Linking Social Change and Developmental Change: Shifting Pathways of Human Development

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P. M. Greenfield's new theory of social change and human development aims to show how changing sociodemographic ecologies alter cultural values and learning environments and thereby shift developmental pathways. Worldwide sociodemographic trends include movement from rural residence, informal education at home, subsistence economy, and low-technology environments to urban residence, formal schooling, commerce, and high-technology environments. The former ecology is summarized by the German term *Gemeinschaft* ("community") and the latter by the German term *Gesellschaft* ("society"; Tönnies, 1887/1957). A review of empirical research demonstrates that, through adaptive processes, movement of any ecological variable in a Gesellschaft direction shifts cultural values in an individualistic direction and developmental pathways toward more independent social behavior and more abstract cognition—to give a few examples of the myriad behaviors that respond to these sociodemographic changes. In contrast, the (much less frequent) movement of any ecological variable in a Gemeinschaft direction is predicted to move cultural values and developmental pathways in the opposite direction. In conclusion, sociocultural environments are not static either in the developed or the developing world and therefore must be treated dynamically in developmental research.

Keywords: social change, culture, cognitive development, social development, learning

The goal in this article is to develop a theory that links social change with developmental change. It therefore deals simultaneously with two scales of development: change within a lifetime and change across succeeding generations. In the field of developmental psychology, one normally thinks of developmental trajectories as a constant across historical time. Indeed, a theoretical problem is that theory and research in cultural psychology, including cultural developmental psychology, assume that cultures are static rather than dynamic. This article, in contrast, presents a theory that, paradoxically, sees change in developmental trajectories as the constant. A major goal of the theory of social change and human development is to explain how, as sociodemographic conditions change, cultural values and developmental patterns are transformed across generations. Because sociodemographic conditions are changing throughout the world—in the direction of greater urbanization, higher levels of formal schooling, increasing commercialization, and ever higher levels of technology—the influence of social change on developmental patterns is an important domain in which theory is needed to guide empirical research and to understand children and youths in the United States and around the world.

A major strength of the theory of social change and human development is that it is not simply descriptive but also predictive. This makes it unique among cultural theories of human development. Given particular sociodemographic changes, the theory is able to predict the effects of those changes on pathways of development in both the social and cognitive domains. It is also unique in its parsimony. It utilizes the same principles to understand changing trajectories of human development not only in two domains of development but also in two major contexts of sociocultural change: one in which families stay put while the sociocultural environment changes and one in which families immigrate to a different sociocultural environment. Both theoretical roots and empirical evidence are multidisciplinary, as they come from developmental psychology, anthropology, and sociology. Foundational is the notion that a strong theory is not methodocentric but can be validated and illuminated at different levels of analysis by widely varying methods and methodology (Greenfield, 2000).

Two Sociodemographic Prototypes

Gemeinschaft and Gesellschaft as Theoretical Constructs

The terms *Gemeinschaft* (community) and *Gesellschaft* (society), introduced by the German sociologist Tönnies in 1887 (1957), are my theoretical starting points for describing contrasting sociocultural ecologies. They are prototypes, each with its own particular characteristics, which are most visible at the extremes. Each prototypical environment has a corresponding developmental pathway (Abels et al., 2005; Keller, 2007). One pathway of development is well adapted to Gesellschaft environments, the other to Gemeinschaft environments.

How Are Gemeinschaft and Gesellschaft Environments Defined?

These concepts have much in common with Redfield's (1941) anthropological contrast between folk society (corresponding to Gemeinschaft) and urban society (corresponding to Gesellschaft). Anthropologists have traditionally studied rural, small-scale, low-tech, homogenous, relatively self-contained Gemeinschaft environments, whereas sociologists have traditionally studied urban, large-scale, high-tech, heterogeneous, and permeable Gesellschaft environments (Fiske, 1991). The two prototypes are defined by contrasting demographic characteristics (see Figure 1). Prototypes are useful in analyzing change because they "establish the 'outer limits' or standards by means of which the processes of change or intermediate forms can be comprehended from the perspective of [a] continuum" (Loomis & McKinney, 1957, p. 12). Hence, in my theory each prototypical environment comprises a set of continuous dimensions (see Figure 1), anchored by the extremes; the framework does not utilize binary categories.

Illustrating the concepts with Redfield's comparative ethnography. Redfield (1941) portrayed a continuum of four communities on the Yucatán peninsula of Mexico; together, the communities demonstrate the dimensionality (rather than a binary quality) of relevant sociodemographic variables. (Here and elsewhere in this article, concepts from the figure or variables from the theory are italicized.) At one end of the continuum, an indigenous village, Tusik, approaches the Gemeinschaft prototype. Ecologically, this village was a *small-scale rural* community, population 106. Its structure was *simple,* with *little division of labor*; specialists were
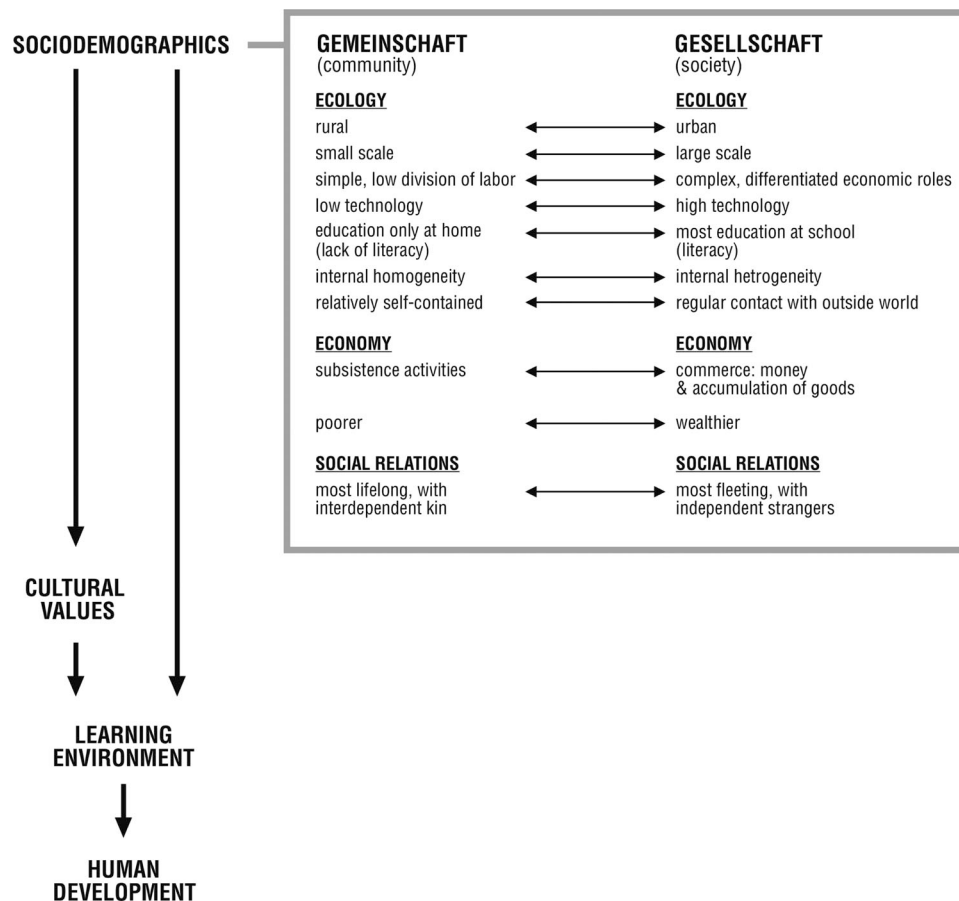

Figure 1.   Top level of the model in detail: Sociodemographic dimensions differentiating Gemeinschaft (community) from Gesellschaft (society). The double-sided horizontal arrows indicate that the variables are multivalued dimensions rather than binary concepts. The vertical arrows indicate the dominant causal relations.

restricted to priests, musicians, midwives, and basket makers. Thatched houses bespoke the *low level of technology* in the village, which *did not contain a school.* Maya ancestry made the village relatively *homogenous.* Without a road to it, the village was extremely *self-contained.* Virtually everyone did *subsistence agriculture* based on growing corn. In monetary terms, Tusik was therefore *poor. Lifelong social relations* were exemplified by the permanent nature of marriage without any institution of divorce. *Interdependence of kin* was enduring: A married couple had lifelong relations not only to each other but also to each others' relatives.

At the opposite, Gesellschaft end of the scale of four Yucatec communities was the *city* of Mérida, which had a *larger scale population* (96,660). In terms of social *complexity,* the city directory listed almost 100 *differentiated economic roles,* such as physician, banker, insurance agent, automobile dealer, and storekeeper. These occupations depended on a *higher level of technology* (e.g., medical technology and mechanics). Mérida had the *highest literacy level* in the state. It was *heterogeneous*: Its residents came from all over the state, from all over Mexico, and from 56 foreign countries. As the communication center for the state, it had *regular contact with the outside world. Economically,* most people lived by *commercial activity* (buying and selling commodities, manufacturing goods, or providing services). Instead of subsistence, Mérida had a *money economy,* and it contained an extreme *concentration of the state's wealthy. Kin relations were less enduring*: Divorce was possible and marital desertion was frequent. *The fleeting relations that take place in commercial transactions* (e.g., with a store clerk) were also common. The other two Yucatec communities studied by Redfield had intermediate values on all of these sociodemographic dimensions.

The social complexity of Gesellshaft environments: Nested Gemeinschaft communities. Note that the internal heterogeneity of Gesellschaft means that it can have multiple relatively Gemeinschaft communities nested inside it; small rural towns or immigrant communities furnish examples of more Gemeinschaft communities nested inside a Gesellschaft society. Another aspect of Gesellschaft heterogeneity is social class stratification, which does not exist in the very homogenous structure of pure Gemeinschaft.

Relationship of Gemeinschaft and Gesellschaft to the Concepts of Individualism and Collectivism

Collectivism and individualism summarize social adaptations to the two types of environment. Independence and interdependence (Markus & Kitayama, 1991) are more psychological variations of the same concepts. Collectivistic qualities, such as sharing among the extended family, are adapted to the daily practices of Gemeinschaft environments, such as living in a one-room house. Individualistic values, such the value of privacy, are adapted to the characteristics of Gesellschaft environments, such as houses with separate bedrooms. However, the terms *individualism* and *collectivism* do not adequately describe cognitive adaptations to the two types of environment; the ecologies therefore have greater explanatory generality than do the value systems of individualism and collectivism. Another theoretical problem with the term collectivism is that it can be used to refer to any collectivity or ingroup; however, adaptations to Gemeinschaft involve prioritizing the family as the key collectivity. Perhaps most important, individu-

alism and collectivism, as well as cultural values more generally, are, unlike earlier theories, no longer seen as the governing causal level. Instead, cultural values are seen as an intermediate level that is strongly influenced by sociodemographic factors in the macro-environment (Greenfield, 2004).

Implications of Gemeinschaft and Gesellschaft for Learning Environments and Development: Two Cultural Pathways

Each of the two sociodemographic complexes—Gemeinschaft and Gesellschaft—has learning environments and patterns of development that yield two distinct cultural pathways through universal development (Greenfield, Keller, Fuligni, & Maynard, 2003). That is, there are a number of adaptations to each type of environment on the levels of cultural values, learning environments, and human development. The pathway concept is founded on a multilevel causal model with sociodemographic characteristics of a community and individuals as the top level (see Figure 2). The figure shows both a direct route (right side of Figure 2) and an indirect route, through cultural values (left side of Figure 2), by which sociodemographic characteristics influence the learning environment; this learning environment in turn shapes a developmental pathway. Adaptation is an important concept. Cultural values are seen as adapted to and therefore influenced by sociodemographics. Learning environments are also seen as adapted to and therefore directly influenced by sociodemographics. Central to learning environments are the adaptations that parents make. Figure 3 diagrams the two cultural pathways in early development.
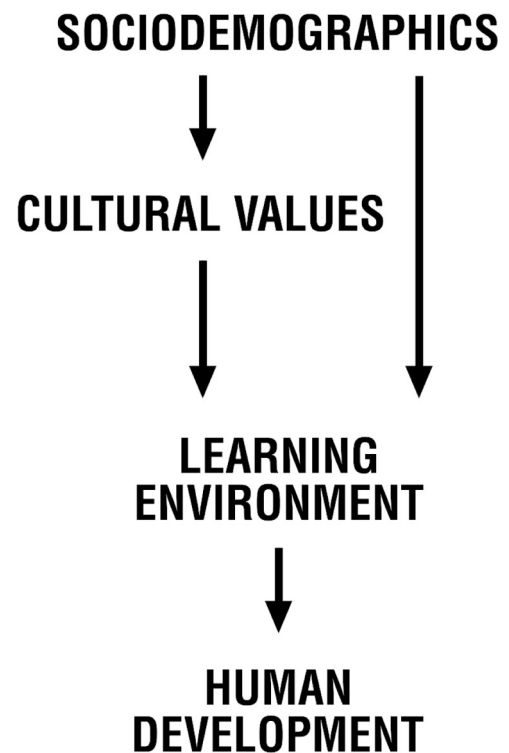

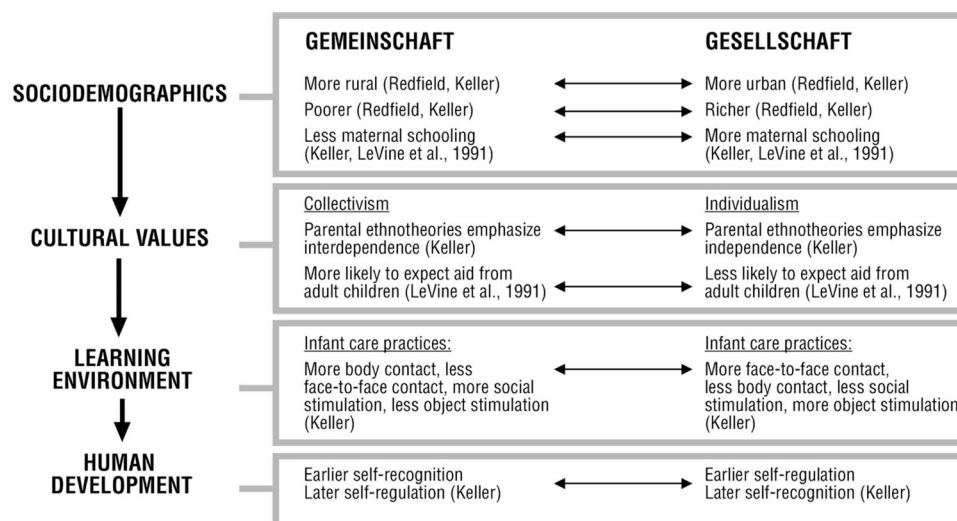
Figure 2. Multilevel causal model.

Figure 3.   Cultural pathways through development: links between sociodemographics, cultural values, learning environment, and early development from Keller's cross-cultural developmental research (Keller, 2007). Link between sociodemographics and cultural values from research in Cuernavaca (LeVine et al., 1991). Citations indicate which variables were measured and correlated in the same population and study. The double-sided horizontal arrows indicate that the variables are multivalued dimensions rather than binary concepts. The vertical arrows indicate the dominant direction of causality.

Empirical examples, including links between the levels, are discussed in detail below.

From sociodemographics to cultural values to learning environments to development.   Keller (2007) has extended the behavioral and cognitive implications of these environmental dimensions to the developmental arena by studying cultural values embodied in parental ethnotheories (culture-specific theories of child development) and linking them to developmental pathways via the child learning environments of infancy and toddlerhood. Although she does not use the Gemeinschaft and Gesellschaft labels, her cultural prototypes reference the same environmental types. Working in India, West Africa, India, China, Costa Rica, Germany, and the United States, Keller concluded that parental ethnotheories and infant socialization practices emphasizing *interdependence (more extensive bodily contact and social stimulation, less extensive face-to-face contact, less object stimulation)* are adapted to the *small agricultural village,* relatively Gemeinschaft environments (see Figure 3). In contrast, she concludes that parental ethnotheories and socialization practices that emphasize *independence (less extensive bodily contact and social stimulation, more extensive face-to-face contact, more object stimulation)* are adapted to *urban middle-class* environments, which are relatively Gesellschaft in nature. She and her colleagues have found that *earlier self-regulation* (which develops the child for a social environment) *and later self-recognition* (which develops the child's individual psychology) characterize the developmental pathway adapted to a Gemeinschaft environment; in contrast, earlier self-recognition and later self-regulation characterize the developmental pathway adapted to a Gesellschaft environment. Although others have found additional dimensions of social and cognitive development linked with the same sociodemographic patterns, Keller is unique in linking all the different theoretical levels from sociodemographic down to child development (see Figure 3).

The Case for Dimensions, not Binary Categories

Lest this be seen as a binary theory, let me emphasize that intermediate values on the sociodemographic dimensions should lead to intermediate results on the developmental variables. Like Redfield, Keller did not dichotomize the environmental variables in her research settings but utilized environments that were intermediate between village and urban environments (Keller, 2007). Keller's intermediate environments were middle-class urban ecologies in traditionally interdependent societies: Costa Rica, India, and China. The implication of these intermediate environments is that parents who themselves were raised with an interdependence orientation will be influenced in their own child rearing by their parents' socialization values as well as by their own adaptation to their present urban middle-class lifestyle. Keller confirmed this prediction: Ethnotheories of middle-class urban Costa Ricans, Indians, and Chinese were in between those of the poor, rural African or Indian villagers and the middle-class Germans or Americans on both autonomy and interdependence.

Another Gemeinschaft socialization value is the expectation that *children will take care of their parents in old age* (see Figure 3). In examining the effect of the sociodemographic variable of maternal schooling, LeVine et al. (1991) divided a sample of Mexican mothers into three groups with *three different levels of schooling. The less schooling a mother had, the more likely she was to expect aid from her adult children* (see Figure 3). Still other studies have found links between sociodemographic dimensions and learning environments and between learning environments and cognitive development (see Figure 4). All of these studies go beyond binary categories and utilize intermediate values in both ecology and development.
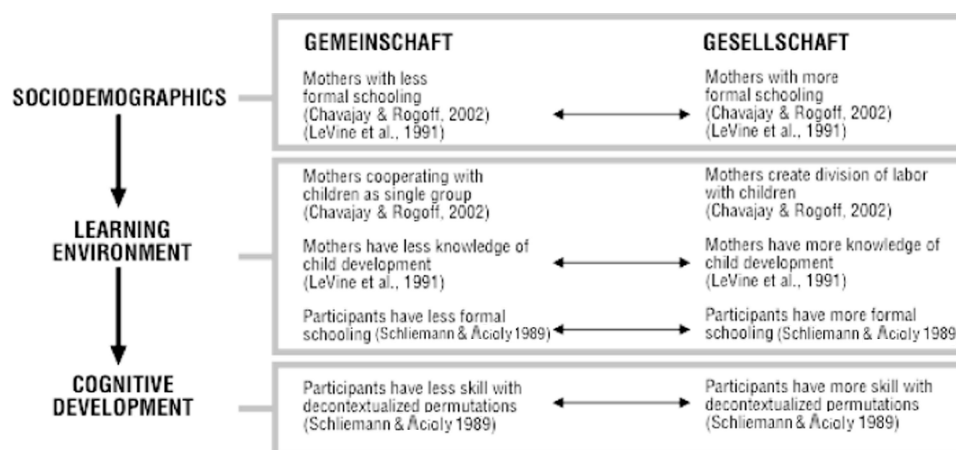
Figure 4. Cultural pathways through cognitive development: link between sociodemographics and learning environment (Chavajay & Rogoff, 2002; LeVine et al., 1991) and between learning environment and cognitive development (Schliemann & Acioly, 1989). Citations indicate which variables were measured and correlated in the same population and study. None of these studies investigated the level of cultural values. The double-sided horizontal arrows indicate that the variables are multivalued dimensions rather than binary categories. The vertical arrows indicate the probable direction of causality.

Social Change: A Motor for Shifting Pathways of Human Development

The two prototypical environments are defined by a number of sociodemographic variables (e.g., technology, urbanization, economic activity; see Figure 1). This theory predicts (and herein lies its innovation) that when any of these variables shifts in either direction, either toward Gemeinschaft or Gesellschaft, learning environments and developmental pathways are also likely to shift in a corresponding direction. Sociodemographic change becomes a motor driving changes in cultural values, learning environments, and development. Sociodemographics refers not just to characteristics of a culture or a society as a whole but also to the sociodemographics of particular families and children. This feature allows predictions to be made both on the group level and the individual level.

This is not a unidirectional model of social evolution. Figure 5 depicts shifts in both directions. The Gesellschaft direction is noted as dominant because the world is, in general, becoming more commerce driven, richer (with greater disparities between rich and poor), more urban, more high tech, and more highly educated (Georgas, Berry, van de Vijver, Kağitçibaşi, & Poortinga, 2006; Kağitçibaşi, 2007; Keller & Lamm, 2005). There are certain situations, though, in which environments become more Gemeinschaft over time. For example, the rural commune movement in the United States involved voluntarily leaving the commercial city for a more subsistence lifestyle in the country; the theory would predict corresponding changes in developmental pathways (Weisner, Bausano, & Kornfein, 1983).

Sometimes groups consciously try to maintain a more Gemeinschaft milieu by forming homogenous, self-contained groups at the interior of a more Gesellschaft environment. A case in point is urban Orthodox Jewish communities. The theory predicts corresponding differences in socialization practices and developmental pathways compared with the broader society. Such cases are small

minorities and are reactive against the surrounding culture. Nonetheless, we need to learn more about the underlying forces that make these cultural forms very resistant to the macroenvironment and its shifts in the Gesellschaft direction and, thus, create apparent exceptions to the general rule.

In other cases, large-scale sociodemographic forces move whole societies in the Gemeinschaft direction. The current economic downturn in the United States is an example. The theory predicts that lesser economic means will move values and practices in the United States toward more Gemeinschaft adaptations; if sustained, these adaptations will include relevant shifts in values, learning environments, and pathways of development.

But whatever the direction of change, the key theoretical prediction is that all of the sociodemographic variables shown in Figures 1 and 5 have a similar directional effect on socialization and developmental variables. In other words, each value on the left (Gemeinschaft) side of Figures 1 and 5 moves developmental and socialization variables in the same direction, whereas each value on the right (Gesellschaft) side of Figures 1 and 5 moves developmental and socialization variables in the opposite direction.

Linking Sociocultural Change and Developmental Change

Over historical time, groups experience transformations in their worlds, generally from more Gemeinschaft to more Gesellschaft (Lerner, 1958). Because different qualities, skills, and social relations become adaptive, this shift provides a motor for social and psychological change. As a consequence, the theory predicts a dynamic that shifts pathways of socialization, cultural values, modes of learning, and individual development, so that individual developmental trajectories become better adapted to more Gesellschaft conditions as the environment shifts in that direction. Adaptations include both those made by parents as they bring up the new generation and those made by the younger generation. However, note that individuals are not passive pawns in this process;
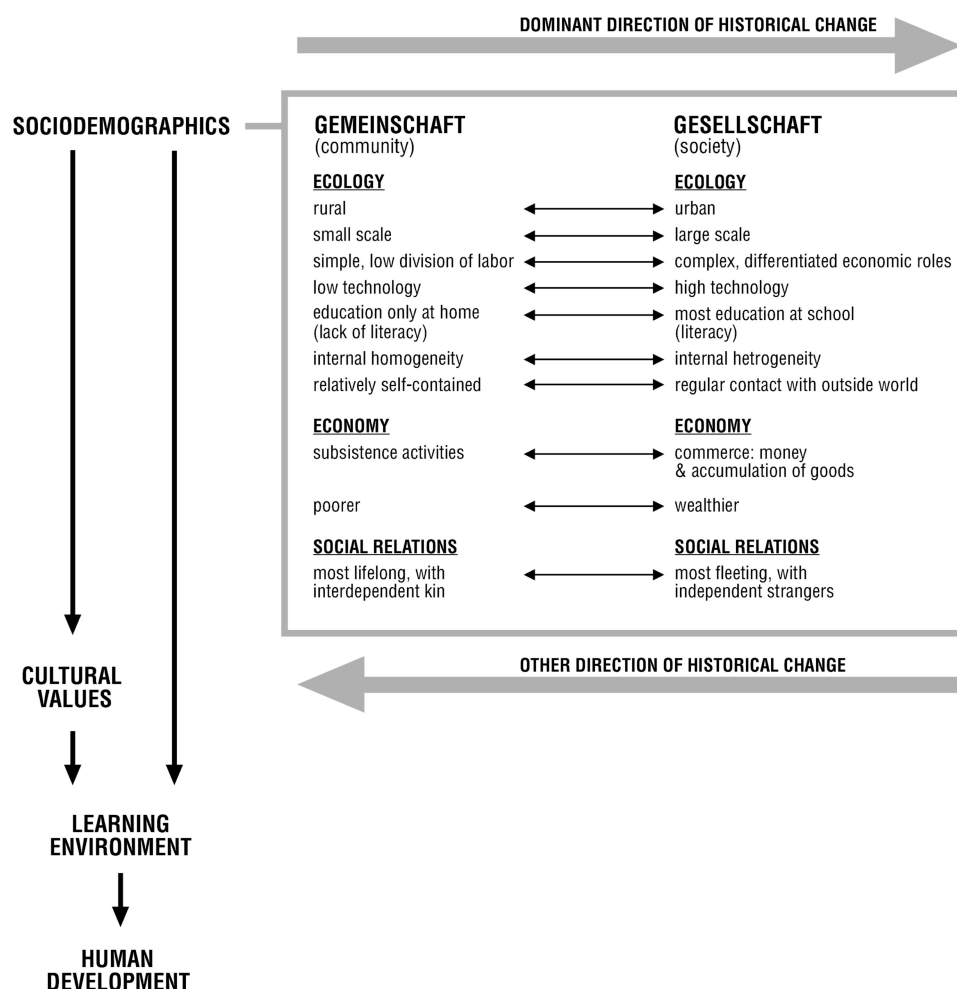
Figure 5. Directions of social change. The one-sided gray horizontal arrows indicate directions of change over historical time. The double-sided horizontal arrows indicate that the variables are multivalued dimensions rather than binary concepts. The vertical arrows indicate the dominant causal relations.

instead, active individuals creatively construct adaptations to changing conditions, a topic that is expanded later.

Two different kinds of processes can lead to shifts from more Gemeinschaft to more Gesellschaft conditions. One is more endogenous, the other is more exogenous. Relatively endogenous change is exemplified in postwar Germany, as German society became richer, more commerce driven, and more high tech, while educational opportunities expanded (Keller & Lamm, 2005). In the developing world, Maya communities in Mexico and Guatemala exemplify the same direction of movement toward economic commercialization, high technology, and more formal education, although in these communities each of these sociodemographic variables started its dynamic path much closer to the Gemeinschaft prototype than it did in Germany (Chavajay & Rogoff, 2002; Greenfield, 1999, 2004; Rogoff, Correa-Chávez, & Navichoc-Cotuc, 2005). Change is always relative to the starting point. The theory's predictions relate to directions of change, not to absolute endpoints.

But not only are ecologies and environments transformed; people move from one ecology to another. This is the more exogenous

source of change. The terms *endogenous* and *exogenous* as used here are relative rather than absolute: Global economic development affects individual countries' economic and social development; internal factors can impel immigration to other countries. But for whatever reason, around the world, people from poorer, more Gemeinschaft worlds often immigrate into richer, more Gesellschaft worlds. As they do, they cause contact and influence from one world to another (Greenfield, 2006).

Under these conditions, the theory of social change and human development predicts that children will be subject to cross-cutting currents, in that they will receive both socialization messages at home that continue to be adapted to the more Gemeinshchaft environment that their parents grew up in and conflicting socialization messages from representatives of the more Gesellschaft host society, such as teachers (Greenfield, 2006). Eventually, these currents will shift immigrant development in a direction that is more adapted to a Gesellschaft world (e.g., Suzuki & Greenfield, 2002).

The effects of social change can be studied by comparing generations at the same stage of life but at different historical

periods (i.e., at different time points). One can also compare different generations at the same time. In both designs, intergenerational difference is the variable of interest. When the latter design involves parents and children in the same family, intergenerational conflict can be used to index intergenerational change. The following two sections, one on endogenous change, the other on exogenous change, review virtually all the studies that utilize these designs, in order to provide empirical support for the theory. For each section, the organizing principle will be the links in Figure 2.

Internal Social Change Shifts Developmental Pathways

Empirical research shows that endogenous shifts in the direction of more Gesellschaft environments shift learning environments, development, and cultural values in the predicted direction. In what follows, I summarize studies testing various links in the theoretical model. Because the theory of social change and human development is being used to explain data that preexisted the theory itself, testing of the complete theory awaits future research. However, the fit of all the individual links—and, in a few cases, multiple links in the same study—provides indication of its validity.

In the empirical examples that follow, two points in the historical trajectory of a given group of people are compared. Starting points on the Gemeinschaft–Gesellschaft variables may be very different, but that is irrelevant to the direction of change, which constitute the independent and dependent variables of interest.

Linking Sociodemographic Change to Changing Learning Environments

Rogoff et al. (2005) studied how historical change in a Maya town in Guatemala influenced child learning environments. Three generations were studied over a period of 23 years. On the sociodemographic level (see Figure 5), the town of San Pedro had *increased its population,* its *diversity of occupations,* and the availability and importance of *schooling.* In effect, it had moved from *subsistence and agriculture* to a *money-based economy.*

During this period, children's learning environments also changed (italics indicate key variables). As *schooling increased in importance, informal education at home decreased,* and there was a *decrease in children's opportunities to observe and therefore learn adult activities in the family environment.* As generally happens in the shift away from subsistence lifestyles, *family size was reduced.* As there were fewer younger siblings and more time was spent in school, there was *a decline in responsibilities as sibling caregivers,* which is the major influence in the development of altruistic (as opposed to egoistic) behavior (J. M. W. Whiting & Whiting, 1973). *Relationships with unrelated peers became more important, as multiage interactions in the family decreased.* Rogoff et al. (2005) showed how a rapid shift from a Gemeinschaft to a Gesellschaft environment affects children's learning environments.

Linking Sociodemographic Change, Changing Learning Environments, and a Shifting Trajectory of Cognitive Development

Sociodemographic change affects learning environments, which, in turn, affect cognitive development. Evidence for these links from various sources follows. Note that unlike what many macrosocial scientists do, the following studies link individual or family differences in sociodemographic characteristics to individual differences in learning environment and/or cognitive development.

Mexico: The Zinacantec Maya. From 1969 to 1991, the Zinacantec Maya economy transitioned from *agriculture and subsistence* to *commerce and money.* Figure 6 summarizes new Gesellschaft characteristics in the environment. Most important, *subsistence activities,* the key to a Gemeinschaft economy, were reduced (weaving all the family's clothes) or virtually eliminated (subsistence agriculture).

During this same period, the *learning environment* also shifted (see Figure 7). *More children went to school and helped their parents in commercial activities,* as the need for *children's help with certain subsistence activities (such as drawing water) declined* (Greenfield, 2004; Greenfield, Maynard, & Childs, 2003). Quantitative comparison of two generations from the same families studied 2 decades apart showed that, in that same period of 21 years, weaving apprenticeship, a culturally central feature of Zinacantec girls' learning environment, shifted from *more social scaffolding* (most often by mothers) to *more independent trial-and-error learning* (see Figure 7).

This shift in style of weaving apprenticeship has important implications for the issue of maternal adaptation. In essence, mothers were not creating the same learning environment for their daughters that they had experienced; instead, they were preparing their daughters for the new commercial world in which independence was an adaptive trait. Ethnographic evidence indicates that this was not a conscious, intentional maternal adaptation. Often, mothers were not available when daughters were learning to weave because mothers were engaged in a commercial activity either at home (e.g., embroidering on order) or away (e.g., selling in a distant city) (Greenfield, 2004). Thus, adaptation to the new commercial environment—the development of women's work outside the home—created another adaptation in the daughters' development: a more independent learner. Indeed, variability in adopting the new, more independent style of weaving apprenticeship was, as predicted, a function of family differences in female participation in the commercial economy (Greenfield, Maynard, & Childs, 2003).

The historical shift from subsistence to commerce and a concomitant change in learning environment also affected cognitive development (see Figure 7). In this same period of two decades, children and adolescents showed a generational shift from a more detailed to a more abstract style of visual representation, as well as increased skill in representing novel visual patterns. Innovation is a value in a commercial, entrepreneurial economy, and innovative (vs. traditional) pattern design had entered Zinacantec textiles in the intervening 21 years (Greenfield, 1999, 2004). Linking changing sociodemographics to altered trajectories of cognitive development, structural equation modeling indicated that a more commercial and technological family environment (e.g., father bought and sold goods for a living; family had a television) led to a more abstract cognitive style and greater skill in dealing with novel visual problems in our experimental task. There was also a direct link from learning environment to cognitive trajectory: Those girls who were learning to weave most independently were also the best at representing novel patterns (see Figure 7).
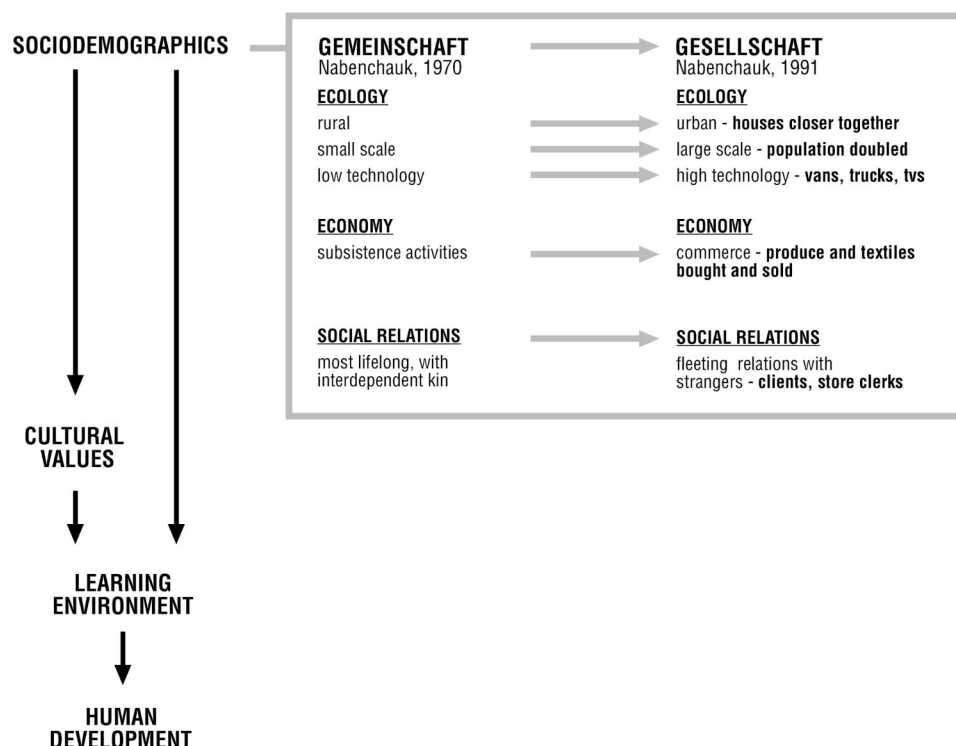
Figure 6.   Away from Gemeinschaft, toward Gesellschaft: sociodemographic changes in Nabenchauk from 1970 to 1991 (Greenfield, 2004). The one-sided gray horizontal arrows indicate direction of change over historical time. The vertical arrows indicate the dominant causal relations. Also, Nabenchauk, even in 1991, did not conform to the ideal type of a Gesellschaft environment, but the diagram should be interpreted as indicating that Nabenchauk had moved in a Gesellschaft direction.

New Guinea: The Oksapmin. Saxe (1999) used different groups of adults studied at the same chronological time to link changing sociodemographics to learning environment to cognitive development. In the 1970s, the Oksapmin lived in a *subsistence culture of hunting and agriculture.* Their traditional counting system was tied to the context of the human body: Body parts and numbers were one and the same thing (e.g., the word for "thumb of the right hand" and the word for "one" were the same). Number cognition was tied to a specific context, the body; it was never abstracted from this context.

However, wage work on distant plantations with trade stores and the introduction of trade stores into Oksapmin communities introduced *commerce and money* into the Oksapmin environment. Older men grew up in the subsistence environment; younger men had differential exposure to the commercial environment. Saxe (1999) explored the effect of interacting with this new commercial learning environment on cognitive development in the domain of mathematics.

To adapt to the trade stores, Oksapmin people had to add and subtract for the first time. In this commercial environment, the contextualized system of using body-part names for numbers broke down. In adaptation, the Oksapmin started developing a slightly more abstract system that was usable for addition and subtraction; in this more decontextualized or abstract system, counting words were dissociated from the counter's actual body parts.

Participants had different levels of experience with the Gesellschaft variable of commercial activity (i.e., different learning environments). In decreasing order of commercial experience were (a) trade store owners, (b) returnees from plantation work, (c) young adults without plantation experience but with childhood exposure to trade stores and a money economy, and (d) older adults with only peripheral experience with the money economy. In a linear relationship, more commercial experience was associated with the more decontextualized method of enumerating.

Linking Sociodemographic Change With Changes in Cognitive Development: The Flynn Effect

The Flynn effect refers to the worldwide increase in IQ performance, particularly on nonverbal tests, over at least the last century. In more Gemeinschaft environments, cognition is for social ends, whereas in more Gesellschaft environments, cognition is valued for its own sake (Greenfield, Keller, et al., 2003). Greenfield (1998) summarized many studies to show that the three Gesellschaft factors of *urbanization, technological development, and formal education* are responsible for historical increases in cognitive performance for its own sake (as in IQ tests) (see also Schooler, 1998a). For example, following expansion in the Gesellschaft domains of technology, urbanization, and education between 1930 and 1940, average IQs in East Tennessee mountain
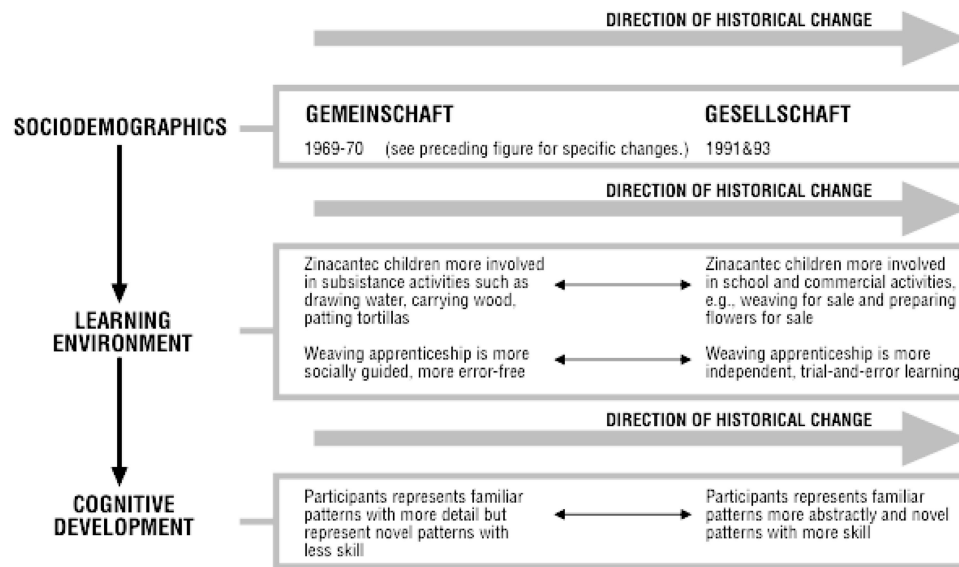
Figure 7. Shifting pathways through cognitive development: As the sociodemographic level shifts, so do the learning and cognitive developmental levels of the model (Greenfield, 2004; Greenfield, Maynard, & Childs, 2003). The one-sided horizontal gray arrows indicate the actual direction of historical change. The double-sided horizontal arrows indicate that the variables are multivalued dimensions rather than binary concepts. The vertical arrows indicate the direction of causality.

children rose about 10 points across Grades 1 through 8 (Wheeler (1942/1970). Daley, Whaley, Sigman, Espinosa, & Neumann (2003) found similar effects in Kenyan children, partly due to increased emphasis on schooling in the community.

Which Sociodemographic Change Will Operate to Alter a Developmental Pathway?

Four sociodemographic variables can provide the motor for the Flynn effect: formal education, technology, urbanization (Greenfield, 1998) and social complexity (Schooler, 1998a). All four characterize Gesellschaft environments, and each moves IQ toward better performance. Which variable is the main motor for cognitive change at a particular time and place depends on which variable is changing most in a particular environment during a particular epoch. Thus, the sociodemographic variables have equipotentiality. Equipotentiality should also apply to social development, the next topic.

Links From Sociodemographic Change to Changing Learning Environments to Changing Patterns of Social Development

Japan. Japan was transformed after World War II from a primarily *agricultural* society through massive *industrialization* and *urbanization* (Rice, 2001; see Figure 8). The wife and mother's role changed in adaptation to the new conditions; *her subsistence work role was greatly diminished.* These sociodemographic changes altered the child's learning environment. *Family size decreased* from around 5 children per family in the 1920s to 1.46 per family in 1993. *Sibling caregiving also declined,* but *individual attention from the mother increased.* This attention was focused on

promoting *school* success in keeping with the *pedagogical* model of maternal involvement. At the same time, the *isolation of the nuclear family from the extended family increased in the urban context* and the *collective nature of the family declined.* Child rearing became more *child centered.*

The result of all of these changes in sociodemographics and child environment has been a changed pathway of social development. In the new generation of young adults, raised under these new child-centered conditions, women's roles are much more by *choice* than they are *ascribed by birth as daughter, wife, and mother; personal pleasure and women's personal achievement* often replace *social responsibility* as life-course values (Efron, 2001; Hirao, 2001). *The couple relationship takes on importance as a source of romance* and displaces to some extent *the intergenerational relationships,* including elder care, that are the cornerstone of a collectivistic social system (Efron, 2001; Suzuki, 2000; see Figure 8). However, these changes involve the presence of conflicting norms and a process of social negotiation (Dunn, 2003; Jenike, 2003).

Do Japanese mothers experience inner conflict under conditions of social change? Despite the macro changes that Japan has witnessed, the unique value of Japanese *amae* (inclination to depend on or accept another's nurturant indulgence) remains essential to mother–child relationships (Lebra, 1991; Rice, 2001). It is part of the special bond in Japanese culture that makes mothers and children inseparable (Hirao, 2001). One adaptation to the continuing emphasis on maternal amae, in the face of increased education for women, has been delayed marriage and a sharp decline in the fertility rate (Hirao, 2001). Another response from Japanese mothers has been ambivalence toward parenting, frustration at not being able to pursue personal achievement in a chosen career, and a sense that the social value of child rearing is declining
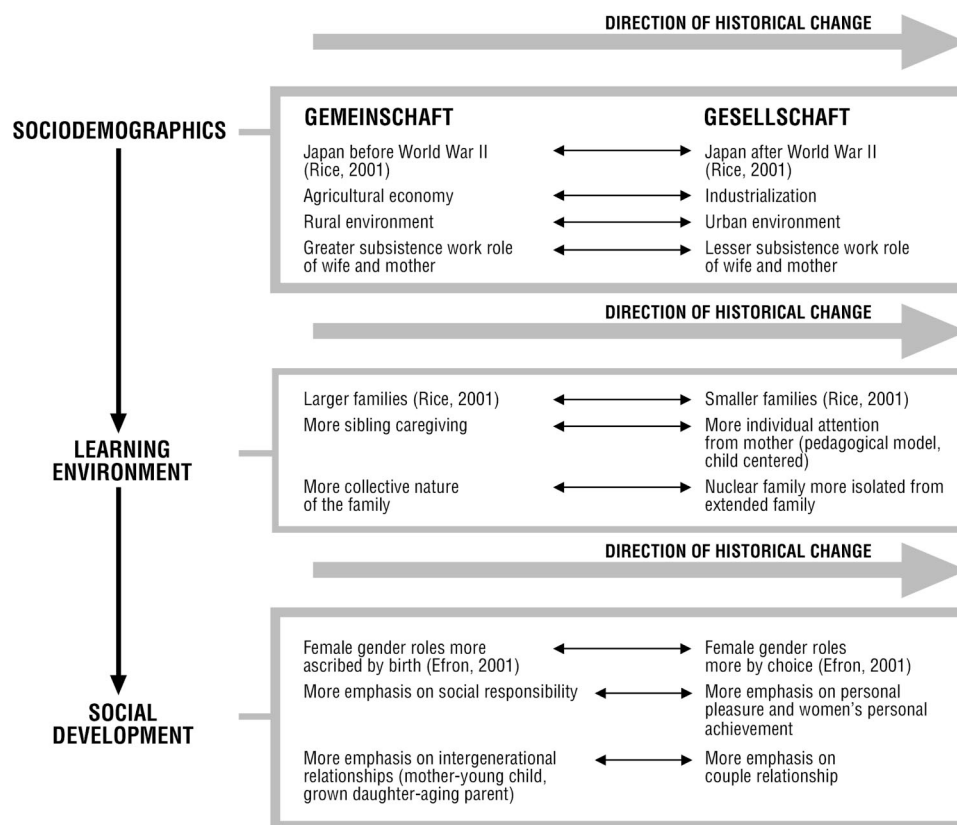
DIRECTION OF HISTORICAL CHANGE ⟶

	GEMEINSCHAFT	**GESELLSCHAFT**
SOCIODEMOGRAPHICS	Japan before World War II (Rice, 2001) ⟷	Japan after World War II (Rice, 2001)
	Agricultural economy ⟷	Industrialization
	Rural environment ⟷	Urban environment
	Greater subsistence work role of wife and mother ⟷	Lesser subsistence work role of wife and mother

DIRECTION OF HISTORICAL CHANGE ⟶

LEARNING ENVIRONMENT	Larger families (Rice, 2001) ⟷	Smaller families (Rice, 2001)
	More sibling caregiving ⟷	More individual attention from mother (pedagogical model, child centered)
	More collective nature of the family ⟷	Nuclear family more isolated from extended family

DIRECTION OF HISTORICAL CHANGE ⟶

SOCIAL DEVELOPMENT	Female gender roles more ascribed by birth (Efron, 2001) ⟷	Female gender roles more by choice (Efron, 2001)
	More emphasis on social responsibility ⟷	More emphasis on personal pleasure and women's personal achievement
	More emphasis on intergenerational relationships (mother-young child, grown daughter-aging parent) ⟷	More emphasis on couple relationship

Figure 8. Shifting pathways through social development: As the sociodemographic level shifts, so do the learning and social developmental levels of the model. The one-sided horizontal gray arrows indicate the actual direction of historical change. The source for all the information in the top and middle rectangles is Rice, 2001; in the bottom rectangle, the source is Efron, 2001. In addition, on the left side of the bottom rectangle, findings of Rice (2001) confirm the emphasis on the mother–child intergenerational relationship; on the right side of the bottom rectangle, findings of Hirao (2001) confirms the importance of women's personal achievement. The double-sided horizontal arrows indicate that the variables are multivalued dimensions rather than binary concepts. The vertical arrows indicate the direction of causality.

(Hirao, 2001). Both kinds of response indicate tension between the new pathway of development created by an egalitarian school environment, with increased emphasis on women's personal achievement, and persistence of the older value of amae as the center of the mother–child relationship; this tension has clearly produced inner conflict.

Links From Sociodemographic Change to Changing Cultural Values

The United States and Taiwan. These shifts in psychology apply to the West, which has experienced higher levels of societal wealth, technology, and formal education over recent decades, as well as to the rest of the world. Take self-esteem, a psychological adaptation to the importance of personal achievement in a Gesellschaft environment. Cho, Sandel, Miller, and Wang (2005) found that U.S. mothers generally perceived children's self-esteem to be much more important than did grandmothers; this finding indicates a shift over decades toward greater importance of self-esteem.

The researchers also compared an indigenous sample in Taiwan, a society undergoing transformation in recent generations into a commercial, high-tech Gesellschaft environment. All but one of the Taiwanese mothers were familiar with self-concept terms, whereas nearly half the grandmothers had no familiarity with these terms at all (Cho et al., 2005). Because grandmothers in the United States experienced more Gesellschaft environments than did grandmothers in Taiwan, familiarity with the concept of self-esteem was greater in U.S. grandmothers. Nonetheless, with very different starting points, the direction and pattern of change over time—toward greater importance of self-esteem on the value level and more Gesellschaft characteristics on the sociodemographic level—were similar in both countries.

The Value of Children Study. This exemplary study of endogenous value change over time comprised two waves of data, 3 decades apart, in multiple countries (Kağitçibaşi, 2007). It focused on changes in the developmental stage of motherhood. But changes in maternal attitudes also indicate changing socialization patterns for the next generation of children. A combination of longitudinal and cross-sectional analysis implicated the role of increasing urbanization, increasing economic means, and increased formal education in the observed changes.

Children are sources of necessary economic aid to their parents in a Gemeinschaft environment, especially in old age, so wealth flows toward the older generation. In contrast, children need to be educated to develop their individual careers in a Gesellschaft environment, so wealth flows toward the younger generation. At the same time, the psychological pleasures of raising children become more adaptive in a Gesellschaft environment, where parents do not have to rely on the work of their children.

I focus here on the Turkish results. Between the early 1970s and the early 2000s, as Turkish mothers became more *educated, urbanized*, and *wealthier*, they shifted their ideas concerning the value of children *away from material aid* and *toward psychological values* (Kağitçibaşi, 2007). There were *significant decreases* from 1975 to 2003 *in the value attributed to children helping their parents in old age, helping around the house,* and *helping economically*; in the same period, there were *significant increases in the value attributed to the pleasure of watching children grow (the pedagogical model).* Cross-sectional analysis of groups differing in urbanization and wealth confirmed the role of these factors in some aspects of the value shift.

Parental ethnotheories also *shifted away from* child-rearing values, such as *child obedience,* that are adapted to agrarian life in a Gemeinschaft environment and *toward* values, such as *independence*, that are adapted to urban life in a Gesellschaft environment. In 1975, *child obedience* had great importance to parents; in 2003, this was one of the least important qualities; however, as the theory would predict, it *retained more importance for rural and urban low-income parents than for urban and higher income parents* (Kağitçibaşi, 2007). In contrast, *independence* and *self-reliance,* which were given little importance in 1975, *emerged in 2003 as desirable child qualities, especially for the urban high socioeconomic status (SES) group,* exactly as the theory would predict.

Linking Sociodemographic Change and Changing Learning Environments in Germany: Infant Caregiving

Keller and Lamm (2005) compared two cohorts of German mothers, one studied in 1977–1978 and another in 2000. In this period, Germany became *wealthier* and its populace became *better educated.* Indeed, mothers in the later cohort had significantly *higher educational attainment* than did mothers in the first cohort. Maternal environments shifted in a way that reflected these sociodemographic changes. The first generation of mothers created an environment better adapted to *fostering social intelligence*; they had a more *interdependent relationship* with their babies, as indexed by *greater bodily contact* and *more opportunity to become sensitive to the world of people*. The second generation created an environment better adapted to fostering *technological intelligence*; mothers more frequently provided *toys for the babies to manipulate* and thus provided them with *greater opportunity to learn about the world of physical objects.*

Culture Contact Through Immigration

Another Motor for Shifting Trajectories of Human Development

The pattern of immigration in the world is from the poorer, less technologically advanced countries to the richer, more technolog-ically advanced countries (Greenfield, 2006). Both within and across countries there is massive immigration from rural to urban areas (Kağitçibaşi, 2007). In other words, the global pattern is movement from more Gemeinschaft environments to more Gesellschaft ones. Examples in this section show that the effects of immigration on pathways of development are therefore similar to the effects of more endogenous social change. In the immigration situation, people move to a new type of environment. In more endogenous social change, people stay in the same place, but the environment is transformed.

The Link From Sociodemographic Change to Changing Cultural Values to Changing Patterns of Social Development: Mexican Immigrant Families

A large number of Latino immigrants in Los Angeles in the mid-1990s had moved from agricultural communities in Mexico to the most commercial environment in the world. They moved from small, homogenous, face-to-face villages of extended family and familiar people to large, culturally heterogeneous cities full of strangers and nuclear family households. They were transplanted from environments in which a large part of learning took place in their families to environments in which most learning takes place in school. In other words, they moved from more Gemeinschaft to more Gesellschaft environments. The theory predicted that these immigrants would bring child-rearing values more adapted to a Gemeinschaft world into the more Gesellschaft host society.

This situation set the stage for conflicting socialization and developmental priorities between Los Angeles teachers and Latino immigrant parents. We therefore predicted (and found) an intergenerational difference: As children were exposed to two sets of values developed values that reflected the influence of both parents and teachers, children's values moved away from parents' values and toward teachers' values (Raeff, Greenfield, & Quiroz, 2000). To illustrate, I utilize a scenario that pits the value of sharing, a collectivistic value adapted to a Gemeinschaft environment, against the value of personal property, an individualistic value adapted to a high-technology, commerce-based Gesellschaft environment (Raeff et al., 2000). This scenario, along with others, was presented to fifth-grade Latino children, their immigrant parents, and teachers in their school.

The stimulus scenario went as follows:

> Adam and Johnny each get $20 from their mother, and Johnny buys a T-shirt. A week later Adam wants to borrow Johnny's T-shirt, and Johnny says "No, this is my T-shirt, and I bought it with my own money." And Adam says, "But you're not using it now."

What do you think the mother should do?

The dominant response from the parents, who had grown up in more Gemeinschaft conditions, expressed the value of unconditional sharing. The dominant response from the teachers expressed two values adapted to a Gesellschaft world: personal property ("It's Johnny's T-shirt") and choice (Johnny should decide whether he wants to share or not). Thus, the children's environment typically contained both value messages. The children therefore had to negotiate conflicting values in order to respond to this and other scenarios. Indeed, their responses showed that they were actively constructing adaptations to new environmental conditions, conditions that their parents had never experienced. For the chil-

dren, relative to the teachers' values, sharing was viewed as more important. Relative to the parents' values, personal property and choice were viewed as more important. If we consider the change across generations, the children's developmental trajectory is going in the direction of values adaptive in a Gesellschaft world. This intergenerational change is diagrammed in Figure 9.

The Link From Sociodemographics to Cultural Values: Vietnamese Immigrant Families

Vietnamese refugees emigrated from a poor country into a rich one. Upon arrival, they started at the bottom of the economic ladder and were underrepresented in higher education and professional occupations. With time, income and education increased. The second generation grew up with greater means than their parents in the more Gesellschaft environment of the United States. This situation led to intergenerational conflict, another measure of change in values over time. According to Zhou and Bankston (1998), "Tension between the individualism of American society and the collectivism of Vietnamese culture lies at the heart of the conflict between Vietnamese refugee parents and their children" (p. 165).

Resistance to Value Change: Vietnamese and Mexican Immigrant Families Compared

The existence of a large ethnic enclave can slow the pace of intergenerational change in immigration situations. Phinney, Ong, and Madden (2000) found evidence for this in Mexican American adolescents in Los Angeles, where Mexican Americans constitute close to half the population. In Los Angeles, U.S.-born adolescents from immigrant Mexican families endorsed family obligation values just as strongly as did adolescents who were born in Mexico. However, this was not the case for adolescents whose parents immigrated from Vietnam. Among Vietnamese Americans, an ethnic group that constitutes less than 2% of the area's population, U.S.-born adolescents were more discrepant from their immigrant

parents on the value of family obligation than were foreign-born adolescents from the same immigrant Vietnamese backgrounds. This pattern of findings signals quicker loss of ancestral values for Vietnamese immigrant families than for Mexican immigrant families. Thus, size of the immigrant community seems to be one answer to the question of what conditions make Gemeinschaft values more resistant to macrochange.

Do Parents Experience Inner Conflict When Parenting Under Conditions of Social Change Brought About by Immigration?

Exploring this important question in the area of filial piety, Suzuki (2000) found that some Asian American immigrant parents lamented the fact that their children were not treating them as "filially" as they would like. They sometimes did not understand the change from their filial behavior toward their own parents in Asia to the absence of this behavior in their own children, who were growing up in the United States. Inner conflict for a parent could translate into parent–child conflict; for example, an immigrant parent from China, trying consciously to teach filial piety to her U.S.-raised child, met resistance from her sixth grader, who disagreed on how much material support she should provide for her parents in their old age.

Do the Children of Immigrants Experience Inner Conflict When Growing Up in a More Gesellschaft Environment Than Their Parents Did?

Navigation between two cultures is not always easy, even if one has achieved the educational success so valued in the Gesellschaft world. For example, a first-generation UCLA student of Persian Jewish immigrant parents reported that her U.S.-born friends could not understand why she had so much family responsibility (Greenfield & Suzuki, 1998). As another example, some second-generation Vietnamese students "are torn between the individual-
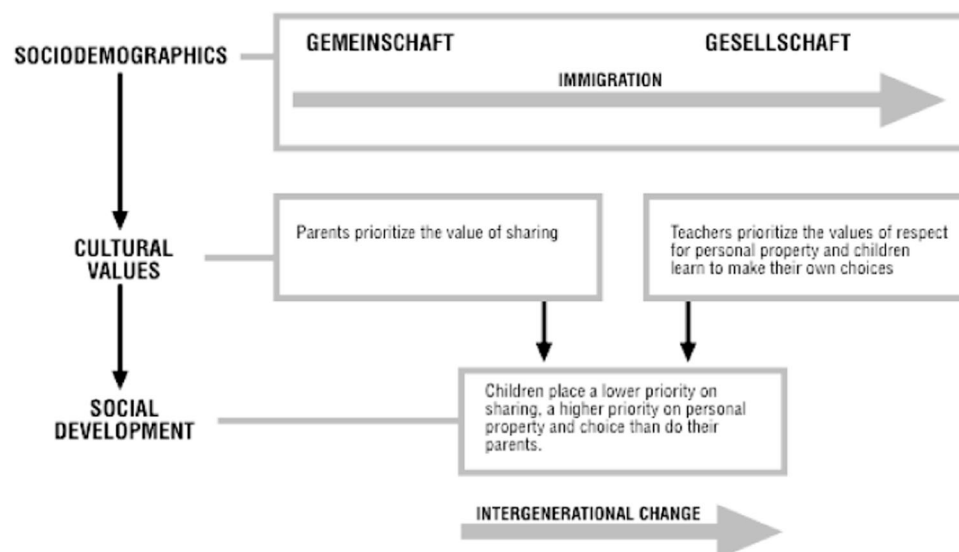

Figure 9. Intergenerational change that results from immigration (Raeff, Greenfield, & Quiroz, 2000).

ism of growing up American and the community or parental demands to fulfill family obligations; others manage to balance the two" (Zhou and Bankston, 1998, p. 166).

Relationship to Other Theories of Human Development in Cultural Context

The theory of social change and human development is a direct descendant of cultural pathways through universal development (Greenfield, Keller, et al., 2003), and it owes much to Keller's prototypical environments (Keller, 2007). But it has earlier theoretical roots. This section highlights both its roots and its distinctive contribution.

Kağitçibaşi's Theory of Family Change

Kağitçibaşi's theory (1996, 2007) calls attention to many of the same sociodemographic variables. It has been the major theory of human development focusing on social change and was a significant influence on the present theory. However, there are important differences. Kağitçibaşi sees given sociodemographic variables as having different effects in the Majority World (formerly called the Third World) and the Minority World (formerly called the First World). She asserts that urbanization, socioeconomic development, and formal education in Majority World countries create a new and distinctive self that is not part of Western individualism: the autonomous-related self, a self that maintains close-knit familial relations while it develops autonomous decision making and initiative. In contrast, I see the autonomous-related self as simply an intermediate stage on the continuum. In this stage, socialization by parents raised in a more Gemeinschaft world still has an impact on their children, although the impact that will be reduced in each succeeding generation. In other words, my theory is more universalistic concerning the effects of social change on family development; Kağitçibaşi's is more particularistic. While this debate will go on, emerging empirical evidence favors my conception of the autonomous-related self as an intermediate form rather than a separate type (Keller, 2007).

Ecological Theory: Berry, Dasen, Bronfenbrenner

The first ecological theory in cross-cultural psychology was developed by Berry (1966), who focused on the difference between the perceptual task demands of agricultural and hunting environments. The major developmentalist working in this theoretical tradition was Dasen (1975), who applied the same ecological dimensions to Piagetian tasks of cognitive development. Berry recognized that Westernization, including formal schooling and technology, would have an impact on cognitive development, but he did not consider these key components of Gesellschaft environments to be "ecological"; therefore, they are extrinsic rather than intrinsic to the theoretical formulation. This is the most important difference from the present theory of social change and human development.

Because of their macro scale, Gemeinschaft and Gesellschaft at first glance resemble Bronfenbrenner's (1979) ecological theory with its concentric circles representing family, school, and community. However, there are important differences: Gemeinschaft and Gesellschaft, like Keller's cultural prototypes, call attention to the patterned organization of child-rearing environments and specify particular dimensions of difference in various macroenvironments. Unlike Bronfenbrenner's purely descriptive level of theory, the theory of social change and human development leads to specific predictions about behavioral adaptations to environmental conditions. Also, the concepts of Gemeinschaft and Gesellschaft allow one to conceptualize the nature of social change over time and its consequences for development. Although Bronfenbrenner's chronosystem introduces the dimension of time, it refers to the child's changing environment at different life stages, not to the historical shifts on which the present theory focuses.

The Lineage of Beatrice and John Whiting

Anthropologists Beatrice and John Whiting pioneered study of the ecology of childhood across cultures (Whiting and Whiting, 1973, 1975) and have been a major influence on my thinking. In focusing on one of the Gemeinschaft–Gesellschaft dimensions, societal complexity, the Whitings identified altruistic child behavior with simpler cultures and egoistic child behavior with more complex cultures. Their early student, Robert LeVine, went on to focus on another important sociodemographic variable, maternal schooling, and explicitly connected it to social change, as noted earlier. In the present theory, simplicity–complexity and maternal schooling are important variables, but they are only two of a number of sociodemographic dimensions. The theory also expands dimensions of child behavior beyond altruism and egoism, and this expansion endows it with greater generality and predictive power than the Whitings' formulation had. A later Whiting student, Richard Shweder, extended the contrast between egoistic and altruistic behavior in a constructivistic direction by identifying egocentric and sociocentric conceptions of person (Shweder & Bourne, 1984). Construction processes are integrated with behaviors in the present conceptualization; they are particularly important at the level of cultural values, a level that the Whitings eschewed.

Two other Whiting students, Sarah Harkness and Charles Super, conceptualized the developmental niche, in which parental ethnotheories and child development patterns are adapted to different ecological settings (Super & Harkness, 1986). For example, they contrasted parental ethnotheories in an Nso village in East Africa with parental ethnotheories in the urban environment of Cambridge, Massachusetts (Harkness & Super, 1992). The Nso village is a prototypical Gemeinschaft setting, whereas Cambridge is a prototypical Gesellschaft setting. Gemeinschaft and Gesellschaft are generalizations of these two developmental niches; this generalization allows the concepts to be applied to environments around the world and to be used for predicting socialization effects of specific kinds of social change.

As did the Whitings, the present theory of social change and human development makes adaptation to material and economic conditions the most important causal force in shaping cultural pathways of development. However, neither parents nor children are seen as passive reactors to these conditions. In a manner similar to Shweder's constructivistic approach to the Whiting heritage (e.g., Shweder, Jensen, & Goldstein, 1995), the present theory sees parents and children as actively constructing responses to both the constraining and enabling conditions of their particular ecology.

The Sociohistorical School: Vygotsky, Luria, Cole, Scribner, Rogoff

Vygotsky was the first to call attention to the role of history in development (Scribner, 1985). In the 1930s, after the formation of the Soviet Union, Vygotsky and Luria used cross-sectional data to infer the effects of historical change; they compared collectivized, literate farmers in Soviet Central Asia with illiterate peasant farmers. The inference was that the illiterate peasant farmers represented the generation prior to Communism and its attendant social changes. Their theoretical point was that, when sociohistorical conditions change, cognitive activity also changes (Luria, 1976).

Cole, Scribner, and Rogoff carried on this theoretical tradition. However, they differ from their Russian forebears (and from the present theory) in seeing both activities and cognition as situationally determined. For this reason, they have not developed universalistic theories of culture and human development (e.g., Cole, 1996; Rogoff, 2003; Scribner & Cole, 1981).

Individualism and Collectivism Theory: Hofstede, Triandis

Sociodemographic influences on individualism and collectivism at both the societal and individual level have been noted by Hofstede (1980, 2001) and Triandis (1993). However, unlike the present theory, these researchers do not posit a connection or patterning among the various sociodemographic variables. Connection and patterning among the variables has been achieved in the present theory through the use of the ideal sociodemographic types of Gemeinschaft and Gesellschaft.

Concerning historical change, Triandis noted that "over the course of cultural evolution there has been a shift toward individualism" (Triandis, 1989, p. 509). What has been added here to Triandis's insight is specification of the sociodemographic motors behind this evolution and the new insight that this evolution is not a thing of the past in the West but continues today.

The present theory solves still other theoretical problems faced by individualism and collectivism. A developmental pathway toward independence relates conceptually to individualism and a developmental pathway towards interdependence relates conceptually to collectivism, but it feels quite forced to classify cognitive processes as being individualistic or collectivistic. Starting with social ecology, in contrast, it is quite natural to claim that certain cognitive processes are better adapted to one kind of environment or another. One can make the claim that particular modes of both social and cognitive development are adapted to a particular ecological environment. This is an advantage of founding a theory of culture and human development on different ecological types rather than on different value systems.

García Coll's Theory of Ethnic Diversity and Human Development

The various theories of culture and human development discussed this far have been primarily concerned with crossing national borders. In contrast, García Coll's theory is focused primarily on cultural diversity within the United States. García Coll (1990) was the first to recognize the importance of both culture and sociodemographics in development. Initially she saw these

factors as independent influences on the development of ethnic minority children, but later she began to explore interdependencies between cultural and sociodemographic factors (García Coll & Vazquez García, 1995).

In 1996, García Coll et al. made a major statement of the requirements for a theory of ethnic diversity and human development. The present theory fulfills many of these requirements. Their statement called for appropriate conceptual frameworks for conducting research in order to address the diversity and strength of minority populations. Because the present theory is based on the concept of adaptation to two specific types of environment, it focuses exclusively on strengths; all developmental characteristics are seen as appropriate adaptations to one or the other of the environmental types. Hence it is a theory of normative rather than deficient development and one that applies equally to minority and majority children.

A major concern of García Coll et al. (1996) is to explain within-group variability rather than to assume that panethnic groups (Asian Americans, African Americans, Latinos, and European Americans) are culturally and developmentally homogenous. In the present theory, the use of sociodemographics as the governing causal level both predicts and explains cultural variability within a given ethnic group. Moreover, the theory predicts both similarities among members of different ethnic groups on the basis of similar sociodemographic characteristics and differences within the same ethnic group on the basis of different sociodemographic characteristics. By tracing causal pathways from sociodemographics to socialization values and from sociodemographics to learning environments and developmental trajectories, the theory emphasizes processes, not outcomes. Thus, it fulfills another stipulation of García Coll et al. (1996).

Theoretical Challenges and Solutions

Contrasting perspectives present challenges to the present theory. Although debate in the field will go on, I now show how the present theory of social change and human development can successfully meet these challenges, both theoretically and empirically.

Dichotomizing Cultures and Individuals

Helwig (2006), Mascolo (2004), Raeff (2006a, 2006b), Rogoff (2003), and Smetana (2006) have called attention to the theoretical problem of dichotomizing cultures and individuals as independent or interdependent, individualistic or collectivistic. Such dichotomizing eliminates important within-group variability and within-person complexity. In the first part of this article, I address this problem by showing that dimensions rather than dichotomies are the basis for both the theory and its empirical support. That is, the ideal types of Gemeinschaft and Gesellschaft are used to anchor dimensions, rather than to create dichotomies.

However, there is another sense in which these theorists reject dichotomies, and that relates to within-person variability. They rightly point out that all pathways of development, and therefore all people, have both relational and autonomous aspects. This assertion is not in doubt. However, the basic argument here is that there are different forms of relatedness and autonomy and that some forms are more adapted to Gemeinschaft conditions while

others are more adapted to Gesellschaft environments. For example, relatively permanent kin-based relations dominate in Gemeinschaft communities; in contrast, these are less important in Gesellschaft societies, in which unrelated friends and transitory relations to strangers become a larger part of life. Similarly, autonomy can be defined as taking the initiative to carry out social responsibilities in a Gemeinschaft environment (Weisner & Gallimore, 1977); in contrast, personal choice is a type of autonomy that is important in a Gesellschaft environment (Kağitçibaşi, 2007).

The argument that some forms of relatedness and autonomy are more adapted to Gemeinschaft conditions and others are more adapted to Gesellschaft environments can be applied to shifts in the expression of filial piety throughout East Asia, where countries have rapidly transformed into Gesellschaft societies. Traditionally, children must take care of parents and live with them when grown up (Suzuki, 2000). But in the Gesellschaft East Asia of today, grown-up children and parents often live apart, as the theory predicts. Research shows that many forms of filial piety, adapted to new Gesellschaft conditions, have emerged to honor parents in Hong Kong, Taiwan, Singapore, Korea, and China. Instead of being with parents physically, children bring gifts. Instead of serving by their side, children phone their parents (Sung, 1998). These new forms of filial piety bespeak a shift in the forms of social interaction, from physical closeness to more distanced and mediated interactions, as the theory predicts.

The Relation Between Changed Practices and Changed Values

But filial values are also changing, albeit at a slower pace than filial practices. Although the general value of filial piety has remained strong, components of this value are changing over time. In Korea and China, obedience to parental authority is becoming a weaker value as mutual respect and reciprocal relations between parent and adult child become stronger values (Sung, 1998; Thomas, 1990). This value change is in line with predictions of the present theory of social change and human development. Data from Singapore provide further evidence of changing filial values (Thomas, 1990). Whereas filial piety was ranked highest of all values on a value-ranking scale by Singapore adolescents, it was identified and understood by the fewest adolescents in a more in-depth interview study that utilized social dilemmas as stimuli (Thomas, 1990).

Cultural Stereotypes Ignore Individual Differences

Another potential criticism from the field of psychology has to do with individual differences. This concern reflects the very foundation of psychology as the science of the individual (Greenfield, 1994). Although psychologists often note the need for cultural approaches, there is also a generalized distrust of culture as a stereotyping generalization. There are two responses to this challenge: First, Gesellschaft societies are by definition more differentiated and lead to greater individual differentiation, so individual differences are more pronounced in a more complex society; that prediction is part and parcel of the present theory. Second, sources of individual differences—education, urban–rural residence, technology, economic level—are specified in the theory. Hence, for a pure Gemeinschaft environment, in which sociodemographic dif-

ferences are relatively minor, the theory predicts few differences in socialization and developmental pathways. A study of historical change from a more subsistence-based to a more commerce-based community across two generations found the increased variability in learning environments that the present theory predicts (Greenfield, Maynard, & Childs, 2003).

Is Increasing Autonomy a Universal Feature of Human Development?

Helwig (2006) posited universal emphasis on the development of autonomy across cultures. However, he categorized cultures in terms of cultural traditions without taking into account the sociodemographics of particular samples. This methodological lacuna led him to minimize cross-cultural differences; this problem may also apply to Yau and Smetana (2003). Cross-cultural psychology in general tends to minimize cross-cultural differences by studying university students; thus, it equates the very sociodemographic factors that generate differences in cultural values and pathways of development.

The Role of Construction

A criticism of the theory from the constructivist perspective could be that it is too deterministic. And, indeed, many of the studies described have an "effects" design. However, although this article does not focus on the construction process, the underlying notion is that people creatively construct responses to changing environmental conditions. Often, people do not merely respond to but actually create changed environmental conditions in order to put themselves and their children in more Gesellschaft environments, in which higher levels of education and income will be possible (witness the phenomenon and motives for voluntary immigration; Fuligni & Yoshikawa, 2004). Delgado-Gaitan, an anthropologist, has provided a rich ethnography of Latino immigrant women who organize themselves to help their children take advantage of educational opportunities that they never had, opportunities that they have created by immigrating to a more Gesellschaft environment (Delgado-Gaitan, 2005).

Relationship to Modernization Theory

The movement from Gemeinschaft to Gesellschaft has been defined as modernization and is at the heart of the dominant strand of modernization theory in sociology (Tipps, 1973). This is because Gemeinschaft communities predated Gesellschaft societies historically. However, the theory of social change and human development differs from modernization theory in several important ways and thus avoids many criticisms of modernization (Kağitçibaşi, 2007; Tipps, 1973):

1. The present theory makes no value judgments about Gesellschaft being better than Gemeinschaft; nor is movement in the Gesellschaft direction seen as "progress." Instead, each ecology is seen as promoting different pathways of human development, each with its own pattern of strengths and weaknesses. Movement in the Gesellschaft direction is therefore seen as entailing developmental losses as well as gains.

2. The present theory does not see social movement as unilinear. In theory and practice, movement can go in both directions (see

Figure 5), with predictable effects. However, in practice, one direction—the Gesellschaft direction—has been more frequent in the world. Moreover, unlike modernization theory (and unlike Tönnies), the present theory does not view sociodemographic variables moving either in concert or in a "Western" order. Instead, different variables can move at different rates; order and rate of movement vary from culture to culture and society to society. What is theoretically important is that, even though the variables may move unevenly, the movement from more Gemeinschaft to more Gesellschaft characteristics always moves socialization and development in a given direction. Sociodemographic movement in the other direction, as in the present economic downturn, would be predicted to move learning environments and pathways of development in the opposite direction.

3. Whereas modernization theory tends to see modern societies as more homogeneous than traditional societies (Geertz, 1963), the theory of social change and human development, like Triandis (1989), sees them as more heterogeneous and views traditional cultures as relatively homogeneous because of their relative isolation from other contrasting cultures in the same country. In this view, multiculturalism, as well as social class differences, makes modern societies more heterogeneous.

4. Modernization theory is reductionistic, in that it ignores detailed cultural differences between different "modern" societies or between different "traditional" communities. Although it focuses on abstract general descriptions of values and behaviors, the present theory of social change and human development acknowledges the very different particular expressions these may take in different cultures and societies. An example of this is the general value placed on respecting people older than oneself. In East Asia, this value is embodied in filial piety, and the child–parent relationship is its central expression (Suzuki, 2000). Respect for those who are older than oneself is also an important value for the Zinacantec Maya of Chiapas, Mexico, but a different relationship—that of younger brother to older brother—traditionally functioned as the prototype of the same concept (Vogt, 1969). This example illustrates an important point for researchers: It is only through in-depth and detailed study, often starting with ethnography, of particular phenomena—such as filial piety in Asia or the meaning of the older brother/younger brother relationship in Zinacantán—that a general value can be meaningfully uncovered, one culture at a time.

5. Whereas modernization theory (and Tönnies) sees the Western prototype as fixed (Kağitçibaşi, 2007), the present theory of social change and human development sees Western societies as also moving, usually toward more extreme Gesellschaft values on various dimensions. Accordingly, there is no final Gesellschaft prototype; there are simply Gesellschaft variables and a Gesellschaft direction. For example, technology continues to develop and to become more widespread. The world's wealth has increased as global commerce has expanded (Deaton & Paxon, 2001).

6. Modernization theorists in sociology do not generally consider the implications for child development, which is the central focus of the present theoretical formulation.

Conclusions

The world is undergoing accelerating social change as the environmental factors that transform Gemeinschaft communities into Gesellschaft societies—commerce, wealth, technology, urbanization, formal education, and heterogeneity—continue to expand at an accelerating pace around the world and as immigration takes people from more Gemeinschaft into more Gesellschaft worlds, in a kind of human globalization. Each ideal type of social ecology has a pathway of social and cognitive development adapted to it. At the extremes of the two ideal types, all of the variables are correlated. However, under conditions of social change, not all variables move in concert. The theory predicts that movement of any of the environmental variables toward a more Gemeinschaft value or toward a more Gesellschaft value will move socialization pressures (and therefore development) in the corresponding direction. This equipotentiality of the individual sociodemographic variables is one of the new features of the theory.

Positing systematic effects of these variables across both social and cognitive development is another new feature of this theory. Empirical support for the theory shows that social and cognitive development are affected by the same forces and consequently need to be integrated into one unified theory of culture and human development.

The use of Gemeinschaft and Gesellschaft as paradigms represents the patterning of environmental variables to make a complete environment. In this respect, the present theory of social change and human development differs from the dominant cultural paradigm in developmental psychology, which seeks to "disentangle" variables, such as culture or ethnicity and SES (Quintana et al., 2006). In contrast, the present theory seeks to identify relationships between SES and culture. It sees SES as an influence on cultural values and does not see SES and cultural values as operating independently.

The present theory of social change and human development can be useful for developmental psychologists, because it provides a framework for understanding general patterns of cultural change and shifting pathways of human development around the world. Indeed, this theory is the first truly predictive theory in cultural psychology. All others are limited to description rather than prediction. However, equally important, a detailed account of specific features of both change and resistance to change in a particular culture requires a more complete investigation into that particular culture, with its unique traditions.

In much of cultural and cross-cultural psychology, cultures have been treated as basically static. For example, in East–West comparisons, the East is treated as forever collectivistic, the West as forever individualistic. There is no attempt to come to terms with the fact that economically developing societies, such as Japan, have also become more individualistic over time (Miyanaga, 1991). The present theory can, in contrast, deal with Schooler's sociological data by predicting the increasing individualism of Japanese people (Schooler, 1998b).

The assumption of change rather than stasis is perhaps the key contribution of this theory to present-day cultural psychology. Because the world is generally moving from Gemeinschaft to Gesellschaft or from Gesellschaft to more extreme Gesellschaft, pathways of human development shift to adapt in particular ways. I have illustrated these historical shifts in the context of relatively endogenous change, as when, over historical time, the environment moves toward more Gesellschaft conditions, and in the context of exogenous change, as when people migrate from more Gemein-

schaft to more Gesellschaft environments. My goal has been to convince the reader that by beginning a theory with the social ecologies of Gemeinschaft and Gesellschaft, by documenting their transformations over time and their increasing contact in our global world, we emerge with a theory that provides the dynamics for shifting pathways of human development.

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