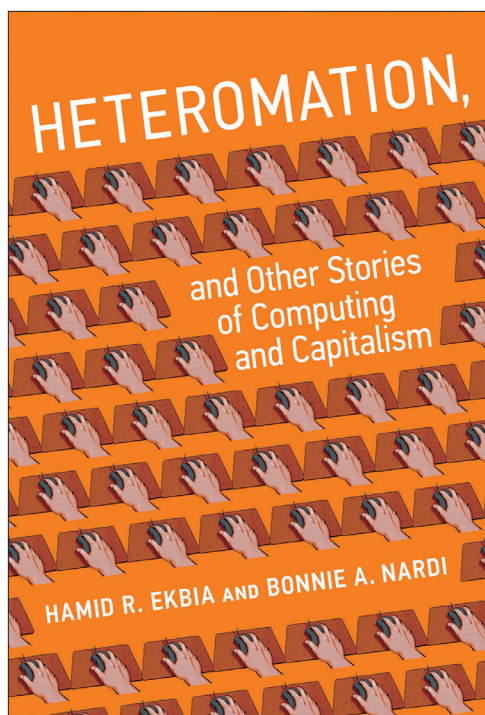
technology | labor studies

Heteromation, and Other Stories of Computing and Capitalism

Hamid Ekbia and Bonnie A. Nardi

The computerization of the economy—and everyday life—has transformed the division of labor between humans and machines, shifting many people into work that is hidden, poorly compensated, or accepted as part of being a "user" of digital technology. Through our clicks and swipes, logins and profiles, emails and posts, we are, more or less willingly, participating in digital activities that yield economic value to others but little or no return to us. Hamid Ekbia and Bonnie Nardi call this kind of participation—the extraction of economic value from low-cost or free labor in computer-mediated networks—"heteromation." In this book, they explore the social and technological processes through which economic value is extracted from digitally mediated work, the nature of the value created, and what prompts people to participate in the process.

Arguing that heteromation is a new logic of capital accumulation, Ekbia and Nardi consider different kinds of heteromated labor: communicative labor, seen in user-generated content on social media; cognitive labor, including microwork and self-service; creative labor, from gaming environments to literary productions; emotional labor, often hidden within paid jobs; and organizing labor, made up of collaborative groups such as citizen scientists. Ekbia and Nardi then offer a utopian vision: heteromation refigured to bring end users more fully into the prosperity of capitalism.

Hamid Ekbia is Professor of Economics, Cognitive Science, and International Studies and Director of the Center for Research on Mediated Interaction at Indiana University Bloomington and a coeditor of *Big Data Is Not a Monolith* (MIT Press). **Bonnie A. Nardi** is Professor of Informatics in the Donald Bren School of Information and Computer Sciences at the University of California, Irvine, and Cofounder of the Center for Research in Sustainability, Collapse-preparedness, and Information Technology there. She is the coauthor of *Acting with Technology* (MIT Press).

An exploration of the new division of labor between machines and humans, in which many workers (or "users") provide value with little or no compensation.

June
6 x 9, 304 pp.
12 illus.

$35.00S/£24.95 cloth
978-0-262-03625-2

Acting with Technology series

*media studies | human-computer interaction*

The Stuff of Bits

An Essay on the Materialities of Information

Paul Dourish

Virtual entities that populate our digital experience, like e-books, virtual worlds, and online stores, are backed by the large-scale physical infrastructures of server farms, fiber optic cables, power plants, and microwave links. But another domain of material constraints also shapes digital living: the digital representations sketched on whiteboards, encoded into software, stored in databases, loaded into computer memory, and transmitted on networks. These digital representations encode aspects of our everyday world and make them available for digital processing. The limits and capacities of those representations carry significant consequences for digital society.

In *The Stuff of Bits*, Paul Dourish examines the specific materialities that certain digital objects exhibit. He presents four case studies: emulation, the creation of a "virtual" computer inside another; digital spreadsheets and their role in organizational practice; relational databases and the issue of "the databaseable"; and the evolution of digital networking and the representational entailments of network protocols. These case studies demonstrate how a materialist account can offer an entry point to broader concerns—questions of power, policy, and polity in the realm of the digital.

Paul Dourish is Chancellor's Professor of Informatics in the Donald Bren School of Information and Computer Sciences at the University of California, Irvine. He is the author of *Where the Action Is: The Foundations of Embodied Interaction* and coauthor of *Divining a Digital Future: Mess and Mythology in Ubiquitous Computing*, both published by the MIT Press.
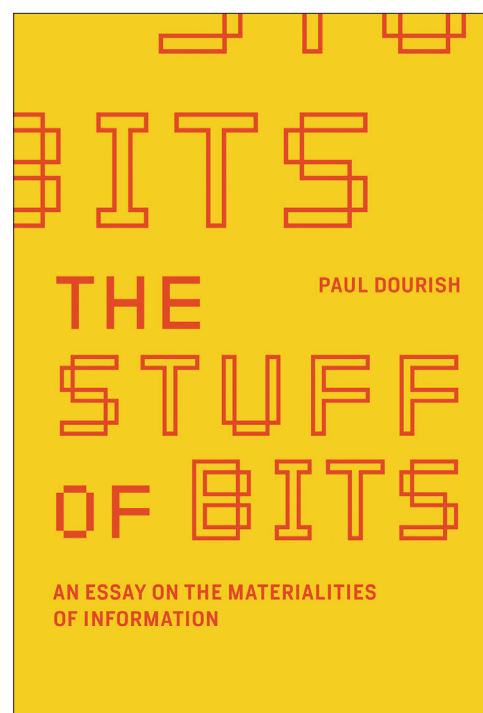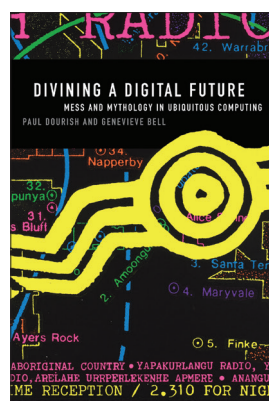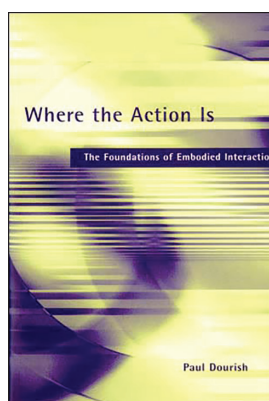
An argument that the material arrangements of information—how it is represented and interpreted—matter significantly for our experience of information and information systems.

May
6 x 9, 264 pp.
11 black & white illus.

$35.00S/£24.95 cloth
978-0-262-03620-7

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Where the Action Is
The Foundations of Embodied Interaction
Paul Dourish

2004, 978-0-262-54178-7
$30.00S/£22.95 paper

Divining a Digital Future
Mess and Mythology in Ubiquitous Computing
Paul Dourish and Genevieve Bell

2014, 978-0-262-52589-3
$25.00S/£18.95 paper

Sport 2.0

Transforming Sports for a Digital World

Andy Miah

Digital technology is changing everything about modern sports. Athletes and coaches rely on digital data to monitor and enhance performance. Officials use tracking systems to augment their judgment in what is an increasingly superhuman field of play. Spectators tune in to live sports through social media, or even through virtual reality. Audiences now act as citizen journalists whose collective shared data expands the places in which we consume sports news.

In *Sport 2.0*, Andy Miah examines the convergence of sports and digital cultures, examining not only how it affects our participation in sport but also how it changes our experience of life online. This convergence redefines how we think about our bodies, the social function of sports, and the kinds of people who are playing. Miah describes a world in which the rise of competitive computer game playing—e-sports—challenges and invigorates the social mandate. Miah also looks at the Olympic Games as an exemplar of digital innovation in sports, and offers a detailed look at the social media footprint of the 2012 London Games, discussing how organizers, sponsors, media, and activists responded to the world's largest media event.

In the end, Miah does not argue that physical activity will cease to be central to sports, or that digital corporeality will replace the nondigital version. Rather, he provides a roadmap for how sports will become mixed-reality experiences and abandon the duality of physical and digital.

Andy Miah (@andymiah) is Professor and Chair of Science Communication and Digital Media in the School of Environment and Life Sciences at the University of Salford, Manchester. He is the coauthor of *The Medicalization of Cyberspace* and *The Olympics* and the author of *Genetically Modified Athletes*.

Ramifications of the convergence of sports and digital technology, from athlete and spectator experience to the role of media innovation at the Olympics.

March
6 x 9, 288 pp.
1 illus.

$30.00S/£22.95 cloth
978-0-262-03547-7

environment | business

Dirty Gold
How Activism Transformed the Jewelry Industry

Michael John Bloomfield

Gold mining can be a dirty business. It creates immense amounts of toxic materials that are difficult to dispose of. Mines are often developed without community consent, and working conditions for miners can be poor. Income from gold has funded wars. And consumers buy wedding rings and gold chains not knowing about any of this. In *Dirty Gold*, Michael Bloomfield shows what happened when Earthworks, a small Washington-based NGO, launched a campaign for ethically sourced gold in the consumer jewelry market, targeting Tiffany and other major firms. The unfolding of the campaign and its effect on the jewelry industry offer a lesson in the growing influence of business in global environmental politics.

Earthworks planned a "shame" campaign, aimed at the companies' brands and reputations, betting that firms like Tiffany would not want to be associated with pollution, violence, and exploitation. As it happened, Tiffany contacted Earthworks before they could launch the campaign; the company was already looking for partners in finding ethically sourced gold.

Bloomfield examines the responses of three companies to "No Dirty Gold" activism: Tiffany, Wal-Mart, and Brilliant Earth, a small company selling ethical jewelry. He finds they offer a case study in how firms respond to activist pressure and what happens when businesses participate in such private governance schemes as the "Golden Rules" and the "Conflict-Free Gold Standard." Taking a firm-level view, Bloomfield examines the different opportunities for and constraints on corporate political mobilization within the industry.

Michael John Bloomfield is Lecturer (Assistant Professor) in International Development in the Department of Social and Policy Sciences at the University of Bath.

The response from the jewelry industry to a campaign for ethically sourced gold as a case study in the power of business in global environmental politics.

March
6 x 9, 256 pp.
5 illus.

$30.00S/£22.95 cloth
978-0-262-03578-1

Earth System Governance series
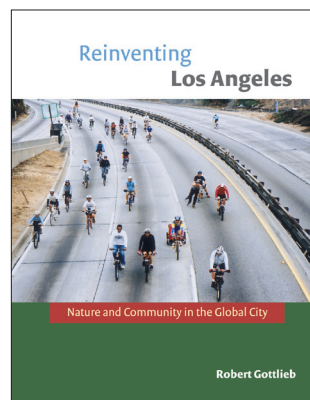
urban studies | environment

Global Cities

Urban Environments in Los Angeles,
Hong Kong, and China

Robert Gottlieb and Simon Ng

Over the past four decades, Los Angeles, Hong Kong, and key urban regions of China have emerged as global cities—in financial, political, cultural, environmental, and demographic terms. In this book, Robert Gottlieb and Simon Ng trace the global emergence of these urban areas and compare their responses to a set of six urban environmental issues.

These cities have different patterns of development: Los Angeles has been the quintessential horizontal city, the capital of sprawl; Hong Kong is dense and vertical; China's new megacities in the Pearl River Delta, created by an explosion in industrial development and a vast migration from rural to urban areas, combine the vertical and the horizontal. All three have experienced major environmental changes in a relatively short period of time. Gottlieb and Ng document how each has dealt with challenges posed by ports and the movement of goods, air pollution (Los Angeles, Hong Kong, and urban China are all notorious for their hazardous air quality), water supply (all three places are dependent on massive transfers of water) and water quality, the food system (from seed to table), transportation, and public and private space. Finally, they discuss the possibility of change brought about by policy initiatives and social movements.

Robert Gottlieb is Research Professor of Urban and Environmental Policy and Founder and former Director of the Urban and Environmental Policy Institute at Occidental College. He is the author of *Reinventing Los Angeles: Nature and Community in the Global City* (MIT Press) and other books. **Simon Ng** is Research Consultant and former Chief Research Officer at Civic Exchange, a public policy think tank in Hong Kong.

How Los Angeles, Hong Kong, and China deal with such urban environmental issues as ports, goods movement, air pollution, water quality, transportation, and public space.

May
6 x 9, 448 pp.
37 illus.

$35.00S/£24.95 cloth
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Robert Gottlieb
2007, 978-0-262-57243-9
$30.95T/£22.95 paper

media | communication

Alt-People
Digital Technologies and the Struggle for Community
Jessa Lingel

Whether by accidental keystroke or deliberate tinkering, technology is often used in ways that are unintended and unimagined by its designers and inventors. In *Alt-People*, Jessa Lingel offers an account of digital technology use that looks beyond Silicon Valley and college dropouts-turned-entrepreneurs. Instead, Lingel tells stories from the margins of countercultural communities that have made the Internet meet their needs, subverting established norms of how digital technologies should be used.

Lingel presents three case studies that contrast the imagined uses of the web to its lived and often messy practicalities. She examines a social media platform (developed long before Facebook) for body modification enthusiasts, with early web experiments in blogging, community, wikis, online dating, and podcasts; a network of communication technologies (both analog and digital) developed by a local community of punk rockers to manage information about underground shows; and the use of Facebook and Instagram for both promotional and community purposes by Brooklyn drag queens. Drawing on years of fieldwork, Lingel explores issues of alterity and community, inclusivity and exclusivity, secrecy and surveillance, and anonymity and self-promotion.

By examining online life in terms of countercultural communities, Lingel argues that looking at outsider experiences helps us to imagine new uses and possibilities for the tools and platforms we use in everyday life.

Jessa Lingel is Assistant Professor of Communication at the Annenberg School for Communication at the University of Pennsylvania.
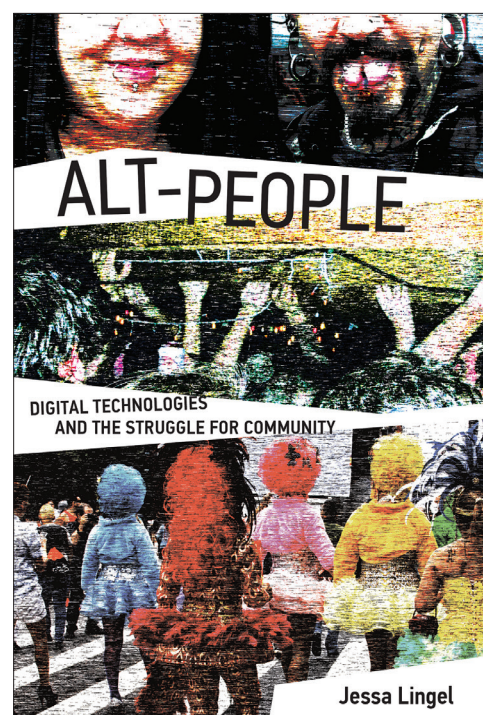
How countercultural communities have made the Internet meet their needs, subverting established norms of digital technology use.
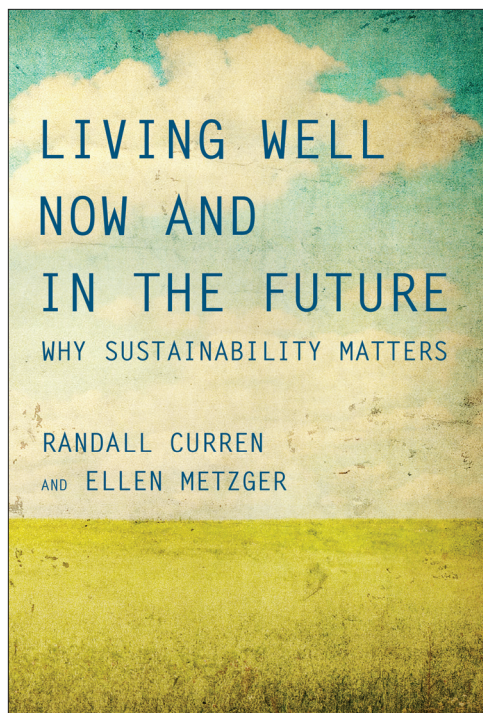
Living Well Now and in the Future
Why Sustainability Matters

Randall Curren and Ellen Metzger

Most people acknowledge the profound importance of sustainability, but few can define it. We are ethically bound to live sustainably for the sake of future generations, but what does that mean? In this book Randall Curren, a philosopher, and Ellen Metzger, a scientist, clarify normative aspects of sustainability. Combining their perspectives, they propose that sustainability can be understood as the art of living well together without diminishing opportunity to live well in the future.

Curren and Metzger lay out the nature and value of sustainability, survey the problems, catalog the obstacles, and identify the kind of efforts needed to overcome them. They formulate an *ethic of sustainability* with lessons for government, organizations, and individuals, and illustrate key ideas with three case studies. Curren and Metzger put intergenerational justice at the heart of sustainability; discuss the need for fair (as opposed to coercive) terms of cooperation to create norms, institutions, and practices conducive to sustainability; formulate a framework for a fundamental ethic of sustainability derived from core components of common morality; and emphasize the importance of sustainability education. The three illustrative case studies focus on the management of energy, water, and food systems, examining the 2010 Gulf of Mexico oil spill, Australia's National Water Management System, and patterns of food production in the Mekong region of Southeast Asia.

Randall Curren is Professor of Philosophy at the University of Rochester. **Ellen Metzger** is Professor of Geology and Director of Science Education at San Jose State University and Codirector of the Bay Area Environmental STEM Institute.

A philosopher and a scientist propose that sustainability can be understood as living well together without diminishing opportunity to live well in the future.

April
6 x 9, 256 pp.
1 illus.

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media | education

Worried About the Wrong Things

Youth, Risk, and Opportunity in the Digital World

Jacqueline Ryan Vickery

foreword by S. Craig Watkins

It's a familiar narrative in both real life and fiction, from news reports to television storylines: a young person is bullied online, or targeted by an online predator, or exposed to sexually explicit content. The consequences are bleak; the young person is shunned, suicidal, psychologically ruined. In this book, Jacqueline Ryan Vickery argues that there are other urgent concerns about young people's online experiences besides porn, predators, and peers. We need to turn our attention to inequitable opportunities for participation in a digital culture. Technical and material obstacles prevent low-income and other marginalized young people from the positive, community-building, and creative experiences that are possible online.

Vickery explains that cautionary tales about online risk have shaped the way we think about technology and youth. She analyzes the discourses of risk in popular culture, journalism, and policy, and finds that *harm-driven* expectations, based on a privileged perception of risk, enact control over technology. Opportunity-driven expectations, on the other hand, based on evidence and lived experience, produce discourses that acknowledge the practices and agency of young people rather than seeing them as passive victims who need to be protected.

Vickery first addresses how the discourses of risk regulate and control technology, then turns to the online practices of youth at a low-income, minority-majority Texas high school. She considers the participation gap and the need for schools to teach digital literacies, privacy, and different online learning ecologies. Finally, she shows that opportunity-driven expectations can guide young people's online experiences in ways that balance protection and agency.

Jacqueline Ryan Vickery is Assistant Professor in the Department of Media Arts at the University of North Texas.
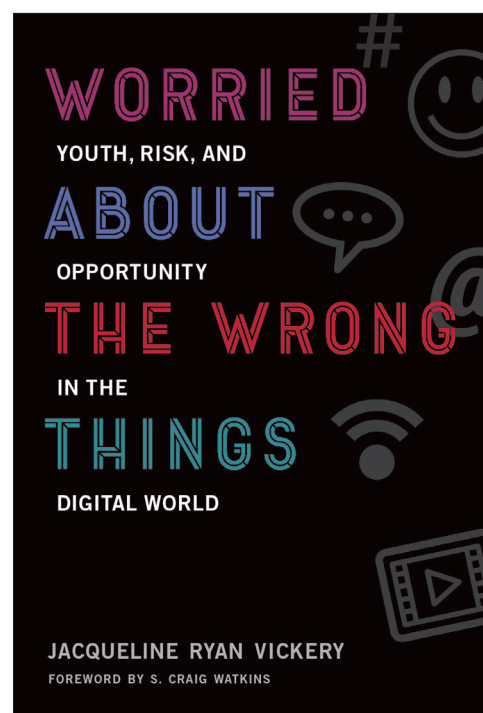
Why media panics about online dangers overlook another urgent concern: creating equitable online opportunities for marginalized youth.

June
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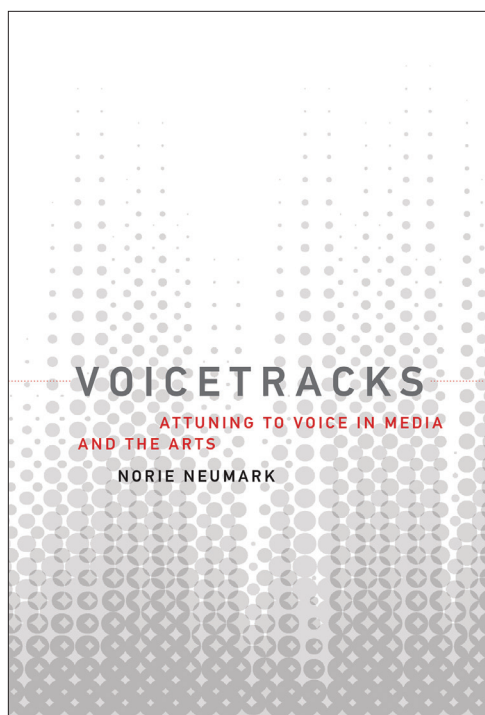
Voicetracks

Attuning to Voice in Media and the Arts

Norie Neumark

Moved by the Aboriginal understandings of songlines or dreaming tracks, Norie Neumark's *Voicetracks* seeks to deepen an understanding of voice through listening to a variety of voicing/sound/voice projects from Australia, Europe, and the United States. Not content with the often dry tone of academic writing, the author engages a "wayfaring" process that brings together theories of sound, animal, and posthuman studies in order to change the ways we think about and act with the assemblages of living creatures, things, places, and histories around us.

Neumark evokes both the literal—the actual voices within the works she examines—and the metaphorical—in a new materialist exploration of voice encompassing human, animal, thing, and assemblages. She engages with artists working with animal sounds and voices; voices of place, placed voices in installation works; voices of technology; and "unvoicing," disturbances in the image/voice relationship and in the idea of what voice is. She writes about remixes, the Barbie Liberation Organisation, and breath in Beijing, about cat videos, speaking fences in Australia, and an artist who reads (to) the birds. Finally, she considers ethics and politics, and describes how her own work has shaped her understandings and apprehensions of voice.

Norie Neumark, a sound and media artist, is Honorary Professorial Fellow at Victorian College of the Arts, University of Melbourne, and Emeritus Professor at La Trobe University in Melbourne. She coedited *At a Distance: Precursors to Art and Activism on the Internet* and *VOICE: Vocal Aesthetics in Digital Arts and Media*, both published by the MIT Press.

The affects, aesthetics, and ethics of voice in the new materialist turn, explored through encounters with creative works in media and the arts.

philosophy

A Mark of the Mental

In Defense of Informational Teleosemantics

Karen Neander

In *A Mark of the Mental*, Karen Neander considers the representational power of mental states—described by the cognitive scientist Zenon Pylyshyn as the "second hardest puzzle" of philosophy of mind (the first being consciousness). The puzzle at the heart of the book is sometimes called "the problem of mental content," "Brentano's problem," or "the problem of intentionality." Its motivating mystery is how neurobiological states can have semantic properties such as meaning or reference. Neander proposes a naturalistic account for sensory-perceptual (nonconceptual) representations.

Drawing on insights from causal theories of reference, teleosemantics, and state space semantics, a theory of naturalized mental representation.

Neander draws on insights from state-space semantics (which appeals to relations of second-order similarity between representing and represented domains), causal theories of reference (which claim the reference relation is a causal one), and teleosemantic theories (which claim that semantic norms, at their simplest, depend on functional norms). She proposes and defends an intuitive, theoretically well-motivated but highly controversial thesis: sensory-perceptual systems have the function to produce inner state changes that are the analogs of as well as caused by their referents. Neander shows that the three main elements—functions, causal-information relations, and relations of second-order similarity—complement rather than conflict with each other. After developing an argument for teleosemantics by examining the nature of explanation in the mind and brain sciences, she develops a theory of mental content and defends it against six main content-determinacy challenges to a naturalized semantics.

Karen Neander is Professor of Philosophy at Duke University.

June | 6 x 9, 296 pp. | 13 illus.

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Life and Mind series

philosophy | science, technology, and society

New Romantic Cyborgs

Romanticism, Information Technology, and the End of the Machine

Mark Coeckelbergh

Romanticism and technology are widely assumed to be opposed to each other. Romanticism—understood as a reaction against rationalism and objectivity—is perhaps the last thing users and developers of information and communication technology (ICT) think about when they engage with computer programs and electronic devices. And yet, as Mark Coeckelbergh argues in this book, this way of thinking about technology is itself shaped by romanticism and obscures a better and deeper understanding of our relationship to technology. Coeckelbergh describes the complex relationship between technology and romanticism that links nineteenth-century monsters, automata, and mesmerism with twenty-first-century technology's magic devices and romantic cyborgs.

An account of the complex relationship between technology and romanticism that links nineteenth-century monsters, automata, and mesmerism with twenty-first-century technology.
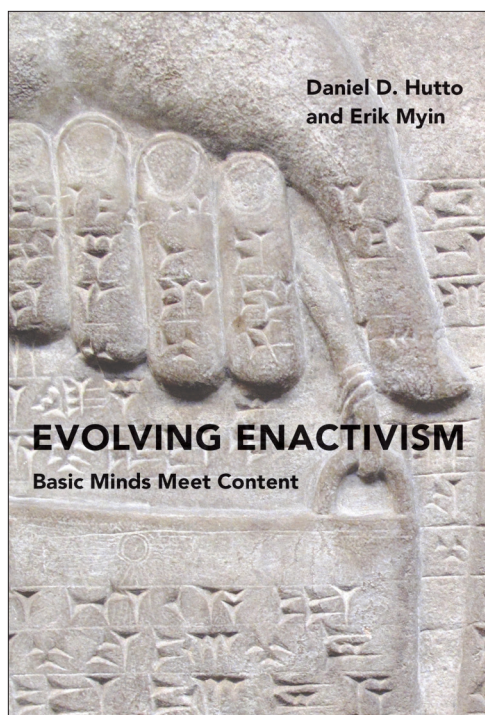
Coeckelbergh argues that current uses of ICT can be interpreted as attempting a marriage of Enlightenment rationalism and romanticism. He describes the "romantic dialectic," when this new kind of material romanticism, particularly in the form of the cyborg as romantic figure, seems to turn into its opposite. He shows that both material romanticism and the objections to it are still part of modern thinking, and part of the romantic dialectic. Reflecting on what he calls "the end of the machine," Coeckelbergh argues that to achieve a more profound critique of contemporary technologies and culture, we need to explore not only different ways of thinking but also different technologies—and that to accomplish the former we require the latter.

Mark Coeckelbergh is Professor of Philosophy of Media and Technology in the Department of Philosophy at the University of Vienna.

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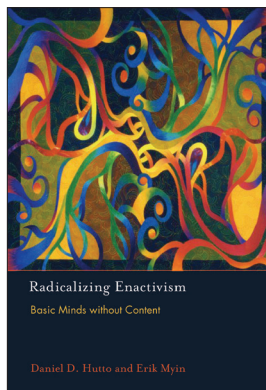
Evolving Enactivism

Basic Minds Meet Content

Daniel D. Hutto and Erik Myin

Evolving Enactivism argues that cognitive phenomena—perceiving, imagining, remembering—can be best explained in terms of an interface between contentless and content-involving forms of cognition. Building on their earlier book *Radicalizing Enactivism*, which proposes that there can be forms of cognition without content, Daniel Hutto and Erik Myin demonstrate the unique explanatory advantages of recognizing that only some forms of cognition have content while others—the most elementary ones—do not. They offer an account of the mind in duplex terms, proposing a complex vision of mentality in which these basic contentless forms of cognition interact with content-involving ones.

Hutto and Myin argue that the most basic forms of cognition do not, contrary to a currently popular account of cognition, involve picking up and processing information that is then used, reused, stored, and represented in the brain. Rather, basic cognition is contentless—fundamentally interactive, dynamic, and relational. In advancing the case for a radically enactive account of cognition, Hutto and Myin propose crucial adjustments to our concept of cognition and offer theoretical support for their revolutionary rethinking, emphasizing its capacity to explain basic minds in naturalistic terms. They demonstrate the explanatory power of the duplex vision of cognition, showing how it offers powerful means for understanding quintessential cognitive phenomena without introducing scientifically intractable mysteries into the mix.

Daniel D. Hutto is Professor of Philosophical Psychology at the University of Wollongong and the author of *Folk Psychological Narratives: The Sociocultural Basis for Understanding Reasons* (MIT Press). **Erik Myin** is Professor of Philosophy at the University of Antwerp. Hutto and Myin are the authors of *Radicalizing Enactivism: Basic Minds without Content* (MIT Press).

An extended argument that cognitive phenomena—perceiving, imagining, remembering—can be best explained in terms of an interface between contentless and content-involving forms of cognition.

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Radicalizing Enactivism
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Daniel D. Hutto and Erik Myin
2013, 978-0-262-01854-8
$41.00S/£30.95 cloth

philosophy | vision

Visual Phenomenology

Michael Madary

In this book, Michael Madary examines visual experience, drawing on both phenomenological and empirical methods of investigation. He finds that these two approaches—careful, philosophical description of experience and the science of vision—independently converge on the same result: Visual perception is an ongoing process of anticipation and fulfillment.

Madary first makes the case for the descriptive premise, arguing that the phenomenology of vision is best described as on ongoing process of anticipation and fulfillment. He discusses visual experience as being perspectival, temporal, and indeterminate; considers the possibility of surprise when appearances do not change as we expect; and considers the content of visual anticipation. Madary then makes the case for the empirical premise, showing that there are strong empirical reasons to model vision using the general form of anticipation and fulfillment. He presents a range of evidence from perceptual psychology and neuroscience, and reinterprets evidence for the two-visual-systems hypothesis. Finally, he considers the relationship between visual perception and social cognition. An appendix discusses Husserlian phenomenology as it relates to the argument of the book.

Madary argues that the fact that there is a convergence of historically distinct methodologies itself is an argument that supports his findings. With *Visual Phenomenology*, he creates an exchange between the humanities and the sciences that takes both methods of investigation seriously.

Michael Madary is Assistant Researcher and Lecturer at the Johannes Gutenberg University of Mainz.

"Defending the idea that visual perception is an ongoing process of anticipation and fulfillment, Madary draws from both phenomenological studies and vision science to provide new, important insights into how we see the world and others. His analysis is rich with the empirical and experiential facts. In contrast to many works on vision, this book is bright and clear and eminently readable."
—Shaun Gallagher, Lillian and Morrie Moss Professor of Excellence in Philosophy, University of Memphis; author of *How the Body Shapes the Mind* and *The Phenomenological Mind*
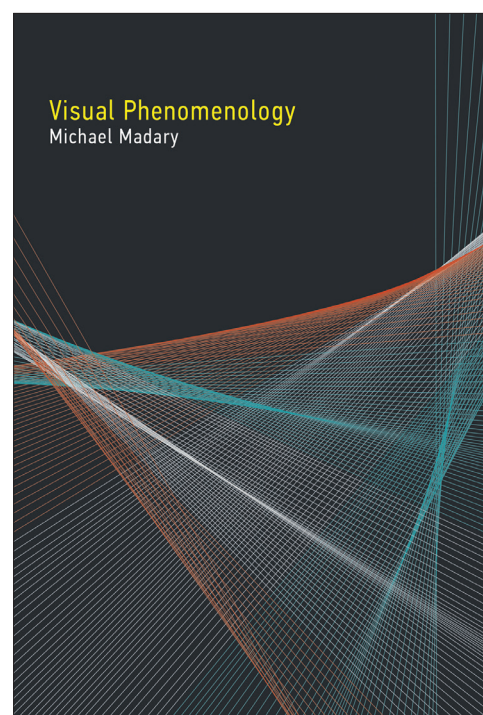
Phenomenological and empirical methods of investigating visual experience converge to support the thesis that visual perception is an ongoing process of anticipation and fulfillment.

philosophy | psychology

Moral Psychology, Volume 5

Virtue and Character

edited by Walter Sinnott-Armstrong and Christian B. Miller

Groundbreaking essays and commentaries on the ways that recent findings in psychology and neuroscience illuminate virtue and character and related issues in philosophy.

April
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Philosophers have discussed virtue and character since Socrates, but many traditional views have been challenged by recent findings in psychology and neuroscience. This fifth volume of *Moral Psychology* grows out of this new wave of interdisciplinary work on virtue, vice, and character. It offers essays, commentaries, and replies by leading philosophers and scientists who explain and use empirical findings from psychology and neuroscience to illuminate virtue and character and related issues in moral philosophy. The contributors discuss such topics as eliminativist and situationist challenges to character; investigate the conceptual and empirical foundations of self-control, honesty, humility, and compassion; and consider whether the virtues contribute to well-being.

Walter Sinnott-Armstrong is Stillman Professor of Practical Ethics in the Philosophy Department and the Kenan Institute for Ethics at Duke University. He edited the previous volumes in *Moral Psychology*. **Christian B. Miller** is Professor of Philosophy at Wake Forest University and Director of the Character Project (www.thecharacterproject.com).

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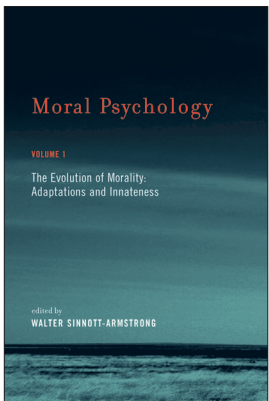
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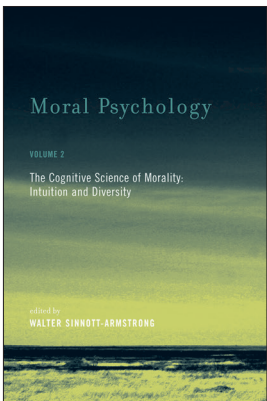
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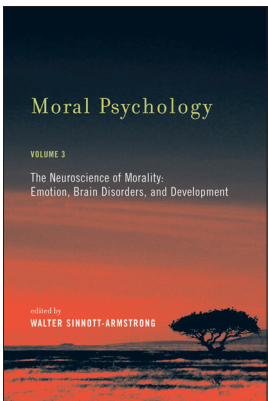
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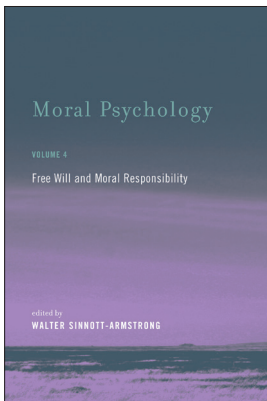
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philosophy of science | psychiatry

Extraordinary Science and Psychiatry

Responses to the Crisis in Mental Health Research

edited by Jeffrey Poland and Şerife Tekin

Psychiatry and mental health research is in crisis, with tensions between psychiatry's clinical and research aims and controversies over diagnosis, treatment, and scientific constructs for studying mental disorders. At the center of these controversies is the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), which—especially after the publication of DSM-5—many have found seriously flawed as a guide for research. This book addresses the crisis and the associated "extraordinary science" (Thomas Kuhn's term for scientific research during a state of crisis) from the perspective of philosophy of science. The goal is to help reconcile the competing claims of science and phenomenology within psychiatry and to offer new insights for the philosophy of science.

Leading scholars offer perspectives from the philosophy of science on the crisis in psychiatric research that exploded after the publication of DSM-5.

The contributors discuss the epistemological origins of the current crisis, the nature of evidence in psychiatric research, and the National Institute for Mental Health's Research Domain Criteria project. They consider particular research practices in psychiatry—computational, personalized, mechanistic, and user-led—and the specific categories of schizophrenia, depressive disorder, and bipolar disorder. Finally, they examine the DSM's dubious practice of pathologizing normality.

Jeffrey Poland is Visiting Professor of Science and Technology Studies at Brown University and a Senior Lecturer in History, Philosophy, and Social Science at Rhode Island School of Design. He is the coeditor of *Addiction and Responsibility* (MIT Press). **Şerife Tekin** is Assistant Professor in the Department of Philosophy and Religious Studies at Daemen College, Amherst, New York.

Contributors
Richard P. Bentall, John Bickle, Robyn Bluhm, Rachel Cooper, Kelso Cratsley, Owen Flanagan, Michael Frank, George Graham, Ginger A. Hoffman, Harold Kincaid, Aaron Kostko, Edouard Machery, Jeffrey Poland, Claire Pouncey, Şerife Tekin, Peter Zachar

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Philosophical Psychopathology series

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philosophy

Truth in Husserl, Heidegger, and the Frankfurt School

Critical Retrieval

Lambert Zuidervaart

The idea of truth is a guiding theme for German continental philosophers from Husserl through Habermas. In this book, Lambert Zuidervaart examines debates surrounding the idea of truth in twentieth-century German continental philosophy. He argues that the Heideggerian and critical theory traditions have much in common—despite the miscommunication, opposition, and even outright hostility that have prevailed between them—including significant roots in the phenomenology of Edmund Husserl. Zuidervaart sees the tensions between Heideggerian thought and critical theory as potentially generative sources for a new approach to the idea of truth. He argues further that the "critical retrieval" of insights from German continental philosophy can shed light on current debates in analytic truth theory.

An innovative, ambitious, tradition-crossing study drawing on the work of Husserl, Heidegger, Horkheimer, Adorno, and Habermas to propose a new and transformative concept of truth.

Zuidervaart structures his account around three issues: the distinction between propositional truth and truth that is more than propositional (which he calls *existential truth*); the relationship between propositional truth and the discursive justification of propositional truth claims, framed in analytic philosophy by debates between epistemic and nonepistemic conceptions of truth; and the relationship between propositional truth and the objectivity of knowledge, often presented in analytic philosophy as a conflict between realists and antirealists over the relation between "truth bearers" and "truth makers." In an innovative and ambitious argument, drawing on the work of Husserl, Heidegger, Horkheimer, Adorno, and Habermas, Zuidervaart proposes a new and transformative conception of truth.

Lambert Zuidervaart is Professor of Philosophy Emeritus at the Institute for Christian Studies in Toronto. He is the author of *Adorno's Aesthetic Theory* (MIT Press), *Artistic Truth*, *Social Philosophy after Adorno*, *Religion, Truth, and Social Transformation*, and other books.

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cognitive science | philosophy

Embodiment, Enaction, and Culture

Investigating the Constitution of the Shared World

edited by Christoph Durt, Thomas Fuchs, and Christian Tewes

Recent accounts of cognition attempt to overcome the limitations of traditional cognitive science by reconceiving cognition

The first interdisciplinary investigation of the cultural context of enactive embodiment, offering perspectives that range from the neurophilosophical to the anthropological.

as enactive and the cognizer as an embodied being who is embedded in biological, psychological, and cultural contexts. Cultural forms of sense-making constitute the shared world, which in turn is the origin and place of cognition. This volume is the first interdisciplinary collection on the cultural context of embodiment, offering perspectives that range from the neurophilosophical to the anthropological.

The book brings together new contributions by some of the most renowned scholars in the field and the latest results from up-and-coming researchers. The contributors explore conceptual foundations, drawing on work by Husserl, Merleau-Ponty, and Sartre, and respond to recent critiques. They consider whether there is something in the self that precedes intersubjectivity and inquire into the relation between culture and consciousness, the nature of shared meaning and social understanding, the social dimension of shame, and the nature of joint affordances. They apply the notion of radical enactive cognition to evolutionary anthropology, and examine the concept of the body in relation to culture in light of studies in such fields as phenomenology, cognitive neuroscience, psychology, and psychopathology. Through such investigations, the book breaks ground for the study of the interplay of embodiment, enaction, and culture.

Christoph Durt is Marie Skłodowska Curie Experienced Researcher at the University of Vienna. **Thomas Fuchs** is Karl Jaspers Professor of Philosophy and Psychiatry at the University of Heidelberg. **Christian Tewes** is a project manager and coordinator of the research group Embodiment as a Paradigm of Evolutionary Anthropology at the University of Heidelberg.

philosophy | cognitive science

Moral Judgments as Educated Intuitions

Hanno Sauer

Rationalists about the psychology of moral judgment argue that moral cognition has a rational foundation. Recent chal-

An argument that moral reasoning plays a crucial role in moral judgment through episodes of rational reflection that have established patterns for automatic judgment foundation.

lenges to this account, based on findings in the empirical psychology of moral judgment, contend that moral thinking has no rational basis. In this book, Hanno Sauer argues that moral reasoning does play a role in moral judgment—but not, as is commonly supposed, because

conscious reasoning produces moral judgments directly. Moral reasoning figures in the acquisition, formation, maintenance, and reflective correction of moral intuitions. Sauer proposes that when we make moral judgments we draw on a stable repertoire of intuitions about what is morally acceptable, which we have acquired over the course of our moral education—episodes of rational reflection that have established patterns for automatic judgment foundation. Moral judgments are educated and rationally amenable moral intuitions.

Sauer engages extensively with the empirical evidence on the psychology of moral judgment and argues that it can be shown empirically that reasoning plays a crucial role in moral judgment. He offers detailed counterarguments to the anti-rationalist challenge (the claim that reason and reasoning play no significant part in morality and moral judgment) and the emotionist challenge (the argument for the emotional basis of moral judgment). Finally, he uses Joshua Greene's Dual Process model of moral cognition to test the empirical viability and normative persuasiveness of his account of educated intuitions. Sauer shows that moral judgments can be automatic, emotional, intuitive, and rational at the same time.

Hanno Sauer is Assistant Professor of Ethics at Utrecht University.

The Social Turn in Moral Psychology

Mark Fedyk

In this book, Mark Fedyk offers a novel analysis of the relationship between moral psychology and allied fields in the social sciences. Fedyk shows how the social sciences can be integrated with moral philosophy, argues for the benefits of such an integration, and offers a new ethical theory that can be used to bridge research between the two.

An argument that moral psychology can benefit from closer integration with the social sciences, offering a novel ethical theory bridging the two.

Fedyk argues that moral psychology should take a social turn, investigating the psychological processes that motivate patterns of social behavior defined as ethical using normative information extracted from the social sciences. He points out methodological problems in conventional moral psychology, particularly the increasing methodological and conceptual inconsilience with both philosophical ethics and evolutionary biology. Fedyk's "causal theory of ethics" is designed to provide moral psychology with an ethical theory that can be used without creating tension between its scientific practice and the conceptual vocabulary of philosophical ethics. His account aims both to redirect moral psychology toward more socially realistic questions about human life and to introduce philosophers to a new form of ethical naturalism—a way of thinking about how to use different fields of scientific research to answer some of the traditional questions that are at the heart of ethics.

Mark Fedyk is Assistant Professor in the Department of Philosophy at Mount Allison University.

March | 6 x 9, 256 pp. | 7 illus.

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Ageism

Stereotyping and Prejudice against Older Persons

SECOND EDITION

edited by Todd D. Nelson

People commonly use age to categorize and stereotype others—even though those who stereotype the elderly are eventually bound to become elderly themselves. Ageism is found cross-culturally, but it is especially prevalent in the United States, where most people regard growing older with depression, fear, and anxiety. Older people in the United States are stigmatized and marginalized, with often devastating consequences. This volume collects the latest theory and research on prejudice against older people, offering perspectives from psychology, nursing, medicine, social work, and other fields. The second edition has been completely updated, with new or extensively revised contributions. The contributors, all experts in their fields, consider issues that range from elder abuse to age discrimination against workers.

Current research and theory from a range of disciplines on ageism, discussing issues from elder abuse to age discrimination against workers, revised and updated.

There has been a relative dearth of research on ageism, perhaps because age prejudice is still considered socially acceptable. This book is still the only one that examines ageism in such detail, from such diverse scholarly perspectives. The contributors discuss the origins and effects of ageism and offer suggestions for how to reduce ageism as the wave of baby boomers heads for old age.

Todd D. Nelson is Professor of Psychology at California State University, Stanislaus.

Contributors
Yoav S. Bergman, Ehud Bodner, Jennifer Barbour, Piers Bayl-Smith, Daphne Blunt Bugental, Maria Clara P. de Paula Couto, Susan T. Fiske, Jeff Greenberg, Barbara Griffin, Jessica A. Hehman, Peter Helm, Sarah H. Kagan, Molly Maxfield, Lynn McDonald, Mary Chase Mize, Joann M. Montepare, Todd D. Nelson, Michael S. North, Amanda Rumsey, Jeff Schimel, Laura Shannonhouse, Dirk Wentura, Susan Krauss Whitbourne

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Invisible Mind

Flexible Social Cognition and Dehumanization

Lasana T. Harris

In *Invisible Minds*, Lasana Harris takes a social neuroscience approach to explaining the worst of human behavior. How can a person take part in racially motivated violence and then tenderly cradle a baby or lovingly pet a puppy? Harris argues that our social cognition—the ability to infer the mental states of another agent—is flexible. That is, we can either engage or withhold social cognition. If we withhold social cognition, we dehumanize the other person. Integrating theory from a range of disciplines—social, developmental, and cognitive psychology, evolutionary anthropology, philosophy, economics, and law— with neuroscience data, Harris explores how and why we engage or withhold social cognition. He examines research in these different disciplines and describes biological processes that underlie flexible social cognition, including brain, genetic, hormonal, and physiological mechanisms.

An interdisciplinary view of the evolution and consequences of flexible social cognition—the capacity to withhold the inference of mental states to other people.

After laying out the philosophical and theoretical terrain, Harris explores examples of social cognitive ability in nonhumans and explains the evolutionary staying power of this trait. He addresses two motives for social cognition—prediction and explanation—and reviews cases of anthropomorphism (extending social cognition to entities without mental states) and dehumanization (withholding it from people with mental states). He discusses the relation of social cognition to the human/nonhuman distinction and to the evolution of sociality. He considers the importance of social context and, finally, he speculates about the implications of flexible social cognition in such arenas for human interaction as athletic competition and international disputes.

Lasana T. Harris is Senior Lecturer in Experimental Psychology at University College London and Guest Lecturer in Social and Organizational Psychology at Leiden University.

Mindmade Politics

The Cognitive Roots of International Climate Governance

Manjana Milkoreit

Mindmade Politics takes a novel, interdisciplinary approach to understanding the complex and contentious dynamics of global climate politics. Manjana Milkoreit argues that integrating cognitive theories and international relations scholarship can yield valuable insights into multilateral cooperation (or the lack of it) on climate change and the process of negotiating climate agreements.

How integrating cognitive theories and international relations scholarship can yield valuable insights into the effectiveness of climate negotiations.

Milkoreit argues that cognition is at the root of all political behavior and decision making. Some of the most important variables of international relations scholarship—the motivations of political actors—are essentially cognitive variables. Drawing on interviews with participants in the United Nations Framework Convention on Climate Change (UNFCCC), Milkoreit examines the thoughts, beliefs, and emotions of individuals and groups, focusing on the mental mechanisms connecting decision-relevant factors and observed political behavior.

Milkoreit offers a brief introduction to international relations theory and key insights regarding the politics of climate change; outlines the basic cognitive theories and concepts that she applies in her analysis, discussing the cognitive challenges of climate change; and describes the integrated methodological approach she used for her cognitive-political analysis. She presents four cognitive-affective lessons for global change politics, including the "cognitive triangle" of three major concerns of climate negotiators—*threat*, *identity*, and *justice*—and she identifies six major belief systems driving negotiators. Finally, she offers guidance for climate governance based on her findings. Utilizing recent advances in cognitive science, Milkoreit builds a theoretical bridge between two major disciplines that will benefit both scholars and practitioners.

Manjana Milkoreit is Assistant Professor of Public Policy in the Department of Political Science at Purdue University.

meteorology | cognitive science

Minding the Weather

How Expert Forecasters Think

Robert R. Hoffman, J. Gregory Trafton, Paul J. Roebber, H. Michael Mogil, and Daphne S. LaDue

This book argues that human cognition systems is the least understood, yet probably most important, component of forecasting accuracy. *Minding the Weather* investigates how people acquire massive and highly organized knowledge and develop the reasoning skills and strategies that enable them to achieve the highest levels of performance.

A detailed study of research on the psychology of expertise in weather forecasting, drawing on findings in cognitive science, meteorology, and computer science.

The authors consider such topics as the forecasting workplace; atmospheric scientists' descriptions of their reasoning strategies; the nature of expertise; forecaster knowledge, perceptual skills, and reasoning; and expert systems designed to imitate forecaster reasoning. Drawing on research in cognitive science, meteorology, and computer science, the authors argue that forecasting involves an interdependence of humans and technologies. Human expertise will always be necessary.

Robert R. Hoffman is Senior Research Scientist at the Institute for Human and Machine Cognition in Pensacola, Florida. **J. Gregory Trafton** is Cognitive Scientist at the Naval Research Laboratory in Washington, D.C. **Paul J. Roebber** is Distinguished Professor of Atmospheric Sciences at the University of Wisconsin-Milwaukee. **H. Michael Mogil** is currently a consulting meteorologist focusing on meteorological education in the primary and secondary school systems. **Daphne S. LaDue** is a Research Scientist at the University of Oklahoma's Center for Analysis and Prediction of Storms and Director of the Research Experiences for Undergraduates Program at the National Weather Center in Norman, Oklahoma.

July | 7 x 9, 528 pp. | 82 black & white illus., 21 color plates

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neuroscience | medicine

Cannabinoids and the Brain

Linda A. Parker

The cannabis plant has been used for recreational and medicinal purposes for more than 4,000 years, but the scientific investigation into its effects has only recently yielded useful results. In this book, Linda Parker offers a review of the scientific evidence on the effects of cannabinoids on brain and behavioral functioning, with an emphasis on potential therapeutic uses.

A review of the scientific evidence on the effects of cannabinoids on brain and behavioral functioning, with an emphasis on potential therapeutic use.

Parker describes the discovery of tetrahydocannbinol (THC), the main psychoactive component of cannabis, and the further discovery of cannabinoid receptors in the brain. She explains that the brain produces chemicals similar to THC, which act on the same receptors as THC, and shows that the endocannabinoid system is involved in all aspects of brain functioning. Parker reports that cannabis contains not only the psychoactive compound THC, but also other compounds of potential therapeutic benefit, and that one of them, cannabidiol (CBD), shows promise for the treatment of pain, anxiety, and epilepsy. Parker reviews the evidence on cannabinoids and anxiety, depression, mood, sleep, schizophrenia, learning and memory, addiction, sex, appetite and obesity, chemotherapy-induced nausea, epilepsy, and such neurodegenerative disorders as multiple sclerosis and Alzheimer's Disease. Each chapter also links the scientific evidence to historical and anecdotal reports of the medicinal use of cannabis. As debate about the medical use of marijuana continues, Parker's balanced and objective review of the fundamental science and potential therapeutic effects of cannabis is especially timely.

Linda A. Parker is Professor in the Psychology and Collaborative Neuroscience Program and Canada Research Chair in Behavioural Neuroscience at the University of Guelph. She was the 2016 recipient of the Lifetime Achievement Award from the International Cannabinoid Research Society and is currently President of the Canadian Consortium for Investigation of Cannabinoids.

March | 6 x 9, 248 pp. | 11 illus.

$35.00S/£24.95 cloth
978-0-262-03579-8

The Computational Brain

25th Anniversary Edition

Patricia S. Churchland and Terrence J. Sejnowski

Before *The Computational Brain* was published in 1992, conceptual frameworks for brain function were based on the behavior of single neurons, applied globally. In *The Computational Brain*, Patricia Churchland and Terrence Sejnowski developed a different conceptual framework, based on large populations of neurons. They did this by showing that patterns of activities among the units in trained artificial neural network models had properties that resembled those recorded from populations of neurons recorded one at a time. It is one of the first books to bring together computational concepts and behavioral data within a neurobiological framework. Aimed at a broad audience of neuroscientists, computer scientists, cognitive scientists, and philosophers, *The Computational Brain* is written for both expert and novice. This anniversary edition offers a new preface by the authors that puts the book in the context of current research.

This approach influenced a generation of researchers. Even today, when neuroscientists can routinely record from hundreds of neurons using optics rather than electricity, and the 2013 White House BRAIN initiative heralded a new era in innovative neurotechnologies, the main message of *The Computational Brain* is still relevant.

Patricia S. Churchland is President's Professor of Philosophy Emerita at the University of California, San Diego, and Adjunct Professor at the Salk Institute for Biological Sciences. She is the author of many books, including *Neurophilosophy* and *Brain-Wise* (both published by the MIT Press). **Terrence J. Sejnowski** is Francis Crick Professor and Director of the Computational Neurobiology Laboratory at the Salk Institute, an Investigator at the Howard Hughes Medical Institute, and Distinguished Professor at the University of California, San Diego. He was a member of the advisory committee for President Obama's BRAIN Initiative.

Praise for the original edition

"This attractive and well-illustrated volume falls somewhere between a trade book and a textbook. . . . The reader will be well rewarded who seeks to understand, from well-chosen examples, how to merge the analysis of neuroscientific data with the developments of computational principles."
—**Michael Arbib,** *Science*

An anniversary edition of the classic work that influenced a generation of neuroscientists and cognitive neuroscientists.

February
7 x 10, 568 pp.
1 illus.

$45.00X/£34.95 paper
978-0-262-53339-3

Computational Neuroscience series

Also available

Brain-Wise
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Patricia Churchland
2002, 978-0-262-53200-6
45.00S/£34.95 paper

neuroscience | psychology

MATLAB for Brain and Cognitive Scientists

Mike X Cohen

MATLAB is one of the most popular programming languages for neuroscience and psychology research. Its balance of us-

An introduction to a popular programming language for neuro-science research, taking the reader from beginning to intermediate and advanced levels of MATLAB programming.

ability, visualization, and widespread use makes it one of the most powerful tools in a scientist's toolbox. In this book, Mike Cohen teaches brain scientists how to program in MATLAB, with a focus on applications most commonly used in neuroscience and psychol-

ogy. Although most MATLAB tutorials will abandon users at the beginner's level, leaving them to sink or swim, *MATLAB for Brain and Cognitive Scientists* takes readers from beginning to intermediate and advanced levels of MATLAB programming, helping them gain real expertise in applications that they will use in their work.

The book offers a mix of instructive text and rigorous explanations of MATLAB code along with programming tips and tricks. The goal is to teach the reader how to program data analyses in neuroscience and psychology. Readers will learn not only how to but also how not to program, with examples of bad code that they are invited to correct or improve. Chapters end with exercises that test and develop the skills taught in each chapter. Interviews with neuroscientists and cognitive scientists who have made significant contributions their field using MATLAB appear throughout the book. *MATLAB for Brain and Cognitive Scientists* is an essential resource for both students and instructors, in the classroom or for independent study.

Mike X Cohen is Assistant Professor in the Donders Institute for Brain, Cognition, and Behavior at the Radboud University and University Medical Center, Nijmegan, the Netherlands. He is the author of *Analyzing Neural Time Series Data: Theory and Practice* (MIT Press).

May | 8 x 9, 504 pp. | 183 illus.

$50.00X/£37.95 cloth
978-0-262-03582-8

language | psychology

Language Acquisition

The Growth of Grammar

SECOND EDITION

Maria Teresa Guasti

How do children begin to use language? How does knowledge of language emerge in early infancy, and how does it grow? This

The new edition of a comprehensive introduction to a rapidly developing field, combining developmental data with theory.

textbook offers a comprehensive introduction to knowledge acquisition, drawing on empirical evidence and linguistic theory. The theoretical framework used is the generative theory of Universal Grammar; students should have some familiarity

with concepts in linguistic research. Aimed at upper-level undergraduate and graduate students, the book offers end-of-chapter summaries, key words, study questions, and exercises.

This second edition has been thoroughly updated, with new content throughout. It has been reorganized according to the three main components of language acquisition. The computational components and the interfaces are covered in chapters on structure building in the verbal and nominal domains, movement-derived structure, and the relation between syntax and semantics and semantic and pragmatic. The sensory-motor interface is treated in chapters on infants' perception of language and on the acquisition of words. The intentional-conceptual interface is discussed in chapters on the acquisition of words. This edition features additional cross-linguistic content, a new focus on brain imaging findings and the motor aspect of language, new material on Williams and Down Syndromes and dyslexia, and a new chapter on bilingualism, early second language acquisition, and bimodalism. Revisions reflect the burgeoning research in the field. New pedagogical features include chapter outlines, summaries of chapters, hypotheses, and linguistic milestones; methodological information; explanatory boxes; and suggestions for further reading.

Maria Teresa Guasti is Professor in the Department of Psychology at the University of Milan-Bicocca.

March | 7 x 9, 672 pp.

$50.00X/£37.95 paper
978-0-262-52938-9

A Bradford Book

linguistics

Agreement Beyond Phi

Shigeru Miyagawa

Much attention in theoretical linguistics in the generative and Minimalist traditions is concerned with issues directly or indirectly related to movement. The EPP (extended projection principle), introduced by Chomsky in 1981, appeared to coincide with morphological agreement, and agreement came to play a central role as the driver of movement and other narrow-syntax operations. In this book, Shigeru Miyagawa continues his investigation into a computational equivalent for agreement in agreementless languages such as Japanese.

Miyagawa extends his theory of Strong Uniformity, introduced in his earlier book, *Why Agree? Why Move? Unifying Agreement-Based and Discourse-Configurational Languages* (MIT Press). He argues that agreement and agreementless languages are unified under an expanded view of grammatical features including both phi-features and discourse configurational features of topic and focus. He looks at various combinations of these two grammatical features across a number of languages and phenomena, including allocutive agreement, root phenomena, topicalization, "why" questions, and case alternation.

Shigeru Miyagawa is Professor of Linguistics and Kochi-Manjiro Professor of Japanese Language and Culture at MIT. He is the author of *Why Agree? Why Move? Unifying Agreement-Based and Discourse-Configurational Languages* (MIT Press).

An argument that agreement and agreementless languages are unified under an expanded view of grammatical features including both phi-features and certain discourse configurational features.

March | 6 x 9, 240 pp.

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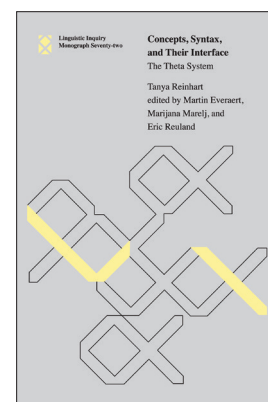
'And'

Conjunction Reduction Redux

Barry Schein

In this book, Barry Schein argues that "and" is always the sentential logical connective with the same, one, meaning. "And"

A bold argument that "and" always means "&," the truth-functional sentential connective.

always means "&," across the varied constructions in which it is tokened in natural language. Schein examines the constructions that challenge his thesis, and shows that the objections disappear when these constructions are translated into Eventish, a neo-Davidsonian event semantics, and, enlarged with Cinerama Semantics, a vocabulary for spatial orientation and navigation. Besides rescuing "and" from ambiguity, Eventish and Cinerama Semantics solve general puzzles of grammar and meaning unrelated to conjunction, revealing the book's central thesis in the process: aspects of meaning mistakenly attributed to "and" are discovered to reflect neighboring structures previously unseen and unacknowledged.

Schein argues that Eventish and Cinerama Semantics offer a fundamental revision to clause structure and what aspects of meaning are represented therein. Eventish is distinguished by four features: supermonadicity, which enlarges verbal decomposition so that every argument relates to its own event; descriptive event anaphora, which replaces simple event variables with silent descriptive pronouns; adverbialization, which interposes adverbials derived from the descriptive content of every DP; and AdrPs, which replace all NPs with Address Phrases that locate what nominals denote within scenes or frames of reference.

With '*And*' Schein rehabilitates an old rule of transformational, generative grammar, answering the challenges to it exhaustively and meticulously.

Barry Schein is Associate Professor of Linguistics at the University of Southern California and the author of *Plurals and Events* (MIT Press).

Giving Voice

Mobile Communication, Disability, and Inequality

Meryl Alper

Mobile technologies are often hailed as a way to "give voice to the voiceless." Behind the praise, though, are beliefs about

How communication technologies meant to empower people with speech disorders —to give voice to the voiceless—are still subject to disempowering structural inequalities.

technology as a gateway to opportunity and voice as a metaphor for agency and self-representation. In *Giving Voice*, Meryl Alper explores these assumptions by looking closely at one such case—the use of the iPad and mobile app Proloquo2Go, which converts icons and text into

synthetic speech, by children with disabilities and their families. She finds that despite claims to empowerment, the hardware and software are still subject to disempowering structural inequalities. Views of technology as a great equalizer, she demonstrates, rarely account for all the ways that culture, law, policy, and even technology itself can reinforce disparity, particularly for those with disabilities.

Alper explores, among other things, alternative understandings of voice, the surprising sociotechnical importance of the iPad case, and convergences and divergences in the lives of parents across class. She shows that working-class and low-income parents understand the app and other communication technologies differently from upper- and middle-class parents, and that the institutional ecosystem reflects a bias toward those more privileged.

Handing someone a talking tablet computer does not in itself give that person a voice. Alper finds that the ability to mobilize social, economic, and cultural capital shapes the extent to which individuals can not only speak but be heard.

Meryl Alper is Assistant Professor of Communication Studies at Northeastern University and a Faculty Associate with Harvard University's Berkman Center for Internet and Society. She is the author of a MacArthur Foundation Report, *Digital Youth with Disabilities* (MIT Press).

education | inequality studies

Stuck in the Shallow End

Education, Race, and Computing

UPDATED EDITION

Jane Margolis

with Rachel Estrella, Joanna Goode,
Jennifer Jellison Holme, and Kim Nao

The number of African Americans and Latinos/as receiving undergraduate and advanced degrees in computer science is

Why so few African American and Latino/a students study computer science: updated edition of a book that reveals the dynamics of inequality in American schools.

disproportionately low. And relatively few African American and Latino/a high school students receive the kind of institutional encouragement, educational opportunities, and preparation needed for them to choose computer science as a field of study

and profession. In *Stuck in the Shallow End*, Jane Margolis and coauthors look at the daily experiences of students and teachers in three Los Angeles public high schools: an overcrowded urban high school, a math and science magnet school, and a well-funded school in an affluent neighborhood. They find an insidious "virtual segregation" that maintains inequality.

The race gap in computer science, Margolis discovers, is one example of the way students of color are denied a wide range of occupational and educational futures. *Stuck in the Shallow End* is a story of how inequality is reproduced in America—and how students and teachers, given the necessary tools, can change the system. Since the 2008 publication of *Stuck in the Shallow End*, the book has found an eager audience among teachers, school administrators, and academics. This updated edition offers a new preface detailing the progress in making computer science accessible to all, a new postscript, and discussion questions (coauthored by Jane Margolis and Joanna Goode).

Jane Margolis is a Senior Researcher at the UCLA Graduate School of Education and Information Studies and the coauthor of *Unlocking the Clubhouse: Women in Computing* (MIT Press). She was a 2016 White House Champion of Change for her work addressing underrepresentation of students of color and women in computer science. **Joanna Goode** is a Professor of Education at the University of Oregon and is coauthor of the Exploring Computer Science program.

March | 6 x 9, 248 pp. | 2 illus.

$25.00S/£18.95 paper
978-0-262-53346-1

public health | information technology

Global Health Informatics

Principles of eHealth and mHealth
to Improve Quality of Care

edited by Leo Anthony G. Celi, Hamish Fraser, Vipan Nikore, Juan Sebastián Osorio, and Kenneth Paik

The widespread usage of mobile phones that bring computational power and data to our fingertips has enabled new models

Key concepts, frameworks, examples, and lessons learned in designing and implementing health information and communication technology systems in the developing world.

for tracking and battling disease. The developing world in particular has become a proving ground for innovation in eHealth (using communication and technology tools in healthcare) and mHealth (using the affordances of mobile technology

in eHealth systems). In this book, experts from a variety of disciplines—among them computer science, medicine, public health, policy, and business—discuss key concepts, frameworks, examples, and lessons learned in designing and implementing digital health systems in the developing world.

The contributors consider such topics as global health disparities and quality of care; aligning eHealth strategies with government policy; the role of monitoring and evaluation in improving care; databases, patient registries, and electronic health records; the lifecycle of a digital health system project; software project management; privacy and security; and evaluating health technology systems.

Leo Anthony G. Celi is an attending physician at Beth Israel Deaconess Medical Center, Boston, and Assistant Professor at Harvard Medical School. **Hamish Fraser** is Associate Professor in eHealth at the Leeds Institute of Health Sciences and the Yorkshire Centre for Health Informatics. **Vipan Nikore** is an internal medicine physician at Trillium Health Partners and a lecturer at the University of Toronto. **Juan Sebastián Osorio** is a biomedical engineer, named by *Technology Review* as one of the world's top innovators under 35 for designing monitors to detect breathing problems in premature infants. **Kenneth Paik** is a Research Scientist in the Institute for Medical Engineering and Science at MIT.

April | 8 x 9, 424 pp. | 65 illus.

$45.00X/£34.95 paper
978-0-262-53320-1

Remaking the News

Essays on the Future of Journalism in the Digital Age

edited by Pablo J. Boczkowski and C. W. Anderson

The use of digital technology has transformed the way news is produced, distributed, and received. Just as media organiza-

Leading scholars chart the future of studies on technology and journalism in the digital age.

tions and journalists have realized that technology is a central and indispensable part of their enterprise, scholars of journalism have shifted their focus to the role of technology. In *Remaking the News*, leading scholars chart the future of studies on technology and journalism in the digital age.

These ongoing changes in journalism invite scholars to rethink how they approach this dynamic field of inquiry. The contributors consider theoretical and methodological issues; concepts from the social science canon that can help make sense of journalism; the occupational culture and practice of journalism; and major gaps in current scholarship on the news: analyses of inequality, history, and failure.

Pablo J. Boczkowski is Professor of Communication Studies at Northwestern University. He is the author of *Digitizing the News* and the coauthor, with Eugenia Mitchelstein, of *The News Gap* (both published by the MIT Press). **C. W. Anderson** is Associate Professor of Media Culture at City University of New York and the author of *Rebuilding the News*.

Contributors
Mike Ananny, C. W. Anderson, Rodney Benson, Pablo J. Boczkowski, Michael X. Delli Carpini, Mark Deuze, William H. Dutton, Matthew Hindman, Seth C. Lewis, Eugenia Mitchelstein, W. Russell Neuman, Rasmus Kleis Nielsen, Zizi Papacharissi, Victor Pickard, Mirjam Prenger, Sue Robinson, Michael Schudson, Jane B. Singer, Natalie (Talia) Jomini Stroud, Karin Wahl-Jorgensen, Rodrigo Zamith

June | 6 x 9, 360 pp. | 2 illus.

$40.00X/£29.95 cloth
978-0-262-03609-2

Inside Technology series

Mapping Israel, Mapping Palestine

How Occupied Landscapes Shape Scientific Knowledge

Jess Bier

Maps are widely believed to be objective, and data-rich computer-made maps are iconic examples of digital knowl-

Digital practices in social and political landscapes: Why two researchers can look at the same feature and see different things.

edge. It is often claimed that digital maps, and rational boundaries, can solve political conflict. But in *Mapping Israel, Mapping Palestine*, Jess Bier challenges the view that digital maps are universal

and value-free. She examines the ways that maps are made in Palestine and Israel to show how social and political landscapes shape the practice of science and technology.

How can two scientific cartographers look at the same geographic feature and see fundamentally different things? In part, Bier argues, because knowledge about the Israeli military occupation is shaped by the occupation itself. Ongoing injustices—including checkpoints, roadblocks, and summary arrests—mean that Palestinian and Israeli cartographers have different experiences of the landscape. Palestinian forms of empirical knowledge, including maps, continue to be discounted.

Bier examines three representative cases of population, governance, and urban maps. She analyzes Israeli population maps from 1967 to 1995, when Palestinian areas were left blank; Palestinian state maps of the late 1990s and early 2000s, which were influenced by Israeli raids on Palestinian offices and the legacy of British colonial maps; and urban maps after the Second Intifada, which show how segregated observers produce dramatically different maps of the same area. The geographic production of knowledge, including what and who are considered scientifically legitimate, can change across space and time. Bier argues that greater attention to these changes, and to related issues of power, will open up more heterogeneous ways of engaging with the world.

Jess Bier is Assistant Professor of Urban Sociology at Erasmus University Rotterdam.

May | 6 x 9, 320 pp. | 4 color illus., 27 black & white illus.

$35.00S/£24.95 cloth
978-0-262-03615-3

Inside Technology series

Programmed Inequality

How Britain Discarded Women Technologists
and Lost Its Edge in Computing

Marie Hicks

In 1944, Britain led the world in electronic computing. By 1974, the British computer industry was all but extinct. What happened in the intervening thirty years holds lessons for all postindustrial superpowers. As Britain struggled to use technology to retain its global power, the nation's inability to manage its technical labor force hobbled its transition into the information age.

In *Programmed Inequality*, Marie Hicks explores the story of labor feminization and gendered technocracy that undercut British efforts to computerize. That failure sprang from the government's systematic neglect of its largest trained technical workforce simply because they were women. Women were a hidden engine of growth in high technology from World War II to the 1960s. As computing experienced a gender flip, becoming male-identified in the 1960s and 1970s, labor problems grew into structural ones and gender discrimination caused the nation's largest computer user—the civil service and sprawling public sector—to make decisions that were disastrous for the British computer industry and the nation as a whole.

Drawing on recently opened government files, personal interviews, and the archives of major British computer companies, *Programmed Inequality* takes aim at the fiction of technological meritocracy. Hicks explains why, even today, possessing technical skill is not enough to ensure that women will rise to the top in science and technology fields. *Programmed Inequality* shows how the disappearance of women from the field had grave macroeconomic consequences for Britain, and why the United States risks repeating those errors in the twenty-first century.

Marie Hicks is Assistant Professor of History at the Illinois Institute of Technology.

How Britain lost its early dominance in computing by systematically discriminating against its most qualified workers: women.

March
6 x 9, 352 pp.
30 illus.

$40.00S/£29.95 cloth
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Janet Abbate
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The Handbook of Science and Technology Studies

FOURTH EDITION

edited by Ulrike Felt, Rayvon Fouché, Clark A. Miller, and Laurel Smith-Doerr

Science and Technology Studies (STS) is a flourishing interdisciplinary field that examines the transformative power of science and technology to arrange and rearrange contemporary societies. *The Handbook of Science and Technology Studies* provides a comprehensive and authoritative overview of the field, reviewing current research and major theoretical and methodological approaches in a way that is accessible to both new and established scholars from a range of disciplines. This new edition, sponsored by the Society for Social Studies of Science, is the fourth in a series of volumes that have defined the field of STS. It features 36 chapters, each written for the fourth edition, that capture the state of the art in a rich and rapidly growing field. One especially notable development is the increasing integration of feminist, gender, and postcolonial studies into the body of STS knowledge.

The fourth edition of an authoritative overview, with all new chapters that capture the state of the art in a rapidly growing field.

The book covers methods and participatory practices in STS research; mechanisms by which knowledge, people, and societies are coproduced; the design, construction, and use of material devices and infrastructures; the organization and governance of science; and STS and societal challenges including aging, agriculture, security, disasters, environmental justice, and climate change.

Ulrike Felt is Professor of Science and Technology Studies and Dean of the Faculty of Social Sciences at the University of Vienna. **Rayvon Fouché** is Associate Professor in the School of Interdisciplinary Studies and Director of American Studies at Purdue University. **Clark A. Miller** is Associate Professor of Science and Technology Studies and Associate Director of the School for the Future of Innovation in Society at Arizona State University. **Laurel Smith-Doerr** is Director of the Institute for Social Science Research and Professor of Sociology at the University of Massachusetts.

February | 7 x 9, 1208 pp. | 10 illus., 6 color plates

$75.00X/£55.95 cloth
978-0-262-03568-2

What Do Science, Technology, and Innovation Mean from Africa?

edited by Clapperton Chakanetsa Mavhunga

In the Science, Technology, and Innovation (STI) literature, Africa has often been regarded as a recipient of science, technology, and innovation rather than a maker of them. In this book, scholars from a range of disciplines show that STI in Africa is not merely the product of "technology transfer" from elsewhere but the working of African knowledge. Their contributions focus on African ways of looking, meaning-making, and creating. The chapter authors see Africans as intellectual agents whose perspectives constitute authoritative knowledge and whose strategic deployment of both endogenous and inbound things represents an African-centered notion of STI. "Things do not (always) mean the same from everywhere," observes Clapperton Chakanetsa Mavhunga, the volume's editor. Western, colonialist definitions of STI are not universalizable.

Explorations of science, technology, and innovation in Africa not as the product of "technology transfer" from elsewhere but as the working of African knowledge.

The contributors discuss topics that include the trivialization of indigenous knowledge under colonialism; the creative labor of *chimurenga*, the transformation of everyday surroundings into military infrastructure; the role of enslaved Africans in America as innovators and synthesizers; the African ethos of "fixing"; the *constitutive appropriation* that makes mobile technologies African; and an African innovation strategy that builds on domestic capacities. The contributions describe an Africa that is creative, technological, and scientific, showing that African STI is the latest iteration of a long process of accumulative, multicultural knowledge production.

Clapperton Chakanetsa Mavhunga is Associate Professor of Science, Technology, and Society at MIT and the author of *Transient Workspaces: Technologies of Everyday Innovation in Zimbabwe* (MIT Press).

Contributors
Geri Augusto, Shadreck Chirikure, Chux Daniels, Ron Eglash, Ellen Foster, Garrick E. Louis, D. A. Masolo, Clapperton Chakanetsa Mavhunga, Neda Nazemi, Toluwalogo Odumosu, Katrien Pype, Scott Remer

May | 7 x 9, 232 pp. | 25 illus.

$36.00X/£26.95 paper
978-0-262-53390-4

science, technology, and society | innovation

Models of Innovation

The History of an Idea

Benoît Godin

Models abound in science, technology, and society (STS) studies and in science, technology, and innovation (STI) studies.

The emergence and diffusion of the most influential conceptual models of innovation from the early twentieth century to the late 1980s.

They are continually being invented, with one author developing many versions of the same model over time. At the same time, models are regularly criticized. Such is the case with the most influential model in STS-STI: the linear model of innovation.

In this book, Benoît Godin examines the emergence and diffusion of the three most important conceptual models of innovation from the early twentieth century to the late 1980s: stage models, linear models, and holistic models. Godin first traces the history of the models of innovation constructed during this period, considering why these particular models came into being and what use was made of them. He then rethinks and debunks the historical narratives of models developed by theorists of innovation. Godin documents a greater diversity of thinkers and schools than in the conventional account, tracing a genealogy of models beginning with anthropologists, industrialists, and practitioners in the first half of the twentieth century to their later formalization in STS-STI.

Godin suggests that a model is a conceptualization, which could be narrative, or a set of conceptualizations, or a paradigmatic perspective, often in pictorial form and reduced discursively to a simplified representation of reality. Why are so many things called models? Godin claims that model has a rhetorical function. First, a model is a symbol of "scientificity." Second, a model travels easily among scholars and policy makers. Calling a conceptualization or narrative or perspective a model facilitates its propagation.

Benoît Godin is a Professor at the Institut national de la recherche scientifique, Montreal.

March | 6 x 9, 344 pp. | 21 illus.

$37.00X/£27.95 cloth
978-0-262-03589-7

Inside Technology series

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science, technology, and society | biology

Reordering Life

Knowledge and Control in the Genomics Revolution

Stephen Hilgartner

The rise of genomics engendered intense struggle over the control of knowledge. In *Reordering Life*, Stephen Hilgartner

How the regimes governing biological research changed during the genomics revolution, focusing on the Human Genome Project.

examines the "genomics revolution" and develops a novel approach to studying the dynamics of change in knowledge and control. Hilgartner focuses on the Human Genome Project (HGP)—the symbolic and scientific centerpiece of the emerging field—showing how problems of governance arose in concert with new knowledge and technology. Using a theoretical framework that analyzes "knowledge control regimes," Hilgartner investigates change in how control was secured, contested, allocated, resisted, justified, and reshaped as biological knowledge was transformed. Beyond illuminating genomics, *Reordering Life* sheds new light on broader issues about secrecy and openness in science, data access and ownership, and the politics of research communities.

Drawing on real-time interviews and observations made during the HGP, *Reordering Life* describes the sociotechnical challenges and contentious issues that the genomics community faced throughout the project. Hilgartner analyzes how laboratories control access to data, biomaterials, plans, preliminary results, and rumors; compares conflicting visions of how to impose coordinating mechanisms; examines the repeated destabilization and restabilization of the regimes governing genome databases; and examines the fierce competition between the publicly funded HGP and the private company Celera Genomics. The result is at once a path-breaking study of a self-consciously revolutionary science, and a provocative analysis of how knowledge and control are reconfigured during transformative scientific change.

Stephen Hilgartner is Professor of Science and Technology Studies at Cornell University.

April | 6 x 9, 320 pp. | 15 illus.

$35.00X/£24.95 cloth
978-0-262-03586-6

Inside Technology series

science, technology and society | political science

Democratic Experiments

Problematizing Nanotechnology and Democracy in Europe and the United States

Brice Laurent

In *Democratic Experiments*, Brice Laurent discusses the challenges that emerging technologies create for democracy today. He focuses on nanotechnology and its attendant problems, proposing nanotechnology as a lens through which to understand contemporary democracy in both theory and practice. Arguing that democracy is at stake where nanotechnology is defined as a problem, Laurent examines the sites where nanotechnology is discussed and debated by scientists, policymakers, and citizens. It is at these sites where the joint production of nanotechnology and the democratic order can be observed.

An examination of nanotechnology as a lens through which to study contemporary democracy in both theory and practice.

Focusing on the United States, France, and Europe, and various international organizations, Laurent analyzes representations of nanotechnology in science museums, collective discussions in participatory settings, the making of categories such as "nanomaterials" or "responsible innovation" in standardization and regulatory arenas, and initiatives undertaken by social movements. He contrasts American debates, in which the concern for public objectivity is central, with the French "state experiment," the European goal of harmonization, and the international concern with a global market. In France, public debate proceeded in response to public protest and encountered a radical critique of technological development; the United States experimented with an innovative approach to technology assessment. The European regulatory approach results in lengthy debates over political integration; the United States relies on the adversarial functioning of federal agencies. Because nanotechnology is a domain where concerns over anticipation and participation are pervasive, Laurent argues, nanotechnology—and science and technology studies more generally—provides a relevant focus for a renewed analysis of democracy.

Brice Laurent is a Researcher at Mines ParisTech, Centre de Sociologie de l'Innovation.

March | 6 x 9, 288 pp. | 1 illus.

$40.00X/£29.95 cloth
978-0-262-03576-7

Inside Technology series

science, technology, and society | history of science

The Long Arm of Moore's Law

Microelectronics and American Science

Cyrus C. M. Mody

Since the mid 1960s, American science has undergone significant changes in the way it is organized, funded, and practiced.

How, beginning in the mid 1960s, the US semiconductor industry helped shape changes in American science, including a new orientation to the short-term and the commercial.

These changes include the decline of basic research by corporations; a new orientation toward the short-term and the commercial, with pressure on universities and government labs to participate in the market; and the promotion of interdisciplinarity. In this book, Cyrus Mody argues that the changes in American science that began in the 1960s co-evolved with and were shaped by the needs of the "civilianized" US semiconductor industry.

In 1965, Gordon Moore declared that the most profitable number of circuit components that can be crammed on a single silicon chip doubles every year. Mody views "Moore's Law" less as prediction than as self-fulfilling prophecy, pointing to the enormous investments of capital, people, and institutions the semiconductor industry required—the "long arm" of Moore's Law that helped shape all of science.

Mody offers a series of case studies in microelectronics that illustrate the reach of Moore's Law. He describes the pressures on Stanford University's electrical engineers during the Vietnam era, IBM's exploration of alternatives to semiconductor technology, the emergence of consortia to integrate research across disciplines and universities, and the interwoven development of the molecular research community and associated academic institutions as the vision of a molecular computer informed the restructuring of research programs.

Cyrus C. M. Mody is Professor and Chair of the History of Science, Technology, and Innovation Department at Maastricht University. He is the author of *Instrumental Community: Probe Microscopy and the Path to Nanotechnology* (MIT Press).

February | 6 x 9, 304 pp. | 13 illus.

$45.00X/£34.95 cloth
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Inside Technology series

science, technology, and society | environmental studies

Cryopolitics

Frozen Life in a Melting World

edited by Joanna Radin and Emma Kowal

As the planet warms and the polar ice caps melt, naturally occurring cold is a resource of growing scarcity. At the same

The social, political, and cultural consequences of attempts to cheat death by freezing life.

time, energy-intensive cooling technologies are widely used as a means of preservation. Technologies of cryopreservation support global food chains, seed and blood banks, reproductive medicine, and even the preservation of cores of glacial ice used to study climate change. In many cases, these practices of freezing life are an attempt to cheat death. Cryopreservation has contributed to the transformation of markets, regimes of governance and ethics, and the very relationship between life and death. In *Cryopolitics*, experts from anthropology, history of science, environmental humanities, and indigenous studies make clear the political and cultural consequences of extending life and deferring death by techno-scientific means.

The contributors examine how and why low temperatures have been harnessed to defer individual death through freezing whole human bodies; to defer nonhuman species death by freezing tissue from endangered animals; to defer racial death by preserving biospecimens from indigenous people; and to defer large-scale human death through pandemic preparedness. The cryopolitical lens, emphasizing the roles of temperature and time, provokes new and important questions about living and dying in the twenty-first century.

Joanna Radin is Assistant Professor in the Program in History of Science and Medicine at Yale University. **Emma Kowal** is Professor of Anthropology at Deakin University, Melbourne.

Contributors

Warwick Anderson, Michael Bravo, Jonny Bunning, Matthew Chrulew, Soraya de Chadarevian, Alexander Friedrich, Klaus Hoeyer, Frédéric Keck, Eben Kirksey, Emma Kowal, Joanna Radin, Deborah Bird Rose, Kim TallBear, Charis Thompson, David Turnbull, Thom van Dooren, Rebecca J. H. Woods

April | 6 x 9, 336 pp. | 26 illus.

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978-0-262-03585-9

economics | Latin America studies

The Economics of Contemporary Latin America

Beatriz Armendáriz and Felipe Larraín B.

Latin America is richly endowed with natural resources, fertile land, and vibrant cultures. Yet the region remains much poorer

Analysis of Latin America's economy focusing on development, covering the colonial roots of inequality, boom and bust cycles, labor markets, and fiscal and monetary policy.

than its neighbors to the north. Most Latin American countries have not achieved standards of living and stable institutions comparable to those found in developed countries, have experienced repeated boom-bust cycles, and remain heavily reliant on primary commodities.

This book studies the historical roots of Latin America's contemporary economic and social development, focusing on poverty and income inequality dating back to colonial times. It addresses today's legacies of the market-friendly reforms that took hold in the 1980s and 1990s by examining successful stabilizations and homemade monetary and fiscal institutional reforms. It offers a detailed analysis of trade and financial liberalization, twenty-first-century growth, and the decline in poverty and income inequality. Finally, the book offers an overall analysis of inclusive growth policies for development—including gender issues and the informal sector—and the challenges that lie ahead for the region, with special attention to pressing demands by the vibrant and vocal middle class, youth unemployment, and indigenous populations.

Beatriz Armendáriz is Senior Lecturer in the Department of Economics at University College London and Research Affiliate at Harvard University. She is coauthor of *The Economics of Microfinance* (MIT Press). **Felipe Larraín B.** is Professor of Economics at the Catholic University of Chile and Director of the Latin American Center of Economics and Social Policies (CLAPES UC). He is coauthor of *Macroeconomics in the Global Economy* and was Finance Minister of Chile from 2010 to 2014.

April | 7 x 9, 392 pp. | 92 illus.

$45.00X/£34.95 paper
978-0-262-53315-7

economics | sociology

Social Economics

Current and Emerging Areas

edited by Joan Costa-Font and Mario Macis

The growing field of social economics explores how individual behavior is affected by group-level influences, extending the approach of mainstream economics to include broader social motivations and incentives. This book offers a rich and rigorous selection of current work in the field, focusing on some of the most active research areas. Topics covered include culture, gender, ethics, and philanthropic behavior.

A rich collection of current research in the growing field of social economics, covering such issues as culture, gender, ethics, and philanthropic behavior.

Social economics grows out of dissatisfaction with a purely individualistic model of human behavior. This book shows how mainstream economics is expanding its domain beyond market and price mechanisms to recognize a role for cultural and social factors. Some chapters, in the tradition of Gary Becker, attempt to extend the economics paradigm to explain other social phenomena; others, following George Akerlof's approach, incorporate sociological and psychological assumptions to explain economic behavior. Loosely organized by theme—Social Preferences; Culture, Values, and Norms; and Networks and Social Interactions—the chapters address a range of subjects, including gender differences in political decisions, "moral repugnance" as a constraint on markets, charitable giving by the super-rich, value diversity within a country, and the influence of children on their parents' social networks.

Joan Costa-Font is Associate Professor of Political Economy at the London School of Economics. **Mario Macis** is Associate Professor in the Carey Business School at Johns Hopkins University.

Contributors
Mireia Borrell-Porta, Sjoerd Beugelsdijk, Joan Costa-Font, Elwyn Davies, Julio Jorge Elias, Marcel Fafchamps, Luigi Guiso, Odelia Heizler, Ayal Kimhi, Mariko J. Klasing, Martin Ljunge, Mario Macis, Mark Ottoni-Wilhelm, Abigail Payne, Kelly Ragan, Jana Sadeh, Azusa Sato, Kimberley Scharf, Sarah Smith, Mirco Tonin, Michael Vlassopoulos, Evguenia Winschel, Philipp Zahn

March | 6 x 9, 344 pp. | 32 illus.

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CESifo Seminar series

economics | environment

Global Carbon Pricing

The Path to Climate Cooperation

edited by Peter Cramton, David JC MacKay, Axel Ockenfels, and Steven Stoft

After twenty-five years of failure, climate negotiations continue to use a "pledge and review" approach: countries pledge (almost anything), subject to (unenforced) review. This approach ignores everything we know about human cooperation. In this book, leading economists describe an alternate model for climate agreements, drawing on the work of the late Nobel laureate Elinor Ostrom and others. They show that a "common commitment" scheme is more effective than an "individual commitment" scheme; the latter depends on altruism while the former involves reciprocity ("we will if you will").

Why the traditional "pledge and review" climate agreements have failed, and how carbon pricing, based on trust and reciprocity, could succeed.

The contributors propose that global carbon pricing is the best candidate for a reciprocal common commitment in climate negotiations. Each country would commit to placing charges on carbon emissions sufficient to match an agreed global price formula. The contributors show that carbon pricing would facilitate negotiations and enforcement, improve efficiency and flexibility, and make other climate policies more effective. Additionally, they analyze the failings of the 2015 Paris climate conference.

Peter Cramton is Professor of Economics at the University of Maryland. The late **Sir David JC MacKay** was Regius Professor of Engineering at the University of Cambridge and Chief Scientific Advisor to the United Kingdom's Department of Energy and Climate Change. **Axel Ockenfels** is Professor of Economics at the University of Cologne. **Steven Stoft** is an economic consultant and author of *Carbonomics*.

Contributors
Richard N. Cooper, Peter Cramton, Stéphane Dion, Ottmar Edenhofer, Christian Gollier, Éloi Laurent, David JC MacKay, William Nordhaus, Axel Ockenfels, Joseph E. Stiglitz, Steven Stoft, Jean Tirole, Martin L. Weitzman

June | 6 x 9, 256 pp. | 13 illus.

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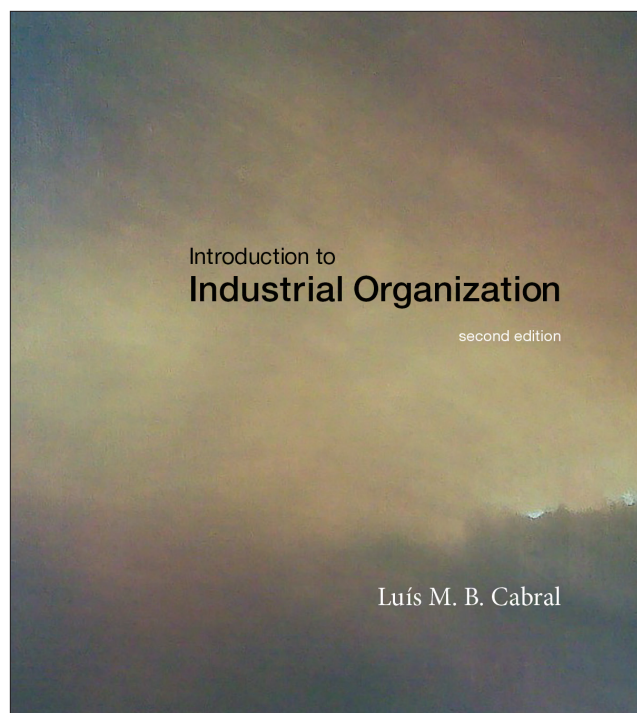
economics

Introduction to Industrial Organization

SECOND EDITION

Luís M. B. Cabral

The study of industrial organization (IO)—the analysis of the way firms compete with one another—has become a key component of economics and of such related disciplines as finance, strategy, and marketing. This book provides an issue-driven introduction to industrial organization. Although formal in its approach, it is written in a way that requires only basic mathematical training. It includes a vast array of examples, from both within and outside the United States. This second edition has been thoroughly updated and revised.

In addition to updated examples, this edition presents a more systematic treatment of public policy implications. It features added advanced sections, with analytical treatment of ideas previously presented verbally; and exercises, which allow for a deeper and more formal understanding of each topic. The new edition also includes an introduction to such empirical methods as demand estimation and equilibrium identification. Supplemental material is available online.

An issue-driven introduction to industrial organization, thoroughly updated and revised.

March
8 x 9, 448 pp.
75 illus.

$95.00X/£65.00 cloth
978-0-262-03594-1

Luís M. B. Cabral is Paganelli-Bull Professor of Economics and International Business and Chair of the Department of Economics at the Leonard N. Stern School of Business at New York University.

Praise for the first edition

"Cabral's *Introduction to Industrial Organization* is clear, precise, relevant, even fun. This delightful volume is your best choice for crisp and accessible coverage of IO theory."
—Carl Shapiro, Transamerica Professor of Business Strategy, Haas School of Business, University of California, Berkeley

"Industrial organization has needed a book like this. This articulate exposition of the subject by Luís Cabral, who has himself made many important contributions to the field, will be invaluable to all students of industrial organization."
—Paul Klemperer, Fellow of the British Academy and Edgeworth Professor of Economics, Oxford University

Health Economics

SECOND EDITION

Frank A. Sloan and Chee-Ruey Hsieh

This book introduces students to the growing research field of health economics. Rather than offer details about health

The new edition of a textbook that combines economic concepts with empirical evidence, updated with material on the Affordable Care Act and other developments.

systems without providing a theoretical context, *Health Economics* combines economic concepts with empirical evidence to enhance readers' economic understanding of how health care institutions and markets function. The book takes a global perspective, with description and analysis of institutional features of health sectors in countries around the world.

This second edition has been updated to include material on the U.S. Patient Protection and Affordable Care Act. The discussion of health care and health insurance in China has been substantially revised to reflect widespread changes there. Tables and figures have been updated with newly available data.

The text includes readings, extensive references, review and discussion questions, and exercises.

Frank Sloan, awarded the Victor R. Fuchs Award for Lifetime Contributions to the Field of Health Economics in 2016, is J. Alexander McMahon Professor of Health Policy and Management and Professor of Economics at Duke University. **Chee-Ruey Hsieh** is a Research Professor of Health Economics at Duke Global Health Institute, Duke University, and the Global Health Research Center, Duke Kunshan University.

March | 8 x 9, 824 pp. | 89 illus.

$100.00X/£74.95 cloth
978-0-262-03511-8

Student Solutions Manual to Accompany *Health Economics,* Second Edition

Frank A. Sloan and Chee-Ruey Hsieh

Solutions to odd-numbered exercises in the second edition of *Health Economics*.

February | 7 x 9, 136 pp.

$18.00X/£13.95 paper
978-0-262-53342-3

Monetary Theory and Policy

FOURTH EDITION

Carl E. Walsh

This textbook presents a comprehensive treatment of the most important topics in monetary economics, focusing on the

The new edition of a comprehensive treatment of monetary economics, including the first extensive coverage of the effective lower bound on nominal interest rates.

primary models monetary economists have employed to address topics in theory and policy. Striking a balance of insight, accessibility, and rigor, the book covers the basic theoretical approaches, shows how to do simulation work with the models, and

discusses the full range of frictions that economists have studied to understand the impacts of monetary policy.

For the fourth edition, every chapter has been revised to improve the exposition and to reflect recent research. The new edition offers an entirely new chapter on the effective lower bound on nominal interest rates, forward guidance policies, and quantitative and credit easing policies. Material on the basic new Keynesian model has been reorganized into a single chapter to provide a comprehensive analysis of the model and its policy implications. In addition, the chapter on the open economy now reflects the dominance of the new Keynesian approach. Other new material includes discussions of price adjustment, labor market frictions and unemployment, and moral hazard frictions among financial intermediaries. References and end-of-chapter problems allow readers to extend their knowledge of the topics covered.

Monetary Theory and Policy continues to be the most comprehensive and up-to-date treatment of monetary economics, not only the leading text in the field but also the standard reference for academics and central bank researchers.

Carl E. Walsh is Professor of Economics at the University of California, Santa Cruz. He is a Visiting Scholar at the Federal Reserve Bank of San Francisco.

May | 7 x 9, 704 pp. | 44 illus.

$95.00X/£70.95 cloth
978-0-262-03581-1

economics | finance

Money, Payments, and Liquidity

SECOND EDITION

Guillaume Rocheteau and Ed Nosal

In *Money, Payments, and Liquidity*, Guillaume Rocheteau and Ed Nosal provide a comprehensive investigation into the economics of money, liquidity, and payments by explicitly modeling the mechanics of trade and its various frictions (including search, private information, and limited commitment). Adopting the last generation of the New Monetarist framework developed by Ricardo Lagos and Randall Wright, among others, Nosal and Rocheteau provide a dynamic general equilibrium framework to examine the frictions in the economy that make money and liquid assets play a useful role in trade. They discuss such topics as cashless economies; the properties of an asset that make it suitable to be used as a medium of exchange; the optimal monetary policy and the cost of inflation; the coexistence of money and credit; and the relationships among liquidity, asset prices, monetary policy; and the different measures of liquidity in over-the-counter markets.

A new edition of a book presenting a unified framework for studying the role of money and liquid assets in the economy, revised and updated.

The second edition has been revised to reflect recent progress in the New Monetarist approach to payments and liquidity. Rocheteau and Nosal have added three new chapters: on unemployment and payments, on asset price dynamics and bubbles, and on crashes and recoveries in over-the-counter markets. The chapter on the role of money has been entirely rewritten, adopting a mechanism design approach. Other chapters have been revised and updated, with new material on credit economies under limited commitment, open-market operations and liquidity traps, and the limited pledgeability of assets under informational frictions.

Guillaume Rocheteau is Professor of Economics at the University of California, Irvine. **Ed Nosal** is Vice President and Senior Research Advisor at the Federal Reserve Bank of Chicago.

April | 6 x 9, 496 pp. | 110 illus.

$50.00X/£37.95 paper
978-0-262-53327-0

economics | policy

Taxing Ourselves

A Citizen's Guide to the Debate over Taxes

FIFTH EDITION

Joel Slemrod and Jon Bakija

To follow the debate over tax reform, the interested citizen is often forced to choose between misleading sound bites and academic treatises. *Taxing Ourselves* bridges the gap between the oversimplified and the arcane, presenting the key issues clearly and without a political agenda. Tax policy experts Joel Slemrod and Jon Bakija lay out in accessible language what is known and not known about how taxes affect the economy and offer guidelines for evaluating tax systems—both the current tax system and proposals to reform it.

The new edition of a popular guide to the key issues in tax reform, presented in a clear, nontechnical, and unbiased way.

This fifth edition has been extensively revised to incorporate the latest data, empirical evidence, and tax law. It offers new material on recent tax reform proposals, expanded coverage of international tax issues, and the latest enforcement initiatives. Offering historical perspectives, outlining the basic criteria by which tax policy should be judged (fairness, economic impact, enforceability), examining proposals for both radical change (replacement of the income tax with a flat tax or consumption tax) and incremental changes to the current system, and concluding with a voter's guide, the book provides readers with enough background to make informed judgments about how we should tax ourselves.

Joel Slemrod is Paul W. McCracken Collegiate Professor of Business Economics and Public Policy and Professor of Economics at the University of Michigan, where he is also Director of the Office of Tax Policy Research. **John Bakija** is Professor of Economics at Williams College.

Praise for earlier editions

"An excellent book."
—Jeff Medrick, *New York Times*

"A fair-minded exposition of a politically loaded subject."
—*Kirkus Reviews*

May | 6 x 9, 552 pp. | 15 illus.

$30.00X/£22.95 paper
978-0-262-53317-1

$75.00X/£55.95 cloth
978-0-262-03567-5

Beyond Austerity

Reforming the Greek Economy

edited by Costas Meghir, Christopher A. Pissarides, Dimitri Vayanos, and Nikolaus Vettas

More than eight years after the global financial crisis began, the economy of Greece shows little sign of recovery, and its position

Prominent economists present detailed analyses of the conditions that made Greece vulnerable to economic crisis and offer policy recommendations for comprehensive and radical change.

in the eurozone seems tenuous. Between 2008 and 2014, Greeks' incomes shrank by more than a quarter, their homes lost more than a third of their value, and the unemployment rate reached 27 percent. Most articles on Greece in the media focus on the effects of austerity, repayment of its debt, and its future in the eurozone. This book takes a broader and deeper view of the Greek crisis, examining the pathologies that made Greece vulnerable to the crisis and the implications for the entire eurozone.

In each chapter, leading economists takes on a specific policy area, examining it in terms of Greece's economic past, present, and future. The topics range from macroeconomic issues to markets and their regulation to finance to the public sector. Individual chapters address the costs and benefits of participation in the eurozone, Greece's international competitiveness, taxation, pensions, the labor market, privatization, education, healthcare, the justice system, and corruption. The contributors argue that Greek institutions require a deep overhaul to enable long-term solutions rather than quick fixes.

Costas Meghir is Professor of Economics at Yale University. **Christopher A. Pissarides**, 2010 Nobel Laureate in Economics, is School Professor of Economics and Political Science and Regius Professor of Economics at the London School of Economics. **Dimitri Vayanos** is Professor of Finance at the London School of Economics. **Nikolaus Vettas** is Professor of Economics at Athens University of Economics and Business and General Director of the Foundation for Economic and Industrial Research (IOBE).

July | 7 x 9, 728 pp. | 121 illus.

$75.00X/£55.95 cloth
978-0-262-03583-5

Investors and Exploiters in Ecology and Economics

Principles and Applications

edited by Luc-Alain Giraldeau, Philipp Heeb, and Michael Kosfeld

In the natural world, some agents (investors) employ strategies that provide resources, services, or information, while others

Experts from the natural and social sciences examine the coexistence of productive and exploitative behavior strategies observable in many species at many levels.

(exploiters) gain advantages through these efforts. This behavior coexists and can be observed in many species and at many levels. For example, bacteria depend on the existence of biofilms to synthesize constituent proteins; cancerous cells employ angiogenesis

to feed a tumor; and parents forgo vaccinating their children yet benefit from herd immunity. Two independent research traditions have developed to analyze this behavior—one couched in evolutionary theory championed by behavioral ecologists, the other in social science concepts advocated by economists. In this book experts from economics, evolutionary biology, behavioral ecology, public health, and anthropology look for commonalities in understanding and approach.

The contributors consider parasitic strategies in ecological and economic terms; the governance of natural resources, with insights from "producer-scrounger models," forest management, and game theory; human health, discussing therapeutic opportunities, public health economics, and the integration of perspectives; and behavioral, social, and institutional consequences of exploitation strategies.

Luc-Alain Giraldeau is Professor of Behavioral Ecology and Dean of the Faculty of Science at the Université du Québec à Montréal. **Philipp Heeb** is Director of Research at the Centre national de la Recherche scientifiques (CNRS) in Evolutionary Ecology in the Laboratory for Evolution and Biological Diversity. **Michael Kosfeld** is Professor of Business Administration at Goethe University Frankfurt, where he is also Director of the Center for Leadership and Behavior in Organizations (CLBO) and the Frankfurt Laboratory for Experimental Economic Research.

March | 6 x 9, 336 pp. | 10 color illus., 20 black & white illus.

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Strüngmann Forum Reports
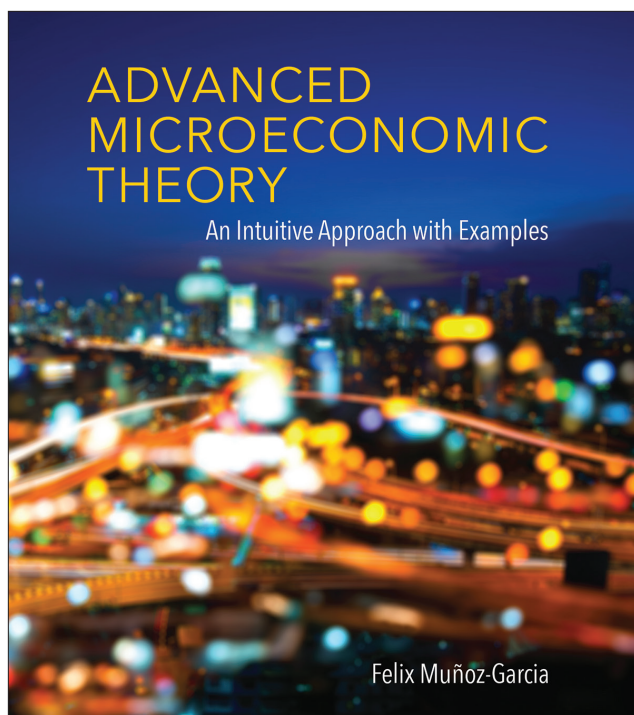
economics

Advanced Microeconomic Theory

An Intuitive Approach with Examples

Felix Muñoz-Garcia

This textbook offers an introduction to advanced microeconomic theory that emphasizes the intuition behind mathematical assumptions, providing step-by-step examples that show how to apply theoretical models. It covers standard topics such as preference relations, demand theory and applications, producer theory, choice under uncertainty, partial and general equilibrium, monopoly, game theory and imperfect competition, externalities and public goods, and contract theory; but its intuitive and application-oriented approach provides students with a bridge to more technical topics. The book can be used by advanced undergraduates as well as Masters students in economics, finance, and public policy, and by PhD students in programs with an applied focus.

The text connects each topic with recent findings in behavioral and experimental economics, and discusses these results in context, within the appropriate chapter. Step-by-step examples appear immediately after the main theoretical findings, and end-of chapter exercises help students understand how to approach similar exercises on their own. An appendix reviews basic mathematical concepts. A separate workbook, *Practice Exercises for Advanced Microeconomic Theory*, offers solutions to selected problems with detailed explanations. The textbook and workbook together help students improve both their theoretical and practical preparation in advanced microeconomics.

Felix Muñoz-Garcia is Associate Professor in the School of Economic Sciences at Washington State University.

An introduction to advanced topics in microeconomics that emphasizes the intuition behind assumptions and results, providing examples that show how to apply theory to practice.

April
8 x 9, 800 pp.
454 illus.

$110.00X/£69.95 cloth
978-0-262-03544-6

Practice Exercises for *Advanced Microeconomic Theory*

Felix Muñoz-Garcia

This workbook provides solutions and step-by-step explanations for the odd-numbered exercises in *Advanced Microeconomic Theory* (107 problems in total). The answer key and detailed explanations emphasize the economic intuition behind the mathematical assumptions and results.

April | 8 x 9, 288 pp. | 120 illus.

$50.00X/£37.95 paper
978-0-262-53314-0

business | management

Beyond the Triple Bottom Line

Eight Steps toward a Sustainable Business Model

Francisco Szekely and Zahir Dossa

foreword by Jeffrey Hollender

Many recent books make the case for businesses to become more sustainable, but few explain the specifics. In this book, Francisco Szekely and Zahir Dossa offer a pragmatic new business model for sustainability that extends beyond the traditional framework of the triple bottom line, describing eight steps that range from exploring a vision and establishing a strategy to implementing the strategy and promoting innovation.

A pragmatic new business model for sustainability that outlines eight steps that range from exploring a mission to promoting innovation; with case studies.

Szekely and Dossa argue that businesses and organizations need to move away from the business case for sustainability toward a sustainable business model. That is, businesses should go beyond the usual short-term focus on minimizing harm while maximizing profits. Instead, businesses on the path to sustainability should, from the start, focus on addressing a societal need and view profitability not as an end but as a means to support the sustainable organization.

Szekely and Dossa explore key problems organizations face when pursuing a sustainability agenda. Each chapter presents one of the eight steps, describes a business dilemma for sustainability, provides a theoretically grounded strategic framework, offers case studies that illustrate the dilemma, and summarizes key findings; the case studies draw on the experiences of such companies as Tesla Motors, Patagonia, TOMs, and Panera. The book emphasizes leadership, arguing that leaders who question the status quo, inspire others, and take risks are essential for achieving sustainable business practices.

Francisco Szekely is Sandoz Foundation Professor of Leadership and Sustainability at IMD Business School in Lausanne, where he is also Director of the Global Centre for Sustainability Leadership. **Zahir Dossa** is a postdoctoral Research Fellow at the Global Centre for Sustainability Leadership at IMD Business School.

April | 6 x 9, 240 pp. | 25 illus.

$50.00X/£37.95 cloth
978-0-262-03599-6

urban studies | environment

Infrastructural Ecologies

Alternative Development Models for Emerging Economies

Hillary Brown and Byron Stigge

Many emerging nations, particularly those least developed, lack basic critical infrastructural services—affordable energy, clean drinking water, dependable sanitation, and effective public transportation, along with reliable food systems. Many of these countries cannot afford the complex and resource-intensive systems based on Western, single-sector, industrialized models. In this book, Hillary Brown and Byron Stigge propose an alternate model for planning and designing infrastructural services in the emerging market context. This new model is holistic and integrated, resilient and sustainable, economical and equitable, creating an infrastructural ecology that is more analogous to the functioning of natural ecosystems.

An integrated, holistic model for infrastructure planning and design in developing countries.

Brown and Stigge identify five strategic infrastructure objectives and illustrate each with examples of successful projects from across the developing world. Each chapter also highlights exemplary preindustrial systems, demonstrating the long history of resilient, sustainable infrastructure. The case studies describe the use of single solutions to solve multiple problems, creating hybridized and reciprocal systems; "soft path" models for water management, including water reuse and nutrient recovery; post carbon infrastructures for power, heat, and transportation such as rural microhydro and solar-powered rickshaws; climate adaptation systems, including a multi-purpose tunnel and a "floating city"; and the need for community-based, equitable, and culturally appropriate projects.

Hillary Brown is Principal of the consulting firm New Civic Works and Professor of Architecture at City College of New York, where she directs its interdisciplinary program in Urban Sustainability. As Assistant Commissioner at New York City's Department of Design and Construction, she founded its Office of Sustainable Design in 1996. **Byron Stigge** is Founder of the Level Agency for Infrastructure, a New York City based infrastructure planning and engineering firm implementing projects predominantly in developing countries.

April | 7 x 9, 304 pp. | 63 color illus.

$30.00X/£22.95 paper
978-0-262-53386-7

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environment | philosophy

Philosophy, Technology, and the Environment

edited by David Kaplan

Environmental philosophy and philosophy of technology have taken divergent paths despite their common interest in

Contributions by prominent scholars examining the intersections of environmental philosophy and philosophy of technology.

examining human modification of the natural world. Yet philosophers from each field have a lot to contribute to the other. Environmental issues inevitably involve technologies, and technologies inevitably have environmental impacts. In this book, prominent scholars from both fields illuminate the intersections of environmental philosophy and philosophy of technology, offering the beginnings of a rich new hybrid discourse.

All the contributors share the intuition that technology and the environment overlap in ways that are relevant in both philosophical and practical terms. They consider such issues as the limits of technological interventions in the natural world, whether a concern for the environment can be designed into things, how consumerism relates us to artifacts and environments, and how food and animal agriculture raise questions about both culture and nature. They discuss, among other topics, the pessimism and dystopianism shared by environmentalists, environmental philosophers, and philosophers of technology; the ethics of geoengineering and climate change; the biological analogy at the heart of industrial ecology; green products and sustainable design; and agriculture as a bridge between technology and the environment.

David Kaplan is Associate Professor in the Department of Philosophy and Religion at the University of North Texas, where he is also Director of the Philosophy of Food Project.

Contributors
Braden Allenby, Raymond Anthony, Philip Brey, J. Baird Callicott, Brett Clark, Wyatt Galusky, Ryan Gunderson, Benjamin Hale, Clare Heyward, Don Idhe, Mark Sagoff, Julian Savulescu, Paul B. Thompson, Ibo van de Poel, Zhang Wei, Kyle Powys Whyte

February | 6 x 9, 272 pp. | 5 illus.

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978-0-262-53316-4

$90.00X/£66.95 cloth
978-0-262-03566-8

environment | China studies

Resigned Activism

Living with Pollution in Rural China

Anna Lora-Wainwright

Residents of rapidly industrializing rural areas in China live with pollution every day. Villagers drink obviously tainted water

An examination of the daily grind of living with pollution in rural China and of the varying forms of activism that develop in response.

and breathe visibly dirty air, afflicted by a variety of ailments—from arthritis to nosebleeds—that they ascribe to the effects of industrial pollution. "Cancer villages," village-sized clusters of high cancer incidence, have

emerged as a political and cultural phenomenon. In *Resigned Activism*, Anna Lora-Wainwright explores the daily grind of living with pollution in rural China and the varying forms of activism that develop in response. She finds that claims of health or environmental damage are politically sensitive, and that efforts to seek redress are frustrated by limited access to scientific evidence, growing socioeconomic inequalities, and complex local realities. Villagers, feeling powerless, often come to accept pollution as part of the environment; their activism is tempered by their resignation.

Lora-Wainwright uses the term "resigned activism" as a lens through which to view villagers' perceptions and the diverse forms of environmental engagement that result. These range from picketing at the factory gate to quieter individual or family-oriented actions. Drawing on her own extensive fieldwork, Lora-Wainwright offers three case studies of "resigned activism" in rural China, examining the experiences of villagers who live with the effects of phosphorous mining and fertilizer production, lead and zinc mining, and electronic waste processing. These cases make clear the staggering human costs of development and the deeply uneven distribution of costs and benefits that underlie China's economic power.

Anna Lora-Wainwright is Associate Professor in the Human Geography of China at the University of Oxford, and the author of *Fighting for Breath: Living Morally and Dying of Cancer in a Chinese Village*.

June | 6 x 9, 272 pp. | 27 illus.

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Urban and Industrial Environments series

Carbon Capture and Storage

Efficient Legal Policies for Risk Governance and Compensation

Michael G. Faure and Roy A. Partain

Carbon capture and storage (CCS) systems inject highly compressed carbon dioxide gas deep into geological formations in order to contain the gas, and its harmful effects on the planet, for the foreseeable future and beyond—for centuries or even millennia. Used effectively, CCS could lessen the impact of climate change while carbon-free energy sources are developed. And yet CCS is not widely deployed. In this book, Michael Faure and Roy Partain offer a theoretical and practical discussion of one of the main obstacles to CCS adoption: complex liability and compensation issues.

A theoretical and practical analysis of the complex liability issues raised by carbon capture and storage systems for containing greenhouse gases.

Faure and Partain point out that current liability rules are unclear in their application to CCS. Causation is complicated, and the timeline of hundreds of years goes beyond the lifetimes of people or corporations. Examining the subject from legal and economic perspectives, they consider whether rules of civil liability can govern CCS risk; how a liability system might address the open-ended timeline; what role public and private regulatory measures could play; and whether compensation should be provided from public or private resources. They investigate the utility of different forms of insurance and of such financial tools as guarantees, deposits, and catastrophe bonds. They offer not only a rigorous framework for assessing policy but also a summary of policy recommendations they develop from their findings.

Michael G. Faure is Professor of Comparative and International Environmental Law at Maastricht University and Academic Director of the Maastricht European Institute for Transnational Legal Research. **Roy A. Partain** is Reader at the University of Aberdeen School of Law.

April | 6 x 9, 376 pp.

$50.00X/£37.95 cloth
978-0-262-03559-0

Governing Complex Systems

Social Capital for the Anthropocene

Oran R. Young

The onset of the Anthropocene, an era in which human actions have become major drivers of change on a planetary scale, has increased the complexity of socioecological systems. Complex systems pose novel challenges for governance because of their high levels of connectivity, nonlinear dynamics, directional patterns of change, and emergent properties. Meeting these challenges will require the development of new intellectual capital. In this book, Oran Young argues that to achieve sustainable outcomes in a world of complex systems, we will need governance systems that are simultaneously durable enough to be effective in guiding behavior and agile enough to adapt to rapidly changing circumstances.

An exploration of the need for innovative mechanisms of governance in an era when human actions are major drivers of environmental change.

While some insights from past research on governance remain valid in this setting, Young argues that we need new social capital to supplement mainstream regulatory approaches that feature rule making with an emphasis on compliance and enforcement. He explores the uses of goal setting as a governance strategy, the idea of principled governance, and the role of what is often called good governance in meeting the challenges of the Anthropocene. Drawing on his long experience operating on the science/policy frontier, Young calls for more effective collaboration between analysts and practitioners in creating and implementing governance systems capable of producing sustainable outcomes in a world of complex systems.

Oran R. Young is Distinguished Professor Emeritus at the Bren School of Environmental Science and Management at the University of California, Santa Barbara. He is the author of *Institutional Dynamics: Emergent Patterns in International Environmental Governance* (MIT Press) and other books.

March | 6 x 9, 288 pp. | 3 illus.

$30.00X/£22.95 paper
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$90.00X/£66.95 cloth
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Earth System Governance series

environmental policy | political science

Climate of Capitulation

An Insider's Account of State Power in a Coal Nation

Vivian E. Thomson

The United States has pledged to the world community a reduction in greenhouse gas emissions by 26–28 percent below 2005 levels in 2025. Because much of this reduction must come from electric utilities, especially coal-fired power plants, coal states will make or break the U.S. commitment to emissions reduction. In *Climate of Capitulation*, Vivian Thomson offers an insider's account of how power is wielded in environmental policy making at the state level. Thomson, a former member of Virginia's State Air Pollution Control Board, identifies a "climate of capitulation" in state government—a deeply rooted favoritism toward coal and electric utilities in states' air pollution policies.

Thomson narrates three cases involving coal and air pollution from her time on the Air Board. She illuminates the overt and covert power struggles surrounding air pollution limits for a coal-fired power plant just across the Potomac from Washington, for a controversial new coal-fired electrical generation plant in coal country, and for coal dust pollution from truck traffic in a country hollow. Thomson links Virginia's climate of capitulation with campaign donations that make legislators politically indebted to coal and electric utility interests, a traditionalistic political culture tending to inertia, and a part-time legislature that depended on outside groups for information and bill drafting. Extending her analysis to fifteen other coal-dependent states, Thomson offers policy reforms aimed at mitigating the ingrained biases toward coal and electric utilities in states' air pollution policy making.

Vivian E. Thomson is Professor in the Department of Environmental Sciences and Politics and Director of the Environmental Thought and Practice BA Program at the University of Virginia.

How power is wielded in environmental policy making at the state level, and how to redress the ingrained favoritism toward coal and electric utilities.

May
6 x 9, 248 pp.
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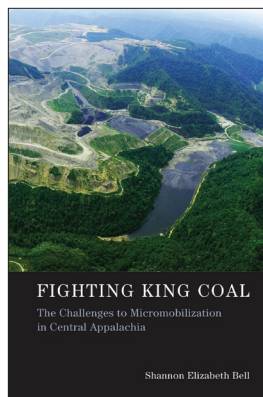
Governing through Goals

Sustainable Development Goals as Governance Innovation

edited by Norichika Kanie and Frank Biermann

In September 2015, the United Nations General Assembly adopted the Sustainable Development Goals as part of the

A detailed examination of the UN's Sustainable Development Goals and the shift in governance strategy they represent.

2030 Agenda for Sustainable Development. The Sustainable Development Goals built on and broadened the earlier Millennium Development Goals, but they also signaled a larger

shift in governance strategies. The seventeen goals add detailed content to the concept of sustainable development, identify specific targets for each goal, and help frame a broader, more coherent, and transformative 2030 agenda. The Sustainable Development Goals aim to build a universal, integrated framework for action that reflects the economic, social, and planetary complexities of the twenty-first century.

This book examines in detail the core characteristics of goal setting, asking when it is an appropriate governance strategy and how it differs from other approaches; analyzes the conditions under which a goal-oriented agenda can enable progress toward desired ends; and considers the practical challenges in implementation.

Norichika Kanie is Professor at the Graduate School of Media and Governance at Keio University, Tokyo, and Senior Research Fellow at United Nations University Institute for the Advanced Study of Sustainability. **Frank Biermann** is Research Professor of Global Sustainability Governance with the Copernicus Institute of Sustainable Development at Utrecht University and the author of *Earth System Governance: World Politics in the Anthropocene* (MIT Press).

Contributors
Dora Almassy, Steinar Andresen, Noura Bakkour, Steven Bernstein, Frank Biermann, Thierry Giordano, Aarti Gupta, Joyeeta Gupta, Peter M. Haas, Masahiko Iguchi, Norichika Kanie, Rakhyun E. Kim, Marcel Kok, Kanako Morita, Måns Nilsson, László Pintér, Michelle Scobie, Noriko Shimizu, Casey Stevens, Arild Underdal, Tancrède Voituriez, Takahiro Yamada, Oran R. Young

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Earth System Governance series

Environmental Governance Reconsidered

Challenges, Choices, and Opportunities

SECOND EDITION

edited by Robert F. Durant, Daniel J. Fiorino, and Rosemary O'Leary

This survey of current issues and controversies in environmental policy and management is unique in its thematic mix, broad

Key topics in the ongoing evolution of environmental governance, with new and updated material.

coverage of key debates, and in-depth analysis. The contributing authors, all distinguished scholars or practitioners, offer a comprehensive examination of key

topics in the continuing evolution of environmental governance, with perspectives from public policy, public administration, political science, international relations, sustainability theory, environmental economics, risk analysis, and democratic theory.

The second edition of this popular reader has been thoroughly revised, with updated coverage and new topics. The emphasis has shifted from sustainability to include sustainable cities, from domestic civic environmentalism to global civil society, and from global interdependence to the evolution of institutions of global environmental governance. A general focus on devolution of authority in the United States has been sharpened to address the specifics of contested federalism, and the treatment of flexibility now explores the specifics of regulatory innovation and change. New chapters address energy security; risk assessment, communication, and technology innovation; regulation-by-revelation; and retrospective regulatory analysis.

The topics are organized and integrated by the book's "3R" framework: *reconceptualizing* governance to reflect ecological risks and interdependencies better, *reconnecting* with stakeholders, and *reframing* administrative rationality. Extensive cross-references pull the chapters together.

Robert F. Durant is Professor Emeritus in the School of Public Affairs, American University. **Daniel J. Fiorino** is Director of the Center for Environmental Policy at American University. **Rosemary O'Leary** is Edwin O. Stene Distinguished Professor in the School of Public Affairs at the University of Kansas.

May | 6 x 9, 456 pp. | 2 illus.

$35.00X/£24.95 paper
978-0-262-53331-7

American and Comparative Environmental Policy series

digital humanities | literary criticism

Traversals

The Use of Preservation for Early Electronic Writing

Stuart Moulthrop and Dene Grigar

foreword by Joseph Tabbi

Many pioneering works of electronic literature are now largely inaccessible because of changes in hardware, software, and platforms. The virtual disappearance of these works—created on floppy disks, in Apple's defunct HyperCard, and on other early systems and platforms—not only puts important electronic literary work out of reach but also signals the fragility of most works of culture in the digital age. In response, Stuart Moulthrop and Dene Grigar have been working to document and preserve electronic literature, work that has culminated in the Pathfinders project and its series of "Traversals"—video and audio recordings of demonstrations performed on historically appropriate platforms, with participation and commentary by the authors of the works.

An exercise in reclaiming electronic literary works on inaccessible platforms, examining four works as both artifacts and operations.

In *Traversals*, Moulthrop and Grigar mine this material to examine four influential early works: Judy Malloy's *Uncle Roger* (1986), John McDaid's *Uncle Buddy's Phantom Funhouse* (1993), Shelley Jackson's *Patchwork Girl* (1995) and Bill Bly's *We Descend* (1997), offering "deep readings" that consider the works as both literary artifacts and computational constructs. For each work, Moulthrop and Grigar explore the interplay between the text's material circumstances and the patterns of meaning it engages and creates, paying attention both to specificities of media and purposes of expression.

Stuart Moulthrop is Professor in the Department of English at the University of Wisconsin–Milwaukee. **Dene Grigar** is Professor and Director of the Creative Media and Digital Culture Program at Washington State University Vancouver.

April | 6 x 9, 304 pp. | 30 illus.

$45.00S/£34.95 cloth
978-0-262-03597-2

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media | Internet studies

Minitel

Welcome to the Internet

Julien Mailland and Kevin Driscoll

A decade before the Internet became a medium for the masses in the United States, tens of millions of users in France had access to a network for email, e-commerce, chat, research, game playing, blogging, and even an early form of online porn. In 1983, the French government rolled out Minitel, a computer network that achieved widespread adoption in just a few years

The first scholarly book in English on Minitel, the pioneering French computer network, offers a history of a technical system and a cultural phenomenon.

as the government distributed free terminals to every French telephone subscriber. With this volume, Julien Mailland and Kevin Driscoll offer the first scholarly book in English on Minitel, examining it as both a technical system and a cultural phenomenon.

Mailland and Driscoll argue that Minitel was a technical marvel, a commercial success, and an ambitious social experiment. Other early networks may have introduced protocols and software standards that continue to be used today, but Minitel foretold the social effects of widespread telecomputing. They examine the unique balance of forces that enabled the growth of Minitel: public and private, open and closed, centralized and decentralized. Mailland and Driscoll describe Minitel's key technological components, novel online services, and thriving virtual communities. Despite the seemingly tight grip of the state, however, a lively Minitel culture emerged, characterized by spontaneity, imagination, and creativity. After three decades of continuous service, Minitel was shut down in 2012, but the history of Minitel should continue to inform our thinking about Internet policy, today and into the future.

Julien Mailland is Assistant Professor at the Media School at Indiana University Bloomington. **Kevin Driscoll** is Assistant Professor in the Department of Media Studies at the University of Virginia.

June | 6 x 9, 240 pp. | 33 illus.

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978-0-262-03622-1

Platform Studies

international relations | history

Fragile Rise

Grand Strategy and the Fate of Imperial Germany, 1871–1914

Xu Qiyu

translated by Joshua Hill

foreword by Graham Allison

A series of solemn anniversary events have marked the centenary of World War I. Could history repeat itself in today's geopolitics? Now, as then, a land power with a growing economy and a maritime power with global commitments are the two leading states in the international system. Most ominously, the outbreak of war in 1914 is a stark reminder that nations cannot rely on economic interdependence and ongoing diplomacy to keep the peace.

In *Fragile Rise*, Xu Qiyu offers a Chinese perspective on the course of German grand strategy in the decades before World War I. Xu shows how Germany's diplomatic blunders turned its growing power into a liability instead of an asset. Bismarck's successors provoked tension and conflict with the other European great powers. Germany's attempts to build a powerful navy alienated Britain. Fearing an assertive Germany, France and Russia formed an alliance, leaving the declining Austro-Hungarian Empire as Germany's only major ally.

Xu's account demonstrates that better strategy and statesmanship could have made a difference—for Germany and Europe. His analysis offers important lessons for the leaders of China and other countries. *Fragile Rise* reminds us that the emergence of a new great power creates risks that can be managed only by adroit diplomats, including the leaders of the emerging power. In the twenty-first century, another great war may not be inevitable. Heeding the lessons of *Fragile Rise* could make it even less likely.

Xu Qiyu is Deputy Director of the Institute for Strategic Studies at National Defense University in Beijing.

Germany's rise to power before World War I from a Chinese persepctive, and the geopolitical lessons for today.

March
6 1/8 x 9 1/4, 368 pp.

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Belfer Center Studies in International Security

art | new media

Here/There

Telepresence, Touch, and Art at the Interface

Kris Paulsen

"Telepresence" allows us to feel present—through vision, hearing, and even touch—at a remote location by means of real-time communication technology. Networked devices such as video cameras and telerobots extend our corporeal agency into distant spaces. In *Here/There*, Kris Paulsen examines telepresence technologies through the lens of contemporary

An examination of telepresence technologies through the lens of contemporary artistic experiments, from early video art through current "drone vision" works.

artistic experiments, from early video art through current "drone vision" works. Paulsen traces an arc of increasing interactivity, as video screens became spaces for communication and physical, tactile intervention. She explores the work of artists who took up these technological tools and questioned the aesthetic, social, and ethical stakes of media that allow us to manipulate and affect far-off environments and other people—to touch, metaphorically and literally, those who cannot touch us back.

Paulsen examines 1970s video artworks by Vito Acconci, Joan Jonas, live satellite performance projects by Kit Galloway and Sherrie Rabinowitz, and CCTV installations by Chris Burden. These early works, she argues, can help us make sense of the expansion of our senses by technologies that privilege real time over real space and model strategies for engagement and interaction with mediated others. They establish a political, aesthetic, and technological history for later works using cable TV infrastructures and the World Wide Web, including tele-robotic works by Ken Goldberg and Wafaa Bilal and artworks about military drones by Trevor Paglen, Omar Fast, Hito Steyerl, and others. These works become a meeting place for *here* and *there*.

Kris Paulsen is Assistant Professor of History of Art and Film Studies at the Ohio State University.

March | 7 x 9, 264 pp. | 54 illus.

$40.00S/£29.95 cloth
978-0-262-03572-9

A Leonardo Book

digital humanities

Coding Literacy

How Computer Programming Is Changing Writing

Annette Vee

The message from educators, the tech community, and even politicians is clear: everyone should learn to code. To emphasize the universality and impor-

How the theoretical tools of literacy help us understand programming in its historical, social and conceptual contexts.

tance of computer programming, promoters of coding for everyone often invoke the concept of "literacy," drawing parallels between reading and writing code and reading and writing text. In this book, Annette Vee examines the coding-as-literacy analogy and argues that it can be an apt rhetorical frame. The theoretical tools of literacy help us understand programming beyond a technical level, and in its historical, social, and conceptual contexts. Viewing programming from the perspective of literacy and literacy from the perspective of programming, she argues, shifts our understandings of both. Computer programming becomes part of an array of communication skills important in everyday life, and literacy, augmented by programming, becomes more capacious.

Vee examines the ways that programming is linked with literacy in coding literacy campaigns, considering the ideologies that accompany this coupling, and she looks at how both writing and programming encode and distribute information. She explores historical parallels between writing and programming, using the evolution of mass textual literacy to shed light on the trajectory of code from military and government infrastructure to large-scale businesses to personal use. Writing and coding were institutionalized, domesticated, and then established as a basis for literacy. Just as societies demonstrated a "literate mentality" regardless of the literate status of individuals, Vee argues, a "computational mentality" is now emerging even though coding is still a specialized skill.

Annette Vee is Assistant Professor in the Department of English at the University of Pittsburgh.

June | 6 x 9, 336 pp. | 10 illus.

$34.00S/£24.95 cloth
978-0-262-03624-5

Software Studies series

design

FireSigns

A Semiotic Theory for Graphic Design

Steven Skaggs

Graphic design has been an academic discipline since the post-World War II era, but it has yet to develop a coherent theoretical foundation.

Semiotics concepts from a design perspective, offering the foundation for a coherent theory of graphic design as well as conceptual tools for practicing designers.

Instead, it proceeds through styles, genres, and imitation, drawing on sources that range from the Bauhaus to deconstructionism. In *FireSigns*, Steven Skaggs offers the foundation for a semiotic theory of graphic design, exploring semiotic concepts from design and studio art perspectives and offering useful conceptual tools for practicing designers.

Semiotics is the study of signs and significations; graphic design creates visual signs meant to create a certain effect in the mind (a "FireSign"). Skaggs provides a network of explicit concepts and terminology for a practice that has made implicit use of semiotics without knowing it. He offers an overview of the metaphysics of visual perception and the notion of visual entities, and, drawing on the pragmatic semiotics of the philosopher Charles Sanders Peirce, looks at visual experience as a product of the action of signs. He introduces three conceptual tools for analyzing works of graphic design—semantic profiles, the functional metric, and the visual gamut that allow visual "personality types" to emerge and enable a greater understanding of the range of possibilities for visual elements. Finally, he applies these tools to specific analyses of typography.

Steven Skaggs is Professor of Design at the Hite Art Institute of the University of Louisville. A semiotician, calligrapher, and font designer, he explores the connections between the visual and verbal worlds.

March | 7 x 9, 296 pp. | 86 color illus., 25 black & white illus.

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Design Thinking, Design Theory series

computer science

Cloud and Cognitive Computing

Principles, Architecture, Programming

Kai Hwang

This is the first textbook to teach students how to build data analytic solutions on large data sets (specifically in Internet of Things applications) using cloud-based technologies for data storage, transmission and mashup, and AI techniques to analyze this data.

The first textbook to teach students how to build data analytic solutions on large data sets using cloud-based technologies.

This textbook is designed to train college students to master modern cloud computing systems in operating principles, architecture design, machine learning algorithms, programming models and software tools for big data mining, analytics, and cognitive applications. The book will be suitable for use in one-semester computer science or electrical engineering courses on cloud computing, machine learning, cloud programming, cognitive computing, or big data science. The book will also be very useful as a reference for professionals who want to work in cloud computing and data science.

Cloud and Cognitive Computing begins with two introductory chapters on fundamentals of cloud computing, data science, and adaptive computing that lay the foundation for the rest of the book. Subsequent chapters cover topics including cloud architecture, mashup services, virtual machines, Docker containers, mobile clouds, IoT and AI, inter-cloud mashups, and cloud performance and benchmarks, with a focus on Google's Brain Project, DeepMind, and X-Lab programs, IBM SyNapse, Bluemix programs, cognitive initiatives, and neurocomputers. The book then covers machine learning algorithms and cloud programming software tools and application development, applying the tools in machine learning, social media, deep learning, and cognitive applications. All cloud systems are illustrated with big data and cognitive application examples.

Kai Hwang is a Professor of Electrical Engineering and Computer Science at the University of Southern California (USC). This book is based on his Cloud Computing course.

April | 8 x 9, 448 pp. | 250 illus.

$110.00X/£81.95 cloth
978-0-262-03641-2

computer science

Real-World Algorithms

A Beginner's Guide

Panos Louridas

Algorithms are what we do in order not to have to do something. Algorithms consist of instructions to carry out tasks—usually dull, repetitive ones. Starting from simple building blocks, computer algorithms enable machines to recognize and produce speech, translate texts, categorize and summarize documents, describe images, and predict the weather. A task that would take hours can be completed in virtually no time by using a few lines of code in a modern scripting program. This book offers an introduction to algorithms through the real-world problems they solve. The algorithms are presented in pseudocode and can readily be implemented in a computer language.

An introduction to algorithms for readers with no background in advanced mathematics or computer science, emphasizing examples and real-world problems.

The book presents algorithms simply and accessibly, without overwhelming readers or insulting their intelligence. Readers should be comfortable with mathematical fundamentals and have a basic understanding of how computers work; all other necessary concepts are explained in the text. After presenting background in pseudocode conventions, basic terminology, and data structures, chapters cover compression, cryptography, graphs, searching and sorting, hashing, classification, strings, and chance. Each chapter describes real problems and then presents algorithms to solve them. Examples illustrate the wide range of applications, including shortest paths as a solution to paragraph line breaks, strongest paths in elections systems, hashes for song recognition, voting power Monte Carlo methods, and entropy for machine learning. *Real-World Algorithms* can be used by students in disciplines from economics to applied sciences. Computer science majors can read it before using a more technical text.

Panos Louridas is Associate Professor in the Department of Management Science and Technology at the Athens University of Economics and Business.

March | 7 x 9, 536 pp. | 286 illus.

$45.00X/£34.95 cloth
978-0-262-03570-5

computer science | electrical engineering

Introduction to Embedded Systems

A Cyber-Physical Systems Approach

SECOND EDITION

Edward Ashford Lee and Sanjit Arunkumar Seshia

The most visible use of computers and software is processing information for human consumption. The vast majority of computers in use, however, are much less visible. They run the engine, brakes, seatbelts, airbag, and audio system in your car. They digitally encode your voice and construct a radio signal to send it from your cell phone to a base station. They command robots on a factory floor, power generation in a power plant, processes in a chemical plant, and traffic lights in a city. These less visible computers are called embedded systems, and the software they run is called embedded software. The principal challenges in designing and analyzing embedded systems stem from their interaction with physical processes. This book takes a cyber-physical approach to embedded systems, introducing the engineering concepts underlying embedded systems as a technology and as a subject of study. The focus is on modeling, design, and analysis of cyber-physical systems, which integrate computation, networking, and physical processes.

An introduction to the engineering principles of embedded systems, with a focus on modeling, design, and analysis of cyber-physical systems.

The second edition offers two new chapters, several new exercises, and other improvements. The book can be used as a textbook at the advanced undergraduate or introductory graduate level and as a professional reference for practicing engineers and computer scientists. Readers should have some familiarity with machine structures, computer programming, basic discrete mathematics and algorithms, and signals and systems.

Edward Ashford Lee is Robert S. Pepper Distinguished Professor in the Department of Electrical Engineering and Computer Sciences at the University of California, Berkeley. **Sanjit Arunkumar Seshia** is Professor in the Department of Electrical Engineering and Computer Sciences at the University of California, Berkeley.

February | 7 1/4 x 9 1/4, 568 pp.

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Reasoning about Uncertainty

SECOND EDITION

Joseph Y. Halpern

In order to deal with uncertainty intelligently, we need to be able to represent it and reason about it. In this book, Joseph Halpern examines formal ways of representing uncertainty and considers various logics for reasoning about it. While the ideas presented are formalized in terms of definitions and theorems, the emphasis is on the philosophy of representing and reasoning about uncertainty. Halpern surveys possible formal systems for representing uncertainty, including probability measures, possibility measures, and plausibility measures; considers the updating of beliefs based on changing information and the relation to Bayes' theorem; and discusses qualitative, quantitative, and plausibilistic Bayesian networks.

Formal ways of representing uncertainty and various logics for reasoning about it; updated with new material on weighted probability measures, complexity-theoretic considerations, and other topics.

This second edition has been updated to reflect Halpern's recent research. New material includes a consideration of weighted probability measures and how they can be used in decision making; analyses of the Doomsday argument and the Sleeping Beauty problem; modeling games with imperfect recall using the runs-and-systems approach; a discussion of complexity-theoretic considerations; the application of first-order conditional logic to security.

Reasoning about Uncertainty is accessible and relevant to researchers and students in many fields, including computer science, artificial intelligence, economics (particularly game theory), mathematics, philosophy, and statistics.

Joseph Y. Halpern is Professor of Computer Science at Cornell University. He is the author of *Actual Causality* and the coauthor of *Reasoning about Knowledge*, both published by the MIT Press.

Praise for the first edition

"A rich source of unique insights, offering unexpected connections between different fields."
—Peter P. Wakker, Department of Economics, University of Amsterdam

May | 7 x 9, 488 pp. | 18 illus.

$65.00X/£48.95 paper
978-0-262-53380-5

Perturbations, Optimization, and Statistics

edited by Tamir Hazan, George Papandreou, and Daniel Tarlow

In nearly all machine learning, decisions must be made given current knowledge. Surprisingly, making what is believed to be the best decision is not always the best strategy, even when learning in a supervised learning setting. An emerging body of work on learning under different rules applies perturbations to decision and learning procedures. These methods provide simple and highly efficient learning rules with improved theoretical guarantees. This book describes perturbation-based methods developed in machine learning to augment novel optimization methods with strong statistical guarantees, offering readers a state-of-the-art overview.

A description of perturbation-based methods developed in machine learning to augment novel optimization methods with strong statistical guarantees.

Chapters address recent modeling ideas that have arisen within the perturbations framework, including Perturb & MAP, herding, and the use of neural networks to map generic noise to distribution over highly structured data. They describe new learning procedures for perturbation models, including an improved EM algorithm and a learning algorithm that aims to match moments of model samples to moments of data. They discuss understanding the relation of perturbation models to their traditional counterparts, with one chapter showing that the perturbations viewpoint can lead to new algorithms in the traditional setting. And they consider perturbation-based regularization in neural networks, offering a more complete understanding of dropout and studying perturbations in the context of deep neural networks.

Tamir Hazan is Assistant Professor at Technion, Israel Institute of Technology. **George Papandreou** is a Research Scientist for Google, Inc. **Daniel Tarlow** is a Researcher at Microsoft Research Cambridge, UK.

February | 8 x 10 , 416 pp. | 174 illus.

$60.00X/£44.95 cloth
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Neural Information Processing series

computer science

Fundamental Proof Methods in Computer Science

A Computer-Based Approach

Konstantine Arkoudas and David Musser

Proof is the primary vehicle for knowledge generation in mathematics. In computer science, proof has found an additional use:

A textbook that teaches students to read and write proofs using Athena.

verifying that a particular system (or component, or algorithm) has certain desirable properties. This book teaches students to read and write proofs using Athena, a freely downloadable computer language. Athena proofs are machine-checkable and written in an intuitive natural-deduction style. The book contains more than 300 exercises, most with full solutions; by putting proofs into practice, it demonstrates the fundamental role of logic and proof in computer science as no other existing text does.

Guided by examples and exercises, students are quickly immersed in the most useful high-level proof methods, including equational reasoning, several forms of induction, case analysis, proof by contradiction, and abstraction/specialization. Athena is particularly suited to the needs of computer science students as proofs are expressed with programming constructs based closely on those used in conventional programming. Block structure, for example, plays a key role in Athena's natural-deduction style. These similarities allow useful analogies to be drawn between proofs-as-programs and ordinary programs. The book also includes auxiliary material on SAT and SMT solving, automated theorem proving, and logic programming.

The book can be used by upper undergraduate- or graduate-level computer science students with a basic level of programming and mathematical experience. Professional programmers, practitioners of formal methods, and researchers in logic-related branches of computer science will find it a valuable reference.

Konstantine Arkoudas is a Senior Research Scientist and Software Engineer in the Machine Learning Group for Bloomberg R&D. **David Musser** is Professor Emeritus of Computer Science at Rensselaer Polytechnic Institute.

February | 8 x 9, 968 pp. | 28 illus.

$60.00X/£44.95 cloth
978-0-262-03553-8

defense | aerospace

Perspectives on Space Surveillance

**edited by Ramaswamy Sridharan
and Antonio F. Pensa**

In the 1950s, the United States and the Soviet Union raced to develop space-based intelligence gathering capability. The

The development of deep space surveillance technology and its later application to near-Earth surveillance, covering work at Lincoln Laboratory from 1970 to 2000.

Soviets succeeded first, with SPUTNIK I in 1957. The United States began to monitor the growing Soviet space presence by developing technology for the detection and tracking of man-made resident space objects (RSOs) in near-Earth orbit. In 1972, the Soviet Union launched a satellite into deep space orbit, and the U.S. government called on MIT Lincoln Laboratory to develop deep space surveillance technology. This book describes these developments, as well as the later application of deep space surveillance technology to near-Earth surveillance, covering work at Lincoln Laboratory on space surveillance from 1970 to 2000.

The contributors, all key participants in developing these technologies, discuss topics that include narrow beam, narrow bandwidth radar for deep surveillance; wide bandwidth radar for RSO monitoring; ground-based electro-optical deep space surveillance and its adaptation for space-based surveillance; radar as the means of real-time search and discovery techniques; methods of analyses of signature data from narrow bandwidth radars; and the collision hazard for satellites in geosynchronous orbit, stemming initially from the failure of TELSTAR 401. They also describe some unintended byproducts of this pioneering work, including the use of optical space surveillance techniques for near-Earth asteroid detection.

Ramaswamy Sridharan is Senior Staff Member at MIT Lincoln Laboratory. **Antonio Pensa** is Assistant Director Emeritus at MIT Lincoln Laboratory.

Contributors
Rick Abbott, Robert Bergemann, E.M. Gaposchkin, Israel Kupiec, Richard Lambour, Antonio F. Pensa, Eugene Rork, Jayant Sharma, Craig Solodyna, Ramaswamy Sridharan, J. Scott Stuart, George Zollinger

April | 7 x 9, 392 pp. | 220 color illus., 15 black & white illus.

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MIT Lincoln Laboratory Series

Deep Learning

Ian Goodfellow, Yoshua Bengio, and Aaron Courville

Deep learning is a form of machine learning that enables computers to learn from experience and understand the world in terms of a hierarchy of concepts. Because the computer gathers knowledge from experience, there is no need for a human computer operator to formally specify all the knowledge that the computer needs. The hierarchy of concepts allows the computer to learn complicated concepts by building them out of simpler ones; a graph of these hierarchies would be many layers deep. This book introduces a broad range of topics in deep learning.

The text offers mathematical and conceptual background, covering relevant concepts in linear algebra, probability theory and information theory, numerical computation, and machine learning. It describes deep learning techniques used by practitioners in industry, including deep feedforward networks, regularization, optimization algorithms, convolutional networks, sequence modeling, and practical methodology; and it surveys such applications as natural language processing, speech recognition, computer vision, online recommendation systems, bioinformatics, and videogames. Finally, the book offers research perspectives, covering such theoretical topics as linear factor models, autoencoders, representation learning, structured probabilistic models, Monte Carlo methods, the partition function, approximate inference, and deep generative models.

Deep Learning can be used by undergraduate or graduate students planning careers in either industry or research, and by software engineers who want to begin using deep learning in their products or platforms. A website offers supplementary material for both readers and instructors.

Ian Goodfellow is Research Scientist at OpenAI. **Yoshua Bengio** is Professor of Computer Science at the Université de Montréal. **Aaron Courville** is Assistant Professor of Computer Science at the Université de Montréal.

"Written by three experts in the field, *Deep Learning* is the only comprehensive book on the subject. It provides much-needed broad perspective and mathematical preliminaries for software engineers and students entering the field, and serves as a reference for authorities."
—**Elon Musk, co-chair of OpenAI; cofounder and CEO of Tesla and SpaceX**
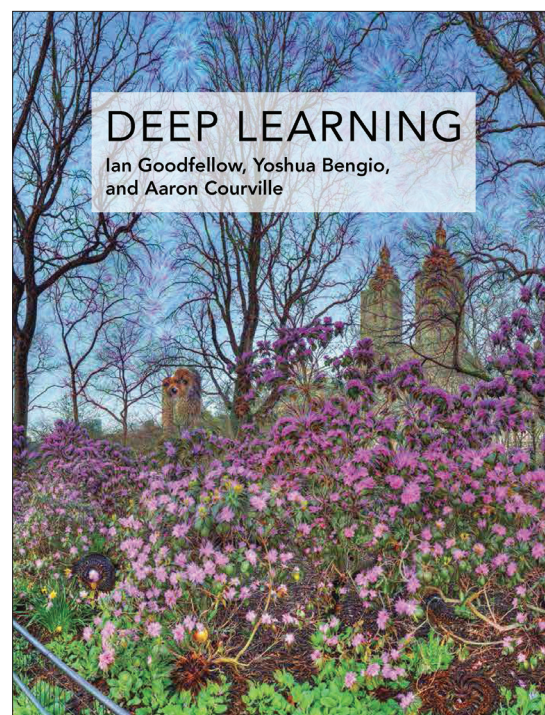
An introduction to a broad range of topics in deep learning, covering mathematical and conceptual background, deep learning techniques used in industry, and research perspectives.

linguistics | evolutionary biology
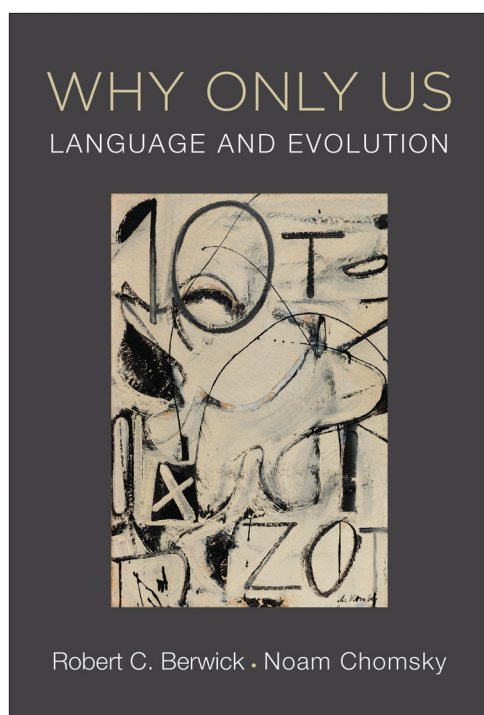
Why Only Us
Language and Evolution

Robert C. Berwick and Noam Chomsky

Our remarkable, species-specific ability to acquire any human language—"the language faculty"—raises important biological questions about language, including how it has evolved. This book by two distinguished scholars—a computer scientist and a linguist—addresses the enduring question of the evolution of language. Robert Berwick and Noam Chomsky explain that until recently the evolutionary question could not be properly posed, because we did not have a clear idea of how to define "language" and therefore what it was that had evolved. But since the Minimalist Program, developed by Chomsky and others, we know the key ingredients of language and can put together an account of the evolution of human language and of what distinguishes us from all other animals.

Robert C. Berwick is Professor of Computational Linguistics and Computer Science and Engineering, in the Laboratory for Information and Decision Systems and the Institute for Data, Systems, and Society at MIT and the author of *Computational Complexity and Natural Language* and *The Acquisition of Syntactic Knowledge*, both published by the MIT Press. **Noam Chomsky** is Institute Professor and Professor of Linguistics (Emeritus) at MIT and the author of many influential books on linguistics, including *Aspects of the Theory of Syntax* and *The Minimalist Program*, both published by the MIT Press.

Berwick and Chomsky draw on recent developments in linguistic theory to offer an evolutionary account of language and humans' remarkable, species-specific ability to acquire it.

May
5 3/8x 8, 224 pp.
4 color illus., 7 black & white illus.

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978-0-262-03424-1

"Will fascinate anyone interested in the extraordinary phenomenon of language."
—Ian Tattersall, *New York Review of Books*

"The book is captivating and a must for everyone interested in evolution and humans. It is a landmark that will define future research."
—Martin Nowak, Professor of Mathematics and of Biology, Harvard University

"A witty and engaging introduction to language from a biological perspective, this is science writing at its best."
—Stephen Crain, Distinguished Professor, Department of Linguistic, Macquarie University, and Director of the ARC Centre of Excellence in Cognition and its Disorders

science

Consciousness

Confessions of a Romantic Reductionist

Christof Koch

Christof Koch has devoted much of his career to bridging the seemingly unbridgeable gap between the physics of the brain and phenomenal experience. This engaging book—part scientific overview, part memoir, part futurist speculation—describes Koch's search for an empirical explanation for consciousness. Koch recounts not only the birth of the modern science of consciousness but also the subterranean motivation for his quest—his instinctual (if "romantic") belief that life is meaningful. He gives us stories from the front lines of modern research into the neurobiology of consciousness as well as his own reflections on a variety of topics, including the distinction between attention and awareness, the unconscious, how neurons respond to Homer Simpson, the physics and biology of free will, dogs, *Der Ring des Nibelungen*, sentient machines, the loss of his belief in a personal God, and sadness. All of them are signposts in the pursuit of his life's work: to uncover the roots of consciousness.
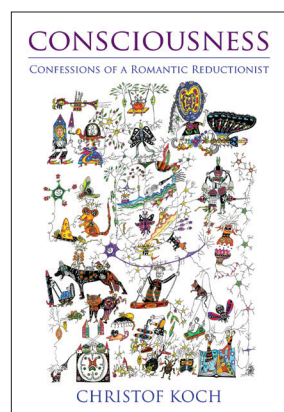
Christof Koch is President and Chief Scientific Officer of the Allen Institute for Brain Science in Seattle. He is the author of *The Quest for Consciousness* and other books.

"Science writing at its best."
—Anil Seth, *Times Higher Education*

"The book will leave you with a small piece of Koch's own consciousness, plucked from his head and delivered into yours."
—Laura Sanders, *Science News*

"I argued with Koch all the way through this book. And I loved every minute of it."
—Robert Stickgold, *Nature*

March | 6 x 9, 200 pp.

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science

Turing's Vision

The Birth of Computer Science

Chris Bernhardt

In 1936, when he was just twenty-four years old, Alan Turing wrote a remarkable paper in which he outlined the theory of computation, laying out the ideas that underlie all modern computers. This groundbreaking and powerful theory now forms the basis of computer science. In *Turing's Vision*, Chris Bernhardt explains the theory, Turing's most important contribution, for the general reader. He argues that the strength of Turing's theory is its simplicity, and that, explained in a straightforward manner, it is eminently understandable by the nonspecialist. Bernhardt begins with the foundation and systematically builds to the surprising conclusions. He also views Turing's theory in the context of mathematical history, other views of computation (including those of Alonzo Church), Turing's later work, and the birth of the modern computer.
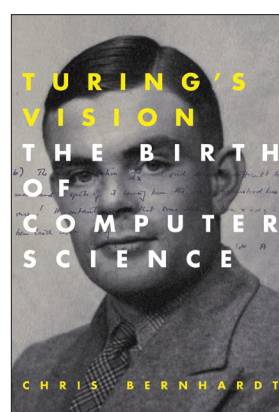
Chris Bernhardt is Professor of Mathematics at Fairfield University.

"A fascinating account of Alan Turing's epic research paper, which kicked off the entire computer revolution. . .simple, transparent, and a pleasure to read."
—Ian Stewart, author of *In Pursuit of the Unknown: 17 Equations That Changed the World*

"This is a delightful introduction for the lay reader to the ideas surrounding Alan Turing's great paper of 1936."
—Scott Aaronson, Associate Professor of Electrical Engineering and Computer Science, MIT

"A marvelous book."
—A. K. Dewdney, Professor Emeritus, Department of Computer Science, University of Western Ontario

May | 5 3/8 x 8, 208 pp. | 15 illus.

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economics | business

The Sharing Economy

The End of Employment and the Rise
of Crowd-Based Capitalism

Arun Sundararajan

Sharing isn't new. Giving someone a ride, having a guest in your spare room, running errands for someone, participating in a supper club—these are not revolutionary concepts. What is new, in the "sharing economy," is that you are not helping a friend for free; you are providing these services to a stranger for money. In this book, Arun Sundararajan, an expert on the sharing economy, explains the transition to what he describes as "crowd-based capitalism"—a new way of organizing economic activity that may supplant the traditional corporate-centered model. Drawing on extensive research and numerous real-world examples, Sundararajan explains the basics of crowd-based capitalism: he describes the intriguing mix of "gift" and "market" in its transactions, demystifies emerging blockchain technologies, and clarifies the dizzying array of emerging on-demand platforms. He considers how this new paradigm changes economic growth and the future of work, suggesting possible new directions for self-regulatory organizations, labor law, and funding our social safety net.

Arun Sundararajan is a Professor at New York University's Stern School of Business. A recognized authority on the sharing economy, he has published commentary in such publications as the *New York Times* and *Harvard Business Review*.

"Sundararajan offers an insightful guide to the forces shaping our economy today—and tomorrow."
—Hal Varian, Chief Economist, Google

"A very interesting book by one the most knowledgeable researchers on the sharing economy."
—*The Enlightened Economist*

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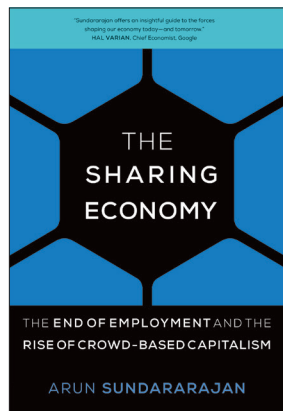
science

The Human Advantage

How Our Brains Became Remarkable

Suzana Herculano-Houzel

Humans are awesome. Our brains are gigantic, seven times larger than they should be for the size of our bodies. So the human brain is special, right? Wrong, according to Suzana Herculano-Houzel. In this book, she shows that it is not the size of our brain that matters but the fact that we have more neurons in the cerebral cortex than any other animal, thanks to our ancestors' invention, some 1.5 million years ago, of a more efficient way to obtain calories: cooking. Because we are primates, ingesting more calories in less time made possible the rapid acquisition of a huge number of neurons in the still fairly small cerebral cortex—the part of the brain responsible for finding patterns, reasoning, developing technology, and passing it on through culture. Herculano-Houzel shows us how she came to these conclusions—making "brain soup" to determine the number of neurons in the brain, for example, and bringing animal brains in a suitcase through customs. *The Human Advantage* is an engaging and original look at how we became remarkable without ever being special.

Suzana Herculano-Houzel is Associate Professor in the Departments of Psychology and Biological Sciences at Vanderbilt University.

"[An] engaging work. . . Herculano-Houzel puts her expertise as a science journalist to good use."
—*Publishers Weekly*

"Convincing, fun, and inspiring. *The Human Advantage* is a game-changer."
—Richard Wrangham, author of *Catching Fire: How Cooking Made Us Human*

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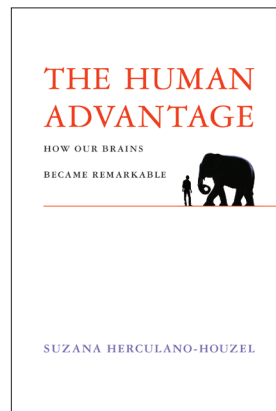
science | psychology

Felt Time

The Science of How We Experience Time

Marc Wittmann
translated by Erik Butler

In *Felt Time*, Marc Wittmann explores our perception of time—whether moment by moment, or in terms of life as a whole.
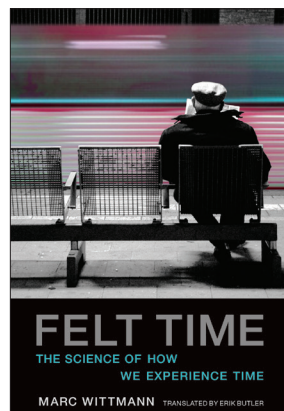
Drawing on the latest insights from psychology and neuroscience, he explains, among other things, how we choose between savoring the moment and deferring gratification, and how the feeling of duration can serve as an "error signal," letting us know when it is taking too long for dinner to be ready or for the bus to come. Describing how, as we grow older, subjective time accelerates as routine increases, Wittman considers the practice of mindfulness, and whether it can reduce the speed of life and help us gain more time. He points to recent research that connects time to consciousness; ongoing studies of time consciousness, he tells us, will help us better understand the conscious self.

Marc Wittmann is a Research Fellow at the Institute for Frontier Areas of Psychology and Mental Health, Freiburg, Germany.

"Eloquently sketches out the importance of time, both in the darkness of the lab and in the full light of everyday behaviour."
—**Hedderik van Rijn,** *Nature*

"*Felt Time* is a lively little disquisition, informative yet accessible . . . both thought-provoking and, indeed, timely."
—**Houman Barekat,** *Times Higher Education*

"[A] fascinating inquiry into how our subjective experience of time's passage shapes everything from our emotional memory to our sense of self."
—**Maria Popova,** *Brain Pickings*

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economics | women in business | memoir

Sharing the Work

What My Family and Career Taught Me about Breaking Through (and Holding the Door Open for Others)

Myra Strober
foreword by John Donahoe, Chair of the Board, PayPal, and former CEO, eBay

Myra Strober's generous memoir captures the spirit of a revolution lived fully, from her Brooklyn childhood (and her shock at age twelve when she's banished to the women's balcony at *shul*) to her groundbreaking Stanford seminar on women and work. Strober's interest in women and work began when she saw her mother's frustration at the limitations of her position as a secretary. Her consciousness of the unfairness of the usual distribution of household chores came when she unsuccessfully asked her husband for help with housework. Later, when a group of conservative white male professors sputtered at the idea of government-subsidized child care, Strober made the case for its economic benefits. Strober was a pioneer, helping to create a new academic field and founding institutions to establish it. But she wasn't alone: she benefited from the women's movement, institutional change, and new federal regulations that banned sex discrimination. She continues the work today and invites us to join her.
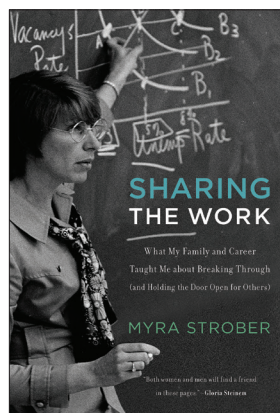
Myra Strober is a labor economist. She is Professor (Emerita) at the Graduate School of Education at Stanford University, and Professor of Economics at Stanford's Graduate School of Business (by courtesy). She is the coauthor of *The Road Winds Uphill All the Way: Gender, Work, and Family in the United States and Japan* (MIT Press).

"Myra Strober's *Sharing the Work* is the memoir of a woman who has learned that 'having it all' is only possible by 'sharing it all'. . . . Both women and men will find a friend in these pages."
—**Gloria Steinem**

"There should be many more books like this . . . . Bravo."
—**Tyler Cowen,** *Marginal Revolution*

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art

Your Everyday Art World

Lane Relyea

Over the past twenty years, the network has come to dominate the art world, affecting not just interaction among art professionals but the very makeup of the art object itself. The hierarchical and restrictive structure of the museum has been replaced by temporary projects scattered across the globe, staffed by free agents hired on short-term contracts, viewed by spectators defined by their predisposition to participate and make connections. In this book, Lane Relyea tries to make sense of these changes, describing a general organizational shift in the art world that affects not only material infrastructures but also conceptual categories and the construction of meaning. Examining art practice, exhibition strategies, art criticism, and graduate education, Relyea aligns the transformation of the art world with the advent of globalization and the neoliberal economy. He calls attention to certain networked forms of art, and offers a powerful answer to the claim that the interlocking functions of the network—each act of communicating, of connecting, or practice—are without political content.

Lane Relyea is Associate Professor and Chair of Art, Theory, and Practice at Northwestern University and the editor-in-chief of *Art Journal*.

"A sophisticated, incisive and deeply engaged book, and Relyea's willingness to be polemical and take a position provides an example that more art historians and critics would do well to follow."
—Saelan Twerdy, *C Magazine*

"With prose of galvanizing punch and verve, Lane Relyea details the ways in which the flesh of art responds to the new spirit of capitalism."
—Judith Rodenbeck, Professor of Modern and Contemporary Art, Sarah Lawrence College

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art | cultural studies

The Big Archive

Art from Bureaucracy

Sven Spieker

In *The Big Archive*, Sven Spieker investigates the archive—as both bureaucratic institution and index of evolving attitudes toward contingent time in science and art—and finds it to be a crucible of twentieth-century modernism. He argues that the use of archives by such contemporary artists as Hiller, Richter, Hans-Peter Feldmann, Walid Raad, and Boris Mikhailov responds to and continues an attack on the nineteenth-century archive and its objectification of the historical process. Spieker considers archivally driven art in relation to changing media technologies—the typewriter, the telephone, the telegraph, film. And he connects the archive to a particularly modern visuality, showing that the avant-garde used the archive as something of a laboratory for experimental inquiries into the nature of vision and its relation to time. *The Big Archive* offers us the first critical monograph on an overarching motif in twentieth-century art.

Sven Spieker teaches in the Comparative Literature Program and the Department of Germanic and Slavic Studies at the University of California, Santa Barbara. He is a founding editor of *ARTMargins*, and *ArtMargins Online*.

Winner, Scholarly Illustrated Category, 2009 AAUP Book, Journal, and Jacket Show

"Spieker's arguments are often beguilingly clever, at times devilishly so."
—Craig Leonard, *Prefix Photo*

"This nonfictional version of Umberto Eco's *The Name of the Rose* is indispensable reading for artists and scholars."
—Boris Groys, Global Professor at New York University, and author of *Art Power*

March | 6 1/2 x 9, 240 pp. | 78 illus.

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art | music | biography

Topless Cellist

The Improbable Life of Charlotte Moorman

Joan Rothfuss
foreword by Yoko Ono

The Juilliard-trained cellist Charlotte Moorman sat nude behind a cello of carved ice, performed while dangling from helium-filled balloons, and did a striptease while playing Bach in Nam June Paik's *Sonata for Adults Only*. Less famous than her madcap antics but more significant is Moorman's transformative influence on contemporary performance practice. In *Topless Cellist*, the first book to explore Charlotte Moorman's life and work, Joan Rothfuss rediscovers, and recovers, the legacy of an extraordinary American artist.
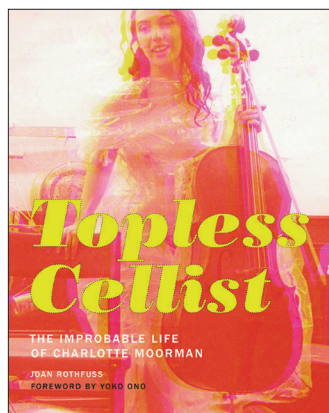
Moorman's arrest in 1967 for performing topless made her a water-cooler conversation starter, but before her tabloid fame she was a star of the avant-garde performance circuit, with a repertoire of pieces by, among others, Yoko Ono, Joseph Beuys, John Cage, and Paik, her main artistic partner. Deeply researched and profusely illustrated, *Topless Cellist* offers a fascinating, sometimes heartbreaking, often hilarious story of an artist whose importance was more than the sum of her performances.

Joan Rothfuss is an independent writer and curator based in Minneapolis.

"A superb biography."
—Holland Cotter, *New York Times*

"Not just a record of a remarkable span and its rich artistic milieu, but a testament also to the ways Moorman could be so easily written out of the history of the avant-garde."
—Brian Dillon, *The Guardian*

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design | business

Make It New

The History of Silicon Valley Design

Barry M. Katz
foreword by John Maeda

California's Silicon Valley is home to the greatest concentration of designers in the world. In *Make It New*, Barry Katz tells how design helped transform Silicon Valley into the most powerful engine of innovation in the world. From Hewlett-Packard and Ampex in the 1950s to Google and Facebook today, design has provided the bridge between research and development, art and engineering, technical performance and human behavior.
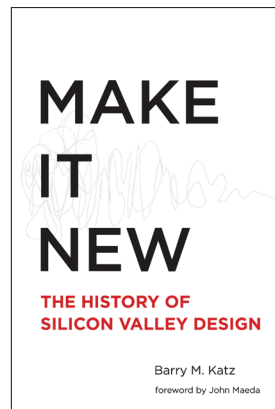
Katz traces the origins of all of the leading consultancies—including IDEO, frog, and Lunar—and shows the process by which some of the world's most influential companies came to place design at the center of their business strategies. Drawing on unprecedented access to a vast array of primary sources and interviews with nearly every influential design leader—including Douglas Engelbart, Steve Jobs, and Don Norman—Katz reveals design to be the missing link in Silicon Valley's ecosystem of innovation.

Barry M. Katz is Professor of Industrial and Interaction Design at California College of the Arts, Consulting Professor in the Design Group, Department of Mechanical Engineering, at Stanford University, and Fellow at IDEO, Inc. He is coauthor of *Change by Design*, with Tim Brown, and *NONOBJECT*, with Branko Lukić (MIT Press).

"A timely—perhaps even overdue—take on the historical development of the appreciation, role, and insights of design in some of the key corporations of digital culture."
—Jussi Parikka, *Leonardo Online*

"A delight for experts and accidental readers alike, as it touches upon so many icons and necessary fixtures of everyday life."
—Paola Antonelli, Museum of Modern Art

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architecture | neuroscience

Mind in Architecture

Neuroscience, Embodiment, and the Future of Design

edited by Sarah Robinson and Juhani Pallasmaa

Although we spend more than ninety percent of our lives inside buildings, we understand very little about how the built environment affects our behavior, thoughts, emotions, and well-being. Architecture is late in discovering the richness of neuroscientific research. As scientists were finding evidence for the bodily basis of mind and meaning, architecture was caught up in convoluted cerebral games that denied emotional and bodily reality altogether. *Mind in Architecture* maps the extraordinary opportunity that engagement with cutting-edge neuroscience offers present-day architects. In this volume, leading thinkers from architecture and other disciplines, including neuroscience, cognitive science, psychiatry, and philosophy, explore what architecture and neuroscience can learn from each other. They offer historical context, examine the implications for current architectural practice and education, and imagine a neuroscientifically informed architecture of the future.

Sarah Robinson is a practicing architect and the author of *Nesting: Body, Dwelling, Mind*. **Juhani Pallasmaa**, architect, educator, and writer, is the author of more than fifty books, including *The Eyes of the Skin: Architecture and the Senses*. He is the former director of both the Finnish Museum of Architecture and the Department of Architecture at Helsinki University of Technology.

"For anyone interested in thinking about the broader implications of perceptually oriented neuroscience, *Mind in Architecture* presents an interesting read."
—Todd C. Handy, *Perception*

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higher education | business

Revolution in Higher Education

How a Small Band of Innovators Will Make College Accessible and Affordable

Richard A. DeMillo
foreword by Andrew J. Young

For the past few years, technology-fueled innovation has begun to transform higher education, introducing new ways to disseminate knowledge and better ways to learn—all at lower cost. In this impassioned account, Richard DeMillo tells the behind-the-scenes story of these pioneering efforts and offers a roadmap for transforming higher education. Building on his earlier book, *Abelard to Apple*, DeMillo argues that the current system of higher education is clearly unsustainable. Where are the revolutionaries who can save higher education? DeMillo's heroes are a small band of innovators who are bringing the revolution in technology to colleges and universities. DeMillo describes the revolution's goals and the entrenched hierarchical system it aims to overthrow; and he reframes the nature of the contract between society and its universities. The new institutions of a transformed higher education promise to demonstrate not only that education has value but also that it has values—virtues for the common good.

Richard A. DeMillo has held senior positions in academia, industry, and government. Currently Charlotte B. and Roger C. Warren Chair of Computing and the Director of the Center for 21st Century Universities at Georgia Tech, he is the author of *Abelard to Apple: The Fate of American Colleges and Universities* (MIT Press).

Winner, 2015 American Publishers Award for Professional and Scholarly Excellence (PROSE Award) in Education Practice

"Whatever you think of open online education. . . your ideas and opinions will be better informed after reading this book."
—Joshua Kim, *Inside Higher Ed*

"DeMillo presents a well-informed account of the challenges and potential transformation in American higher education."
—Library Journal

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978-0-262-02964-3

business | innovation

The Disruption Dilemma

Joshua Gans

"Disruption" is a business buzzword that has gotten out of control. Today everything and everyone seem to be characterized as disruptive. Almost twenty years ago Clayton Christensen popularized the term in his book *The Innovator's Dilemma*. Since then, few have closely examined his account. Joshua Gans does so in this book. He looks at companies that have proven resilient and those that have fallen, and explains why some companies have successfully managed disruption while others have not. Departing from the conventional wisdom, Gans identifies two kinds of disruption: demand-side, when successful firms focus on their main customers and underestimate market entrants with innovations that target niche demands; and supply-side, when firms focused on developing existing competencies become incapable of developing new ones. Herein lies the disruption dilemma: A firm cannot practice both independence and integration at once. Gans shows business leaders how to choose their strategy so their firms can deal with disruption while continuing to innovate.
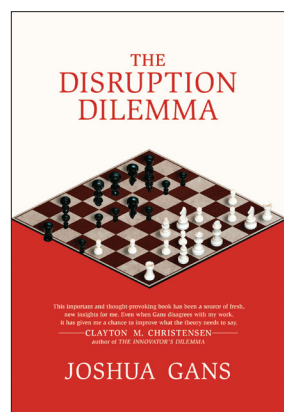
Joshua Gans is Professor of Strategic Management and holder of the Jeffrey S. Skoll Chair of Technical Innovation and Entrepreneurship at the University of Toronto's Rotman School of Management. He is the author of *Parentonomics: An Economist Dad Looks at Parenting* (MIT Press), *Information Wants to Be Shared*, and other books.

"For those who have tired of being told every product or service is disruptive, this is a good—and nuanced—book."
—Emma Jacobs, *Financial Times*

"This important and thought-provoking book has been a source of fresh, new insights for me."
—Clayton M. Christensen, author of *The Innovator's Dilemma*

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business | management

The Power Of Resilience

How the Best Companies Manage the Unexpected

Yossi Sheffi

The interconnectedness of the global economy today means that unexpected events in one corner of the globe can ripple through the world's supply chain and affect customers everywhere. In this book, Yossi Sheffi shows why modern vulnerabilities call for innovative processes and tools for creating and embedding corporate resilience and risk management. Sheffi focuses on deep tier risks as well as corporate responsibility, cybersecurity, long-term disruptions, business continuity planning, emergency operations centers, detection, and systemic disruptions. He offers fascinating case studies that illustrate how companies have prepared for, coped with, and come out stronger following disruption. Supply chain risk management, Sheffi shows, is a balancing act between taking on the risks involved in new products, new markets, and new processes—all crucial for growth—and the resilience created by advanced risk management.

Yossi Sheffi is Elisha Gray II Professor of Engineering Systems at MIT and Director of the MIT Center for Transportation and Logistics as well as a consultant and active entrepreneur. He is the author of *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage* and *Logistics Clusters: Delivering Value and Driving Growth*, both published by the MIT Press.

"Senior executives will gain unique insights and manage much more effectively having read [this book]."
—Frederick W. Smith, Chairman and CEO, FedEx Corporation

"A brilliant book that should be read by all business leaders in order to capably manage risks and create growth in the new global economy."
—Hau L. Lee, Thoma Professor of Operations, Information, and Technology, Graduate School of Business, Stanford University

April | 6 x 9, 488 pp. | 7 illus.
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Prehension

The Hand and the Emergence of Humanity

Colin McGinn

This book is a hymn to the hand. Colin McGinn examines the role of the hand in shaping human evolution, finding that the development of our capacity to grasp, to grip, to take hold (also known as *prehension*) is crucial in the emergence of *Homo sapiens*. Following Darwin and others, McGinn calls the hand the source of our biological success. He recounts how our remote ancestors descended from the trees, adopted a bipedal gait that left the hands free for other work, and began to make tools, leading to increased social cooperation and brain capacity. But McGinn also goes further than others in arguing for the importance of the hand; he speculates that the hand played a major role in the development of language. In doing so, McGinn mixes biology, anthropology, analytic philosophy, existential philosophy, sheer speculation, and utter amazement to celebrate humans' achievement of humanity.

Colin McGinn has taught philosophy at institutions of higher learning including University College London, Rutgers University, and Oxford University. He is the author of *The Character of Mind, Consciousness and Its Objects*, *The Meaning of Disgust*, *The Philosophy of Language: The Classics Explained* (MIT Press), and other books.

"A serious attempt to identify the conditions that enabled what we take to be the distinctly human achievements."
—**Daniel N. Robinson**, *Review of Metaphysics*

"[A] gripping, inventive, and wide-ranging tale of evolution and human nature."
—**Alva Noë, Professor of Philosophy, University of California, Berkeley, and author of** *Strange Tools: Art and Human Nature*

July | 5 3/8 x 8, 208 pp.
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cloth 2015
978-0-262-02932-2

The Future Is Not What It Used to Be

Climate Change and Energy Scarcity

Jörg Friedrichs

The future is not what it used to be because we can no longer rely on the comforting assumption that it will resemble the past. In this book, Jörg Friedrichs argues that industrial society itself is transitory, and he examines the prospects for our civilization's coming to terms with its two most imminent choke points: climate change and energy scarcity. Friedrichs contends that industrial civilization cannot outlast our ability to burn fossil fuels and that the demise of industrial society would entail cataclysmic change, including population decreases. To understand the social and political implications, he examines historical cases of climate stress and energy scarcity, including the Little Ice Age in the medieval Far North, the Japanese struggle to prevent "fuel starvation" from 1918 to 1945, and Cuba's socioeconomic adaptation to fuel scarcity in the 1990s, and draws important lessons about the likely effects of climate and energy disruptions on different kinds of societies.

Jörg Friedrichs is Associate Professor in the Department of International Development at the University of Oxford. He is the author of *Fighting Terrorism and Drugs* and *European Approaches to International Relations Theory*.

Honorable Mention, Rachel Carson Environment Book Award given by the Society of Environmental Journalists

"A dark masterpiece. . . a message that anyone interested in civilisation's long-term future needs to hear."
—**Robin Lovelace,** *Environmental Values*

"An important reminder of the perilous times ahead, not just for human societies but also for the biota who share this planet with us."
—**Ian Lowe,** *The Quarterly Review of Biology*

March | 6 x 9, 240 pp. | 31 illus.
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978-0-262-01924-8

architecture | philosophy

Heidegger's Hut

Adam Sharr

foreword by Simon Sadler

prologue by Andrew Benjamin

Beginning in the summer of 1922, philosopher Martin Heidegger (1889–1976) occupied a small, three-room cabin in the Black Forest Mountains of southern Germany. Over the years, Heidegger worked on many of his most famous writings in "die Hütte," from his early lectures to his last enigmatic texts. There are many ways to interpret Heidegger's hut—as the site of heroic confrontation between philosopher and existence; as the petit bourgeois escape of a misguided romantic; as a place overshadowed by Heidegger's troubling involvement with the Nazi regime in the early 1930s; or as an entirely unremarkable little building. *Heidegger's Hut* does not argue for any one reading, but guides readers toward their own possible interpretations of the importance of "die Hütte."
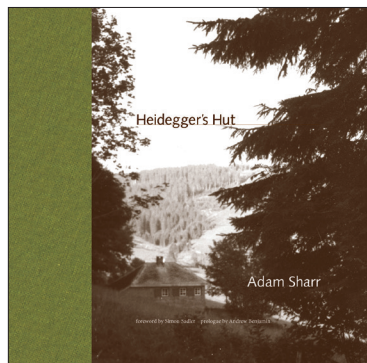
Adam Sharr is an architect and writer. He is Professor of Architecture and Head of School at Newcastle University, UK, editor-in-chief of *arq: Architectural Research Quarterly* and Principal of Adam Sharr Architects.

"Whether [it was] a magic trick, a fox's trap, or simply a thinker's retreat, Sharr has written a most fascinating account of this small but highly significant hut in the Black Forest."
—Volker M. Welter, *Journal of the Society of Architectural Historians*

"As Adam Sharr reveals in his remarkable study *Heidegger's Hut*, the philosopher's timber-shingled cabin . . . can be interpreted as a locus of contemplation, a romantic escape, and a place where, given the politically problematic nature of Heidegger's writings, fascist overtones cannot but linger."
—Andrea Walker, *Bookforum*

March | 7 1/2 x 7 1/2, 164 pp. | 53 illus.

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cloth 2006
978-0-262-19551-5

philosophy

Heidegger and the Thinking of Place

Explorations in the Topology of Being

Jeff Malpas

The idea of place—*topos*—runs through Martin Heidegger's thinking almost from the very start. It can be seen not only in his attachment to the famous hut in Todtnauberg but in his constant deployment of topological terms and images and in the situated, "placed" character of his thought and of its major themes and motifs. Heidegger's work, argues Jeff Malpas, exemplifies the practice of "philosophical topology." In *Heidegger and the Thinking of Place*, Malpas examines the topological aspects of Heidegger's thought and offers a broader elaboration of the philosophical significance of place. In doing so, he provides a distinct and productive approach to Heidegger as well as a new reading of other key figures—notably Kant, Aristotle, Gadamer, and Davidson, but also Benjamin, Arendt, and Camus. Philosophy, Malpas argues, begins in wonder and begins in place and the experience of place. The place of wonder, of philosophy, of questioning, he writes, is the very topos of thinking.
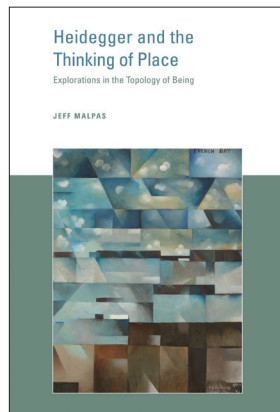
Jeff Malpas is Distinguished Professor at the University of Tasmania and Adjunct Professor in the School of Architecture at RMIT University. He is the author of *Heidegger's Topology: Being, Place, World* (MIT Press).

"Malpas does a brilliant job. . . . this book constitutes another impressive achievement by Jeff Malpas in reconsidering the importance and senses of place, not only in Heidegger's work, but also more broadly in philosophy itself."
—François Raffoul, *Notre Dame Philosophical Reviews*

"Far exceeds the bounds of Heidegger exegesis. It is a major work."
—Julian Young, Kenan Professor of Humanities, Wake Forest University

March | 6 x 9, 388 pp. | 3 illus.

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philosophy

Division III of Heidegger's *Being and Time*

The Unanswered Question of Being

edited by Lee Braver

Heidegger's *Being and Time* is one of the most influential and important books in the history of philosophy, but it was left unfinished. In this book, leading Heidegger scholars and philosophers influenced by Heidegger take up the unanswered questions in Heidegger's masterpiece, speculating on what Division III would have said, and why Heidegger never published it.

The contributors' task—to produce a secondary literature on a nonexistent primary work—seems one out of fiction by Borges or Eco. Why did Heidegger never complete *Being and Time*? Did he become dissatisfied with it? Did he judge it too subjectivistic, not historical enough, too individualistic, too existential? What does being mean, after all? The contributors, in search of lost *Being and Time*, consider these and other topics, shedding new light on Heidegger's thought.

Lee Braver is Professor of Philosophy at the University of South Florida and the author of *Groundless Grounds: A Study of Wittgenstein and Heidegger* (MIT Press) and *A Thing of This World: A History of Continental Anti-Realism*.

Contributors
Alain Badiou, Lee Braver, Daniel Dahlstrom, Charles Guignon, Graham Harman, Karsten Harries, Theodore Kisiel, Denis McManus, Eric S. Nelson, Richard Polt, François Raffoul, Thomas Sheehan, Iain Thomson, Kate Withy, Julian Young

"[The essays] give the reader a greater understanding not only of *Being and Time* but also of Heidegger's entire philosophy."
—*Library Journal Reviews*

March | 6 x 9, 384 pp.

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engineering

Engineering a Safer World

Systems Thinking Applied to Safety

Nancy G. Leveson

Engineering has experienced a technological revolution, but the basic engineering techniques applied in safety and reliability engineering have changed very little over the years. In this groundbreaking book, Nancy Leveson proposes a new approach to safety based on modern systems thinking and systems theory. Revisiting and updating ideas pioneered by 1950s aerospace engineers in their System Safety concept, Leveson presents a new, extended model of causation (Systems-Theoretic Accident Model and Processes, or STAMP), and applies the new techniques to real-world events including the friendly-fire loss of a U.S. Blackhawk helicopter in the first Gulf War; the Vioxx recall; the U.S. Navy SUBSAFE program; and the bacterial contamination of a public water supply in a Canadian town. Leveson's approach is relevant even beyond safety engineering, offering techniques for "reengineering" any large sociotechnical system to improve safety and manage risk.
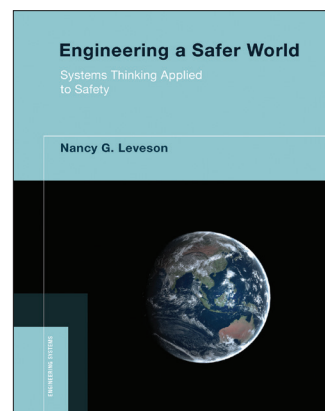
Nancy G. Leveson is Professor of Aeronautics and Astronautics and Engineering Systems at MIT. An acknowledged leader in the field of safety engineering, she has worked to improve safety in nearly every industry over the past thirty years.

"Nancy Leveson's book should be required reading for all Directors of Safety. She makes engineering 'come alive' more than any professor I've ever read. You cannot deliver a mature Safety Management System unless you go beyond the boundaries that currently constrain our thinking. Leveson will take you there."
—**Mont Smith, M.S. (Aeronautical Systems), Director of Safety-Air Transport Association**

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978-0-262-01662-9

Engineering Systems series

Positive Computing

Technology for Wellbeing and Human Potential

Rafael A. Calvo and Dorian Peters

Technology, so pervasive and ubiquitous, has the capacity to increase stress and suffering; but it also has the less-heralded potential to improve the wellbeing of individuals, society, and the planet. In this book, Rafael Calvo and Dorian Peters investigate what they term "positive computing"—the design and development of technology to support psychological wellbeing and human potential. They explain that technologists' growing interest in social good is part of a larger public concern about how our digital experience affects our emotions and our quality of life—which itself reflects an emerging focus on humanistic values in many different disciplines. Synthesizing theory, knowledge, and empirical methodologies from a variety of fields, they offer a rigorous and coherent foundational framework for positive computing, as well as suggestions for future research and funding.

Rafael A. Calvo is Professor of Software Engineering, ARC Future Fellow, and Director of the Positive Computing Lab at the University of Sydney. **Dorian Peters** is user experience designer and online strategist for the Faculty of Education and Social Work at the University of Sydney and Creative Leader of the Positive Computing Lab there.

"A call to action. . . . There's no time like today to plan for a future in which we can thrive, and not be the victims of our own design."
—Giovanni Rodriguez, *Forbes*

"Three cheers to Calvo and Peters for *Positive Computing*: It's about time."
—Don Norman, Director of the Design at UC San Diego Program; author of *Emotional Design* **and** *The Design of Everyday Things*

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Sharing Cities

A Case for Truly Smart and Sustainable Cities

Duncan McLaren and Julian Agyeman

In *Sharing Cities*, Duncan McLaren and Julian Agyeman argue that the intersection of cities' highly networked physical space with new digital technologies and new mediated forms of sharing offers cities the opportunity to connect smart technology to justice, solidarity, and sustainability. McLaren and Agyeman explore these opportunities in the changing nature of sharing. Drawing on detailed case studies of San Francisco, Seoul, Copenhagen, Medellín, Amsterdam, and Bengaluru (formerly Bangalore), they propose a new "sharing paradigm," to envision models of sharing that are not always commercial but also communal, encouraging trust and collaboration.

Duncan McLaren, former Chief Executive of Friends of the Earth Scotland, is Director of McLaren Environmental Research and Consultancy. **Julian Agyeman** is Professor of Urban and Environmental Policy and Planning at Tufts University. He is the coeditor of *Just Sustainabilities: Development in an Unequal World* (MIT Press) and other books.

Named one of *Nature***'s "Books and Arts" blog's top 20 for 2015**

"A wake-up call to policy makers, businesspeople, and community leaders: There has never been a better—or more urgent—time to build a shared urban future."
—April Rinne, *Stanford Social Innovation Review*

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Urban and Industrial Environments series

urban studies | environment

The Fabric of Space

Water, Modernity, and the Urban Imagination

Matthew Gandy

Water lies at the intersection of landscape and infrastructure, crossing between visible and invisible domains of urban space, in the tanks and buckets of the global South and the vast subterranean technological networks of the global North. In this book, Matthew Gandy considers the cultural and material significance of water through the experiences of six cities: Paris, Berlin, Lagos, Mumbai, Los Angeles, and London. Tracing the evolving relationships among modernity, nature, and the urban imagination, from different vantage points and through different periods, Gandy uses water as a lens through which to observe both the ambiguities and the limits of nature as conventionally understood.
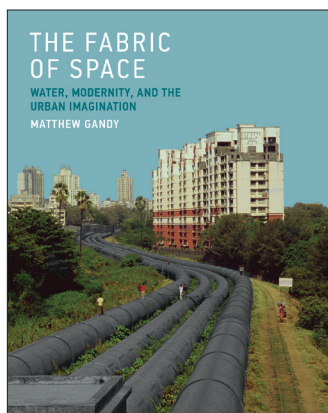
Matthew Gandy is Professor of Geography at the University of Cambridge. He is the author of *Concrete and Clay: Reworking Nature in New York City* (MIT Press), recipient of the 2003 Spiro Kostof Award from the Society of Architectural Historians, and has published widely on urban, cultural, and environmental themes.

Winner of the 2014 AAG Meridian Book Award for Outstanding Scholarly Work in Geography

"Most exceptional. That the book left me with so many questions—not only about water—is a tribute to its value."
—Martin V. Melosi, *Journal of Historical Geography*

"One of the exceptional achievements of the book is that it breaks down the imperial project of twentieth-century modernism as a coherent aesthetic and political project into a narrative of conflicting choices and fractured outcomes."
—Rajna Rao, *Journal of Planning Education and Research*

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environment | economics

The Globalization of Clean Energy Technology

Lessons from China

Kelly Sims Gallagher

The development and deployment of cleaner energy technologies have become globalized phenomena. Yet despite the fact that energy-related goods account for more than ten percent of international trade, policy makers, academics, and the business community perceive barriers to the global diffusion of these emerging technologies. In this book, Kelly Gallagher uses analyses and case studies from China's solar photovoltaic, gas turbine, advanced battery, and coal gasification industries to examine both barriers and incentives in clean energy technology transfer. Gallagher finds that the barriers are not as daunting as many assume. She shows that intellectual property infringement is not as widespread as business leaders fear, and that firms in developing countries show considerable resourcefulness in acquiring technology legally. The biggest single barrier, she finds, is the failure of government to provide sensible policy incentives. The case studies show how government, through market-formation policy, can unleash global market forces.

Kelly Sims Gallagher is Director of the Center for International Environment and Resource Policy and Professor of Energy and Environmental Policy at Tufts University's Fletcher School. She is the author of *China Shifts Gears: Automakers, Oil, Pollution, and Development* (MIT Press).

Honorable Mention, 2014 American Publishers Award for Professional and Scholarly Excellence (PROSE Award) in Environmental Science

"A useful book—a thorough piece of practical research."
—Richard N. Cooper, *Foreign Affairs*

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Organic Struggle

The Movement for Sustainable Agriculture
in the United States

Brian K. Obach

In *Organic Struggle*, Brian Obach examines the evolution of the organic movement in the United States. He analyzes why the organic movement developed as it did and evaluates its achievements and shortcomings, identifying how divergent interests within the diverse organic coalition created vulnerabilities for the movement. In particular, he examines the ideological divide between those he calls the "spreaders," who welcome the wider market for organic food and want to work with both government and agribusiness, and the more purist "tillers," who see organic practices as part of a broader social transformation that will take place outside existing institutions. Obach argues that the movement's changing relationship with governmental institutions is crucial to understanding the trajectory of the organic sector, and cites the need for a refocus on policy efforts that can reshape the agricultural system as a whole.

Brian K. Obach is Professor of Sociology at the State University of New York at New Paltz and the author of *Labor and the Environmental Movement: The Quest for Common Ground* (MIT Press).

"This is an accessible book that will appeal not only to those interested in food policy and sustainable agriculture, but also those seeking ways of transforming institutions and systems."
—E. G. Harrington, *Choice*

"*Organic Struggle* is a book well worth reading to be able to grasp an overview of a complicated part of our contemporary food system."
—Charles Francis, *Organic Farming*

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Food, Health, and the Environment series

The Geometry of Meaning

Semantics Based on Conceptual Spaces

Peter Gärdenfors

In *The Geometry of Meaning*, Peter Gärdenfors proposes a theory of semantics that bridges cognitive science and linguistics and shows how theories of cognitive processes, in particular concept formation, can be exploited in a general semantic model. He argues that our minds organize the information involved in communicative acts in a format that can be modeled in geometric or topological terms—in what he calls *conceptual spaces*, extending the theory he presented in an earlier book by that name. Focusing on how various forms of communication establish a system of meanings that becomes shared between interlocutors, Gärdenfors argues that these "meetings of mind" depend on underlying geometric structures, and that these structures facilitate language learning. He shows that the meanings of different word classes can be given a cognitive grounding, and considers the future implications of his theory for robot semantics and the Semantic Web.
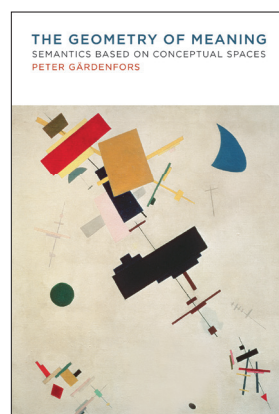
Peter Gärdenfors is Professor of Cognitive Science at Lund University, Sweden. He is the author of *Conceptual Spaces: The Geometry of Thought* (MIT Press) and other books.

"A highly important contribution to the theory of meaning in natural language—not to one of the many particular branches of semantic theorizing, but to semantics in general."
—Radek Ocelák, *Choice*

"Gärdenfors has found an impressive hammer and now many issues in semantics look like nails."
—Guy Dove, *Mind*

"Peter Gärdenfors is creating a new science of meaning. The recent ideas, expressed so clearly in *The Geometry of Meaning*, make his achievement even more impressive."
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philosophy of mind

The Feeling Body

Affective Science Meets the Enactive Mind

Giovanna Colombetti

In *The Feeling Body*, Giovanna Colombetti takes ideas from the enactive approach developed over the last twenty years in cognitive science and philosophy of mind and applies them for the first time to affective science—the study of emotions, moods, and feelings. She focuses on long-debated issues in affective science, including the notion of basic emotions, the nature of appraisal and its relationship to bodily arousal, the place of bodily feelings in emotion experience, the neurophysiological study of emotion experience, and the bodily nature of our encounters with others. Drawing on enactivist tools such as dynamical systems theory, the notion of the lived body, neurophenomenology, and phenomenological accounts of empathy, Colombetti advances a novel approach to these traditional issues that does justice to their complexity. She also expands the enactive approach into a further domain of inquiry, one that has more generally been neglected by the embodied-embedded approach in the philosophy of cognitive science.

Giovanna Colombetti is Associate Professor of Philosophy in the Department of Sociology, Philosophy, and Anthropology at the University of Exeter, UK.

"*The Feeling Body* is the book that I wish had been available at the beginning of my graduate studies. It will provide an excellent stepping-stone for researchers in this area to develop the nascent area of affectivity and embodiment yet further."
—*Constructivist Foundations*

"An insightful and genuinely interdisciplinary discussion of emotion that will be of interest to affective scientists, emotion theorists, phenomenologists, and proponents of enactivism."
—*Phenomenology and the Cognitive Sciences*

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cognitive science | literary theory

Storytelling and the Sciences of Mind

David Herman

With *Storytelling and the Science of Mind*, David Herman proposes a cross-fertilization between the study of narrative and research on intelligent behavior. The book as a whole centers on two questions: How do people make sense of stories? and How do people use stories to make sense of the world? Examining narratives from different periods and across multiple media and genres, Herman shows how traditions of narrative research can help shape ways of formulating and addressing questions about intelligent activity, and vice versa. Using case studies that range from Robert Louis Stevenson's *Dr. Jekyll and Mr. Hyde* to sequences from *The Incredible Hulk* comics to narratives told in everyday interaction, Herman considers storytelling both as a target for interpretation and as a resource for making sense of experience itself. In doing so, he puts ideas from narrative scholarship into dialogue with such fields as psycholinguistics, philosophy of mind, and cognitive, social, and ecological psychology.

David Herman is Professor of the Engaged Humanities in the Department of English Studies at Durham University, UK. He is the author of *Basic Elements of Narrative* and other books.

"An important attempt to bridge the gap between several (sub) disciplinary approaches while avoiding the pitfalls of the promotion of one master discipline."
—**Jan Baetens,** *Leonardo*

"A must-read not only for specialists in narrative but for anyone interested in the mutual actions of 'worlding a story' and 'storying a world.'"
—**N. Katherine Hayles, Professor of Literature, Duke University; author of** *How We Think: Digital Media and Contemporary Technogenesis*

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history of science | bioethics

The Genealogy of a Gene

Patents, HIV/AIDS, and Race

Myles W. Jackson

In *The Genealogy of a Gene*, Myles Jackson uses the story of the *CCR5* gene to investigate the interrelationships among science, technology, and society. The *CCR5* gene began as a small sequence of DNA, became a patented product of a corporation, and then, when it was found to be an AIDS virus co-receptor with a key role in the immune system, it became part of the biomedical research world—and a potential moneymaker for the pharmaceutical industry. When it was further discovered that a mutation of the gene found in certain populations conferred near-immunity to the AIDS virus, questions about race and genetics arose. Jackson describes these developments in the context of larger issues, including the rise of "biocapitalism," the patentability of products of nature, the difference between U.S. and European patenting approaches, and the relevance of race and ethnicity to medical research.
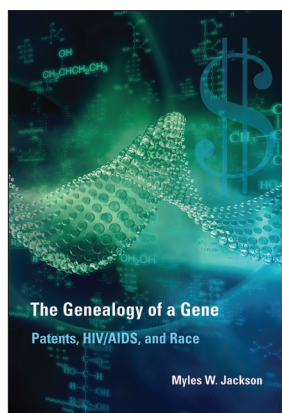
Myles W. Jackson is Albert Gallatin Research Excellence Professor of the History of Science, NYU-Gallatin and the author of *Spectrum of Belief: Joseph von Fraunhofer and the Craft of Precision Optics* and *Harmonious Triads: Physicists, Musicians, and Instrument Makers in Nineteenth-Century Germany*, both published by the MIT Press.

"An exceptionally well-documented analysis of the intricacies and dilemmas of modern biomedical science through the window of a gene—intimately involved in the outcome of one of the greatest pandemics of modern times."
—Robert C. Gallo, *Cell*

"A carefully detailed interdisciplinary understanding involving biochemistry, genetics, biotechnology as well as the historical and contemporary aspects of patenting and intellectual property laws."
—Darius Khalid, *BioNews*

March | 6 x 9, 352 pp. | 14 illus.

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Transformations: Studies in the History of Science and Technology

game studies

Third Person

Authoring and Exploring Vast Narratives

edited by Pat Harrigan and Noah Wardrip-Fruin

The ever-expanding capacities of computing offer new narrative possibilities for virtual worlds. *Third Person* explores strategies of vast narrative across a variety of media, including video games, television, literature, comic books, tabletop games, and digital art. The contributors—media and television scholars, novelists, comic creators, game designers, and others—investigate such issues as continuity, canonicity, interactivity, fan fiction, technological innovation, and cross-media phenomena. Taken together, the multidisciplinary conversations in *Third Person*, along with Harrigan and Wardrip-Fruin's earlier collections First Person and Second Person, offer essential insights into how fictions are constructed and maintained in very different forms of media at the beginning of the twenty-first century.
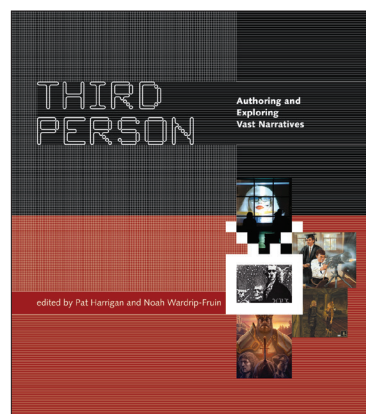
Pat Harrigan is a freelance writer and editor, most recently of *Zones of Control: Perspectives on Wargaming*, coedited with Matthew Kirschenbaum (MIT Press). His work has been published widely and he is the author of a novel, *Lost Clusters*, and a collection of short stories, *Thin Times and Thin Places*. **Noah Wardrip-Fruin** is Assistant Professor in the Computer Science Department at the University of California, Santa Cruz, and author of *Expressive Processing: Digital Fictions, Computer Games, and Software Studies* (MIT Press).

A comprehensive, lucid look at the emergence, development, and influence of large-scale storytelling experiments."
—J. A. Saklofske, *Choice*

"An important and very readable collection that helps bridge the gaps between narrative theory . . . and the world of contemporary storytelling."
—Jan Baetens, *Leonardo*

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science

Nautilus is a different kind of science magazine. It delivers deep, undiluted, narrative storytelling that brings big-picture science into today's most important conversations. It challenges readers to con-sider the common themes that run through the sciences and connect them to philosophy, culture, and art.

The print edition of *Nautilus* is a co-publication of the MIT Press and NautilusThink. Digital content is housed at nautil.us.

ASME Award for Best Style and Design of a magazine cover, for the September/October 2015 print edition.

"The Man Who Tried to Redeem the World with Logic" was selected for inclusion in *The Best American Science and Nature Writing 2016*.

Nautilus was chosen as an Honoree in the Web: Best Writing (Editorial) category at the 20th Annual Webby Awards.

"How to Restart an Ecosystem" was chosen as an Honoree in the Online Video—General Film: Science & Education category at the 20th Annual Webby Awards.

National Magazine Award for General Excellence in the category of Literature, Science, and Politics.

"America Is Getting the Science of Sun Exposure Wrong" won the American Society of Journalists and Authors' June Roth Award for an Outstanding Medical Article.

The Webby Awards Best General Website: Science.

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arts & humanities

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The *Journal of Design and Science* (*JoDS*) captures the antidisciplinary ethos of the MIT Media Lab. Like the Lab, it opens new connections between science and design, encouraging discourse that breaks down the barriers between traditional academic disciplines. It explores not only the design of science, but also the science of design.

JoDS is shepherded by a team led by MIT Media Lab Director Joi Ito, and published in partnership with the MIT Press.

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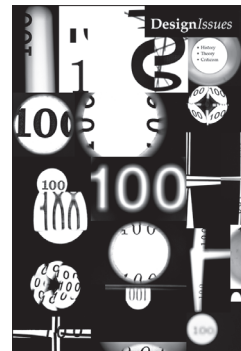
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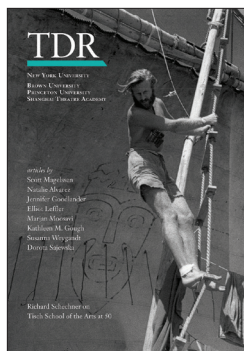
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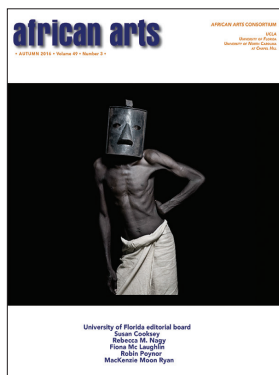
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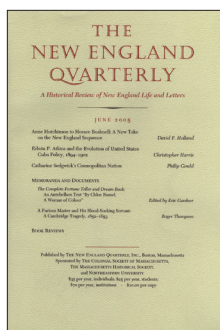
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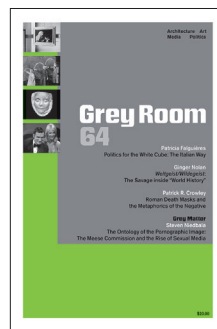
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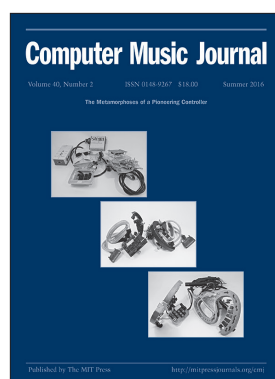
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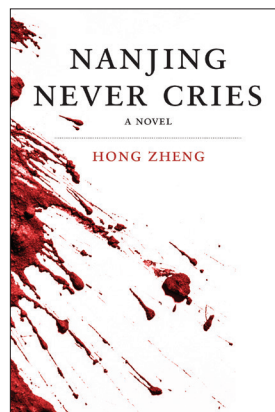
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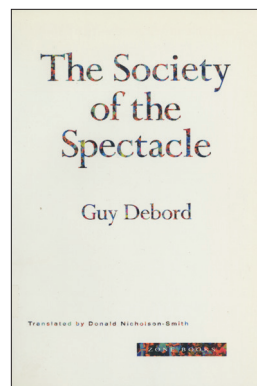
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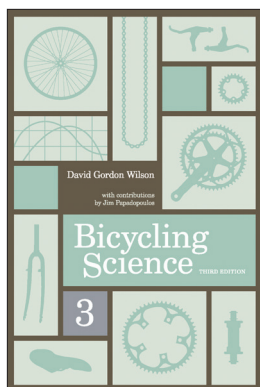
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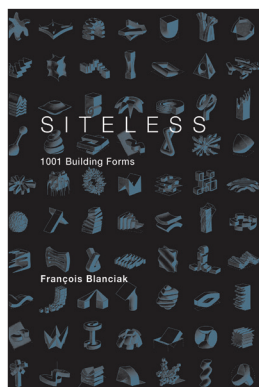
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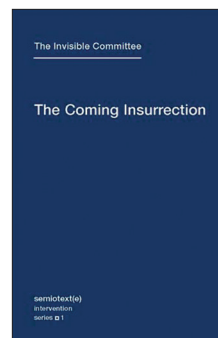
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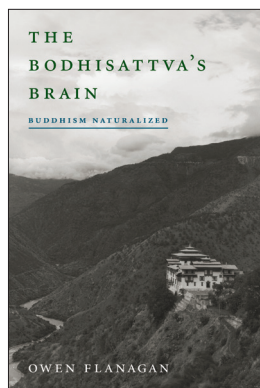
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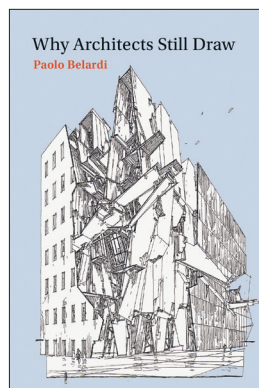
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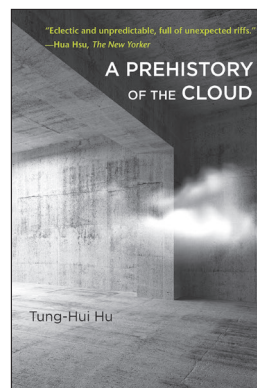
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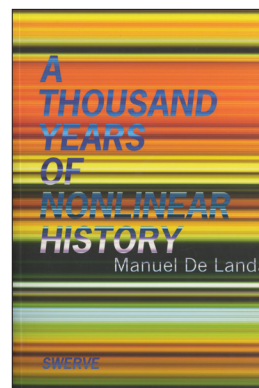
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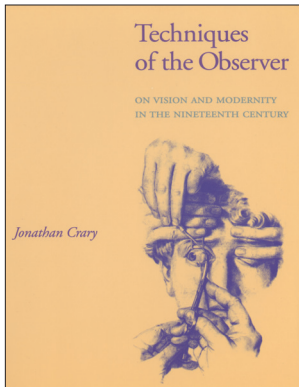
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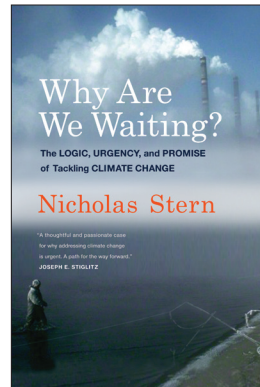
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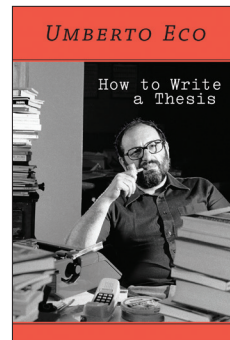
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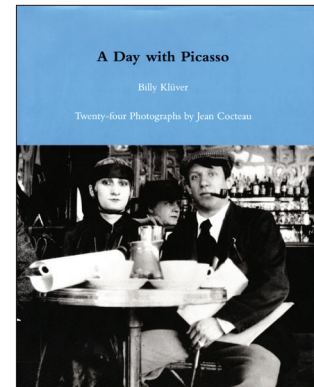
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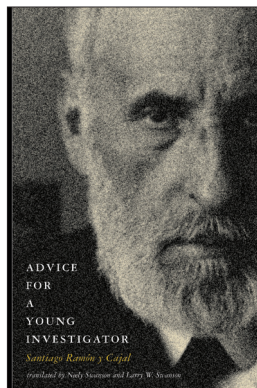
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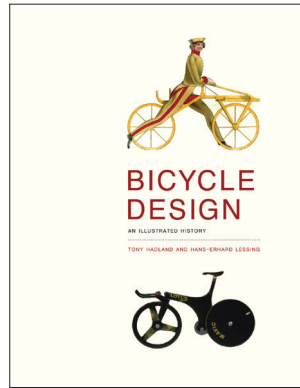
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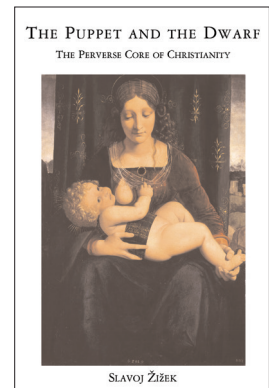
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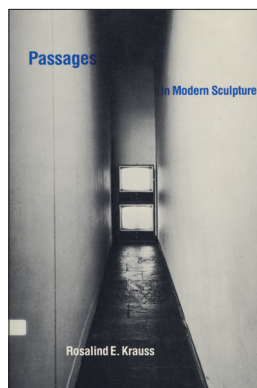
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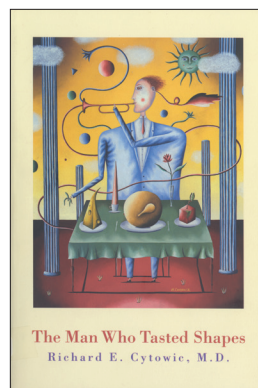
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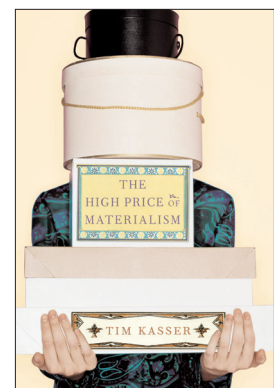
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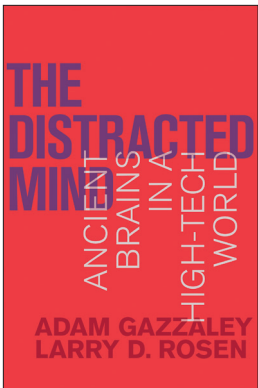
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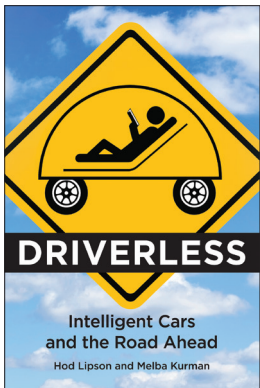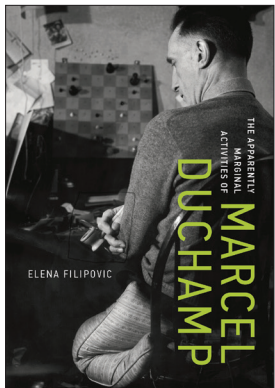
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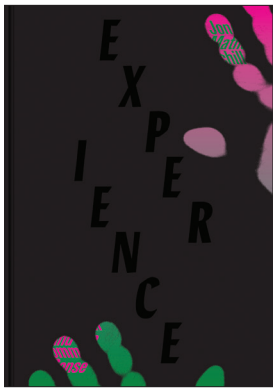
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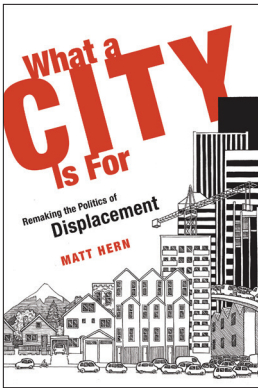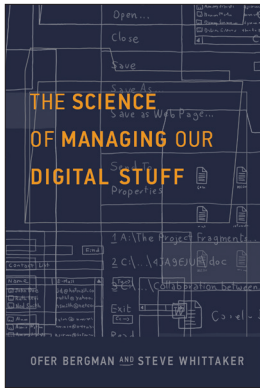
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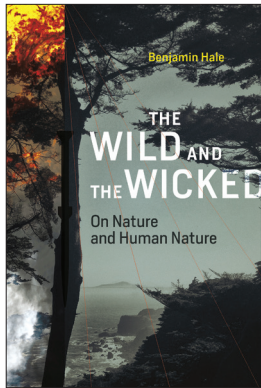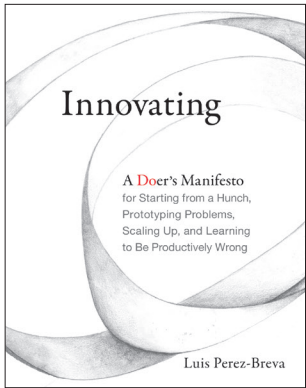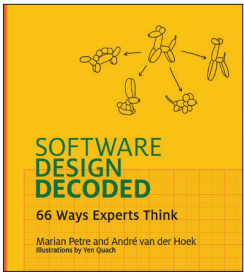
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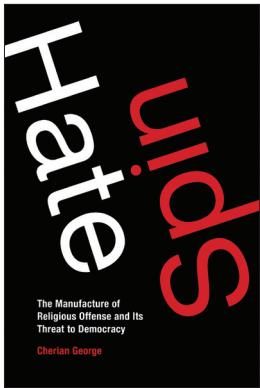
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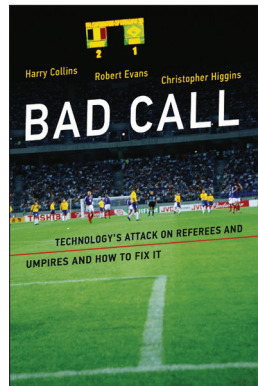
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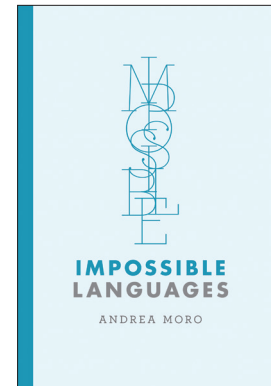
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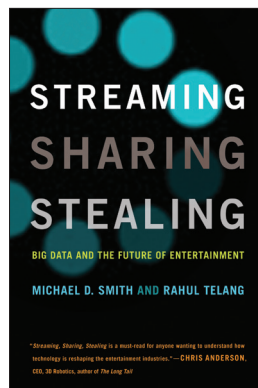
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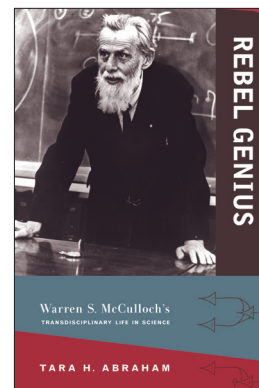
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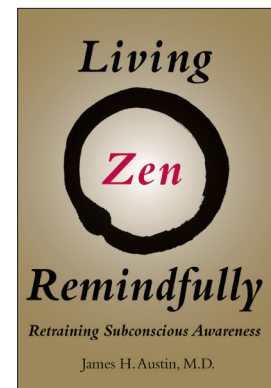
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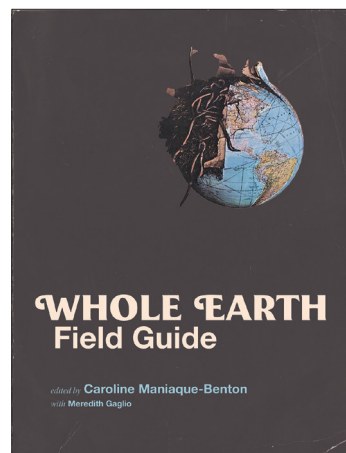
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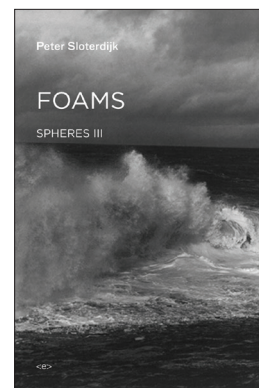
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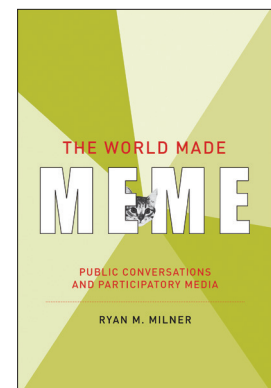
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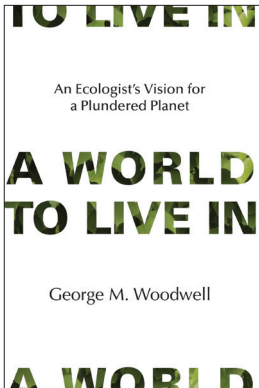
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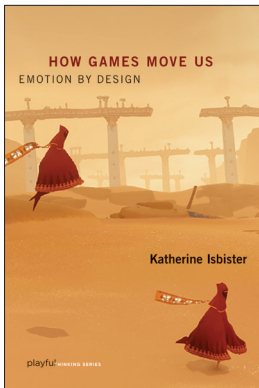
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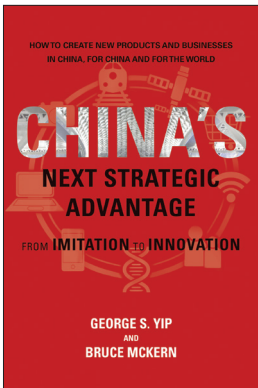
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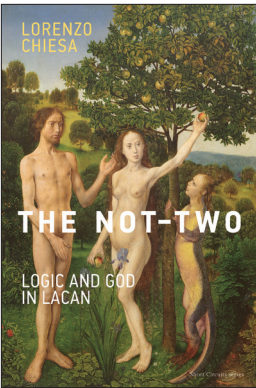
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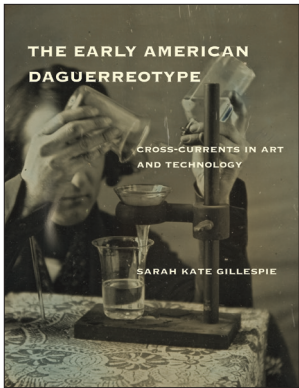
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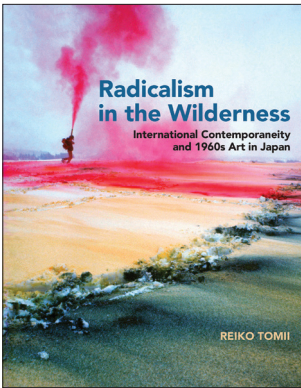
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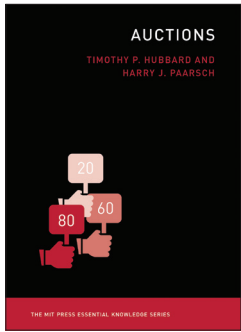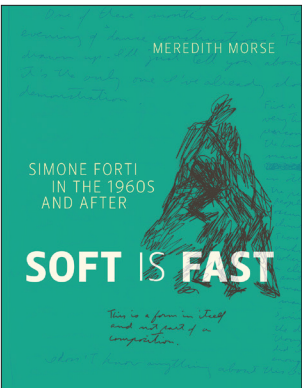
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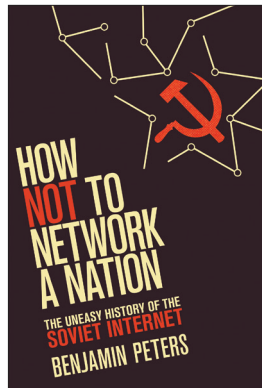
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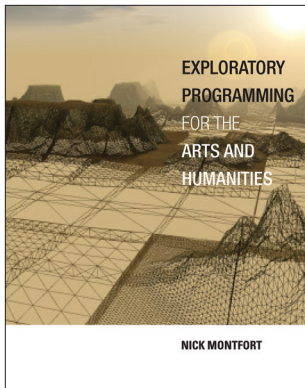
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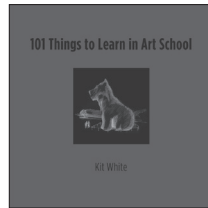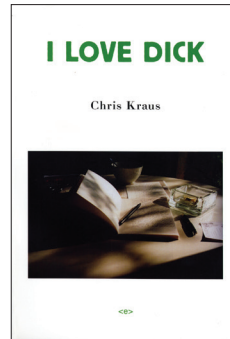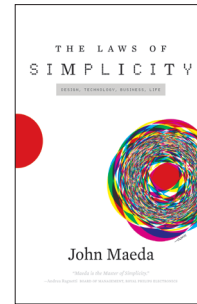
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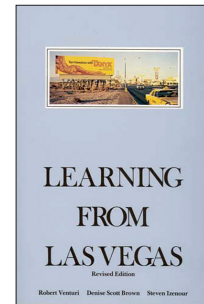
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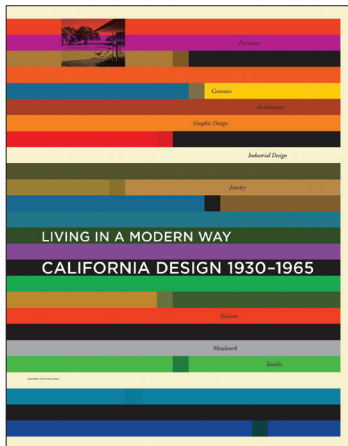
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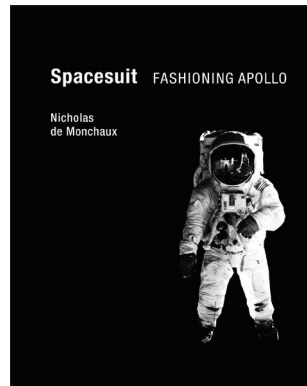
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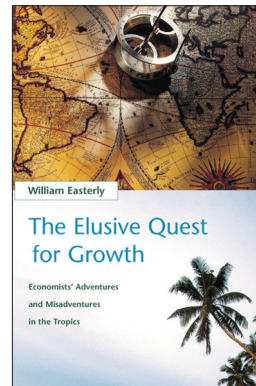
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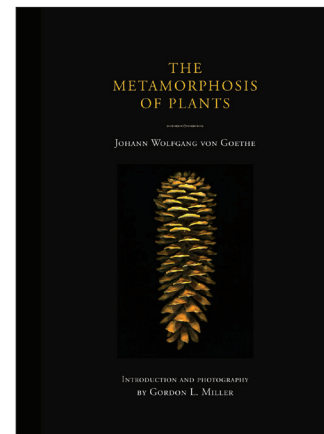**Architect?**
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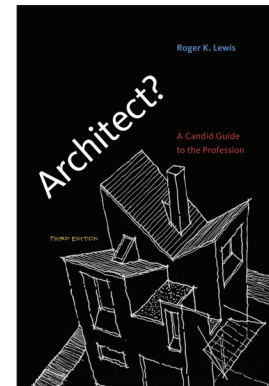
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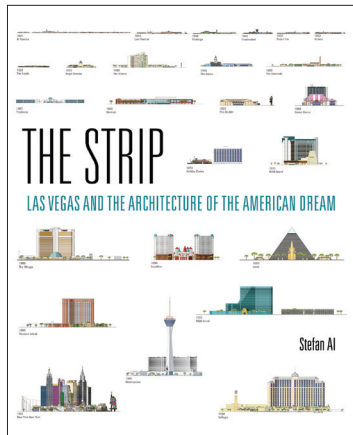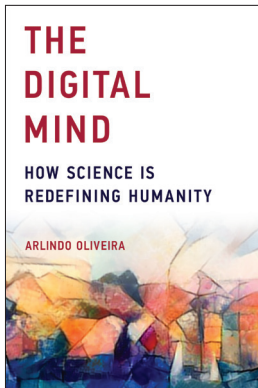Visualizing What We Know
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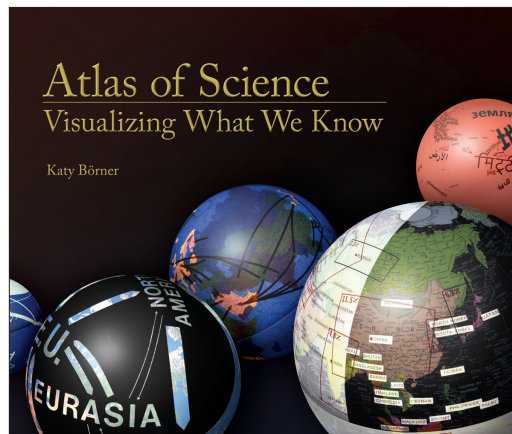
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