

## Culture and Basic Psychological Processes—Toward a System View of Culture: Comment on Oyserman et al. (2002)

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D. Oyserman, H. M. Coon, and M. Kimmelmeier (2002) provide a most comprehensive review of empirical studies that used attitudinal surveys to capture cultural variations in individualism and collectivism. In the present article, the author suggests that the cross-cultural validity of attitudinal surveys can no longer be taken for granted. Moreover, the meta-theory underlying this literature (called the *entity view* of culture) is called into question. The author presents an alternative meta-theory (called the *system view* of culture) and discusses its implications for future work in cultural and cross-cultural psychology.

In a comprehensive review of empirical evidence for cultural variations in individualism (IND) and collectivism (COL), Oyserman, Coon, and Kimmelmeier (2002) concluded that “(European) Americans differ in IND and COL from others [in the predicted directions] and . . . IND and COL does influence basic psychological processes” (p. 43). In making this summary statement, Oyserman et al. drew largely on research studies with attitudinal surveys. For example, agreement with an “individualistic” statement such as “I tend to do my own thing, and others in my family do the same” may indicate that the person is more individualistic. Likewise, agreement with a collectivistic statement such as “to understand who I am, you must see me with members of my group” may indicate that the person is more collectivistic. Overall, North Americans report themselves to be more individualistic (in particular, more independent and unique) or less collectivistic (in particular, less obliged to groups and less oriented toward group harmony) than many other peoples on this globe.

The Oyserman et al. (2002) review is timely. It comes at a time when an increasing number of researchers in all areas of psychology have recognized the critical role of culture in shaping psychological processes. It is comprehensive and thoughtful. Indeed, the review meticulously identifies many deviations from the general pattern. The authors thus qualified the overall conclusion with a cautionary note: “[T]he empirical basis for this conclusion is not as firm as might be desired” (p. 43). Altogether, Oyserman et al.’s effort is commendable, and their empirical conclusions seem well balanced.

However, in reading the review and reflecting on the entire research tradition on which it draws, I cannot help but come back to a set of lingering concerns. What do responses to attitudinal

questions measure? Can researchers take for granted that the responses measure the core of culture? What is the theoretical ground on which to posit, let alone to measure, the cultural core? Are there any good theoretical reasons to adopt attitudinal questions as the method of choice for measuring cultural values? One might worry that the field as a whole might be fitting its central research questions to a particular method because the method is relatively easy to use.

In assessing the significance of Oyserman et al.’s (2002) empirical conclusion, it will be necessary to carefully examine the theoretical framework used to organize the research literature they reviewed—for depending on the validity of this framework, Oyserman et al.’s empirical conclusion will have very different theoretical implications. It appears that the field of cultural and cross-cultural psychology has yet to come up with a much better and clearer understanding of the theoretical basis for the empirical research designed to measure cultural values such as IND (or independence) and COL (or interdependence). It is thus urgently necessary to determine the role and place of this research in a larger multidisciplinary effort to integrate culture and psychology (e.g., Bruner, 1990; Fiske, Kitayama, Markus, & Nisbett, 1998; Greenfield, 1997; Miller, 1999; Shweder, 1990; Tomasello, 1999). Doing so will better inform all researchers of future directions for research on culture and psychological processes.

The present article is intended to contribute to this dialogue by supplementing the Oyserman et al. (2002) empirical review with some additional theoretical considerations. In the first section of this article, I argue that it is no longer possible to confidently assume that cultural values can be measured with attitudinal surveys. Indeed, self-reflective reports examined in these surveys (e.g., “I tend to do my own thing,”) often fail to accurately reflect mental responses of cognition, emotion, and motivation that are produced spontaneously, or on-line, as people behave in actual social settings (called *on-line responses* hereafter). In the second section, I suggest that the meta-theory underlying this literature (called the *entity view* of culture) is suspect. I then present an alternative meta-theory (called the *system view* of culture). Finally, in the third section I discuss some implications of the system view for future work in cultural and cross-cultural psychology.

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## Why Measurement of Cultural Values Can Be So Problematic

### *Can Arithmetic Mean Ratings Given to Attitudinal Questions Serve as a Valid Index of Culture?*

So far, researchers both in and out of the field of measurement of cultural values appear to be quite naive in believing what attitudinal survey items indicate at their face value. For a long time, however, the field of psychology as a whole has known that measurement of psychological constructs is prone to many biases. Hence, validity of measurement is always at risk. In the attitude measurement literature, for example, this point has been both well recognized and seriously taken as a major challenge to the entire endeavor of attitude measurement. It has prompted researchers to examine many factors that compromise the validity of attitude measurement (see N. Schwartz, Groves, & Schuman, 1998, for a review). The same is true for measurement of personality characteristics (Cronbach, 1991). All of the problems identified in the attitude and personality measurement literature are relevant when an attempt is made to measure *cultural variations* in values with attitudinal questionnaires.

In this particular domain of research, however, the concern with validity can become even more serious because there is one additional difficulty that applies only to cross-cultural comparisons. The difficulty stems from the fact that many factors that differentially influence different cultures (e.g., ecology, language, history, customs, lay theories, and common sense) are much less variable for people in any single cultural group. Hence, from the perspective of respondents of an attitudinal questionnaire, the very features that make cultures different from each other are sometimes very hard (a) to take note of, (b) to categorize, and (c) to evaluate. For example, the habit of hesitation is very much invisible in Japanese cultural context because this particular behavioral feature is quite prevalent and routine. Likewise, a direct expression of preference is also invisible in North America because it is so often expected and required.

*Difficulty in attending to distinctive features of culture.* To be more specific, many researchers of culture have long assumed that culture is tacit and implicit. What culture is to humans is what water is to fish. Culture is not tacit, however, because it is suppressed from the realm of conscious awareness, nor is it tacit because cultural knowledge is entirely automatized. Rather, culture is tacit largely because it is embodied in what Durkheim (Lukes, 1982) called the *social facts*—human-made artifacts and associated on-line mental responses that make up the society in general and daily behavioral environments (Hallowell, 1955) in particular. These facts include daily routines, practices, interpersonal rituals and discourses, styles of conversation, and social institutions. The social facts—which define a sort of the Lewinian field (Lewin, 1951)—make each and every society and culture distinct and unique. At the same time, however, they are widely shared in any given society or culture, and hence, they are often brought to the back of conscious awareness of the people who routinely engage in them. As a consequence, individuals rarely think explicitly about them.

This means that on-line responses that are embedded in social facts are also unlikely to be self-reflectively cognized. Hence, many cultural effects that can be found with on-line measures may

not be found in attitudinal judgments. For example, Nisbett and Cohen (1996) have demonstrated a number of honor-related behavioral differences between Southerners and Northerners of the United States. Drawing on this work, D'Andrade (2000) created many attitudinal questions designed to tap these differences and administered the questions to both Southerners and Northerners. None of the questions successfully recovered the behavioral differences observed by Nisbett and Cohen.

The point made here is reminiscent of an earlier analysis by Nisbett and Wilson (1977), who suggested a dissociation between verbal report and mental processes. These researchers claimed that people often “say more than they can know” (p. 231). This euphemism, however, may be right only in part (and, perhaps, only for some people). Just as often, people may fail to say much because they do not notice distinct patterns of behaviors they engage in. In either case, retrospective verbal report may be suspect as evidence of what really goes on spontaneously, on-line, in the mind of people.

*Difficulty in categorizing distinctive features of culture.* Even when distinctive features of one's own culture are attended to, there is another hurdle against validity. The difficulty results from the fact that different sociocultural groups may assign different pragmatic meanings to abstract traits and values used in many value and attitude surveys (Peng, Nisbett, & Wang, 1997). For example, “often having one's own opinions” may qualify as a feature of independence in a culture in which people typically refrain from expressing any personal opinions on many social issues, but the same feature may fall short of anything that resembles independence in cultures in which people are typically quite opinionated. To the extent that specific behavioral referents of abstract concepts and values vary across cultures, meanings conveyed by attitudinal questions will be distorted accordingly.

*Difficulty in evaluating distinctive features of culture.* Finally, attitudinal questions often require social comparisons. This presents a further obstacle against the cross-cultural validity of such questions. Particularly, Heine, Lehman, Peng, and Greenholtz (1999) have argued, with initial empirical evidence, that when individuals make certain judgments on themselves, they are likely to draw implicit comparisons with others (Biernat & Billings, in press). These referent others, however, are different for people in different cultures. For example, even though someone is quite individualistic, the person may not think so if many others in the same group are also equally individualistic. Likewise, even if two people believe that they are both average in, say, IND, they are likely to be very different if they are from different cultures. To illustrate, suppose a first person is in an individualist culture and hence compares himself or herself with other, equally individualistic others. A second person may be in a collectivist culture and therefore compares himself or herself with other, equally less individualistic others. The first person is quite likely to be more individualistic in behavioral dispositions than the second, but this difference will fail to show up in attitudinal measures of IND and COL. All in all, the social comparison process—referred to by Heine, Lehman, Peng, and Greenholtz (1999) as the *reference group effect*—should attenuate any real cross-cultural differences.

### *Remedies*

Are there any remedies of the questionnaire methodology as applied to cross-cultural comparisons? Recent studies have proposed a couple of possibilities. Specifically, one difficulty of attitudinal scales stems from the fact that they are often quite abstract and framed very broadly. These scales are therefore quite detached from on-line responses in actual social settings. Accordingly, the cross-cultural validity of attitudinal questions may be improved if specific behavioral contexts are reinstated in the measurement of attitudes (Peng et al., 1997). Another difficulty of attitudinal scales comes from social comparisons and the resulting reference group effect. Recognizing this problem, Heine et al. (2001, Study 4) suggested that it is desirable to use a forced-choice format (i.e., choosing between two options that vary in the attitude at issue, say, between an individualist choice and a collectivist choice) rather than a more traditional Likert-type format. In forced choice, there is no need to evoke any reference group for judgment.

Peng et al. (1997) reported initial evidence for the proposed remedies. Focusing on two cultures of China and North America, these researchers examined (a) forced-choice responses to concrete scenarios and (b) traditional rating and ranking responses to abstract value questions. Moreover, the researchers also asked many experts of the two cultural regions (e.g., anthropologists and East Asian studies experts) to characterize the respective cultural groups by using the same survey instruments. Peng et al. found that the forced-choice responses to the scenarios were unrelated to the rating and ranking responses to the abstract value questions. Furthermore, only the forced-choice responses to the scenarios were valid, inasmuch as these responses did correspond to the expert judgments but the rating and ranking responses to the abstract value questions did not (see, e.g., Heine et al., 2001, Study 4; Miller & Bersoff, 1992; Triandis, Chen, & Chan, 1998, for the scenario method at work in cross-cultural comparisons).

### *Between-Group Variation Versus Within-Group Variation*

Although these recent innovations in the cross-cultural questionnaire method are promising, the point still remains that responses to attitudinal scales (especially the ones in the traditional, most commonly used format) are often cross-culturally invalid. They usually fail to capture systematic cross-cultural variations. It is important to realize that this is the case even when the scales at issue are perfectly reliable and valid in assessing individual differences within each culture. This happens because the within-cultural variation usually draws on individual difference, which is a source of variance that is entirely separate from the sources of variance relevant for between-cultural variation (e.g., various social facts constituted by many factors including ecology, language, history, customs, lay theories, and common sense).

The separation between the within-group variation and the between-group variation brings up a methodological point that is often ignored in cross-cultural work. The common practice of the field today is to justify the use of any given scale in a cross-cultural study as long as the scale is demonstrably reliable and valid in each of the cultures that are compared. This practice may be necessary and perhaps sufficient to justify the use of the scale in a single-culture study. However, it is not sufficient in cross-cultural com-

parisons. Indeed, the within-group information on reliability and validity may have nothing to do with the cross-cultural validity.

### *Implications*

Over the last three decades, a number of pioneering studies in cross-cultural psychology, notably the ones by Hofstede (1980), S. H. Schwartz and Bilsky (1987), and Triandis (1995), made extremely significant contributions to the study of cultural values. These studies used the best method available (i.e., attitude and value surveys) at the time they were conducted. It was reasonable, and perhaps quite desirable in many ways back then, to begin concerted empirical work with the most realistic assumption that attitude and value surveys were cross-culturally valid.

This may no longer be the case, however. In view of the subsequent advancement of theories of cross-cultural methods and some initial empirical evidence for them, the cross-cultural validity of attitudinal scales of values would appear quite questionable. No strong inferences seem justified from cross-cultural differences and similarities that are found with attitudinal scales. I argue that this is especially the case when the findings are not corroborated by more valid data on on-line responses.

The present discussion suggests that a worry expressed by Oyserman et al. (2002) was misguided. They worried that the general pattern observed in their review was weak at best. Furthermore, their worry was augmented by many exceptions they identified for the general pattern. Hence, Oyserman et al. cast a doubt on a cultural psychological approach that emphasizes the constitutive role of culture in psychological processes. Yet, from the focus of the present discussion on the validity problems of cross-cultural attitudinal surveys, it would have been quite surprising if the cross-cultural differences had been massive and entirely systematic.

More important, I am concerned that if the field should continue to ignore the dubious cross-cultural validity of attitude and value surveys of IND and COL, its progress could be seriously impeded. Specifically, in cross-cultural psychology today, the practice of using IND and COL scales is often highly recommended as a test of the assumption that some of the cultures being compared are more or less individualistic or collectivistic than some others. Indeed, Oyserman et al. (2002) appear to have taken it for granted that this practice is a *sine qua non* of scientific rigor in cross-cultural research—a belief that is premature and unfounded but that appears widely shared in some quarter of the field. Hence, it is plausible that the apparent failure to support the assumption (which is likely to result because of the validity problems of the scales) would raise an unnecessary doubt on other, more meaningful and valid findings obtained in the study. It may then prove to be very difficult to publish the findings. For example, some reviewers with the same unfounded belief might point out a “fatal flaw” in the study, and with such reviews at hand, journal editors may feel reluctant to accept the study for publication.

For further advancement of the field of cultural and cross-cultural psychology, unfortunate events like the one illustrated above must be avoided by all means. It is instructive to note that nearly all studies that have been influential in the forming of the field of cultural psychology in the past decade never used the scales of IND and COL (see, e.g., Greenfield, 1997, and Miller, 1999, for informative discussions on the comparison between

cross-cultural psychology and cultural psychology). These studies include (but obviously are not limited to) Cousins (1987) on self-perception, Morris and Peng (1994) on causal attribution, and Heine et al. (2001) on intrinsic motivation. They exclusively focused on on-line responses. This was fortunate not only for the researchers themselves (who managed to publish the studies) but also for the field as a whole (which managed to accumulate its asset in record). Without these studies, the field of cultural and cross-cultural psychology would have looked very different today. Indeed, without the findings on on-line responses obtained in these studies, the field would have been intellectually sterile.

### Culture: Static Entity or Dynamic System?

The empirical considerations above might seem sufficient to raise serious reservations in regard to the findings from cross-cultural attitudinal surveys. To me, however, even more questionable is the theory behind this methodology. To their credit, Oyserman et al. (2002) were quite clear in what they assumed on this account. They stated that attitudinal questions could be used to capture the core of culture. With this assumption, the authors made a recommendation that the field should “narrowly [define] IND and COL in terms of their core elements” (p. 42). These core elements are the set of values such as self-assertion, uniqueness, duty, and group harmony. These values are internalized and cognitively represented (otherwise, they would not be measured with questionnaires). Furthermore, they are “assumed to shape behaviors” (p. 42).

This view, called *entity view*, describes culture as a static entity. Oyserman et al. (2002) assumed that this entity is composed of a set of values such as IND and COL. Moreover, they insisted that this entity is a causal antecedent of all behaviors relevant to this cultural core. Presumably, these behaviors are not cultural by themselves. They are external to culture—that is, they are merely influenced by it. It is in the context of this entity view that attitudinal measures of values are regarded as the central focus of the study of culture. It might seem almost inevitable that examinations of on-line responses including cognitive, emotional, and motivational behaviors are relegated to the periphery of cross-cultural research.

The problem with the entity view is that any preexisting groups, such as those defined by culture, gender, social class, race and ethnicity, and language, cannot qualify, by their very nature, as independent entities that can cause behaviors in people who belong to the groups. For example, sometimes during the adolescent period, girls begin to do worse in math than boys in many countries (Eccles & Jacobs, 1986). Yet, the performance difference between girls and boys is not caused by gender. Gender is not an entity that can exert any causal force. The performance difference can best be analyzed in terms of sociocultural practices and meanings associated with gender socialization. For example, in some cultures math is strongly gender typed. There may exist a general stereotype of math as a male rather than female domain. This social stereotype may well be associated with a variety of subtle and nonsubtle behaviors of both teachers and parents that discourage girls from doing any better than boys do in math. It is these specific practices and meanings of culture that cause the gender difference (Eccles & Jacobs, 1986).

Likewise, when Japanese and Americans are different in a certain psychological characteristic, say, self-esteem, the difference is not caused by culture. The notion of culture as a static entity that exists separate from behaviors and that exerts a causal influence on the latter is misleading and, to some, even insensible. The self-esteem difference between the two cultural groups would best be understood in terms of public practices and meanings that implicate the self in the respective groups. For example, in the United States, individuals are often encouraged to be positive and optimistic because self-esteem is considered as the *prima facie* evidence of health and well-being (Taylor & Brown, 1988). In contrast, in Japan the practice of *hansei*, the practice of routinely reflecting on one’s own shortcomings and problems (Lewis, 1995), is highly encouraged because recognition of such shortcomings and problems is seen as the first step toward self-improvement. These cultural practices and meanings of the self cause the Japan–United States difference in self-esteem (Kitayama & Markus, 1999).

This line of reasoning lends itself to an alternative view of culture—the one that insists that culture is a dynamic system that is composed of many loosely organized, often causally connected elements—meanings, practices, and associated mental processes and responses (D’Andrade, 2001; Giddens, 1984). This view may be called the *system view*. It is important to realize that culture is not just “in the head.” Rather, culture is “out there” in the form of external realities and collective patterns of behavior (Farr, 1991). Long emphasized by leading theorists of culture such as Geertz (1973), Kroeber and Kluckholm (1963), and D’Andrade (2001), cultural meanings are typically externalized in a pattern of historically accumulated public artifacts and associated mental functions and behaviors (Adams, Garcia, & Markus, 2001). These artifacts and collective behavioral patterns include verbal and nonverbal symbols (e.g., language and media), daily practices and routines (e.g., conversational scripts), tools (e.g., abacus and Internet), and social institutions and structures (e.g., merit pay vs. seniority systems). Because a cultural meaning system is expressed in, and therefore carried and transmitted by, the collective patterns of behaviors and on-line mental processes and responses, it is often tacit for any given individual.

Each person’s psychological processes and structures are organized through the active effort to coordinate his or her behaviors with the pertinent cultural systems of practices and public meanings. Hence, cultural meaning systems can be expected to have many and profound formative consequences on psychological processes and structures. It may be worth repeating the argument a colleague and I have made, that

[the] mutually constitutive relation is formed between culture and the person through development. Everyone is born into a culture consisting of a set of practices and meanings, which have been laid out by generations of people who have created, carried, maintained, and altered them. To engage in culturally patterned relationships and practices and to become mature, well-functioning adults in the society, new members of the culture must come to coordinate their responses to their particular social milieu. That is, people must come to think, feel, and act with reference to local practices, relationships, institutions and artifacts; to do so they must use the local cultural models, which consequently become an integral part of their psychological systems. Each person actively seeks to behave adaptively in the attendant cultural context, and in the process different persons

develop their own unique set of response tendencies, cognitive orientations, emotional preparedness, and structures of goals and values. (Kitayama & Markus, 1999, pp. 250–251)

According to the system view, personal values are not cultural values writ small. Nor are cultural values personal convictions writ large. Individualistic cultural values such as liberty, happiness, and autonomy are not significant in an individualist culture such as the United States because they are endorsed by all members of the culture. Instead, these values are significant because they have historically shaped the contemporary cultural system—the system of social institutions, conversational scripts and routines, daily practices, and lay theories (see Kitayama & Markus, 1999, for a further discussion).

The system view of culture explicitly acknowledges that all psychological processes and mechanisms are potentially available for all peoples and cultures. After all, the human being is an animal that has accomplished biological adaptation through culture. Hence, humans are likely to share with their close evolutionary kin, such as chimpanzees, elementary cognitive, emotional, and motivational capacities (Tomasello, 1999). By the same token, however, many aspects of psychological systems develop rather flexibly in such a way that they are attuned to the surrounding sociocultural environment. Hence, the elementary processes of cognition, emotion, and motivation are likely to be configured quite differently, sometimes dramatically so, across different sociocultural groups and historical periods.

#### Future Directions for the Study of Culture in Psychology

I believe that a number of fascinating questions can be raised and pursued and, therefore, that a lot of creative empirical work is waiting to be done in cultural and cross-cultural psychology. Yet for this to happen, the currently dominant entity view will have to be replaced with a system view. Indeed, the system view suggests a couple of guidelines for the future work.

#### *Analysis of On-Line Responses*

The system view recognizes on-line responses of cognition, emotion, and motivation as constitutive elements of culture. It therefore suggests that one important direction of the study of culture is to develop more and better ways to empirically capture these on-line responses themselves. The on-line responses can be captured by a variety of means. Self-report of on-line cognitive, emotional, and evaluative responses is extremely useful. But many other less obtrusive measures should also be taken. For example, it is important to take advantage of a variety of behavioral measures such as persistence time (Heine et al., 2001; Iyengar & Lepper, 1999) and choice (Kim & Markus, 1999) as well as performance measures such as response time (Kitayama & Ishii, in press) and memory (Masuda & Nisbett, 2001). Furthermore, these measures must be supplemented with a further effort to measure naturally occurring behaviors and experiences on-line, as has been done with an experience sampling method (e.g., Mesquita & Karasawa, in press).

It is primarily through this effort to capture on-line responses that many cross-cultural differences have been uncovered in the recent years (Fiske et al., 1998). The studies reviewed by Oyserman et al. (2002), namely, those that drew on attitudinal survey

questions, have added surprisingly little. The reason is that on-line measures are far more valid indicators of cultural differences than answers to attitudinal questions. Hence, the data from attitudinal items should be trusted only when they fit well with other data from on-line measures, not vice versa.

It is reassuring that the empirical front of the research agenda of capturing on-line responses has rapidly been expanding. Now we have considerable evidence for divergent psychocultural dynamics with respect to cognition (Nisbett, Peng, Choi, & Norenzayan, 2001), emotion (Kitayama, Markus, & Kurokawa, 2000; Mesquita, 2001), and motivation (Heine, Lehman, Markus, & Kitayama, 1999). Furthermore, this empirical effort is not limited to East–West comparisons. One excellent example of research that is informed by the system view of culture is a multimethod investigation of the psychocultural dynamics of the American South—the culture of honor—by Nisbett and Cohen (1996).

#### *Analysis of Culture-Dependent Functional Relations Among Variables*

Because culture is a system of many elements—both psychological and societal—it is to be anticipated that cultures should be different not only in terms of central tendencies in any given variables but also in terms of functional relations among them. Thus, the second important direction of the study suggested by the system view of culture is to develop culture-dependent models that functionally link a set of variables in each of many domains, such as well-being, aggression, helping, person perception, motivation, and the like. Ideally, these culture-dependent models may be conceptualized as specific cases of a more general model of the domain at issue.

Let me illustrate the point with a recent study by myself and colleagues. Uchida, Kitayama, Mesquita, and Reyes (2001) investigated how the perception of social support from close others might enhance happiness and well-being in the United States and two Asian countries (Japan and the Philippines). We hypothesized that there are two ways in which social support gives rise to happiness. First, it may affirm the intrinsic worth and esteem of the self and an associated sense of the self as independent and autonomous and, as a consequence, may give rise to happiness. If so, the effect of social support should be mediated by self-esteem. Social support should increase the experience of happiness only if it enhances self-esteem. Second, it is also possible that social support affirms the social relationship of which the self is part. Furthermore, this relational affirmation may be intrinsically pleasant and, as a consequence, may increase the experience of happiness even if it does not bring about any change in self-esteem. We measured self-esteem, social support, and happiness in the three cultures. The scales used to measure them were all reasonably reliable within each of the three cultures. On the basis of prior evidence, we also assumed that these were valid measures within each culture.

A structural equation analysis revealed that in the United States, the path mediated by self-esteem (social support → self-esteem → happiness) was very strong, but no evidence was found for the path unmediated by self-esteem (i.e., relational path, social support → happiness). In contrast, in Japan and the Philippines, the two paths were equally strong. The cultural difference identified here concerns cultural systems in which two or more variables are func-

tionally interconnected. We interpreted the findings to be consistent with the hypothesis that the American cultural system involving social support and happiness is predicated on an independent (i.e., individualist) model of self, whereas the comparable Asian cultural system is predicated on an interdependent (i.e., collectivist) model of self (Markus & Kitayama, 1991).

Notice that the notions of independence and interdependence (or IND and COL), as formulated here, refer to properties of the dynamic systems in which the pertinent variables are functionally interconnected. Uchida et al. (2001) hypothesized that Americans are independent and Asians are interdependent in terms of the psychocultural functions rather than in terms of what they personally endorse or they say about themselves. Thus, there is no reason to expect any corresponding difference in average ratings to IND and COL scales. Indeed, when Uchida et al. examined this issue with the Singelis (1994) measure of independent construal of self (IND in the Oyserman et al., 2002, classification) and interdependent construal of self (COL in the Oyserman et al., 2002 classification), Filipinos were much more independent than both Americans and Japanese, with no significant difference between the latter two groups. A virtually identical ordering was found for interdependence. Given the drawbacks and validity problems of mean-level cross-cultural comparisons (as noted above), the finding should not come as any surprise. The best Uchida et al. could do was to refrain from any strong inferences from such findings.

### *Analysis of Cultural Affordances*

The system view implies that psychological tendencies are attuned with the surrounding cultural contexts. A third important guideline for future research suggested by the system view of culture is to develop new ways to analyze this dynamic interplay between psychological tendency and cultural context. In initiating this research effort, it is important to realize that cultural context is not psychologically inert. Subtly but powerfully, cultural context can shape human behavior and experience. The potential of cultural contexts to foster certain on-line responses and experiences has been referred to as *cultural affordances* (Kitayama & Markus, 1999).

The notion of cultural affordances implies that different psychological tendencies are constantly fostered and primed by myriad elements of the attendant cultural context. Several recent attempts to extend a priming method (e.g., Bargh & Ferguson, 2000) to cross-cultural comparisons are an important initial step toward an empirical analysis of cultural affordances. It is questionable, however, whether primes used in this research can fully capture cultural affordances. In one study, the primes included pictures that are associated with different cultures, such as a Chinese Dragon (to prime a Chinese culture) and the Statue of Liberty (to prime an American culture; Hong, Morris, Chiu, & Benet-Martinez, 2000). It has been demonstrated among Hong Kong Chinese that situational attributions (a typically Asian propensity) are activated by the Chinese primes, but dispositional attributions (a typically American propensity) are activated by the American primes. Clearly, these cognitive responses are contingent on impinging stimuli (i.e., primes).

Although this and other related studies are important, the system view implies that culture is much more multidimensional and multifaceted than can be fully captured by a Chinese Dragon, the

Statue of Liberty, and other similar pictures. Furthermore, many elements of culture are likely to be both diffusely distributed and loosely organized. Hence, there is no need for cultural meaning systems to be “packed into” each individual’s cognitive memory. A view that cultural meaning systems can be reduced to personal knowledge structures is unnecessarily narrow as a view of culture. Indeed, one might worry that this view is to become yet another version of psychologizing of processes that are fundamentally social and collective. Different methods may be required to fully capture the nature of affordances that are ubiquitous in cultural context.

For this purpose, my colleagues and I have devised a method called *situation sampling* (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Morling, Kitayama, & Miyamoto, in press). This method involves sampling representative sets of certain social situations from different cultures. For example, Kitayama et al. (1997) examined Japanese and Americans and collected a large number of descriptions of social situations in which one’s own self-esteem increased (success) or decreased (failure). Subsequently, 100 of these situational descriptions were randomly sampled from each of the four conditions defined by the two independent variables, namely, the country of the subjects who produced the situational descriptions (Japan and the United States) and the condition in which the situational descriptions had been produced (success and failure). These situations were then presented to a new group of both Japanese and American subjects, who were asked to imagine that they were in each situation and to indicate whether and to what extent their own self-esteem would increase or decrease in the situation.

Likewise, Morling et al. (in press) examined both situations involving what Weisz, Rothbaum, and Blackburn (1984) called *primary control* (i.e., a set of behaviors designed to influence the surrounding world) and those involving what Weisz et al. called *secondary control* (i.e., a set of behaviors designed to adjust oneself to the surrounding world). Weisz et al. (1984) suggested that primary control is predominant and culturally sanctioned in the United States but that secondary control is predominant and culturally sanctioned in Japan. Morling et al. asked a group of Japanese and American subjects to generate many situations in which they either influenced or adjusted themselves to surrounding events, objects, or people. A random sample of 320 of the situations were then presented to a new group of subjects, who were asked to indicate the level of efficacy or of connectedness to other people they would feel in each of the situations.

Using this method, Kitayama et al. (1997) demonstrated that Americans are highly self-enhancing (i.e., reporting that their self-esteem would greatly increase in positively valenced situations), especially when they are engaging in American-made self-relevant situations. Furthermore, this prototypically American tendency is quite pronounced when the Americans are engaging in situations that involve influencing acts, but it entirely vanishes when they are engaging in situations that involve adjusting acts (Morling et al., in press). In contrast, Japanese are quite self-critical (i.e., reporting that their self-esteem would greatly decrease in negatively valenced situations), especially when they are engaging in Japanese-made self-relevant situations (Kitayama et al., 1997). Moreover, Japanese do experience a considerable degree of connectedness with others. Importantly, however, this seemingly prototypical Japanese tendency occurs only when the individuals

are engaging in situations that involve adjusting acts. It does not happen in situations involving influencing acts (Morling et al., in press).

As in the Uchida et al. (2001) study, this work has begun to suggest that cultures are often different not so much in terms of average levels of certain variables such as self-efficacy or connectedness, but rather in terms of the contingency by which these responses are associated with other features of culture, such as type of social situation, and other social facts, including policy, education, parenting practices, language use, and conversational conventions and scripts. Future research should focus on linking these aspects of sociocultural context to the psychological tendencies they foster and maintain. Culture may occasionally be reflected in attitudinal value statements, but it is far more likely to be reflected in social facts and the collective realities they support.

### Final Comment

Whether cultures are different in terms of core values (as assumed by Oyserman et al., 2002) or they are different in terms of system properties (as proposed in the present article), these psychological-level discussions cannot fully resolve the question of where cultural differences have come from. Thus, it is not entirely clear, for example, why individualist (or collectivist) cultures have as their core values individualist (or collectivist) values or, for that matter, why individualist (or collectivist) cultures have an individualistic (or collectivistic) cultural system.

To address this issue, researchers will have to supplement the psychological study of culture with analyses on social change and cultural evolution (Durham, 1991). In particular, better, empirically based theories of the history of different cultural groups are necessary. Perhaps more important, theoretical models of nonbiological evolutionary changes that occur over the course of historical change have to be further explored. Comparative institutional analysis pioneered in the field of economics in the recent years is an excellent example of this type of approach (Aoki, 2001).

### Conclusion

Oyserman and colleagues (2002) made a significant contribution to the field of cultural and cross-cultural psychology by providing the most thorough review of what we now know about cultural values of IND and COL. Their review prompted me to evaluate the current state of art in the measurement of cultural values such as IND and COL. In doing so, I identified some serious problems and pitfalls. Thus, I pointed out that implications of the findings summarized by Oyserman et al. are not straightforward. Among others, culture is much more than what people indicate in response to attitudinal survey questions. In fact, culture is composed of public meanings and practices. These meanings and practices may often escape one's attention, staying out of an individual's conscious awareness. For this and other related reasons, they usually fail to be captured by attitudinal measures of cultural values. However, they do constantly foster and afford on-line, divergent psychological tendencies and processes in the person. This is the theoretical rationale for anticipating considerable cross-cultural variations in on-line psychological responses and the psychological systems that produce and regulate them.

With the valuable service done by Oyserman and colleagues (2002) at hand, the field of cross-cultural and cultural psychology may move forward to other issues and agendas. In assessing the prospect of its future, I am reservedly optimistic: The future will be very bright if the researchers are adept at recognizing the problems of the entity view of culture, adopting a system view as a viable alternative, and then capitalizing on its rich and wide-ranging implications.

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