

Multilevel Analysis of Individuals and Cultures

Edited by

Fons J. R. van de Vijver

Dianne A. van Hemert

Ype H. Poortinga

 Lawrence Erlbaum Associates
Taylor & Francis Group

New York London

6

Individualism and Collectivism: Societal-Level Processes with Implications for Individual-Level and Society-Level Outcomes

Daphna Oyserman and Ayse K. Uskul

Culture can be broadly and briefly operationalized as a set of structures and institutions, values, traditions, and ways of engaging with the social and nonsocial world that are transmitted across generations in a certain time and place (e.g., Shweder & LeVine, 1984). Culture is thus temporally and geographically situated and multilevel. It is situated because it takes place in a certain time and place and is dynamically transmitted over time and across place, changing as time and place change. It is multilevel because its influence can be observed in societal-level constructs such as structures and institutions, group-level constructs such as traditions and ways of engaging in the world, and individual-level constructs such as internalized norms, personally felt values, cognitive procedures, and behaviors.

Cultural psychology focuses both on the ways that societal processes influence societal-level outcomes and on the ways that these processes influence individuals, either directly or through their effect on group-level processes.¹ Culture's situated nature has implications for each level of conceptualization. One's place within a society and the social networks within which one is embedded should influence which structural and institutional aspects of "culture" one has access to. In this way, context and changes in context that occur, for example due to immigration, may (Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006) or may not (Atran, Medin, & Ross, 2005) carry with it cultural change depending in part on features of more proximal social networks before and after contextual change. Thus, Kitayama and his colleagues provide evidence that living

in or moving to Japan's frontier areas is associated with higher individualism, in part due to the change in context. Atran and his colleagues use as their example differences in understanding of forest ecology among groups who live in somewhat different areas but importantly have differing contact with more expert groups, to show that cultural knowledge does not spread via physical moves but via social contact.

Following from this operationalization of culture, a large number of differences at the societal level, group-process level, or individual-expression level are likely due to culture. Unfortunately, such broad conceptualization can rob the term *culture* of conceptual specificity, making it all but impossible to make specific predictions about how and when culture matters. Perhaps for this reason, psychologists have sought basic organizing principles of cultures that could move the field beyond both broad generalizations and particularized description and set the stage for predictive model building. A number of potentially useful basic organizing constructs (e.g., "tight" vs. "loose" cultures, Triandis, 1995; "masculine" vs. "feminine" cultures, Hofstede, 1980; survival vs. self-expression, Inglehart 1997; honor-modesty vs. shame, Gregg, 2005; see also Cohen 2001), and frameworks (e.g., the ecocultural model, Berry, 1976, 1994; Georgas, 1988, 1993) have been proposed. To date the two constructs that most captured popular appeal are individualism and collectivism (e.g., Hofstede, 1980, 2001; Kagitcibasi, 1997; Kashima, 2001; Oyserman, Coon, & Kimmelmeier, 2002; Triandis, 1995).

Though use of individualism and collectivism as organizing constructs does provide the field with an organizing theme and focus for prediction and investigation, these organizing constructs alone do not provide a process model so that research relies on implicit process models. In this chapter we attempt to integrate these implicit models to describe both a multilevel and a societal-level process model of culture (the multilevel model focuses on individual-level consequences of culture, the societal-level model is self-explanatory). Both models begin with the same basic societal-level antecedents, but one model is multilevel in that proximal antecedents and consequences are at the individual level and the other model remains societal-level in that all antecedents and consequences are at the societal level. Most psychological research focuses on individual-level consequences, implicitly if not explicitly evoking a multilevel model.

In the following sections, we first operationalize individualism and collectivism as used both in multilevel and societal-level models, providing process models that pinpoint where research to date has concentrated and where gaps still exist. We operationalize a cultural psychological approach to the differing levels of analysis relevant to cultural psychology and ask what can and cannot be generalized from research using different levels of analysis given concerns about the ecological fallacy (see chapters 1 and 2 for a detailed discussion of levels issues in cultural research) and Simpson's paradox.

INDIVIDUALISM AND COLLECTIVISM: OPERATIONALIZATION, ASSESSMENT, AND USAGE

Modern usage of the term *individualism* is closely connected with Hofstede (1980). In the 1970s Hofstede obtained employees' ratings of workplace relevant values, averaged those into national scores, and factor analyzed them (Hofstede, 1980; see also Leung & Bond, 1989). Hofstede described one of the emerging factors as individualism (high scores on this factor were anchored at individualism, low scores at collectivism). He defined individualism as a focus on rights above duties, a concern for oneself and immediate family, an emphasis on personal autonomy and self-fulfillment, and basing identity on one's personal accomplishments. By obtaining averages across individuals, Hofstede obtained an average individual score that he used as a stand-in for a country-level score that could be correlated with other country-level variables such as Gross National Product (GNP).

A number of authors have followed Hofstede's reasoning in thinking about country-level value syndromes, arguing that individualism is associated with modernity, democracy, wealth, urbanism, higher education, and educational systems focused on positive self-regard and autonomy. Thus, for example, Inglehart (Inglehart & Baker, 2000) collected data separately as part of the World Values Survey, correlating national average value scores with national scores from other sources rating country-level attainment of education, gender equality, and other societal features. Authors using this perspective provide evidence supporting the case that collectivism as a worldview is associated with poverty, less education, hierarchical or cast-based societies, and educational systems focused on self-improvement, obedience to authority, and acceptance of social structure (e.g., Kagitcibasi, 1997).

While Hofstede was not interested in individual-level implications of cultural syndromes and attempted to obtain a country-level variable by averaging within-country individual responses, a number of researchers have developed individual-level value scales with a goal of individual-level assessment. Triandis and his colleagues have coined the terms *allocentrism* and *idiocentrism* to refer to these individual-level assessments (Triandis, 2007; Triandis, Leung, Villareal, & Clack, 1985). The consequences of individualism and collectivism at an individual level have also been described for self-concept, cognitive style, and relationality (Kitayama et al., 2006; Oyserman, Coon, & Kimmelmeier, 2002; Oyserman, Kimmelmeier, & Coon, 2002).

In their review, Oyserman, Coon, and Kimmelmeier (2002) suggest the following individual-level implications of individualism and collectivism. At the individual-level, individualism as a cultural syndrome implies

that the self is permanent, separate from context, traitlike, and a causal nexus; that reasoning is a tool to separate out main points from irrelevant background or context; and that relationships and group memberships are impermanent and nonintensive, strangers may become friends or allies, and current in-group memberships may be given up for others. Conversely, at the individual-level, collectivism as a cultural syndrome implies that the self is malleable, context-dependent, and socially sensitive; that reasoning is a tool to link and make sense of the whole rather than disparate elements; and that relationships and group memberships are ascribed and fixed, “facts of life” to which people must accommodate. Strangers are not to be trusted; in- and out-group memberships are fixed.

PREDICTING INDIVIDUAL-LEVEL OUTCOME VARIABLES

Process models can help to clarify our thinking about relationships between concepts. We first address the prediction of individual-level outcome variables and thereafter discuss the strengths of these approaches.

A Process Model

An integrated process model of the individual-level effects of culture is displayed as Figure 6.1 (modified from Oyserman, Kimmelmeier, & Coon, 2002). The process model outlines the main presumed or tested links between societal and group-level antecedent factors and individual-level consequences. This simplified multilevel cultural process model draws attention to the likely influences of societal-level culture: structures, processes, systems, and artifacts; and internalized features of culture, such as values and norms, for how situations are understood—subjective construals, and the consequences of these culture-laden construals for individual action at any point in time. Internalized features of culture are subjective, heterogeneous, and nonuniform so that both within and between group differences are to be expected.

As presented from left to right in Figure 6.1, some general processes are assumed to apply. First, it is assumed that all human societies must have been influenced by evolutionary forces (e.g., natural and sexual selection and adaptation) and the ecological (e.g., climate, geographical latitude) and natural (e.g., water supply and soil conditions) features of the environments in which they developed (box 1). These basic features influence both distal culture (history, language, and religion) (box 2) and the circumstances and extent that social connection and personal autonomy

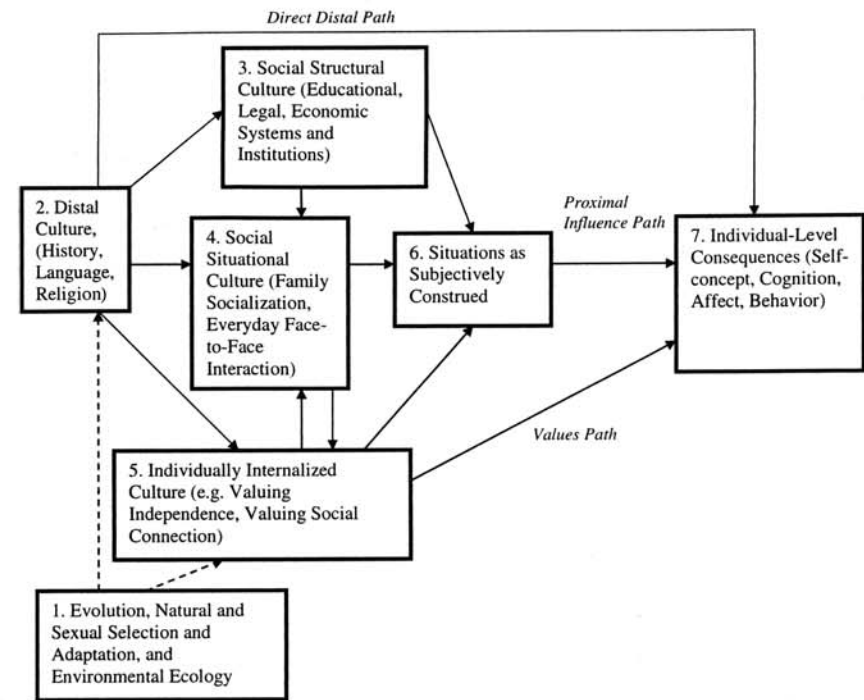


FIGURE 6.1 Culture as a multilevel process influencing individual-level outcomes. (Adapted with permission from Oyserman, Kimmelmeier, & Coon (2002). *Cultural psychology, a new look: Reply to Bond (2002), Fiske (2002), Kitayama (2002), and Miller (2002). Psychological Bulletin*, 128, 110–117. Copyright 2002 American Psychological Association)

are valued (box 5). That is, we assume that all distal cultures and value systems have some elements of individualism and some elements of collectivism. Societies established in more environmentally and ecologically resource-rich contexts would be likely to have less need for interdependent action for survival and thus likely to have fewer structures and contexts that require or cue interdependence. Conversely societies established and developed in harsher environmental and ecological niches would be likely to have more need for interdependent action for survival and so would be likely to have more structures and contexts that require or cue interdependence (for more detailed models see Cohen, 2001; Oyserman, Kimmelmeier & Coon, 2002). Between-group differences emerge due to differences in the extent that independence and interdependence patterns are embedded in distal culture and differences in the frequency of everyday contexts in which these patterns are likely to be evoked.

Though influenced by the environmental and ecological niche in which it was established, distal culture is assumed to be dynamically stable rather than static. That is, we expect distal culture to be permanent enough

to have predictable consequences but not be completely fixed. Distal culture is assumed to influence social structural (educational, legal, and economic systems and institutions, box 3), social situational (what families socialize children to be like, social roles within the family, the nature of everyday face-to-face interactions in school, with age-mates, on the street, at work, box 4), and individually internalized culture (box 5). Individually internalized culture takes the form of values and norms. Social structures, social situations, and internalized values are likely to influence the sense made of any particular situation (subjective construal of social situations, box 6). Distal culture, internalized values, and subjective construal have each been posited as paths to influencing individual outcomes (box 7). These include content of self-concept, cognition, affect, and behavior. We distinguish self-concept, cognition, affect, and behavior from values not because we wish to argue that values are fundamentally different in structure from other cognitions but rather because content of self-concept, behavior, affect, and cognitive style have been described as *consequences* of individualism and collectivism while values have been described as individually internalized *markers* of individualism and collectivism. An alternative would be to posit that values are consequences of culture in the same way that self-concept, cognition, and affect are without giving any preferred status to values.

Common Approaches to Operationalization

To date, three general approaches have dominated operationalization and measurement of individualism and collectivism in multilevel models. Oyserman, Coon, and Kimmelmeier (2002) have labeled these approaches “applying Hofstede,” using rating scales, and priming studies as outlined below. Each of these is presented in the process model as an explanatory path used to predict individual-level consequences of posited or assessed cultural differences. Each approach is outlined and incorporated into our multilevel model as detailed below.

Applying Hofstede

The most common approach is “applying Hofstede”; that is, citing Hofstede as the rationale for one’s choices of country comparisons. Following the usage of Oyserman, Coon, and Kimmelmeier (2002), we use the term *applying* rather than *following* because this approach *does not follow* from Hofstede in the sense that he did not make the claims others make in his name. We have labeled this work as assuming a “Direct Distal Path” between distal country and individual outcomes in Figure 6.1 because that is what the researchers are doing in their empirical work.

Researchers who apply Hofstede assert that Hofstede’s (1980) ranking can be used to justify the choice of countries for cross-national compari-

son. These researchers imply that because Hofstede (1980) defined and calculated national aggregated individualism scores, his ratings can be treated as indicators of distal culture. Reading Hofstede’s initial and later work (Hofstede, 1980, 2001) makes clear that he did not intend that his ratings be assumed to be fixed, and a number of papers have criticized this method (e.g., Bond & Tedeschi, 2001; Oyserman, Coon & Kimmelmeier, 2002; Singelis, 2000).

One concern is a level of analysis issue. Researchers attempting to apply Hofstede seem to assume that individuals from countries that ranked high on individualism are highly individualistic; individuals from countries ranked low in individualism are highly collectivistic (e.g., Hui, 1988). Even if researchers refrain from making this error, a number of broader concerns have also been raised in that Hofstede’s (1980) aggregated individualism scores are not really descriptive of distal culture (though studies that apply Hofstede typically assume a direct distal influence path). Aggregated individualism scores represent a nation-level aggregation of individual-level values of a certain sample of individuals at a certain place and certain point in time. Expressed values, though interesting, should not be the sole basis for cultural difference research because expressed values research requires making a number of assumptions about what culture is and how it is transmitted, as outlined below. First, using expressed values requires assuming that members of a culture can *express* their values and that standard rating scale instruments can *capture* cross-national differences in these values. Second, it requires assuming that *commonality in values* is an essential or core element of culture. Third, it requires assuming *generalizability of values across contexts*—that the values assessed in the workplace, where Hofstede collected data, generalize to values in other psychologically meaningful situations so that individuals not sampled from work but from the same country would have similar value differences. Fourth, it requires assuming that there is no meaningful *values change over time*. Thus it requires assuming that there is no meaningful developmental, temporal, or contextual change—values expressed by adults at a point in time and in one psychologically meaningful context (the workplace in the late 1970s) provide information relevant to other psychologically meaningful situations, other points in time, and other developmental or life phases.

In sum, researchers are using Hofstede’s scores to study issues other than the workplace satisfaction issues on which the scores were based. This requires assuming that individualism as assessed from working adults in the domain of work is constant, not influenced by large-scale economic and political changes over time, applies to other members of the culture and in other life domains. Much of this research does not use Hofstede’s scores themselves and simply alludes to Hofstede’s (1980) measures as rationale for making cross-cultural comparison. This does not solve any of the problems listed previously and because any pair or small set of

countries is likely to differ in many ways, documenting that responses at the individual level differ in ways one might expect given differences in individualism cannot be used to support an individualism–collectivism model of cultural difference. Other cultural syndrome models might also explain the particular differences examined or the differences may have nothing to do with cultural syndrome.

In spite of all of these well-known criticisms, a substantial body of research has focused on examination of the relationship between assumed country-level difference due to Hofstede's description of individualism (and collectivism) and individual-level outcomes. Work using this "apply Hofstede" approach has continued for more than 20 years after Hofstede's categorization and has provided a large number of studies making a link between country-level cultural constructs and individual-level effects. While problematic given the limitations of expressed values research, this work is both the most common form of cross-national research (for an extensive review, see Oyserman, Coon, and Kimmelmeier, 2002) and has provided some important cross-cultural insights. For example, participants living in countries with higher individualism scores are on average less likely to be acquiescent survey responders who simply agree with the opinions of the researcher as implied by question content (Johnson, Kulesa, Cho, & Shavitt, 2005; Smith, 2004).

Direct Assessment

The second common approach is to measure "individualism" and "collectivism" as individual-difference measures—assessing what Triandis (1995) has termed *allocentrism* and *idiocentrism* and what Markus and Kitayama (1991) have termed *independence* and *interdependence*—and to correlate this assessment with individual-level outcomes of interest. This allows the researcher to specify that difference in the dependent variable is associated with a specified set of internalized and explicitly expressed values. We have labeled this method the "Values Path" in Figure 6.1. Researchers who adopt this approach typically ask respondents to rate how much they agree with or how important they find a list of behaviors, attitudes, and value statements. Although direct assessment avoids some of the assumptions made by those who apply Hofstede, it too has many limitations. This approach assumes cross-national equivalence in how questions are understood and rating scales used. It ignores potential cross-cultural differences in the extent to which question context (such as the labels on scales) and research context (such as how the study, researcher, and other potential participants are presented) influence responses. Perhaps most importantly, it assumes that cultural values are a form of declarative knowledge that one can report on.

Just as the "applying Hofstede" approach has limitations yet provides some insights, here too, research based on an expressed value approach

has provided some impressive results and some meaningful simplifying structure while it is clear that what is meant by culture is more than the direct expression of values related to individualism and collectivism. Oyserman, Coon, and Kimmelmeier's (2002) comprehensive meta-analysis of individualism and collectivism data provides evidence that in aggregate, studies based on these approaches do generally show the expected cross-national differences, with two important exceptions. Japan and to some extent Korea generally do not show the expected low valuation of individualism combined with higher valuation of collectivism. Some have argued that this anomaly invalidates the values approach; others have argued that the college student participants from whom these data were obtained no longer accept traditional Japanese and Korean values and that these societies are changing. In either case, research procedures based on direct assessment of values are vulnerable to utilizing individual-based analyses to make generalizations at the societal level as well as to overgeneralizing from findings based on college campuses to a society over time. Studying individual differences in values is not necessarily isomorphic with studying culture. In this sense, the direct values assessment approach is only relevant when used to clarify effects implied from multi-level models and does not pertain to societal-level analyses.

Priming Cultural Frame

The third, increasingly common, approach is to prime "cultural frame," focusing on cueing either individualism or collectivism and assessing the impact of this priming on individual-level cognition, affect, and behavior. While focus to date has been on a set of primes meant to evoke independence-idiocentrism-individualism or to evoke interdependence-allocentrism-collectivism, there is no necessary reason that the priming approach could not be used more broadly to study other dimensions of culture (e.g., power, face, or honor-modesty). We have labeled this method the "Proximal Influence Path" in Figure 6.1 because this approach clarifies the proximal or immediate causal path of cultural influence by making use of findings in social cognition research which consistently shows that habitually or temporarily accessible knowledge influences behavior (e.g., Bargh, Bond, Lombardi, & Tota, 1986).

Using priming as a method has a number of strengths (for a review, see Oyserman & Lee, 2007). It allows for specification of posited "active ingredients" of culture and specification that observed differences are due to these active ingredients. Because of this tighter causality, priming research has the potential to provide more clarity about the active processes that influence outcomes and allows for reasoning about culture as an aspect of situated cognition. Using priming facilitates a situated cognition approach to culture that highlights culture as dynamic process (Oyserman & Lee, 2007). How we make sense of situations, the psychological meaning of

situations, is due to the sense we make of them in the moment. This sense flows from naïve theories that are cued in the moment, these naïve theories may be universal or culturally specific, cultures may also differ in the likelihood that one or another naïve theory will be cued or turned on in a particular situation.

Unlike applying Hofstede, an experimental priming approach makes it possible to study culture as a dynamic process. For example, when primed with “we” participants sit closer to confederates (Holland, Roeder, van Baaren, Brandt, & Hannover, 2004), and thus demonstrate an immediate behavioral response to a psychologically meaningful cultural situation that could not be studied without a priming manipulation. Moreover, unlike either applying Hofstede or direct value assessment an experimental approach avoids the problems associated with direct assessment such as the need to assume that respondents use the scales the same way cross-culturally and that answers provided at one time and place generalize to other times and places. By focusing on particular active ingredients of individualism and collectivism, the experimental priming approach also allows for tighter causal arguments. Thus, findings using this method can be used as part of a multimethod approach to triangulate prior correlational findings.

However, just as the other approaches have limitations, so does the priming approach. Most obviously, ecological validity is sacrificed because the primes must necessarily be narrower than the theorized underlying constructs being studied. Thus, much of the initial priming work simply had the goal of replicating prior cross-cultural findings to demonstrate that the otherwise cross-societal or cross-group effect can be turned on or cued within a society or group (see Oyserman & Lee, 2007, for a review). More generally, efficacy of this approach depends on operationalization of culture in ways relevant to presumed active ingredients of individualism and collectivism. This approach is most relevant when used to clarify effects implied from multilevel models. Relevance to societal-level analyses has not yet been explored.

As to the current state of the priming literature, a number of other limitations should also be noted. With some exceptions (e.g., Chinese participants: Lee, Aaker & Gardner, 2000; Asian and Jewish-Americans: Oyserman, Sakamoto, & Lauffer, 1998; Korean participants: Oyserman, Sorensen, Cha, & Schwarz, 2006; Nepal: Agrawal & Maheswaran, 2005), this approach has been used with European-American and Western-European participants. Much of the research focuses on effects of priming in a single country, typically the United States (e.g., Kühnen & Oyserman, 2002) or Germany (e.g., Haberstroh, Oyserman, Schwarz, Kühnen, & Ji, 2002). While clearly not as yet comprehensive, an emerging strength of the approach comes from consistent evidence that priming collectivism in European-American and Western-European samples increases subsequent collective content in self-concept, salience of collective values, and

sense of closeness to others. Using this parallel between cross-national and priming study results provides some support that priming-study findings in domains that have been less extensively studied in cross-national research, such as cognitive processing, are also likely to find parallels in naturally occurring cultural settings (for a review see Oyserman & Lee, 2007).

STRENGTHS OF APPROACHES AIMED AT PREDICTING INDIVIDUAL-LEVEL OUTCOMES

Taken together, the multilevel (individual-level consequences) approaches to studying culture all focus on the extent that culture can be said to pattern or define individual-level differences in self-concept, cognition, affect, and behavior. In this sense, work in this area focuses on the extent that meaningful between-cultural group individual differences can be found over and above meaningful within-cultural group individual differences. Social psychologists have long studied the effects of social contexts, whether immediate and proximal or more distal and abstract on self-concept, cognition, affect, and behavior. Cultural psychology reminds us that contexts and their meaning may be differently organized in different societies. The question asked is whether all societies provide the same psychologically meaningful situations with the same frequency, differ in the frequency that these situations are likely to be encountered, or differ in the psychological meaning of the situations themselves. These are multilevel questions that are answerable by triangulated use of multimethod approaches, though each of the currently used approaches has limitations when used alone.

In terms of cognition, for example, research in this area asks if something about cultural contexts systematically predicts average processing speed, online perception, focus of spontaneous recall, and the like. Thus, Kitayama and his colleagues show within-Japan heterogeneity in relative ease of processing context-independent vs. context-dependent information that is associated with coming from or moving to frontier areas (Kitayama et al., 2006). Similarly, Oyserman and her colleagues show that priming “I” relative to “we” speeds processing on a color Stroop task and that this effect occurs both in the United States as well as in Korea (Oyserman et al., 2006). Taken together, studies of these types begin to provide information about what constitutes psychologically meaningful contexts and about the likely patterning of responses to these contexts.

Multilevel models provide a structured process model within which to make inferences about the psychological meaning of societal-level and group-level differences. Straightforward reverse predictions cannot be

provided by these models in that knowing about individual differences does not provide prediction to group-level or society-level factors (Georgas, van de Vijver, & Berry, 2004).

PREDICTING SOCIETAL-LEVEL OUTCOME VARIABLES

While psychologists have focused on multilevel models in which societal and contextual factors are posited to predict individual-level outcomes, some researchers have focused on societal-level outcomes. Often this research involves a distal culture or values approach in that researchers seek to document meaningful correlations between an aggregated individual score (typically Hofstede's country-level aggregate scores, but also including, for example, Inglehart's World Value Survey score or Schwarz's value scores) or country-level scores assigned by Triandis (using an expert-rating technique) and nation-level variables such as GNP or language structure (e.g., is it grammatically correct to drop personal pronouns?). Some research in this vein does not attempt to directly assess individually aggregated values but rather focuses entirely on country-level variables, arguing that if certain cultural syndromes do in fact exist, then certain country-level (or region-level) patterns should exist. Vandello and Cohen (1999) have examined societal-level antecedents (population density) and consequences (e.g., divorce rates) of collectivism. Cohen (2006) also explores how cultural factors (i.e., culture of honor) moderate the relationship between societal antecedents (e.g., unequal treatment of women) and societal-level consequences (e.g., GNP). In this section, we outline a general process model that incorporates current cultural research focused on societal-level outcomes (Figure 6.2).

A Process Model

As can be seen in Figure 6.2, evolution and ecological environment (box 1) are assumed to influence both distal culture (language, religion, ideologies, histories, box 2) and the kind of values a society is likely to promulgate (box 5). As in the multilevel model, distal culture is assumed to influence social structural (box 3), social situational (box 4), and societal value (box 5) aspects of culture. Social structures (e.g., legal systems), social situations (e.g., classrooms and schooling, markets and shopping), and societal values (e.g., honor, dignity, social cohesion, stranger trust) are posited to influence societal-level consequences (box 6) such as birth rates, marriage and divorce rates, suicide rates, GNP, gender equality, and income equity.

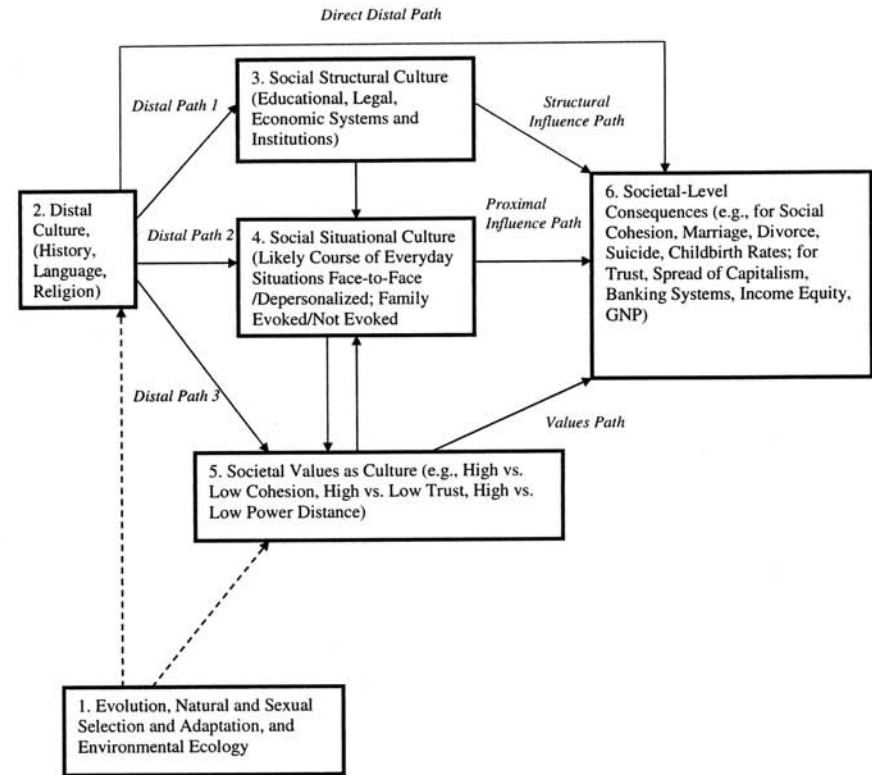


FIGURE 6.2 Culture as a societal-level process influencing societal outcomes.

Both multilevel and societal-level models assume influence of evolution and ecology on distal culture and posit an impact of distal culture on social structure, social situations and values. The process models diverge, however, in how and at what level values (box 5) and social situations (box 4) are operationalized. In the multilevel model, the values assessed are those internalized by individuals and the situations assessed are those which individuals encounter. In a societal-level model, the focus is on societal, not individual, processes and outcomes. Some researchers using a societal-level approach have obtained values via direct assessment (e.g., the World Values Survey approach); that is, aggregating across individuals to obtain national values scores. However, it is possible to infer societal-level values without resorting to direct assessment of individuals. For example, values can be obtained via coding societal artifacts such as ad campaigns, school books, children's stories, or movies.

With regard to social situations, level of analyses differences can also be discerned. Societal-level process models focus on the likely sociological meaning of everyday situations given their interest in society-level

prediction, whereas multilevel process models focus on the likely psychological meaning of everyday situations given their interest in individual-level prediction. For example, to the extent that collectivism increases likelihood of distrusting out-groups and feeling obligated to in-groups, everyday situations in collective societies are more likely to be particularized rather than bureaucratized and all things being equal, situations in which interactions are with an in-group member will be preferred over those involving strangers. Take the everyday situation of shopping, a societal-level analysis would ask whether the shopping is likely to occur at small, family-run stores or chain stores, face-to-face or online, and whether credit cards are likely or unlikely to be part of the transaction. One set of everyday situations sets up personalized face-to-face interactions that do not require trust in strangers whereas the other sets up depersonalized and anonymous interactions that do require stranger trust. Although with the passing of time, cultures may adapt to changing circumstances, they will do so in culturally appropriate ways. In China for example, the American tradition of catalogue sales has not caught on, and its modern equivalent, Internet sales, requires adjustment. Thus, credit card or cash is often provided only when the product is delivered in person and examined rather than trusting that a stranger will provide the product as depicted on the Internet (Bin & Chen, 2003; Martinson, 2002; Reichheld & Scheffer, 2003).

Evidence for Paths within the Process Model

Generally, research focused on societal-level outcomes has focused on either the association between distal cultural factors and social structures or social situations, or the association between social structures and societal-level outcomes. To clarify the implicit models underlying this work, in Figure 6.2 we have labeled the former “distal” path models and the latter “structural influence” path models. This work is necessarily less likely to involve experimental manipulation, providing less emphasis on empirical examination of process.

Distal Paths

Some societal-level research examines differences in features that make up distal culture (labeled “direct distal” in Figure 6.2) with the assumption that the effect of distal culture should be felt as societal-level difference in the present. This research focuses on characteristics of language as a carrier of cultural meaning with implications for societal outcomes. Some research focuses on regional difference within language. For example, Southern-Italian insults are more relational than Northern-Italian insults, which the authors associate with collectivism in the South and individualism in the North (Semin & Rubini, 1990). Other research focuses on

cross-language patterns. For example, Hofstede-scored low individualism is more common in societies using languages in which it is grammatically correct to drop pronouns (Kashima & Kashima, 1998, 2003). Preferred level of abstraction also differs systematically with country-level individualism (Semin, Gorts, Nandram, & Semin-Goossens, 2002)

Other societal-level research considers the effect of distal cultural features as mediated by structures, situations, and values. As can be seen in Figure 6.2, we have labeled these mediational pathways “distal path 1,” “distal path 2,” and “distal path 3,” respectively. The association between individualism-collectivism and social structural variables has attracted considerable attention. Particular attention has been paid to the possibility that individualism (assessed as a value score), is related to societal growth and economic outcomes. Thus, Hofstede reported a negative relationship between aggregated nation-level individualism scores and a country’s population, population density and demographic growth (Hofstede, 1980, 2001). Across studies affluence is associated with individualism. Thus, GNP is positively correlated with Hofstede’s individualism scores (e.g., Georgas et al., 2004; Hofstede, 1980; Van Hemert, van de Vijver, Poortinga, & Georgas, 2002), GNP is positively correlated with Schwartz’s autonomy versus conservation dimension (akin to individualism-collectivism; Schwartz, 1994); economic productivity is positively correlated with expert ratings of individualism (Levine, Norenzayan, & Philbrick, 2001); and economic prosperity is positively correlated with self-expression values (Inglehart, 1997).²

In addition to the focus on social structure, some societal-level research focuses on the association between distal culture factors and social situations. These studies typically assert that the countries or societies they are comparing differed in Hofstede’s analyses and seek to examine differences in social values as expressed in social situations, such as pace of life, content of advertisements and framing of news reports. For example, Levine and Norenzayan (1999) examined the correlation between individualism as rated by Harry Triandis and pace of life as operationalized by average pace in walking and average speed of postal delivery, finding that speed is positively associated with country-level individualism. With regard to advertisements, popular Korean magazine advertisements focus primarily on conformity whereas popular American magazine advertisements focus primarily on uniqueness themes (Kim & Markus, 1999); Korean advertisements are also more likely to emphasize family well-being, in-group goals, and interdependence than U.S. advertisements (Han & Shavitt, 1994). With regard to framing of news, sports articles and editorials published in Hong Kong newspapers use situational attribution to a greater extent and dispositional attributions to a lesser frequency than those published in American newspapers (Lee, Hallahan, & Herzog, 1996).

Structural Influence Paths

Assessing a cultural syndrome is problematic. As we indicated earlier, the aggregated values or attitudes approach is limited in that it assumes that culture is a series of statements that can be made about how one engages the world. Moreover, the relationship between social structure and societal consequence variables has been studied correlationally. The difficulty in empirically assessing cultural syndrome separate from its consequences can be seen by the fact that the variables we have represented as consequences of cultural syndromes have been used by Vandello and Cohen (1999) as indicators of cultural syndrome. Their collectivism index used an array of what we have termed societal-level consequences variables (percentage of people living alone, percentage of elderly people living alone, percentage of households with grandchildren in them, divorce to marriage ratio, percentage of people with no religious affiliation, average percentage voting libertarian over the past presidential elections, ratio of people carpooling to work to people driving alone, and percentage of self-employed workers) and found a positive correlation between these factors and social-structural variables—population density, percentage of individuals engaged in herding, ratio of laborers to farmers, production of cotton, tobacco, and rice, percentage of minorities in a state, percentage of slaves per state. They also found a negative correlation between these factors and suicide rates, percentage of adults classified as binge drinkers, per capita proportion of artists and authors, gender and racial equality, as well as negative correlations with affluence and proportion of farms that were independently operated. Taken together, these results strongly suggest a cultural syndrome is operating but the syndrome itself remains a latent, not well operationalized variable to the extent that average explicit value or attitude statements have to date been the only alternate operationalization method. Other methods—such as content coding from a culture's literature, story books, newspapers, or advertisements—might provide a better latent operationalization.

The Direction of Influence

Because societal-level variables can be subjected to correlational but not experimental studies, direction of effects is open to debate. A number of authors provide evidence that wealth should be considered an antecedent rather than a consequence of individualism. Thus, Hofstede (1991), relying on his analysis over time, suggests that it is wealth that leads to individualism. He indicates that prosperity makes it possible for people to have more freedom of choice, more individual resources and to behave more selfishly. Japan provides a good example: Economic prosperity is associated with erosion of collectivism and more emphasis in individualism; Kelly (1991) argues that current Japanese cohorts are higher in hedonism

and materialism, lower in commitment to societal good, and more likely to stress individual needs over community than earlier cohorts.

Similarly, Inglehart (1997; Inglehart & Baker, 2000) in his societal-level and over-time data has shown that self-expression values increase over time as economic prosperity increases. Moreover, Inglehart's data also show that large intergenerational differences exist in wealthy societies with younger birth cohorts emphasizing self-expression values more than the member of older cohorts. Inglehart and Oyserman (2004) argue that citizens in societies experiencing economic prosperity (rather than scarcity) are less likely to focus primarily on maintaining their material existence, which emancipates people from the cultural restrictions on personal choice necessary under conditions of scarcity. They further argue that economic development facilitates a shift toward the free choice aspects of individualism and away from the traditional survival aspects of collectivism, producing increasing emphasis on individual freedom-focused values and weakening the focus on traditional hierarchies. These arguments are further supported by Kagitcibasi and Ataca (2005) who documented changes in the value of children in Turkey when compared with three decades ago. The most notable change was the sharp increase in the psychological value of the child and the corresponding decrease in its utilitarian/economic value, including old-age security value. They argued that economic growth and higher education levels contributed to changes in the values people attach to their children. These perspectives suggest that societal wealth may be considered an ecological factor much like weather and social conditions rather than as a consequence of culture.

Wealth alone does not determine country-level individualism. Religion, philosophy, and historical experience interface with wealth. For example, although self-expression or individualism values increase as economic prosperity increases, rate of increase is dependent in part on religious and philosophical worldviews and historical experiences (Inglehart, 1997; Inglehart & Baker, 2000). Historically Protestant, Orthodox, Islamic, and Confucian societies cluster in cultural zones with distinctive value systems that persist even as economic development produces a shift toward individualism (Inglehart & Baker, 2000).

LEVELS ISSUES IN CULTURAL RESEARCH

We outlined both a multilevel cultural process model focused on individual-level consequences of culture and a societal-level cultural process model focused on societal-level consequences of culture. In each model, research clusters in small portions of the full model, suggesting that much research still needs to be completed if these assumed cultural processes

are to be tested. Moreover, the societal-level model in particular suffers from lack of clarity about causality. Thus, it seems equally reasonable to argue that small family size increases individualism as to argue that individualism reduces desire to have large families. It is likely that both are true at some level, leading to ambiguity with regard to hypothesis testing. Equally problematic is the lack of any articulation of how cultural studies at the individual and societal levels are to be integrated to move the field forward.

Clearly, theories can focus on individuals or on groups or societies and in order for research to produce plausible evidence of the impact of cultural syndromes, the level at which a theory is articulated should match the level at which constructs are operationalized and assessed and the level of statistical analysis (Klein, Dansereau, & Hall, 1994; Rousseau, 1985). This seemingly straightforward suggestion is complicated in research domains such as cultural psychology that explicitly cross levels. Problems arise when measurement and analyses at one level are used to make inferences at other levels.

For example, cultural researchers commonly collect and compare individual-level data from two countries that Hofstede (1980) argued differ in individualism. Using country as a factor, they report any significant difference found as being a consequence of individualism. Another common approach is to collect both values responses and responses to another individual-level variable and when the two are correlated, report any significant difference in the individual-level variable as being a consequence of individualism. These common techniques may suffer from level of analyses problems to the extent that individual-level results cannot be used to draw conclusions about groups. That the individuals differ does not necessarily mean that the societies differ in cultural syndrome (see chapter 1). A number of authors have made this point; Schwartz (1992, 1994) shows some differences in how values cluster and which are correlated to one another depending on whether individual responses are aggregated at national levels and then analyzed or analyzed at the individual level (see also, Bond et al., 2004; Diener & Diener, 1995; Hui, Triandis, & Yee, 1991; Oishi, Diener, Lucas, & Suh, 1999). One reason for differences in data patterns between individuals and societies can be due to nomological networks that lead to differences in meaning of a concept at different levels of aggregation.

ECOLOGICAL FALLACY AND CROSS-CULTURAL RESEARCH

Indeed, concomitant emphasis on the individual as source of information and society as unit of generalization in cultural psychology can lead

to problems described as the ecological fallacy—use of insight from one level of analyses to incorrectly draw inferences at other levels of analyses (Pedhazur, 1982; Robinson, 1950). For example, a researcher interested in whether collectivism as a cultural syndrome increases or decreases particularized treatment rather than bureaucratized treatment of individuals by public services may gather information about informal protection networks within public systems, levels of institutional corruption or institutionalized bribery of public officials. Finding patterned particularized treatment associated with differences in societies may allow for assertions about the impact of collectivism as a cultural syndrome on institutional processes. It does not allow for predictions about individual-level variables like personal honesty. As another example, a researcher interested in whether individualism and collectivism as cultural syndromes influence the intensity and closeness of interpersonal relationships may gather information about size and density of personal support networks. Finding patterned differences in density of personal relationships associated with differences in societies may allow for assertions about the impact of collectivism as a cultural frame on personal support processes. It does not allow for predictions about societal-level variables like the existence of government-sponsored safety nets such as hospitals or institutional care for the elderly or indigent.

Although processes at the individual and societal levels *may* be the same, there is no guarantee that this would necessarily be the case (e.g., because third variables may be involved). What appears to be a relationship between, for example, collectivism and public institutional corruption may not appear at the individual level, and the reverse, what appears to be a relationship between collectivism and natural support networks may not appear at the societal level (e.g., Chan, 1998; Leung, 1989). A similar phenomenon has been described as Simpson's paradox (e.g., Fiedler, 2000; Schaller, 1992; Waldmann & Hagmayer, 1995); that is, distinct relationships may appear at different levels of analysis, which, when decomposed, may not be present or may be present in opposing directions—the variables may sometimes have positive relationships, at other times negative relationships or no relationship at the separate levels (e.g., Fiedler, Walther, Freytag, & Nickel, 2003).

Take, for example, an association between willingness to care for relatives at home and Hofstede-assessed low individualism. While appearing robust, the association may be due to a third factor; for example, personal or societal wealth. Though on average country-level individualism and country-level wealth may be correlated, wealth may mediate the association of country-level individualism and willingness to care for relatives at home. For example, wealth (both personal and societal) may influence the relationship between individualism and care for relatives by influencing whether alternatives to home care are feasible or exist. Thus, those living in low individualism countries may be more willing to care for rela-

tives at home not because they feel closer to their relatives, more obligated to them, or define themselves more in terms of social obligation than in terms of personal satisfaction; rather, they may report more willingness to care for relatives at home because on average there are no viable alternatives. Similarly, those living in high individualism countries may be less willing to care for relatives at home not because they feel less close to their relatives but because the structure of the labor market is such that no one is home to supervise care.

Indeed, cultural researchers have weighed in on this issue. Bond (2002) argues that the common ecological fallacy committed in cross-cultural psychology involves assuming that nation-level individualism or collectivism can be used to explain observed individual-level differences. Similarly, Schwartz (1994) describes the ecological fallacy as a logical fallacy and problem of construct validity in that one assumes that because a group has certain characteristics the members of the group should also have the same characteristics. As cited in Schwartz (1994), an informative example is provided by Zito (1975) who points to the discrepancy between a hung jury as a group and as individual members. As a group, a hung jury is an indecisive jury, unable to decide whether the accused is guilty or not. However, inferring that the members of that jury are also indecisive would be wrong. On the contrary, the reason the jury is hung is because its members are very decisive, and having decided, they not willing to change their minds.

Extending this issue to cultural psychology, suggests, for example, that a society may be characterized as having many stay-at-home mothers and few working mothers so that as a group, its citizens seem to value traditional family roles and centralize motherhood. Individual mothers may have little choice but to stay home, to the extent that the society also lacks structured day care and has short school days and traditional workplaces. Thus, citizens themselves may not choose traditional family roles so much as live with them. This suggests that even in multilevel models that can make individual-level predictions, care must be taken not to infer individual choice when what is observed is societal or structural patterning of choice.

Generally though, if cultural research is to make predictions about individuals, it must involve the impact of societal-level factors on individual-level variables; these cross-level models are not problematic in principle (Klein et al, 1994; Schwartz, 1994). Indeed, cross-level models can better be handled by using new-generation analytic techniques such as hierarchical linear modeling which allow individuals to be nested in social contexts rather than ignoring the potential for individuals from the same contexts to be more similar in their responses than individuals from different contexts. Because societal-level factors influence societal outcomes and the individuals that make up those societies, this is not a problem. But problems arise when individual-level meaning is drawn from societal-level

data or when individual-level data and analyses are used to draw society-level conclusions. Rather than assume that individual-level correlations are associated with parallel society-level correlations, it may be more useful to broaden experimentally based enquiry into the active ingredients of culture. This entails examining social contexts and social situations in which these active ingredients may be embedded or cued, and study them separately.

CONCLUSION

We argued that generative model building and hypothesis testing in the domain of cultural psychology has benefited from narrowing focus to more specifically operationalizable constructs such as individualism and collectivism. This does not mean that future research should not begin to expand beyond this conceptualization. By operationalizing culture as a multilevel and societal-level process likely to influence individual-level and society-level phenomena, our goal was to map out what the likely processes of cultural influence are at each level and provide some feel for the kinds of research that has focused on the various posited paths in each of these models. We explored the possibility that research in cultural psychology may be vulnerable to a level of analysis problem, as formulated by the ecological fallacy or as Simpson's paradox.

The linkages between culture as society-level antecedents and culture as individual-level consequences have been tested primarily by either assuming that Hofstede's initial ratings are stable and generalizable over time and context or by obtaining individualism and collectivism value endorsement ratings and correlating them with a dependent variable of interest (all individual-level data). Both of these approaches are built on the assumption that individual-level value ratings, either aggregated, or used at the individual level, reflect an important aspect of culture which has implications for societal-level and individual-level outcomes. Alternative approaches have been sought to broaden research by increasing experimental control over the active ingredients of individualism or collectivism brought to mind in the moment, as well as to broaden research by utilizing constructs that do not depend on values ratings.

Of course the benefit of experimental studies that seek to prime active ingredients of culture and then document that these active ingredients have the hypothesized effects is the power of experimental models to provide support for causal hypotheses. The question raised by these studies is whether the effects shown at the individual level can plausibly provide evidence in support of the hypothesized societal effects of individualism and collectivism. At first pass, there clearly seems to be a level of analysis

concern for authors who would argue that the results demonstrate processes occurring at the societal level. Our reading of the current literature is that authors using a priming methodology have been careful to avoid making these kinds of claims, often limiting their discussion of priming effects to evoked content of conceptual knowledge and not attempting generalizations about consequences for cultures (see Oyserman & Lee, 2007 for a review). One way for future research to utilize these findings is to begin to sample everyday face-to-face situated social contexts systematically and to begin to study the extent that these situations prime or make salient constructs that parallel those made salient in priming research. To the extent that this can be documented, then priming studies will be better linked to societal-level antecedents.

In addition to priming studies, a number of ecological models focused more directly on context, specifically attempting to make connections between physical and geographical factors, cultural syndromes, and individual differences due to culture (Berry, 1994; Triandis, 1972; Whiting, 1963, 1976). These efforts and analyses of societal-level antecedents and consequences of culture (e.g., Inglehart, 1997; Vandello & Cohen, 1999) are important because they provide a broader framework for developing testable hypotheses both about stability and change in individualism and collectivism and other cultural constructs. However, just as it is not possible to generalize back from individual differences to make the case that social groups differ, showing group-level effects does not necessarily provide predictions for individuals within the groups.

Moreover, focusing only on the societal level has a number of often overlooked problems. Clearly, it dramatically limits statistical power. If analyses are conducted only at the country level, even large-scale cross-national studies sample relatively few countries—a sample of six countries becomes an effective *n* of six. Other noncountry level designs leave room to examine differences by region or within country. Indeed, future research using a regional approach might increase both power and specificity of prediction by including both regions within countries and regions across countries. Appropriate statistical analysis such as hierarchical linear modeling that allows for analyses of individuals nested within countries increases power but still requires relatively large numbers of countries (e.g., six or more) for analyses. Moreover, country-level comparisons are only sensible if they compare similarly representative samples.

Typically cross-national comparisons that describe individual-level effects involve convenience samples of college students (for a review see, Oyserman, Coon, & Kimmelmeier, 2002). Those focused on societal-level effects provide exceptions; Schwartz (1994) used school teachers and, in most countries, Inglehart (1997) used random samples of adults, and both Smith (2004) and Vandello and Cohen (1999) used representative samples (albeit as secondary analyses of samples collected for other purposes). Given the expense of carrying out large multinational studies, replica-

tion of results across samples or even incremental hypotheses-testing is extremely difficult. Therefore, societal-level analyses are likely to continue to focus on individual countries as case studies. Reading across case studies can provide working hypotheses for priming studies that can at least be replicated cross-nationally.

Sensitivity to the ecological fallacy reduces the risk of concluding that characteristics of individual members of a group can be predicted by average characteristics of the group—such as concluding that country-level policies and services for the elder can be used to predict individual-level respect for the elderly. Sensitivity to Simpson's paradox reduces risk of concluding that patterns that hold at one level of aggregation are likely to predict patterns at disaggregated levels. Thus, for example, it would be inappropriate to conclude that collectivists are generally more cooperative and interdependent than individualists based on samples of these behaviors with in-group or family members because collectivists may well not be more interdependent with non-in-group and non-family members. Indeed, there is evidence that they are not (e.g., Matsumoto, 1990; Rhee, Uleman, & Lee, 1996).

Simpson's paradox reminds us that it is not possible to predict higher level relationships (in this case between collectivism and cooperation in general) from one disaggregated component relationship (in this case between collectivism and cooperation in a family or in-group situation). Indeed, a number of researchers have called for sampling of situations in which cultural practices are engaged (e.g., D'Andrade, 2001; Farr, 1991; Geertz, 1973). By sampling situations, it will be possible to see if societies do or do not differ in the situations in which a practice is engaged. It will also be possible to then use the situation as a prime and assess the extent that individuals in different countries respond uniformly to situations once presented, whether or not they are naturally occurring within a society. An example of this is work by Kitayama, Markus, Matsumoto, and Norasakkukit (1997) who had students describe self-esteem enhancing and deflating situations and found both differences between Japan and the United States in the situations generated and similarities between Japan and the United States when Japanese were presented with American situations and vice versa.

While it is important to be aware of level of analysis issues, in some ways Simpson's paradox provides an important venue for considering the level of aggregation currently being assessed in cultural research. Rather than simply assuming that the sampled relationships found can be generalized to the general universe of possible relationships, it is important to investigate. Researchers can ask whether the nature of the data collection process led to different foci for different cultural groups (e.g., participants in collective societies responding to questions in terms of how they would behave with in-group members vs. participants in individualistic cultures responding to questions in terms of how they would behave with strang-

ers). At the societal level, culture-related variables cannot be subjected to experimentation. It is neither possible to manipulate a society's native language nor to randomly assign children to educational systems. Therefore, at the societal level, evidence must be mostly correlational and therefore open to alternate explanations or to influences by additional variables that have not yet been considered. One possible way forward is to use those natural experiments that occur—such as regime changes and economic shifts. Another possibility is to set up ecologically valid experiments; for example, Marian and Kaushanskaya's (2004) study of individual vs. collective content in memories of participants randomly assigned to recall in Russian or English. While important, neither of these solutions provides the kind of flexibility to study posited processes as do experimental manipulation, thus it seems likely that cultural psychology will continue to move between and across process models of culture that are multilevel and those that are societal-level only.

Notes

1. Of course thinking of the process of influence as unidirectional is a simplification. Just as cultures shape individual action and constitute individual psychologies, over time, individual action and psychology is likely to shape culture. In this sense, our focus is on a simplified process model since a full discussion of culture requires both a multilevel model and additional examination of the more nuanced and complex bidirectional ways in which individuals influence societies.
2. It seems reasonable to assume that the relationship between individualism and prosperity is likely to be bidirectional. On the one hand, high individualism may encourage economic activity and low individualism may encourage large families. On the other hand, it is also likely that as affluence rises, one is more able to stand separately from in-group members and as births per family increase so does the necessity of sharing both physical and social space.

REFERENCES

- Agrawal, N., & Maheswaran, D. (2005). The effects of self-construal and commitment on persuasion. *Journal of Consumer Research*, 31, 841–849.
- Atran, S., Medin, D. L., & Ross, N. (2005). The cultural mind: Environmental decision making and cultural modeling within and across populations. *Psychological Review*, 112, 744–776.
- Bargh, J. A., Bond, R. N., Lombardi, W. J., & Tota, M. E. (1986). The additive nature of chronic and temporary sources of construct accessibility. *Journal of Personality and Social Psychology*, 50, 869–878.

- Berry, J. W. (1976). *Human ecology and cognitive style: Comparative studies in cultural and psychological adaptation*. New York: Sage/Halsted/Wiley.
- Berry, J. W. (1994). Ecology of individualism and collectivism. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. C. Choi, & G. Yoon (Eds.), *Individualism and collectivism* (pp. 77–84). Newbury Park, CA: Sage.
- Bin, Q., & Chen, S. (2003). Cultural differences in E-commerce; A comparison between the U.S. and China. *Journal of Global Information Management*, 11, 48–55.
- Bond, M. H. (2002). Reclaiming the individual from Hofstede's ecological analysis—A 20-year odyssey: Comment on Oyserman et al. (2002). *Psychological Bulletin*, 128, 73–77.
- Bond, M. H., Leung, K., Au, A., Tong, K., Reimel de Carrasquel, S., Murakami, F., et al. (2004). Culture-level dimensions of social axioms and their correlates across 41 cultures. *Journal of Cross-Cultural Psychology*, 35, 548–570.
- Bond, M. H., & Tedeschi, J. T. (2001). Polishing the jade: A modest proposal for improving the study of social psychology across cultures. In D. Matsumoto (Ed.), *The handbook of culture and psychology* (pp. 309–324). New York: Oxford University Press.
- Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, 83, 234–246.
- Cohen, D. (2001). Cultural variation: Considerations and implications. *Psychological Bulletin*, 127, 451–471.
- Cohen, D. (March, 2006). Invited talk. *Culture and Cognition Symposium Series*. University of Michigan
- D'Andrade, R. (2001). A cognitivist's view of the units debate in cultural anthropology. *Cross-Cultural Research*, 35, 242–257.
- Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology*, 68, 653–663.
- Farr, R. M. (1991). Individualism as a collective representation. In A. Aebischer, J. P. Deconchy, & M. Lipiansky (Eds.), *Ideologies et representations sociales* (pp. 129–143). Switzerland: Delval.
- Fiedler, K. (2000). Beware of samples! A cognitive-ecological sampling approach to judgment biases. *Psychological Review*, 107(4), 659–676.
- Fiedler, K., Walther, E., Freytag, P., & Nickel, S. (2003). Inductive reasoning and judgment interference: Experiments on the Simpson paradox. *Personality and Social Psychology Bulletin*, 29, 14–18.
- Geertz, C. (1973). *The interpretation of culture: Selected essays*. New York: Basic Books.
- Georgas, J. (1988). An ecological and social cross-cultural model: The case of Greece. In J. W. Berry, S. H. Irvine, & E. B. Hunt (Eds.), *Indigenous cognition: Functioning in cultural context* (pp. 105–123). Dordrecht, the Netherlands: Martinus Nijhoff.
- Georgas, J. (1993). An ecological-social model for indigenous psychology: The example of Greece. In U. Kim & J. W. Berry (Eds.), *Indigenous psychologies: Theory, method & experience in cultural context* (pp. 56–78). Beverly Hills, CA: Sage.

- Georgas, J., van de Vijver, F. J. R., & Berry, J. W. (2004). The ecocultural framework, ecosocial indices, and psychological variables in cross-cultural research. *Journal of Cross-Cultural Psychology, 35*, 74–96.
- Gregg, G. S. (2005). *The Middle East: A cultural psychology*. Oxford: Oxford University Press.
- Haberstroh, S., Oyserman, D., Schwarz, N., Kühnen, U., & Ji, L. (2002). Is the interdependent self more sensitive to question context than the independent self? Self-construal and the observation of conversational norms. *Journal of Experimental Social Psychology, 38*, 323–329.
- Han, S., & Shavitt, S. (1994). Persuasion and culture: Advertising appeals in individualistic and collectivistic societies. *Journal of Experimental Social Psychology, 30*, 326–350.
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.
- Hofstede, G. (1991). *Cultures and organizations: Software of the mind*. London: McGraw-Hill.
- Hofstede, G. (2001). *Culture's consequences, comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks, CA: Sage.
- Holland, R. W., Roeder, U. R., van Baaren, R. B., Brandt, A. C., & Hannover, B. (2004). Don't stand so close to me—The effects of self-construal on interpersonal closeness. *Psychological Science, 15*, 237–242.
- Hui, C. H. (1988). Measurement of individualism-collectivism. *Journal of Research in Personality, 22*, 17–36.
- Hui, C. H., Triandis, H. C., & Yee, C. (1991). Cultural-differences in reward allocation—Is collectivism the explanation? *British Journal of Social Psychology, 30*, 145–157.
- Inglehart, R. (1997). *Modernization and post-modernization: Cultural, economic and political change in 43 societies*. Princeton, NJ: Princeton University Press.
- Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change, and the persistence of traditional values. *American Sociological Review, 65*, 19–51.
- Inglehart, R., & Oyserman, D. (2004). Individualism, autonomy, self-expression and human development. In H. Vinken, J. Soeters, & P. Ester (Eds.), *Comparing cultures, dimensions of culture in a comparative perspective* (pp. 74–96). Leiden, the Netherlands: Brill.
- Johnson, T., Kulesa, P., Cho, Y., & Shavitt, S. (2005). The relation between culture and response styles: Evidence from 19 countries. *Journal of Cross-Cultural Psychology, 36*, 264–277.
- Kagitcibasi, C. (1997). Individualism and collectivism. In J. Berry, M. Segall, & C. Kagitcibasi (Eds.), *Handbook of cross-cultural psychology* (2nd ed., Vol. 3, pp. 1–49). Needham Heights, MA: Allyn & Bacon.
- Kagitcibasi, C., & Ataca, B. (2005). Value of children and family change: A three-decade portrait from Turkey. *Applied Psychology: An International Review, 54*, 317–337.
- Kashima, Y. (2001). Culture and social cognition: Toward a social psychology of cultural dynamics. In D. Matsumoto (Ed.), *The handbook of culture and psychology* (pp. 325–360). New York: Oxford University Press.
- Kashima, E., & Kashima, Y. (1998). Culture and language: The case of cultural dimensions and personal pronoun use. *Journal of Cross-Cultural Psychology, 29*, 461–486.

- Kashima, Y., & Kashima, E. S. (2003). Individualism, GNP, climate, and pronoun drop, is individualism determined by affluence and climate, or does language use play a role? *Journal of Cross-Cultural Psychology, 34*, 125–134.
- Kelly, W. (1991). Directions in anthropology of contemporary Japan. *Annual Review of Anthropology, 20*, 395–431.
- Kim, H., & Markus, H. (1999). Deviance or uniqueness, harmony or conformity? A cultural analysis. *Journal of Personality and Social Psychology, 77*, 785–800.
- Kitayama, S., Ishii, K., Imada, T., Takemura, K., & Ramaswamy, J. (2006). Voluntary settlement and the spirit of independence. *Journal of Personality and Social Psychology, 91*, 369–384.
- Kitayama, S., Markus, H. R., Matsumoto, H., & Norasakkunit, V. (1997). Individual and collective processes in the construction of the self: Self-enhancement in the United States and self-depreciation in Japan. *Journal of Personality and Social Psychology, 72*, 1245–1267.
- Klein, K. J., Dansereau, F., & Hall, R. J. (1994). Levels issues in theory development, data collection, and analysis. *The Academy of Management Review, 19*, 195–229.
- Kühnen, U., & Oyserman, D. (2002) Thinking about the self influences thinking in general: Cognitive consequences of salient self-concept. *Journal of Experimental Social Psychology, 38*, 492–499.
- Lee, A., Aaker, J., & Gardner, W. (2000). The pleasures and pains of distinct self construals: The role of interdependence in regulatory focus. *Journal of Personality and Social Psychology, 78*, 1122–1134.
- Lee, F., Hallahan, M., & Herzog, T. (1996). Explaining real-life events: How culture and domain shape attributions. *Personality and Social Psychology Bulletin, 22*, 732–741.
- Leung, K. (1989). Cross-cultural differences: Individual-level vs. cultural level analysis. *International Journal of Psychology, 24*, 703–719.
- Leung, K., & Bond, M. (1989). On the empirical identification of dimensions for cross-cultural comparisons. *Journal of Cross-Cultural Psychology, 20*, 133–151.
- Levine, R., & Norenzayan, A. (1999). The pace of life in 31 countries. *Journal of Cross-Cultural Psychology, 30*, 178–205.
- Levine, R., Norenzayan, A., & Philbrick, K. (2001). Cultural differences in the helping of strangers. *Journal of Cross Cultural Psychology, 32*, 543–560.
- Marian, V., & Kaushanskaya, M. (2004). Self-construal and emotion in bicultural bilinguals. *Journal of Memory and Language, 51*, 190–201.
- Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253.
- Martinon, M. (2002). Electronic commerce in China: Emerging success stories. *Information and Management, 39*, 571–579.
- Matsumoto, D. (1990). Cultural similarities and differences in display rules. *Motivation and Emotion, 14*, 195–214.
- Oishi, S., Diener, E. F., Lucas, R. E., & Suh, E. M. (1999). Cross-cultural variations in predictors of life satisfaction: Perspectives from needs and values. *Personality and Social Psychology Bulletin, 25*, 980–990.
- Oyserman, D., Coon, H., & Kimmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin, 128*, 3–72.

- Oyserman, D., Kimmelmeier, M., & Coon, H. M. (2002). Cultural psychology, a new look: Reply to Bond (2002), Fiske (2002), Kitayama (2002), and Miller (2002). *Psychological Bulletin*, *128*, 110–117.
- Oyserman, D., & Lee, S. (2007). Priming "culture": Culture as situated cognition. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 255–279). New York: Guilford.
- Oyserman, D., Sakamoto, I., Lauffer, A. (1998). Cultural accommodation: Hybridity and the framing of social obligation. *Journal of Personality and Social Psychology*, *74*, 1606–1618.
- Oyserman, D., Sorensen, N., Cha, O. & Schwarz, N. (2006). *Thinking about "Me" or "Us": Self-construal priming and fluency in east and west*. Unpublished manuscript.
- Pedhazur, E. (1982). *Multiple regression in behavior research*. New York: Holt, Rinehart & Winston.
- Reichheld, F., & Scheffer, P. (2003). *E-loyalty: Your secret weapon on the web*. Boston: Harvard Business School Press.
- Rhee, E., Uleman, J. S., & Lee, H. K. (1996). Variations in collectivism and individualism by in-group and culture: Confirmatory factor analysis. *Journal of Personality and Social Psychology*, *71*, 1037–1054.
- Robinson, W. S. (1950). Ecological correlations and the behavior of individuals. *American Sociological Review*, *15*, 351–357.
- Rousseau, D. (1985). Issues of levels in organizational research: Multi-level and cross-level perspectives. *Research in Organizational Behavior*, *7*, 1–37.
- Schaller, M. (1992). In-group favoritism and statistical reasoning in social inference: Implications for formation and maintenance of group stereotypes. *Journal of Personality and Social Psychology*, *63*, 61–74.
- Schwartz, S. (1994). Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim, H. Triandis, C. Kagitcibasi, S. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method and application* (pp. 85–119). Thousand Oaks, CA: Sage Publications.
- Schwartz, S. (1994). The fallacy of the ecological fallacy: The potential misuse of a concept and the consequences. *American Journal of Public Health*, *84*, 819–824.
- Semin, G. R., Gorts, C., Nandam, S., & Semin-Goossens, A. (2002). Cultural perspectives on the linguistic representation of emotion and emotion events. *Cognition and Emotion*, *16*, 11–28.
- Semin G., & Rubini, M. (1990). Unfolding the category of person by verbal abuse. *European Journal of Social Psychology*, *20*, 463–474.
- Shweder, R., & Levine, R. (Eds.). (1984). *Culture theory; Essays on mind, self and emotion*. Cambridge: Cambridge University Press.
- Singelis, P. B. (2000). Some thoughts on the future of cross-cultural social psychology. *Journal of Cross-Cultural Psychology*, *31*, 76–91.
- Smith, P. B. (2004). Acquiescent response bias as an aspect of cultural communication style. *Journal of Cross-Cultural Psychology*, *35*, 50–61.
- Triandis, H. (1972). *The analysis of subjective culture*. New York: Wiley.
- Triandis, H. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.
- Triandis, H. (in press). Individualism and collectivism. In S. Kitayama & D. Cohen (Eds.), *Handbook of cross-cultural psychology*. New York: Guilford.

- Triandis, H. C., Leung, K., Villareal, M. J., & Clack, F. L. (1985). Allocentric vs idiocentric tendencies: Convergent and discriminant validation. *Journal of Research in Personality*, *19*, 395–415.
- Van Hemert, D. A., Van de Vijver, F. J. R., Poortinga, Y. H., & Georgas, J. (2002). Structural and functional equivalence of the Eysenck personality questionnaire within and between countries. *Personality and Individual Differences*, *33*, 1229–1249.
- Vandello, J. & Cohen, D. (1999). Patterns of individualism and collectivism across the U.S. *Journal of Personality and Social Psychology*, *77*, 279–292.
- Waldmann, M. R., & Hagmayer, Y. (1995). Causal paradox: When a cause simultaneously produces and prevents an effect. In J. Moore & F. Lehmann (Eds.), *Proceedings of the 17th Annual Conference of the Cognitive Science Society* (pp. 425–430). Mahwah, NJ: Lawrence Erlbaum.
- Whiting, B. (Ed.). (1963). *Six cultures: Studies of child rearing*. New York: Wiley.
- Whiting, B. (1976). The problem of the packaged variable. In K. Riegel & J. Meacham (Eds.), *The developing individual in a changing world* (Vol. 1, pp. 303–309). The Hague: Mouton.
- Zito, G. (1975). *Methodology and meanings: Variety of sociological inquiry*. New York: Praeger.