Towards a Psychological Science for a Cultural Species

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Abstract

Humans are a cultural species and the study of human psychology benefits from attention to cultural influences. Cultural psychology’s contributions to psychological science can largely be divided into the two different stages of scientific inquiry. Stage 1 research seeks cultural differences and establishes the boundaries of psychological phenomena. Stage 2 research seeks underlying mechanisms of those cultural differences. The literatures regarding these two distinct stages are reviewed, and various methods for conducting Stage 2 research are discussed. The implications of culture-blind and multicultural psychologies for society and intergroup relations are also discussed.
Towards a Psychological Science for a Cultural Species

*Before we inquire into origins and functional relations, it is necessary to know the thing we are trying to explain.* (Asch, 1952/1987, p. 65).

Humans are a cultural species. Cultural learning, or the ability to acquire behaviors from other individuals, is evident in a variety of different species (Lefebvre, & Giraldeau, 1994; Rendell & Whitehead, 2001; Whiten et al., 1999), however, humans are unique in the extent to which cultural learning accumulates rapidly over generations, radically alters the ecology in which humans live, and pervades their full repertoire of thoughts and behaviors (Richerson & Boyd, 2005; Tomasello, 1999). Therefore a rich understanding of how humans’ minds operate would be facilitated by a psychological science that is able to study how specific cultural experiences shape and express universal biological potentials.

Few would dispute that culture is relevant to psychology. Yet for much of the history of their field, most psychologists have sought to discover and explain human thought and behavior in terms of universal principles that are applicable to all people (at least all non-brain damaged adults without clinical disorders) regardless of the cultural and historical contexts in which minds develop and operate. Granted, assumptions of universality are sometimes empirically examined in developmental research and in gender comparisons that attempt to disentangle effects of innate structures and maturation from those of experience or socialization. But it has been the primary goal of cultural psychology to transform this assumption of universality into an empirically testable hypothesis. Cultural psychology, and cross-cultural comparisons more broadly, has enjoyed tremendous growth over the past two decades, and has moved from the margins of psychology to the central theories and findings of the field.
Clearly, there are many possible ways one can approach a project as ambitious and complex as the study of how psychological patterns are manifested across cultures, and even within cultural psychology there are different views and lively debates. Here we offer our own view of the field. The centrality of cross-cultural comparisons to progress in all areas of psychology is discussed, and recent advances in cross-cultural research are outlined. Some outstanding issues and critiques are presented, and recommendations and avenues for future research are offered. A central theme in our paper is that cultural psychology, as any other scientific field, advances in two overlapping but distinct stages of inquiry. Each stage has its own logic and priorities, an issue to which we now turn.

Two Stages of Scientific Inquiry

Most scientific inquiry proceeds through two stages. In the first stage new theories are proposed which facilitate the observation and discovery of interesting phenomena, and various methodological confounds are ruled out. In the second stage, the inner workings of phenomena are more precisely explained and underlying mechanisms are identified. The first stage continues while the second is underway, since scientific explanations critically depend on the expansion of the database to novel domains and the discovery of additional phenomena. Philosophers and historians of science, while disagreeing about the extent of the role of a priori theories in guiding observation, tell us that most sciences seem to mature in this sequence (Hempel, 1965; Salmon, 1984). To illustrate this point, consider Charles Darwin’s theory of evolution by natural selection. Darwin developed his theory of natural selection and embarked on decades of systematic cross-species observations and the meticulous documentation of features of various organisms and the ecological peculiarities of their habitats (Darwin, 1859/1958). Darwin’s theory hinged critically on the idea that biological properties were inherited, yet the mechanisms of inheritance were initially unknown and his proposal for how inheritance worked was ultimately flawed. One of Darwin’s
influential critics, Fleeming Jenkin, correctly pointed out that if inheritance was the result of
taking the average of the features from the parental contributions, as Darwin proposed, then in
each generational transmission, variation would be cut in half. In a few generations, there would
be little variation left for inheritance, and natural selection would falter (Boyd & Silk, 2003).
Only decades later it was understood that parental genes remain discrete entities in reproduction,
and Darwin’s theory became grounded in the principles of Mendelian genetics, which then
ushered the modern synthesis between evolutionary theory and genetics, forming the basis of
modern biology (Dobzhansky, 1962).

Much of psychology also operates this way (for discussions, see Cronbach, 1986; Rozin,
2001). Theories are proposed and revised in the first stage process of predicting and discovering
interesting phenomena, but the precise mechanisms underlying theoretical claims are often poorly
understood prior to the second stage of investigation. We agree with Rozin (2001) that Stage 1
research is a key element of scientific progress in any growing science, and unnecessary
constraints on this type of research can damage the prospects of a discipline to develop into a
mature science. As more and more interesting phenomena are discovered, Stage 2 research is
initiated, and scientists begin to offer competing explanations for them, presumed mechanisms
eventually become the subject of debates, competing accounts for mechanisms are advanced,
which animate scientific discovery for long periods of time, and in turn may lead to additional
discoveries of interesting phenomena. Only with time and patience are controversies resolved
successfully, paradigms sometimes shift, and scientific consensus regarding mechanisms emerges.

Research in cultural psychology can also be broken down into these same two stages (see
Atran, Medin, & Ross, 2005 for a similar observation). Stage 1 research typically proposes
theories that predict cultural differences in particular psychological processes, whereas Stage 2
research typically seeks to more precisely explain the observed cultural differences by identifying
the critical variables that vary between two or more populations that account for the differences in psychological functioning. Below we articulate how this distinction is useful for understanding how cultural psychology can contribute to psychological science in general.

**Stage 1 Cultural Psychological Research: Identifying Cultural Differences**

The most straightforward goal of Stage 1 cultural psychological research has been to investigate the extent to which people from different cultures vary in psychological processes. Thus far, the majority of cultural psychological research has been conducted at this stage. This project is of critical importance to scientific progress in the field, as explained below.

**Stage 1 Research and External Validity.**

Psychology has long been criticized for ignoring issues of generalizability of findings; external validity concerns that arise from its limited database being the most prominent critique (e.g., Gergen, 1973; Medin & Atran, 2004; Rozin, 2001; Sears, 1986). Social psychology has been especially vulnerable to such criticisms as it investigates questions regarding how people perceive, understand, and respond to the (culturally variable) social world, yet most social psychological research has been conducted within the social environment of middle-class college students. However, nowhere are the limits of the restricted psychological database more problematic than they are on the topic of cultural representation. A recent review found that 92% of studies published in the *Journal of Personality and Social Psychology*, the most influential international journal in these fields, were conducted in North America, and a full 99% of the studies were conducted in the West (Quinones-Vidal, Lopez-Garcia, Penaranda-Ortega, & Tortosa-Gil, 2004). This problem would not be severe if research published in such journals did not make the implicit or explicit claim that findings are applicable broadly to humanity at large, rather than to the Western subpopulations from which participants are selected. That a similar inattention to cultural variability has been found in other areas of psychology as well (Norenzayan
& Heine, 2005), underscores how much of the psychological database renders us ill-prepared to speak confidently of the extent to which many psychological processes are universal.

In many research programs there are tradeoffs between maximizing internal and external validity. The tendency for researchers from a number of psychological disciplines to primarily conduct studies with convenience samples of Western college students, who are disproportionately of European descent and of middle-class background, suggests that psychologists are often inclined to privilege the maintenance of internal validity. That is, studies conducted with convenience samples afford opportunities for researchers to more easily conduct rigorous and systematic series of studies that can address competing hypotheses and rule out methodological artifacts. Although a heavy reliance on convenience samples facilitates the construction of sound theories that are capable of making reliable predictions, the incumbent sacrifice of external validity becomes untenable when researchers raise questions regarding human nature. The limited psychological database raises a cloud of doubt regarding the generalizability of many findings from studies with Western college students. How can researchers know whether they are studying a phenomenon that is characteristic of humans everywhere or whether they have identified a cultural product that emerges from participating in Western middle-class culture? This distinction cannot confidently be made until appropriate cross-cultural research tactics are taken to test whether the phenomenon meets the criteria of various levels of universality (for a review see Norenzayan & Heine, 2005).

The question of the generalizability of research findings is a challenge for science more generally, and perhaps ensuring culturally representative sampling is an onerous technicality that is unnecessary for psychology. For example, it would hardly seem reasonable to say that a reliably observed phenomenon such as social facilitation or transfer appropriate processing might not be a universal feature of humankind because no one had ever investigated it among, say, the
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Trobriand Islanders. Such a claim would be dubious because there was no theoretical basis for anticipating any differences in social facilitation or transfer appropriate processing in this population. Were it the case, however, that one did have compelling a priori theoretical reasons to anticipate that either of these processes would appear differently among the Trobriand Islanders, our understanding of these processes would potentially stand to be in need of revision if it were indeed found that such a population performed reliably differently on relevant tasks.

Stage 1 Research Identifies Cultural Variation in Psychological Processes

Recent theoretical and empirical developments in cultural psychology have brought the field to the point where researchers need to be mindful of the generalizability of North American or more generally Western findings to other cultural contexts. There are a number of rich theoretical models that allow for predictions about the extent to which various models will replicate in other cultural contexts (e.g., Cohen & Hoshino-Browne, 2005; Heine, 2001; Kim, 2002; Markus & Kitayama, 1991; Medin & Atran, 2004; Nisbett & Cohen, 1996; Nisbett, Peng, Choi, & Norenzayan, 2001; Shweder, Much, Mahapatra, & Park, 1997; Triandis, 1989). Furthermore, in the past 20 years, since the field of cultural psychology re-emerged as a significant discipline, the extent of documented cultural variation in psychological processes has been rather unexpected, even for cultural psychologists. For example, pronounced and theoretically meaningful cultural differences have been found in fundamental psychological processes such as eye-movements when scanning inanimate scenes (e.g., Chua, Boland, & Nisbett, 2005), in attention (Miyamoto, Nisbett, & Masuda, 2006), in perceptions of color, space, and time (e.g., Boroditsky, 2001; Levinson, 1997; Roberson, Davies, & Davidoff, 2000), in numerical reasoning (e.g., Gordon, 2004), in the nature of unspoken thoughts (e.g., Kim, 2002), in people’s preferences for high subjective well-being (e.g., Diener, Diener, & Diener, 1995), in the manifestation of psychological disorders such as depression (e.g., Kleinman, 1982; Ryder et al.,
and bulimia nervosa (e.g., Keel & Klump, 2003), in the need for high self-esteem (e.g., Heine, Lehman, Markus, & Kitayama, 1999), and in preferences for formal reasoning (e.g., Norenzayan, Smith, Kim, & Nisbett, 2002). These research programs have demonstrated that culture is implicated at a much more fundamental level of psychological processing than what was previously considered, and these findings are forcing researchers to conceive of these phenomena differently than they had before.

Predicted cultural differences have also emerged in a diverse array of phenomena including how people handle contradiction (e.g., Peng & Nisbett, 1999), prevention and promotion orientations (e.g., Lee, Aaker, & Gardner, 2000), self-concepts (e.g., Cousins, 1989), moral intuitions and reasoning (Cohen & Rozin, 2001; Miller & Bersoff, 1992), tendencies to make situational and dispositional attributions (e.g., Choi, Nisbett, & Norenzayan, 1999; Morris & Peng, 1994), preferences for choices made by oneself or by others (e.g., Iyengar & Lepper, 1999), the nature of friendships and enemyships (e.g., Adams, 2005), cognitive dissonance (e.g., Heine & Lehman, 1997b; Kitayama, Snibbe, & Markus, 2004), memories for focal and background objects (e.g., Masuda & Nisbett, 2001), motivations for uniqueness (e.g., Kim & Markus, 1999), certain kinds of category-based inductive reasoning (e.g., Medin, Ross, Atran, Burnett, & Block, 2002), daily variability in affective experiences (Oishi, Diener, Napa Scollon, & Biswas-Diener, 2004), the importance of romantic love in marriage decisions (Levine, Sato, Hashimoto, & Verma, 1995), the pace of life and time perspective (Levine & Norenzayan, 1999), preferred decisions in the ultimatum game (e.g., Henrich et al., 2005), feelings of control (e.g., Morling, Kitayama, & Miyamoto, 2002), and a predilection for violence in response to insults (e.g., Nisbett & Cohen, 1996), to name several. Systematic cultural differences have also been found in early childhood as well (e.g., Grossman, Grossman, Spangler, Suess, & Uner, 1985; Imai & Gentner, 1997; Tardif, 1996), underscoring just how embedded psychological life is within cultural experiences.
Furthermore, many of these cultural differences are pronounced in magnitude. Meta-analyses reveal large effects (average $d > .80$) between East Asians and Westerners for self-enhancement effects (Heine & Hamamura, 2006), moderate to large effects between East Asians and Westerners for cognitive differences (average $d = .60$; Miyamoto, Kitayama, & Talhelm, 2006), and smaller effects for cultural differences in self-report value measures of individualism-collectivisms between Asians and Americans (average $d = .39$ for individualism and average $d = .24$ for collectivism; Oyserman, Coon, & Kemmelmeier, 2002; Matsumoto, 2006). In general, the cultural differences tend to be more pronounced in studies that compare behaviors that reflect implicit psychological tendencies and less pronounced in studies that compare explicit measures of self-reported cultural values on subjective Likert scales (for discussion see Heine, Lehman, Peng, & Greenholtz, 2002; Kitayama, 2002).

Stage 1 cultural psychological research is an ongoing project as more and more theories are developed and psychological phenomena are tested in a growing array of cultures. As it progresses, this enterprise will paint an increasingly detailed picture regarding the kinds of processes that are most affected by cultural influences, and those that operate the most independently of cultural context. It is difficult to know a priori which psychological processes are most susceptible to cultural variation, therefore there is no alternative to solid, programmatic Stage 1 research. To illustrate, growing research indicates that attentional processes, initially believed to be fixed and universal, are in some respects highly responsive to cultural experience (e.g., Chua et al., 2005). Conversely, some core aspects of reasoning about other peoples’ mental states (or “theory of mind”), initially believed to be a folk theory that is culturally malleable to a large degree, appear to develop in remarkably similar ways across cultures (e.g., Callaghan et al., 2005).

One important component of Stage 1 research has been to identify the specific situations in which some cultural differences in psychological processes are made manifest. Cultural
differences in various processes are often fluid and do not emerge uniformly as main effects, but often are only evident when certain contextual variables are present. For example, people participating in cultures of honor are not more aggressive across all situations, rather, their aggression emerges specifically in situations in which their honor has been slighted (Nisbett & Cohen, 1996); the Protestant work ethic does not encourage an overall more detached attitude towards relationships, and cultural differences only emerge when Protestants and non-Protestants are engaged in a work task (e.g., Sanchez-Burks, 2002); East Asians do not always prefer intuitive reasoning strategies more than Westerners, but show the same preferences and skills for formal reasoning when completing abstract tasks (e.g., Norenzayan et al., 2002). In sum, much Stage 1 cultural psychological research has targeted the sensitivity of various psychological processes to situational variables, and how cultural differences often only appear in specific contexts.

A second key focus of Stage 1 research has been to conduct systematic series of studies to rule out competing artifactual accounts of cultural differences. A particular challenge of conducting psychological research across cultures is that there are many unique methodological concerns that arise regarding the interpretability of findings (for reviews see Cohen, in press; Greenfield, 1997; van de Vijver & Leung, 2000). The wide array of methodological artifacts that are of concern to cultural psychologists has resulted in research on cross-cultural comparability developing into an enterprise in and of itself. Efforts to determine the validity of cultural differences represent a large part of the studies that are conducted in Stage 1 research.

In sum, there has been a significant expansion in the range of cultural differences in psychological phenomena that have been identified in the past 20 years. Much of these findings have emerged in the wake of recent theoretical developments in cultural psychology, most notably the distinction between independent and interdependent construals of self (Markus & Kitayama, 1991) and individualism-collectivism (Triandis, 1989). These theoretical developments, coupled
with the burgeoning database of documented cultural variation in fundamental psychological processes, challenges psychologists to be hesitant in assuming that findings that emerge from a single population must necessarily be psychological universals (Norenzayan & Heine, 2005).

Stage 1 Cross-Cultural Research Informs Theories about Universals.

Stage 1 cultural psychological research is as important in documenting robust similarities across cultures as it is in documenting variability. Such research allows us to identify the extent to which psychological phenomena are culture-specific or are psychological universals (Norenzayan & Heine, 2005; Norenzayan, Schaller, & Heine, in press). We submit that the restricted database that has historically characterized psychological research has led researchers to inherit a sense of “culture-blindness” where observed findings in one’s own culture are assumed to be universal. Furthermore, because some degree of universality is often a central assumption of evolutionary explanations, this culture-blindness is of particular relevance to evolutionary explanations, and greatly complicates efforts to articulate how particular psychological phenomena may have evolved.

For example, consider the question of whether a need for positive self-regard is a psychological universal. One way to approach this question is to conceive of positive self-regard as self-enhancement, which is usually operationalized as tendencies to dwell on and elaborate positive information about the self relative to negative information (Heine, 2005b). With this operationalization it is clear that people from Western cultures are motivated to have positive self-regard as, across dozens of different methods, Westerners show consistent and pronounced self-enhancement (average $d = .86$). In contrast, the same methods revealed an average effect size for East Asians of $d = -.02$ (Heine & Hamamura, 2006). A need for positive self-regard operationalized as self-enhancement would appear to be far weaker, if not largely absent, among people participating in East Asian cultural contexts (see Sedikides, Gaertner, & Vevea, 2005;
Heine, Kitayama, & Hamamura, in press, for some disagreement about the evidence regarding this conclusion).

Given these findings, how might we consider the evolutionary origins of motivations for positive self-regard? Based on the consistent evidence for self-enhancement among Westerners, a variety of evolutionary accounts have been offered for the emergence of this motivation. For example, the self-enhancement motive has been posited to have been selected 1) as a gauge of changes in one’s status within dominance hierarchies (Barkow, 1989), 2) as a barometer of the vulnerability of one’s social relationships (Leary, Tambor, Terdal, & Downs, 1995), or 3) to stave off the debilitating effects of existential anxieties arising from the awareness of one’s impending death (Pyszczynski et al., 2004). However, these theories are rendered less compelling when one considers the relative lack of self-enhancement motivations that is evident among East Asians, especially as it would seem that concerns with status, social relationships, and death are at least as strong in East Asia as they are in the West (e.g., Heine, 2001; Heine, Harihara, & Niiya, 2002).

We suggest that compelling evolutionary accounts for the origins of psychological processes need to consider the adaptive value of the processes at a level of abstraction where universality is more evident, or the conditions under which those processes are operating (Norenzayan & Heine, 2005). For example, positive self-regard can also be considered in terms of strivings to be the kind of person viewed as appropriate, good, and significant in one’s culture (e.g., Crocker & Park, 2004; Heine et al., 1999). At this level of analysis, a need for positive self-regard is a plausible candidate for a psychological universal, and we propose that the most compelling evolutionary accounts for this motivation will be targeted at this level (see Heine, Proulx, & Vohs, 2006). In sum, cultural variation identified by Stage 1 research programs serves to highlight the level of analysis at which evolutionary accounts might most successfully be posed.

Future Challenges and Opportunities in Stage 1 Research
Looking back over the previous 20 years, Stage 1 cross cultural research has enjoyed a period of tremendous growth. What might happen over the following 20 years? With the humility to recognize that predicting the future is best left to fortune-tellers and investment bankers, we venture to suggest some directions that we think would prove to be fruitful.

One striking shortcoming with the progress of Stage 1 cultural psychological research thus far is that the majority of the most influential research has been focused on comparisons of North Americans and East Asians. Perhaps it is understandable that North Americans specifically and Westerners more generally have usually served as the point of comparison in these studies given that it has been from these samples which the majority of psychological theories have emerged. However, the focus on comparisons between these two cultural groups has resulted in a pronounced neglect of other cultures. We suggest that East Asians have been the primary target of comparison because recent cultural psychological research has been cumulative in nature, and much of it has built upon the ideas of Markus and Kitayama (1991) in which they proposed a model that was largely based on a contrast of Western and East Asian cultures. The richness of that model has allowed for a growing number of theoretical advances to be built upon this initial foundation, leading to a wide variety of predictions for specific differences in the ways that East Asians and North Americans are likely to differ in their psychology (e.g., Cohen & Gunz, 2002; Heine et al., 1999; Nisbett et al., 2001; Norenzayan et al., 2002; Oishi et al., 2004; Suh, 2002).

Furthermore, in many ways, cross-cultural comparisons between East Asians and North Americans have made for strong arguments for specific cultural differences, as the samples that are typically contrasted (university students in the two cultural regions) are similar in so many other respects (i.e., they tend to be from highly industrialized, middle-class, urban environments, and the participants tend to be highly educated and cosmopolitan), that there are fewer possible demographic and cultural variables that could potentially account for the differences. That reliable
and pronounced differences emerge between groups that share so many important societal and ecological features suggests that there should be similarly broad and expansive differences in other regions of the world which are less industrialized.

We call for cultural psychological research to grow beyond comparisons of East Asians and Westerners. At present, despite the growth of cross-cultural research, we still know embarrassingly little about the psychological processes of the majority of cultures of the world. There would appear to be many opportunities to identify important cultural differences for those enterprising enough to launch psychological expeditions into relatively unexplored terrain. In particular, we think the role of culture in psychological functioning should become especially evident when small-scale societies are studied. Although this research is methodologically challenging, it stands to greatly advance our understanding of the ways that culture is implicated in psychology given the multitude of theoretically important differences in cultural experience. There has already been much excellent and influential work that has been conducted with such groups (e.g., Atran et al., 2005; Bailenson et al., 2002; Cole, Gay, & Glick, 1968; Gordon, 2004; Henrich et al., 2005; Levinson, 1997; Medin & Atran, 2004; Segall, Campbell, & Herskiovits, 1963), much of it having been done to make arguments for psychological universals (e.g., Barrett & Behne, 2005; Ekman, Sorenson, & Friesen, 1969; Levenson, Ekman, Heider, & Friesen, 1992). We hope that more researchers pursue the important questions that can only be answered by exploring such samples. Other fruitful but under-explored avenues of cross-cultural research include religious differences that exist in the world today (e.g., Cohen & Rozin, 2001; Sanchez-Burks, 2002; Shweder et al, 1997; Hansen & Norenzayan, in press), and the extent to which findings from middle-class samples generalize to working class ones (e.g., Snibbe & Markus, 2005). Given psychology’s reliance on industrialized, highly secular, and middle-class samples,
the broadening of Stage 1 research in these ways is critical for questioning the generalizability of our findings.

A second shortcoming of past Stage 1 cultural psychological research is that it has largely been limited to explorations of the extent to which theories and phenomena that have been developed and identified in the West generalize to non-Western cultures. An initial impetus of Stage 1 research has been to test the generalizability of assumed universals that had originally been documented in the West. However, it is likely that there are psychological processes that are common in other cultures that would not generalize well to the West, and the study of such processes would be equally informative in addressing questions regarding human nature. Such kinds of “indigenous” phenomena (meaning that they are indigenous to cultures outside of North America) have thus far been most saliently identified in work on psychopathology. For example, a number of psychological disorders such as koro and latah in Southeast Asia (Ngu, 1969; Suwanlert, 1988), taijinkyofusho and hikikomori in Japan (Cousins, 1990; Sakai, Ishikawa, Takizawa, Sato, & Sakano, 2004), dhat syndrome in South Asia (Obeyesekere, 1985), susto in Latin America (Rubell, O’Nell, & Collado, 1985), and malgri among some Australian aboriginal groups (Cawte, 1976), are strikingly different from any conditions that have been identified in North America (see Kleinman, 1988; Tseng, 2001). Cross-cultural research on emotions has also identified a number of emotions that are central to the lives of people from other cultures, yet do not readily fit into any of the taxonomic schemes within the West (e.g., liget in Ilongot; Rosaldo, 1980; amae in Japan; Doi, 1971; iklas in Java; Geertz, 1959). Furthermore, even if a given phenomenon is recognizable in Western culture, it may be overlooked because it is not of central importance in Western samples. However the same phenomenon could be of great importance in many other cultures. We suggest that a shift from exploring whether Western-identified phenomena generalize elsewhere to exploring whether other indigenously-identified phenomena
generalize to the West would open up many fascinating and important avenues to explore, and would greatly advance our understanding of cultural variation and universality of psychological processes. To cite an example, the notion of “face” is far more elaborated and takes on different meanings within East Asia than it is in the West, and this leads to specific psychological predictions that can be tested (e.g., Chang & Holt, 1994; Heine, 2005a). Likewise, a type of dialectical thinking that emphasizes constant change and is tolerant of apparent contradiction (distinct from the Hegelian dialectic) likely would not have been investigated among Westerners if it was not first identified among Chinese (e.g., Peng & Nisbett, 1999). We think psychological research would importantly benefit if greater attention was directed towards the study of phenomena that are less familiar in the West.

We also suggest a third direction in which we hope Stage 1 cultural psychological research would proceed more in the coming years. One of the strongest arguments for the role that culture plays in shaping psychological processes is expressed in the Whorfian hypothesis (Whorf 1956). Simply put, this is the hypothesis that language influences thought (the more extreme version of this hypothesis, the notion that language determines thought, has largely been demonstrated to be untenable). To the extent this hypothesis is correct, one way that cultures shape psychological functioning is through the respective languages that are spoken. Although the Whorfian hypothesis benefits from a certain intuitive appeal (e.g., consider the rationale behind politically correct speech), for the most part it has been dismissed by linguists and psycholinguists in the latter half of the 20th century. One key reason for this dismissal can be traced to work on color perception by Berlin and Kay (1969) and Rosch Heider (1972), who found evidence of universal color perception across cultures with highly divergent linguistic color terms. The evidence against linguistic relativity from these research programs was widely interpreted to generalize to any arguments made in support of the Whorfian hypothesis. Recent research, however, has called into
question the findings from the key studies of Rosch Heider (Roberson, et al., 2000; also see Lucy & Shweder, 1979), and new findings have demonstrated that color perception is significantly affected by linguistic terms for color (Roberson et al., 2000; Roberson, Davidoff, Davies, & Shapiro, 2005). Furthermore, other research has demonstrated how linguistic differences can dramatically impact people’s perceptions of and reasoning about space (e.g., Levinson, 1997), time (Boroditsky, 2001), and numerical quantities (Gordon, 2004; Pica, Lerner, Izard, & Dehaene, 2004). We anticipate that this recent renewal of interest in linguistic relativity will pave the way for a number of other important cross-linguistic and cross-cultural hypotheses to be tested, thereby opening up expansive new avenues for cultural psychological research.

**Stage 2 Cultural Psychology: Explaining Cultural Differences**

Stage 1 cultural psychological research serves an important function in expanding the database of psychology and painting a more accurate picture of the contours of human nature. Arguably, however, it is Stage 2 research that makes the most significant contribution to the science of psychology. Stage 2 cultural psychological research seeks to explain how cultural differences in psychological processes are produced and sustained. Stage 2 research firmly hinges on Stage 1 research, as genuine cultural differences in psychological processes serve the important function of spotlighting potential psychological mechanisms. We agree with Matsumoto and Yoo (this volume), that cross-cultural research exploring underlying mechanisms is critical in psychology because it is the best way, perhaps the only way, to disentangle the effects of multiple variables that tend to co-occur in a given culture but not across cultures. To illustrate with an example, Stage 2 cross-cultural research is needed to assess the relative effects of age-related growth versus schooling on cognitive development. Age and schooling are confounded in Western cultures, but not, for example, in small-scale cultures. By comparing children’s cognitive development in a Western culture to children’s cognitive development in a culture where children
may or may not experience formal schooling, the relative contributions of these two variables can be disentangled (e.g., Stevenson, 1982).

A simple analogy of how cultural differences serve the function of identifying psychological mechanisms can be seen in the study of neuroscience. One way that the functioning of normal brains is made clear to neuroscientists is when they examine the functioning of brains that have been selectively impaired. For example, neuroscientists were able to greatly increase their understanding of how people forecast future events when Phineas Gage lost this ability along with much of his medial prefrontal cortex. The difference between Gage’s brain and that of others, and the difference between his forecasting ability and that of others, spotlighted an obvious place to search to find the neural foundation of forecasting skills. In this way, Gage’s more unfamiliar mind deepens our understanding of the intact minds that we more frequently encounter.

Likewise, observed cultural differences in psychological processes (although of course not indicating damage or abnormalities!) provide us with an opportunity from which we stand to understand those processes. When we find that a certain psychological process is absent, weaker, or more pronounced in another culture, we now know that a key mechanism underlying that process is something that is differentially distributed between those populations. For example, knowing that people from Western cultures self-enhance in ways that East Asians do not (e.g., Heine & Lehman, 1997a), indicates that self-enhancement importantly hinges on a mechanism that is more prevalent in Western than East Asian cultures. Basing their reasoning on arguments by Markus and Kitayama (1991) that Western cultures are better characterized by independent construals of self than are East Asian cultures, Heine et al (1999) hypothesized, and empirically demonstrated, that self-enhancement was importantly tied to independent self-construals. The previously identified cultural difference in self-construals served as a useful starting point for coming to make sense of the cultural differences in self-enhancement. Cultural differences thus
serve to spotlight where the most productive efforts could be directed in searching for underlying mechanisms. Hence, findings from research with East Asian participants do not just deepen our understanding of minds in East Asian cultures; they also deepen our understanding of minds in general. In this way, cross-cultural research findings are relevant and important even for researchers who are not interested in the question of cultural influence per se. Stage 2 research provides an additional tool for researchers to clarify what are the mechanisms behind particular psychological processes. However questions in Stage 2 are quite different from those of Stage 1. Appropriate research tools are needed in this second stage of research.

**Methodological Strategies for Stage 2 Cultural Psychological Research**

There are a few strategies by which underlying mechanisms of cultural differences can be explored in Stage 2 research. Each method has its own strengths and weaknesses and we describe them below.

**Mediation Studies Involving Trait Measures.** One strategy involves trait measures of relevant theoretical constructs to examine whether they mediate cultural differences. In this strategy, cultural differences are first identified in one measure (e.g., embarrassability, Singelis, Bond, Lai, & Sharkey, 1999). Second, cultural differences are then identified in a second measure (e.g., interdependent self-construals). Third, the two constructs (i.e., embarrassability and interdependence) are shown to be related in a predicted direction. Fourth, ideally the cultural differences in one construct (e.g., interdependence) would be shown to mediate the cultural differences in the other construct (e.g., embarrassability). Variants on this strategy have been pursued in a number of different research endeavors (e.g., the relations between individualism and high subjective well-being; Diener & Diener, 1995; independence and self-enhancement; Heine & Renshaw, 2002; holistic thinking and judgments of causal relevance; Choi, Dalal, Kim-Prieto, & Park, 2003; self-esteem and the similarity attraction-effect; Heine, Foster, & Spina, 2005).
However, such efforts to identify mediators through the correlational strategies described above (for more thorough procedural descriptions see Baron & Kenny, 1986), are not always particularly effective. Spencer, Zanna, and Fong (2005) persuasively argue that in many situations experimental strategies to detect underlying psychological processes are preferred to correlational strategies. Specifically, in situations where it is difficult to confidently measure the theorized process, experimental strategies can provide a more effective means to identify the mediating variable. Because measurement of cultural constructs are compromised by a variety of methodological artifacts specific to cross-cultural comparisons (e.g., Cohen, in press; Heine et al., 2002), and often do not provide good evidence of measurement equivalence (van de Vijver & Poortinga, 2002), correlational attempts at mediation are likely to be less successful in many cross-cultural studies. We agree with Matsumoto and Yoo (this volume), that measures of cultural constructs such as independent-interdependent construals of self are especially methodologically suspect (Levine et al., 2003), and we suggest that this diminishes their utility in mediational designs.

Furthermore, we emphasize that trait measures capture people’s self-reflective awareness of their own thoughts and behaviors; however much of people’s mental processes lie distinctly outside of consciousness (e.g., Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trotschel, 2001; Nisbett & Wilson, 1977). Verbal reports therefore can be problematic because participants may not have direct introspective access to their own beliefs, values, or mental processes in general (Nisbett & Wilson, 1977), or they may (often unconsciously) distort or misrepresent their responses for cognitive and motivational reasons (see, for example, Schwarz, 1999). This is problematic for the study of culture, because the cultural variables that are purported to influence psychological processing (e.g., customs, scripts, lay theories) are typically tacit and outside of individual’s awareness. In the words of Kitayama (2002), echoing this point of the inherent
opaqueness of cultural variables, “What culture is to humans is what water is to fish” (p. 90). For example, that Americans tend to prefer unique shapes (Kim & Markus, 1999), or that East Asians tend to rely more on family resemblance cognitive strategies (Norenzayan et al., 2002), are tendencies that are largely invisible to people of those cultures, and only become apparent through direct cultural contrasts. It is unlikely that self-report measures of people’s preferences for unique shapes or, their reliance on family-resemblance cognitive strategies, would reveal cultural differences as reliably, or to the same magnitude, as measures of these phenomena through experimental contrasts. Therefore, efforts to measure cultural variables using trait measures will often be compromised by people’s inability to accurately report on their cultural beliefs and practices. Below we describe some experimental strategies that can avoid the problems inherent in trait measures (albeit, experimental methods have their own unique set of weaknesses) to identify underlying mechanisms in cross-cultural research.

Priming Cultural Constructs. One strategy frequently used to explore mechanisms assesses whether priming constructs hypothesized to vary across cultures leads people from one culture to respond more like those of another culture. For example, growing experimental evidence indicates that temporarily inducing independent versus interdependent self-orientations affect analytic and holistic processing in predictable ways (Kuhnen, Hannover, & Schubert, 2001; Kuhnen & Oyserman, 2002). In one series of studies, Kuhnen and colleagues first primed German participants with independence (“think of how different you are from family and friends”) versus interdependence (“think of how similar you are to family and friends”). Subsequently participants’ responses were measured on an unrelated perceptual task. Results indicated that the activation of independent self-construals led to more field independence whereas primes of interdependent self-construals led to more field dependence, demonstrating that independence and interdependence have a causal relation on the kinds of perceptual differences that have been
identified in other cross-cultural research (e.g., Ji, Peng, & Nisbett, 2000). Many other studies have also utilized this priming method for articulating the mechanisms underlying cultural differences (e.g., the effects of interdependence on enmyship experience, Adams, 2005; interdependence on tolerance for financial risks, Mandel, 2003; complex visual scenes on attention to the field, Miyamoto et al., 2006; interdependence on prevention motivations, Lee et al., 2000; interdependence on collectivist social values; Gardner, Gabriel, & Lee, 1999; dialectical orientations on self-esteem; Spencer-Rodgers, Peng, Wang, & Hou, 2004; distinctiveness on independent self-descriptions, Trafimow, Triandis, & Goto, 1991).

Other Experimental Methods. A variety of other experimental or quasi-experimental approaches have also been explored to identify mechanisms underlying cultural differences. One approach identifies certain key experiences that importantly vary across cultures and measure whether greater exposure to the experiences change psychological variables. For example, Koo and Choi (2005) hypothesized that exposure to Oriental medicine training would foster a holistic way of thinking. They found that Korean students in Oriental medicine more strongly believed in a cyclic pattern of change and considered a broader range of explanatory factors (both hallmarks of holistic reasoning) than did comparable students who were not being trained in Oriental medicine.

Importantly, a chronological trend emerged such that holistic tendencies became stronger the longer students were exposed to training in Oriental medicine, and this trend remained after age differences were accounted for. Similarly, Kitayama, Markus, Matsumoto, and Norasakkunkit (1997) reasoned that self-enhancing and self-improving tendencies emerged from participating in specific cultural situations that encourage such tendencies. They developed a situation-sampling technique to demonstrate that Americans became more self-improving when they imagined themselves in Japanese situations, and, likewise, that Japanese became more self-enhancing when they imagined themselves in American situations. Such a method can also be used to identify the
specific features of situations or social experiences that are associated with different psychological processes (e.g., Morling et al., 2002). Using a different approach, Heine et al (2001) tested the hypothesis that cultural differences in self-improving motivations were related to incremental theories of abilities. They presented people with a task that contained either instructions suggesting that it measured abilities that were incremental, or that it measured abilities that were entity-based. The results indicated that incremental abilities instructions led Americans to respond more like Japanese, whereas entity abilities instructions led Japanese to respond more like Americans. By noting the kinds of information that people responded to, Heine et al (2001) were able to identify what were the default strategies that people in different cultures pursued. Employing another technique, Heine, Takemoto, and Moskalenko (2005) investigated whether self-critical motivations were related to objective states of awareness. They manipulated an objective state of awareness by placing people in front of mirrors, and found that the mirror led Americans to respond more like Japanese, whereas Japanese remained largely unaffected by the mirror (suggesting that they were more chronically in a state of objective self-awareness; also see Cohen & Hoshino-Browne, 2005). These experimental strategies are similar in that they all manipulate or measure the accessibility of ideas or experiences that are hypothesized to be more chronically accessible in one culture than in another.

Another Stage 2 strategy is to decouple the presumed underlying cultural process (e.g., independence-interdependence) from the conventional populations of comparison (e.g., East Asian vs. Western). If the differences between East Asians and Westerners in analytic-holistic thinking are explainable in terms of degrees of independence-interdependence, then other cultures which differ in independence and interdependence should also show parallel differences in analytic versus holistic processing. Kuhnen, Hannover, and Roeder (2001) tested this hypothesis with participants in two individualistic cultures, United States and Germany, and two collectivistic
ones, Russia, and Malaysia, and found results consistent with this hypothesis in the domain of perceptual processing. Namely, Russians and Malays showed higher levels of holistic thinking whereas Americans and Germans showed higher levels of analytic thinking (also see Knight et al, 2005, for parallel differences between Western and Eastern Europeans and between Northern and Southern Italians). New research has also gone beyond independence-interdependence to examine additional cultural affordances that may explain cultural differences in cognition. Miyamoto et al (2006) has shown that 1) randomly sampled Japanese scenes are more visually complex than randomly sampled American scenes, judged by objective measures as well as subjective judgments, and 2) both Japanese and American participants exposed to Japanese scenes were more likely to show holistic processing in a subsequent task than those exposed to American scenes.

Another useful approach is the triangulation strategy, proposed and discussed in Bailenson et al, 2002, and Medin and Atran, 2004. This is a two step process. In the first step, a psychological phenomenon is examined across two cultures A and B that are known to vary on a theoretically relevant variable 1. In the second step, a third culture C is included that varies on another theoretically relevant variable 2 from one of the previous two cultures A or B. As a result, cultures A and B would be different on dimension 1, whereas cultures B and C would be different on dimension 2. This strategy sheds light on the specific population variable that is implicated in the psychological difference. Studies on category-based induction in folkbiological reasoning (Bailenson et al, 2002; see also Medin, & Atran, 2004) have illustrated the usefulness of this strategy in facilitating explanations for cultural differences. For example, Medin and Atran (2004) demonstrated that unlike American college students, Maya villagers in Guatemala and Americans with biological expertise (park maintenance workers) do not typically use the diversity phenomenon in inductive reasoning about plants and animals (i.e., the more diverse are the premise categories, the stronger the inductive inference to a conclusion category that subsumes
these premise categories). Their studies revealed that immersion in the biological world is a key factor that leads to preference for ecological reasoning, and in the absence of biological expertise, people revert to the diversity heuristic.

In sum, in recent years, building upon the findings from Stage 1 research, as well as extending the earlier theoretical foundations that had been developed (e.g., Markus & Kitayama, 1991; Nisbett et al., 2001), a variety of different methods have been used to search for mechanisms underlying cultural differences. Although still in its infancy, these Stage 2 studies have deepened our understanding of psychological mechanisms in ways that would have been less likely to emerge had researchers never considered samples outside of Western culture.

Explanations for Group Differences

Theoretically, psychological differences among human groups can be accounted for in terms of three distinct possibilities (after methodological artifacts have been ruled out): 1) exposure to different local ecological conditions may cause underlying psychological mechanisms to be expressed differently (evoked culture); 2) people may acquire psychological tendencies through social learning processes that are biased in favor of learning from ingroup members (transmitted or epidemiological culture); 3) population differences in gene frequencies may be associated with particular behavioral tendencies (non-cultural genetic variation). Next, we briefly examine each possibility.

Evoked Culture. Human groups occupy vastly different ecological niches (Edgerton, 1971) that may evoke different cognitive tendencies to solve the same problems of human existence, and as a result psychological tendencies also diverge in response to the local conditions (Cohen, 2001). There are two variants to this claim. Evoked culture could emerge because different environments select different psychological processes, or because the same psychological process may be expressed differently in different environments. Tooby and Cosmides (1992; see also Fessler, in
press for discussions) propose that behavioral variation may emerge when different local environmental triggers act on the same underlying psychology. To illustrate how evoked culture operates, Tooby and Cosmides (1992) discuss how the same food sharing mechanism can lead to different cultural norms depending on the degree of variability in foraging success. Where foraging or hunting success is highly variable across time, egalitarian norms for food sharing and sanctions against hoarding are strong, but not when the supply of food is relatively stable.

Similarly, Gangestad, Haselton, and Buss (in press) draw on evoked culture as the explanation for cultural variation in mate preferences. They argue that the same underlying mate preference for indicators of health interacts with an ecological cue to produce cultural variation—where parasite prevalence is high, features signaling health are more valued in potential mates than in regions with low parasite prevalence. Evoked culture is also a partial explanation for cognitive differences between East Asians and North Americans, as indicated by Miyamoto et al’s (2006) findings on different cognitive effects of visual environments. Japanese visual scenes were found to evoke holistic cognitive tendencies even among Americans.

Transmitted or Epidemiological Culture. We propose that the complex cognitive capacities that enable cultural transmission, such as various forms of social learning, are the primary engine that produces the bulk of stable variation across groups (Henrich & Boyd, 1998; Richerson & Boyd, 2005). Transmitted or epidemiological culture is prototypically what most social scientists and cultural psychologists consider culture (Nisbett, 2003; Norenzayan, in press; Richerson & Boyd, 2005; Sperber 1996). This refers to the fact that genetically similar people living in similar environments may possess strikingly different beliefs, practices, and psychological tendencies that they acquire from others in their group. Culture emerges when information is transmitted socially through social learning mechanisms such as imitation and instruction (Tomasello, Kruger, & Ratner, 1993) as well as a byproduct of communicative processes such as gossip, conversations,
and telling of stories (Schaller, 2001). People acquire and transmit substantial amounts of information that subsequently alters their behavior in profound ways. Most cultural differences examined by cultural psychologists would fit this category, although there have been relatively little direct investigations of how transmission processes give rise to cultural differences.

It is useful to distinguish evoked and transmitted cultural explanations, yet in actuality these two processes reflect a continuum rather than a dichotomy. That is, psychological structures may vary in the degree to which they are entirely innately prepared at one extreme, and entirely reliant on socially transmitted mechanisms at the other. The former are activated in individuals by the mere presence of an appropriate ecological cue; the latter require substantial social transmission (including processes of imitation and instruction) for their activation (Fessler, in press). Many psychological structures fall in-between of these two extremes. Furthermore, these two processes work in tandem to produce and maintain cultural diversity (Norenzayan, in press). Nisbett and Cohen’s (1996) work on the culture of honor illustrates this point. The Southern US has a tradition of honor, in which toughness and aggressive response to insults is prized, in a way that it is not in the Northern US. The origin story of this difference is one of evoked culture: where wealth is easily stolen, as in ecologies supporting herding economies, men stand to benefit by maintaining their honor or developing a reputation for toughness. The US South was settled by Scotch Irish herders, whereas the US North was settled mostly by European farmers, and as a result a tradition of honor is more prevalent in the South than in the North. But cultural differences persist even when the original economic conditions disappear. Culture of honor continues to flourish in industrialized parts of the US South, even though herding is a thing of the past. The best explanation for the persistence of honor cultures is social transmission, and indeed a variety of evidence supports this view (Cohen, Vandello, Puente, & Rantilla, 1999; Nisbett & Cohen, 1996). One possibility is that ecological differences evoke initial responses that adaptively vary
across different environments, but then are picked up by processes of transmitted culture, amplified, and perpetuated even when the initial conditions are no longer present (see Cohen, 2001).

An important future Stage 2 question for cross-cultural research is disentangling the relative contributions of evoked and transmitted culture to cultural variation. Richerson and Boyd (2005) propose the ideal “common garden” thought experiment for this purpose: take two groups of individuals living in different environments and having very different cultures, and switch them around. Suppose some Inuit fishermen move into the humid rainforests of the Amazon, and some Yanomamo hunter-gatherers move into the frozen arctic of Canada. The evoked culture explanation would predict the arctic Canadian ecology will quickly trigger the Inuit way of life among the Yanomamo foragers, and as a result they would cease to resemble their Yanomamo compatriots in the Amazon. The transmitted culture explanation would predict they remain more like their Yanomamo compatriots, and without the opportunity to adopt rapidly the cultural repertoire of arctic survival accumulated through thousands of years by the Inuit, would likely suffer greatly from the harsh climate.

Cultural psychologists could take advantage of naturally occurring “experiments” by comparing groups living in similar environments but with different beliefs and practices, to isolate the effects of transmitted culture. The Amish of the US Midwest, for example, live in the same ecological environment as neighboring German-ancestry farmers, but to this day have maintained beliefs and practices that are markedly different. The complementary strategy would be to measure the effects of a novel ecological variable on a group that shares the same culture, e.g., by examining how farmers in the US North living in a farming community differ from farmers who have migrated to a new environment in which they adopt herding. As an example of the former, consider a study by Rice & Steele (2004), in which the average subjective well being (SWB) of
European countries were compared with various European ethnic groups in the United States whose ancestry is derived from these countries. Countries differ markedly in their average SWB, and it was found that the relative differences in SWB among the associated American ethnic groups, although much smaller, were nevertheless preserved even after generations of living in the same country, under similar ecological conditions of American middle class life. Since group differences in SWB in these samples are likely not genetic, such a finding supports the idea that an important psychological variable such as SWB is transmitted socially across generations, and can persist for a long time even in a very different environment. Psychologists interested in cultural variation have been slow in adopting such research questions that are ultimately important in isolating the mechanisms of cultural variation.

**Genetic Variation.** A controversial explanation for psychological differences found between cultures is that they could derive from variation in genes between populations. This possibility should be examined with care, given the unfortunate history of racism and conquest that has often accompanied biological explanations of group differences (see Diamond, 1997, Gould, 1981, for discussions). Research in behavioral genetics reveals that within any human population, many psychological traits and tendencies are moderately to substantially heritable (e.g., Plomin, Owen, & McGuffin, 1994; Roy, Neale, & Kendler, 1995; Turkheimer, 2000). However, it is crucial to underscore that heritable differences within populations do not indicate heritable differences between populations (for discussion see Richerson & Boyd, 2005; Scarr, 1981). Human groups are overwhelmingly genetically similar to each other, and it is likely that although many behaviors are to some extent heritable within groups, most between group differences could be overwhelmingly attributable to socially transmitted mechanisms. Nevertheless, a growing body of research continues to identify a number of genes that systematically vary across populations, including genes associated with distinct blood groups (Landsteiner, 1901), skin color (Jablonski &
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Chaplin, 2000), lactose intolerance (Beja-Pereira et al., 2003), and resistance to malaria (Allison, 1954). It is conceivable, then, that some differences that are identified between two cultural groups derive from differential frequencies of specific genes between the two populations.

To the extent that group-level psychological differences are associated with group-level genetic differences, selection pressures must have diverged in different populations. Cavalli-Sforza and Cavalli-Sforza (1995) argue that we should see the greatest differential selection pressures on traits that have had powerful consequences on fitness and that occurred consistently over long periods of time, such as those related to thermal regulation, pathogen resistance, and diet. This is unlikely to be the case with most psychological traits and tendencies, unless such genes also have yet-to-be identified psychological side effects or spandrels. Most large scale societal changes that separate cultures today – with the possible exception of the agricultural revolution that occurred in some societies 10,000 years ago – have very short time frames that minimize the impact of differential selective pressures on the gene pool in different groups. Cultural practices are fluid, and can often change quite dramatically over generations, making it unlikely that many specific cultural practices have persisted long enough to have significantly influenced the genome.

Perhaps the best way to empirically address the question of whether variation in genes or in cultural practices underlies group differences in psychological processes is to contrast groups such that race is held constant but cultural context is varied. Immigrants and their descendants provide practical samples that afford this investigation. Empirical results typically show that immigrants and their descendants exhibit psychological processes intermediate to their ancestors who remained in their heritage culture, and their compatriots in their host culture – evidence consistent with a cultural, rather than genetic, explanation for group differences. For example, Asian-Americans exhibit psychological tendencies intermediate to those of Asians in Asia and
Americans of European descent (e.g., Kitayama et al., 1997; Norenzayan et al., 2002); if anything, Asian Americans more closely resemble European-Americans than they do Asians in Asia (Heine & Hamamura, 2006; Lydens, 1988; Miyamoto et al, 2006). Furthermore, the longer people of Asian descent have been in North America, the more similar their psychological tendencies resemble those of European-Americans, to the point that third-generation Asian-Canadians are indistinguishable from Canadians of other cultural backgrounds (Heine & Lehman, 2004; McCrae, Yik, Trapnell, Bond, & Paulhus, 1998). At present we know of no compelling empirical evidence to suggest a genetic basis of the group differences that have been identified in psychological studies. We therefore consider such group differences to be cultural differences, whether the primary origin of the differences are evoked or transmitted culture.

Proximal and Distal Explanations of Cultural Differences

In Stage 2 research it is also important to distinguish between proximal and distal explanations of cultural differences. Both levels of explanations are important and complementary for understanding how cultural differences originate and persist in populations. Distal explanations are historical analyses that involve social, economic, and geographic factors that may have given rise to culturally stable patterns of thought and behavior. Proximal explanations largely involve individual-level psychological processes including beliefs, knowledge, and experiences with the world that have been shaped by these historical developments, and could be directly implicated in cultural differences in psychology.

Distal explanations of cultural differences are inherently outside of the scope of psychological research, and require interdisciplinary methods or collaboration with historians, anthropologists, archeologists, sociologists, and ecologists. These collaborations are not without their challenges but they can provide fruitful insights into psychological patterns. A fascinating example of a distal account of cultural differences is Jared Diamond’s (1997) Guns, Germs, and
Steel, in which he traces today’s regional differences in wealth, technology and political institutions to early geographic factors such as the availability of domesticable plants and animals in a given region, and to the shape of coastlines and dominant continental axes.

For a psychological example, consider again Nisbett and Cohen’s (1996) work describing how a culture of honor that currently exists in the US South can be traced back to the herding-based economies of the first European settlers to that region. Such kinds of distal explanations cannot be tested directly through psychological methods. However, evidence for distal explanations can be derived from investigations of proximal measures regarding how cultural patterns continue to persist even when the original ecological factors that gave rise to them are long gone (Cohen, 2001). For example, in the case of honor cultures, Cohen and his colleagues have identified a number of proximal mechanisms by which honor cultures are perpetuated, including the socialization of boys for violence in the event of an insult (Cohen, 1998), behavioral rituals for regulating conflict (Cohen et al., 1999), men’s participation in cultural activities that encourage toughness (Cohen, 1998; Nisbett & Cohen, 1996), the establishment of laws and cultural practices that sustain a culture of honor (Cohen, 1996), and pluralistic ignorance regarding the extent to which masculinity is perceived to be linked with honor (Cohen, Nisbett, Bowdle, & Schwarz, 1996). In sum, there is an important distinction between distal and proximal levels of explanation, and Stage 2 research is important for facilitating both levels of explanation.

**Implications of Cross Cultural Research For Society and Intergroup Relations**

The study of culture and psychology has important social ramifications that extend beyond the psychological laboratory. Here we consider some broader implications of a psychological science that is attentive to cultural differences.

**Cultural Psychology and Stereotyping**
One concern that is sometimes raised regarding cultural psychology is that it smacks of stereotyping, for example, by leading to such conclusions as “Japanese have interdependent selves whereas Americans have independent selves.” Is cultural psychology tantamount to stereotyping?

We suggest that, in principle, statements like the above are not different in kind from how one describes other group differences or experimental effects in psychology, for example, when statements are made about the rumination of depressives, the patriotism of people in a mortality salience condition, the motivated cognitions of people who support a particular position, or, for that matter, when statements are made about aggregate-level phenomena that do not involve people, such as saying that the weather in California is warmer than the weather in Pennsylvania. However, these kinds of descriptions of group differences feel considerably less problematic than saying “Japanese have interdependent selves.” Why might this be? Perhaps perceptions of stereotyping are especially likely to arise when the group that is being referred to is one in which people tend to vest their identity. If one identifies with their group, then a statement about that group would seem to be directly applicable to them, in ways that are different when statements are made about groups to which people do not identify with. And people obviously identify a great deal with their culture, and as a result may feel pigeonholed when cultural differences are invoked.

Charges of stereotyping tend to be more often directed at cultural psychology than other fields of psychology. This might be the case because of a belief that statements about cultural differences are essentializing, and suggest, for example, that all members of a group have the same psychological characteristic, and that the cultural differences are fixed and immutable, allowing little room for social change. Within-group heterogeneity is an obvious fact of human behavior, and we do not know of any arguments of cultural homogeneity that have been made by psychologists. Perhaps the concern with stereotyping in cross-cultural research is merely linguistic, and therefore can be addressed by making greater efforts to report research findings.
with more extensive qualifying terminology (e.g., “on average, as a group, people who participate in Japanese cultural contexts are relatively more likely than those who participate in American cultural contexts to display features of interdependent selves, although there is much variation within both cultures”). Whether or not the concern with stereotyping is largely linguistic, efforts to describe cultural differences in ways that take into account the heterogeneity of the samples can sensitize readers to the fact that cultural differences are statistical regularities, not absolute laws.

The concern with stereotyping may also originate from an implicit assumption that identified cultural differences are claimed to be immutable and unchangeable. Of particular concern is whether cultural differences examined by psychologists are immutable and essentialized because they reflect genetic differences across populations. As discussed above, there is no evidence that group differences in psychology examined to date by cultural psychologists reflect population-level genetic differences, and there is considerable evidence, derived from the findings from much Stage 2 research (for example, in showing that people who are primed with ideas more common in one culture come to think in ways congruent with the norms from that culture) that they are socially transmitted (for further discussion, see Norenzayan & Heine, 2005). The perceived immutability of cultures may also derive from an implicit assumption that cultures are proposed to be entities that remain stable across time. We, like many other cross-cultural researchers, view cultures as statistical distributions of beliefs and behaviors across a group of minds, not as unchanging superorganic entities. The burgeoning literature on cultural evolution (e.g., Berger & Heath, 2005; Norenzayan, Schaller, & Heine, in press; Richerson & Boyd, 2005) support this view, although, we also recognize that there are fascinating arguments for the expectation that some cultural elements may persist over time, arguments that are also consistent with a distributional view of culture (e.g., Cohen, 2001; Nisbett, 2003). We suggest that misperceptions of the immutable nature of cultural differences help to sustain a
concern with stereotyping regarding cultural psychological research, a concern that can be alleviated by the understanding that cultures are best construed as transmitted quasi-stable distributions of shared beliefs, not immutable structures.

**Contrasting Culture-Blind and Multicultural Psychologies**

Considerations of cultural diversity in psychological functioning places cultural psychologists in the crosshairs of another politically-charged debate: what is human nature? The two sides of this debate are guided by competing ideologies in how they interpret human diversity. One approach is the culture-blind notion that people are the same wherever you go. Of course, no one believes that any two people are exactly the same – rather, this belief reflects the view that at some fundamental level, people share some underlying nature or essence (see Shweder, 1990 for an in depth discussion of this perspective). This consideration of human nature, however well-intentioned it may be, carries a significant cost. Maintaining the assumption that people everywhere think the same, when all we really can feel somewhat confident about is how people from our own culture tend to think, requires the potentially ethnocentric projection of our own cultural beliefs to be able to understand those from other cultures. This is especially problematic for psychology as the database is largely based on the findings from Westerners, particularly Americans. As a result the starting point of reference from which we consider intercultural relations is often American or more broadly Western culture, a practice not without costs. Is the highest level of moral reasoning around the world really one that privileges justice and individual rights above all else? (e.g., Kohlberg, 1971; for dissenting views see Miller & Bersoff, 1992; Shweder et al., 1997). Do people everywhere want more individual choice? (Iyengar & Lepper, 1999; Schwartz, 2004). Do people everywhere want high self-esteem or high subjective well-being? (Diener et al., 1995; Heine et al., 1999). Is speaking up in class conducive to thinking everywhere? (Kim, 2002). The extent of the documented cultural variation on these and other
topics encourages people to be cautious in inferring shared beliefs across cultures, rather than reflexively assuming that what Americans or Westerners want reflects universally shared desires.

An alternative to the culture-blind approach is a multicultural notion that difference is not tantamount to deficit, and therefore diversity needs to be recognized and appreciated. One potential cost of this view is that it highlights group differences, making cultural membership a salient consideration, and thus making people more vulnerable to stereotyping. However, this approach also allows people to engage with others knowing that those others might not see the world in the same way that they do, and it provides people with a conceptual framework to understand how different life circumstances, assumptions, or experiences may affect thoughts, feelings, and behaviors differently. This is not a hypothetical argument. As reviewed above, there are real and significant cultural differences in the ways that people think and feel. Ignoring the reality of these differences would make people susceptible to ethnocentric projections and would only seem to breed ignorance and misunderstandings. We agree with Shweder (2000) that the best strategy for dealing with the thorny question of cultural variation in psychological processes is to be slow at judging other cultures; that is, to be cautious about making value judgments about how someone from a different culture might behave or think. This does not mean that criticizing specific practices of other cultures is unreasonable, but that criticism is most compelling and constructive when it is sensitive to the dangers of ethnocentric projections and takes into account cultural contexts.

The prejudice reduction literature in social psychology has emphasized strategies, such as equal-status contact and superordinate goals, that are aimed at breaking down group boundaries and reducing perceptions of group differences. These strategies have been effective to some degree, but they are not without their costs. Their individualist and assimilationist slant leaves little room for cultural diversity, for people to remain different yet tolerant of the cultural other.
This is a heavy price to pay in multicultural societies such as North America and Australia, and increasingly Europe. Cultural psychology offers an alternative. Perhaps with greater knowledge and appreciation of cultural differences, difference would not breed prejudice, but tolerance. We suggest that these two approaches are not incompatible, but complementary. Intergroup contact, for example, may lead to greater appreciation of cultural differences as much as it may lead to the diluting of group boundaries. Cultural knowledge can be used in conjunction to individuating information to form culturally-sensitive yet non-stereotypical judgments about the other.

In fact, some research indicates that this is indeed possible. Wolsko, Park, Judd, & Wittenbrink (2000) primed White Americans with two alternative ideological messages. The color-blind message advocated a race-blind and culture-blind approach at improving interethnic relations (“we are all the same”); the multicultural message took differences as a given and advocated appreciation and respect for cultural differences. Subsequently participants’ interethnic attitudes towards Blacks and Hispanics were measured. The results showed that relative to a control (no message), both the color-blind and the multicultural messages reduced ingroup bias and interethnic prejudice about equally. Although the multicultural message increased perceptions of dissimilarity between ingroup and outgroup, that perception did not translate into ingroup favoritism or outgroup hostility. Furthermore, it was found that the multicultural message increased stereotyping for both negative and positive traits, but it also increased stereotype accuracy for both types of traits, and led to more favorable attitudes towards the outgroups. The results overall suggest that these two strategies, although psychologically quite different, can produce favorable outcomes relative to doing nothing at all. It remains to be explored under what conditions each strategy is more effective in increasing tolerance between cultural groups.

We further suggest that a culture-blind psychology exerts a significant cost on the science of psychology, in that it serves to marginalize psychological research from non-Western cultures.
We have had a number of experiences discussing research with researchers from non-Western cultures who informed us that they tried, and failed, to replicate a well-established Western finding. Some of those people have suggested to us that this “failure” led them to conclude that they were not as talented as researchers as Western psychologists. Indeed, if psychological processes are believed to be universal, and non-Western researchers have difficulty in replicating the findings that come out of the West, then a reasonable conclusion is that the researcher is lacking the acumen to detect this universally-available phenomenon. In contrast, with the perspective of a multicultural psychology, the failure of a phenomenon to travel from one culture to another can suggest something meaningful. It can be an opportunity to locate previously unknown boundary conditions for a phenomenon, or to identify an indigenous phenomenon, and make a contribution that has significance to the whole field. The recognition of culture’s role in shaping psychological processes should serve to importantly reduce the relative monopoly that Western researchers have had over the field of psychology (see Quinones-Vidal et al., 2004).

We anticipate that political sensitivities will continue to be part of cultural psychological research. Thus far, the majority of cross cultural research has identified cultural differences in phenomena that are only mildly controversial, in that they tend to be rather evaluatively neutral, and they have been observed by comparing cultural groups that are for the most part not engaged in intense political struggles. We recognize that there is no guarantee that future culture psychological research efforts will continue to focus on relatively uncontroversial topics or contrasting groups that are not involved in emotionally charged political struggles. Indeed, it would seem that some of the most important kinds of questions that cultural psychologists could investigate would be precisely those that can help us to understand how cultural factors are involved in real-world political conflicts or inequities. For example, consider the conflict between many Muslims and some Western journalists and their supporters regarding the publication of
caricatures of Muhammad by a Danish and other Western newspapers in 2005 and 2006. There are many complex issues that are implicated in this conflict. However an important element is a cultural divide between these two cultural groups centered on different conceptions of morality. This conflict can perhaps be understood as reflective of divergent moral reasoning, one based on a morality of autonomy that favors individual rights and freedoms, and the other on a morality of divinity that favors purity and sacredness (see Shweder et al., 1997). Greater understanding of cultural diversity in moral reasoning strategies can raise awareness of the different moral sensitivities that are important across groups, and potentially prevent such misunderstandings. Thoughtfully conducted research can illuminate the cultural differences that are implicated in intercultural conflicts and misunderstandings. Reducing intercultural conflict requires transcending differences. We suggest that to transcend differences, one must first understand what is it that divides people.
References


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