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Why Should We All Be Cultural Psychologists? Lessons from the Study of Social Cognition

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Abstract

I call the attention of psychologists to the pivotal role of cultural psychology in extending and enriching research programs. I argue that it is not enough to simply acknowledge the importance of culture, and urge psychologists to practice cultural psychology in their research. I deconstruct five assumptions about cultural psychology that seriously undermine its contribution to the building of a true psychological science, including that cultural psychology 1) is only about finding group differences; 2) does not care about group similarities; 3) only concerns group-level analysis; 4) is irrelevant to basic psychological processes; and 5) is only to confirm the generalizability of theories. I discuss how cultural psychology can provide unique insights into psychological processes and further equip researchers with additional tools to understand human behavior. Drawing lessons from the 20 years of cultural research that my colleagues and I have done on the development of social cognition, including autobiographical memory, future thinking, self, and emotion knowledge, I demonstrate that incorporating cultural psychology into a research program is not only necessary but also feasible.

Keywords

culture; cultural psychology; cultural psychologist; social cognition; assumptions; biases

Should we all be cultural psychologists? Why? And how? I'd like to start the discussion with two personal stories.

Story 1: Not long ago, I submitted a paper to a journal specialized in my area of research. Within days, I heard back from the action editor, an eminent cognitive psychologist whose work I admire: "I regret to say that I have decided not to send the manuscript out for review. I just don't think that it fits well enough with the goals of the journal in that cross-cultural research is not typically published …" Really? I couldn't believe my eyes. I took another look at the journal's Aims and Scope, which clearly states that the journal covers "*human* memory and learning, conceptual processes, psycholinguistics, problem solving, thinking, decision making, and skilled performance [italics added]." Ironically, all these aspects of cognition have been shown to be susceptible to cultural influences. If the journal indeed tries to exclude cross-cultural research, then "*WEIRD human*"[1] should be a

[1]Western-Educated-Industrialized-Rich-Democratic (Henrich, Heine, & Norenzayan, 2010).

more accurate description in its Aims and Scope. I wrote back and copied my email to the Editor, hoping to engage them in a constructive discussion, but never heard back from either.

Story 2: A few months ago, I met with a new colleague of mine at Cornell for coffee. She does brilliant work on perception. We talked about how we came to do what we do. Hearing about my interest in culture, she admitted that she never looked at culture or gender in her research because she studies basic perceptual processes that are not supposed to differ across human groups. I told her about the many exciting findings of perception in cross-cultural research (e.g., work by Richard Nisbett and colleagues), and that we found cultural differences in the very perceptual phenomenon she studies. She was stunned and intrigued, and we had a wonderful conversation that excited us both. A few days later, I received an email from her: She was submitting an amendment to our IRB to collect information of participants' ethnicity and gender in her studies. Then two months later, I heard from her again: She asked me if I'd be interested in collaborating on a project to examine the influence of culture on perception and memory. We subsequently submitted a grant application together.

In both stories, we hear a voice, "Culture shouldn't matter for basic human psychological processes." Whereas the first story is depressing and hopeless, the second story is what inspired this article.

Theorists have long emphasized the important role of culture in shaping human cognition and behavior (e.g., Apfelbaum, Phillips, & Richeson, 2014; Cheung, 2012; Cohen A., 2009; Coll & Marks, 2009; Greenfield, 2013; Hardin, Robitschek, Flores, Navarro, & Ashton, 2014; Hermans, 2001; Hong, Morris, Chiu, & Benet-Martínez, 2000; Kitayama, Conway, Pietromonaco, Park, & Plaut, 2010; Markus, 2008; Markus & Kitayama, 1991; Shweder, 2000; Shweder, Goodnow, Hatano, LeVine, Markus, & Miller, 1998; Sternberg, 2004; Triandis, 1994). They have forcefully argued that culture emerges and transforms in response to the changing physical and social environments, which in turn guide the production of adaptive practices, beliefs, and behaviors (Kitayama et al., 2010). Culture operates from not only outside but also within the individual to guide meaning-construction and behavior (Hong et al., 2000). They have warned the field that the dominant models of American psychology impede the complete understanding of psychological experiences (Markus, 2008), and that work that seeks to study a psychological construct outside its cultural context risks the imposition of one's own worldview on the rest of the world and risks drawing false and hasty conclusions (Sternberg, 2004). They have further cautioned psychologists about the use of WEIRD samples as the "baseline" for comparison as such samples are often outliers rather than norms (Apfelbaum et al., 2014; Henrich, Heine, & Norenzayan, 2010). The researchers have urged psychologists to mainstream culture in psychological science and practice (Cheung, 2012), and to consider cultural validity as a critical measure when evaluating psychological theories (Hardin et al., 2014). They have outlined the mission of cultural psychology as to study different mentalities that originate from differences in salient community-based goals, values and worldviews (Shweder, 2000; Shweder et al., 1998), and have emphasized the importance of examining the dynamic

processes underlying individual cultural attitudes and identification (Coll & Marks, 2009; Hermans, 2001). They have further highlighted the far-reaching practical implications of broadening the study of culture in psychology (Cohen A., 2009).

In spite of all those strong calls, there remain confusions and misunderstandings of what cultural psychology can do. Although true believers of "Culture doesn't matter" may be rare in front of the mounting theoretical insights and empirical findings, there are those who choose not to care about culture because of the fear to venture into the unknown or the desire to maintain status quo. The hope rests on the researchers like my colleague in the second story, who are curious about culture and yet unsure of how to make it matter for their research. They sense the urgency when facing an increasingly diverse world around them and when working with an increasingly diverse participant pool. For those researchers, the important question is how to incorporate culture into research so that they are not continuing to ignore the cultural backgrounds of their participants – taking an attitude of "Don't ask, don't tell" – or to control for the variation in analysis as if it imposes "noises."

I here discuss some of the ways that cultural psychology can help. To do so, I analyze five assumptions about cultural psychology that often get in way or cut short the effort when researchers consider the integration of culture into their work. Some of the assumptions are mythical, some incomplete, and some outright false. Together, they seriously undermine the importance of culture and cultural psychology in the study of human cognition and behavior.

Assumption 1: Cultural psychology is only about finding group differences.

Assumption 2: Cultural psychology does not care about group similarities.

Assumption 3: Cultural psychology only concerns group-level analysis.

Assumption 4: Cultural psychology is irrelevant to basic psychological processes.

Assumption 5: Cultural psychology is only to confirm the generalizability of theories.

Notably, these assumptions may seem obviously false to cultural psychologists – "who would think this way?" – and therefore be quickly dismissed. This may contribute to their persistence in researchers like the journal editor and the colleague in my stories. I hope that by deconstructing these assumptions, it will become clear to general psychologists that cultural psychology is necessary for the building of a true psychological science. Without cultural psychology, we cannot understand adequately any psychological phenomena, including basic processes that are commonly assumed to be immune to cultural influences. I draw lessons from the 20 years of cultural research that my colleagues and I have done on the development of social cognition, including autobiographical memory, future thinking, self, and emotion knowledge, to discuss how cultural psychology can provide unique insights into psychological processes and further equip researchers with additional tools to understand human behavior. Although this suite of research is constrained by the methodological scope of the subject matters and the range of cultural groups involved, it serves as an example to demonstrate that incorporating cultural psychology into a research program is not only necessary but also feasible. For reviews of exciting developments in cultural psychology, readers may refer to Kitayama and Cohen D. (2007), Gelfand and

Diener (2010), and Heine (2016), among others. These volumes have broad coverage of work by researchers from diverse fields of psychology and related disciplines.

Assumption 1: Cultural psychology is only about finding group differences

What is cultural psychology about? The most frequent answer to this question is that cultural psychology is about finding cultural differences. This is not an entirely false assumption, although identifying differences between cultural groups is only the important first step that leads to further investigations. To the present day, cultural psychology has developed into a sophisticated field of research with well established theories and methodologies (for a review, see Kitayama & Cohen D., 2007). Some of the particularly notable developments include cultural neuroscience (Chiao, Cheon, Pornpattananangkul, Mrazek, & Blizinsky, 2013; Park & Huang, 2010), investigations of the causes of cultural change (Greenfield, 2013; Trzesniewski & Donnellan, 2010; Twenge, Campbell, & Freeman, 2012; also see Freeman, 2002, and Putnam, 2000), the study of Gene × Culture interaction (Kim & Sasaki, 2012; Kitayama, King, Yoon, Tompson, Huff, & Liberzon, 2014; Luo, Ma, Liu, Li, Wang, Shi, & … Han, 2015), the use of social network analysis to study cultural experience and behavior (Mao & Shen, 2015; Qiu, Lin, & Leung, 2013), and the integration of ecological perspectives to understand origins of cultural variability (Kitayama et al., 2010; Talhelm, Zhang, Oishi, Shimin, Duan, Lan, & Kitayama, 2014). These theoretical and methodological advances have allowed investigators not only to identify but, more importantly, explain and predict group differences.

In the study of autobiographical memory, we have consistently observed that when recalling personal experiences, European American adults (Wang, 2001a, 2006a; Wang & Conway, 2004) and children (Han, Leichtman, and Wang, 1998; Peterson, Wang, and Hou, 2009; Wang, 2004) focus more on their own roles and perspectives than do Asians and Asian Americans, who recall more information about social interactions and group activities. Had we stopped here and been satisfied with the cultural differences we observed, we would have missed the more important question of *why*. In subsequent investigations, we found that one important contributing factor is the culturally prioritized self-goals that guide the remembering process (Wang, 2001a, 2008a; Wang & Ross, 2005; Wang, Shao, & Li, 2010). Fundamental self-goals like autonomy and relatedness, although universally exist (Damon, 1983, Deci & Ryan, 2000), are variably emphasized in different cultures (Mascolo & Li, 2004; Wang, 2013). Autonomous self-goals, prioritized in Western, particularly European American cultures (Markus & Kitayama, 1991; Shweder et al., 1998), motivate individuals to focus on idiosyncratic details and subjective experiences that accentuate the uniqueness and agency of the individual. Such information is likely to be well represented in memory and highly accessible during recall. In contrast, relational self-goals, prioritized in cultures such as East Asia (Markus & Kitayama, 1991; Shweder et al., 1998), motivate individuals to attend to and remember information about collective activities and significant others.

By experimentally manipulating self-goals of autonomy and relatedness, we are able to make European Americans recall socially orientated memories as East Asians usually do, and make East Asians recall self-focused memories as European Americans usually do (Wang, 2008a; Wang & Ross, 2005; Wang, Shao, & Li, 2010). In one study (Wang & Ross,

2005), for instance, we asked European American and Asian college students to describe themselves as either unique individuals (i.e., autonomous-self prime) or as members of social groups (i.e., relational-self prime). We then asked them to recall their earliest childhood memories. In both cultural groups, those whose autonomous self-goals were activated prior to the recall reported more self-focused memories, whereas those whose relational self-goals were made salient recalled more socially oriented memories. Priming self-goals within individuals thus resulted in the recall of memory content consistent with the self-goals being primed. In our everyday life, self-goals prioritized by our culture tend to be constantly activated given the surrounding cultural artifacts, the language we speak, the people we interact with, and even the food we eat (Hong et al., 2000). In turn, these self-goals modulate how we remember our experiences. These findings have made critical contributions to general cognitive theories of the remembering process (Conway & Pleydell-Pearce, 2000; Wang & Conway, 2006).

As this line of work illustrates, cultural psychology does not stop at finding cultural differences. It examines and reveals the mechanisms in culturally endorsed goals, values, and practices that give rise to the differences. Cultural psychology is not just about *What*, but, more importantly, *Why* and *How*. It not only uncovers the diversity of human cognition and behavior, but also provides theoretical and empirical insights into such diversity and in so doing greatly advances our general understanding of human cognition and behavior. Thus, a researcher who happens to observe group variations in a psychological construct of interest within her multicultural samples, dismissing the variations, partialling them out in analysis as meaningless noises, or simply accepting them as is, may lose potentially groundbreaking findings. Abandoning the assumption that cultural psychology is only about finding group differences will result in a more productive approach and allow the researcher to go ahead and investigate further. A coherent, systematic new research program may be born as a result.

Assumption 2: Cultural psychology does not care about group similarities

This assumption may be held by not only non-cultural psychologists but even by researchers who conduct studies across cultures. For people with this assumption, a cross-cultural study that has failed to find cultural differences is considered to be a failure. But group similarities are just as important as group differences to our understanding of a psychological construct in the cultural context. Whereas group differences may suggest that a psychological construct or process is sensitive to cultural-ecological variables, group similarities often tell us that this construct or process may be closely tied to biological constraints or shared cultural experiences. In developmental research, identifying cultural similarities in addition to differences is particularly valuable for understanding the interplay between biological-cognitive constraints and sociocultural scaffolding in determining developmental outcomes. Our research on the development of future thinking can serve as an example here.

Children’s ability to travel mentally in time to anticipate future happenings develops rapidly over the preschool years and beyond (e.g., Atance, 2008; Suddendorf, 2010). Whereas 3-year-olds often fail to imagine specific future events such as what they may do the next day or what they plan for going to the beach, by age 5, children are quite successful in doing so.

Yet children's future thinking is still heavily dependent on semantic or general knowledge that guides future event construction. Consequently, when they imagine future events, they often include much general information such as "What we always do at birthday parties," in addition to event details specific in a future time and place, such as "What we are going to do at my next birthday party." We suspect that children's reliance on general knowledge in mental time travel may reflect their inchoate neurocognitive processes independent of cultural influence. The reliance on general knowledge in mental time travel has also been found to be associated with aging, whereby, as a result of decline in cognitive functioning and neural processing, older adults represent future events in more general terms than do younger adults (Addis, Wong, & Schacter, 2008; Levine, Svoboda, Hay, Winocur & Moscovitch, 2002). Accordingly, children, regardless of culture, should include more general information in their representations of future events, when compared with adults.

At the same time, culture may influence the provision of specific details in the construction of future events. Given that European American culture places a greater emphasis on autonomy and individuality, idiosyncratic details of personal experiences may highlight one's uniqueness and thus facilitate the development of a unique personal identity (Wang, 2013). Family socialization practices further encourage children to dwell on and articulate details of their personal experiences and plans, which directly facilitates children's ability to represent event-specific details (Hudson, 2006; Nelson & Fivush, 2004). In contrast, in Chinese culture, where a greater emphasis is placed on interrelatedness, attending to details of one's own experiences may signal an excessive focus on the self, incongruent with cultural norms (Wang, 2013). When discussing personal experiences with their young children, Chinese parents tend not to focus on details of the event but rather to emphasize general rules and expectations (Wang, Leichtman, & Davies, 2000; Wang & Fivush, 2005). In line with the differing practices, we have observed that European American children often produce more specific details than do Chinese children when recalling past experiences (Wang, 2006b, 2007). Given the intimate connection between remembering the past and imagining the future - the two complementary components of mental time travel (Addis et al., 2008), this cultural difference should be paralleled in children's representations of future events.

Our studies confirmed these predictions (Wang, Capous, Koh & Hou, 2014; Wang, Hou, Tang, & Wiprovnick, 2011). We asked 7- to 10-year-old children and college students from European American and Chinese cultural backgrounds to imagine and describe future personal events that would occur at a particular time and place. We then coded the protocols using a standard scoring procedure (Levine et al., 2002) that distinguishes between specific details (e.g., actions, people, and locations) and general references (e.g., facts and metacognition). We found that children of the two cultures relied similarly on general knowledge in their future thinking – being equally likely to include general references relative to specific details in their event representations, and yet they did so to a greater extent when compared with adults. Furthermore, European American children and adults generated more specific details than did Chinese in their representations of future events. These cultural similarities and differences together suggest that the development of future thinking reflects the interaction between cognitive-neurological growth and sociocultural influences, a process contributing to both universality and cultural diversity.

Conducting theory-driven, hypothesis-based research is critical to identifying and understanding cultural similarities and differences. In particular, making informed hypotheses about cultural similarities will help researchers make decisions on research design, sample selection, and statistical strategies for effective testing for equivalence and subsequently obtain interpretable findings (Lalonde, Cila, Lou, & Cribbie, 2015). Cultural similarities may suggest universality in the underlying biological-cognitive mechanisms, on the one hand, and shared human conditions and life circumstances, on the other. Whereas cultural similarities are celebrated by researchers who are interested in universal laws of human behavior, they should not deter students of culture because the similarities may convey critical messages about how culture interacts with other factors in shaping psychological functioning. Abandoning the assumption that cultural psychology does not care about group similarities will help researchers avoid the mistake of viewing to find cultural differences as the sole motivation for a cross-cultural study, and stay cognizant of theories and empirical evidence to make informed hypotheses of cultural similarities and differences.

Assumption 3: Cultural psychology only concerns group-level analysis

The next common belief about cultural psychology is that it only approaches a topic at the level of the group and does not care about individual differences. This assumption seems on its face to make sense as research in cultural psychology often involves comparing groups or cultures. To some extent, group-level analysis is inherent both in theory and by design when two or more groups are involved in an empirical study in cultural psychology. For researchers who truly value multiple levels of analysis, this is obviously an important limitation. Yet cultural psychology by no means downplays the importance of individual differences. On the contrary, examining individual differences is not only important but also often necessary to uncover the factors that account for the observed cultural differences. With theoretical insights and appropriate research designs, cultural psychology may allow us to examine a psychological construct simultaneously across groups (group-level analysis), across individuals (individual-level analysis), and within individuals (situational analysis, as demonstrated in the self-priming study by Wang & Ross, 2005 described earlier; also see Hong et al., 2000). Sometimes, the initial group-level analysis of a research program may motivate subsequent individual-level analysis to reveal the mechanisms that give rise to the group differences. Our research on emotion knowledge and the development of autobiographical memory can serve as an example.

One important component of emotion cognition concerns the semantic knowledge of situational antecedents of emotions (e.g., holidays and birthday parties are happy and joyful situations, whereas separation and the loss of a loved one are situations of sadness and grief), often referred to as emotion situation knowledge or emotion knowledge (Frijda, 1986). Important from the current perspective, emotion knowledge is culturally construed and children form their theory of emotions through participating in everyday sociocultural practices. Our research has suggested that the great emphasis on the personal importance of emotion and the associated family practices for raising an “emotionally intelligent” child in European American culture (Chao, 1995; Gottman, 1998; Wang & Fivush, 2005) directly facilitate children’s developing emotion knowledge (Doan & Wang, 2010). In contrast,

emotion knowledge is not highly valued nor actively facilitated in the Chinese cultural context, where a greater emphasis is placed on external behavior than inner psychological states (Chao, 1995; Halberstadt & Lozada, 2011; Wang, 2006c). Consequently, when asked to judge the emotional nature of story situations or to describe situations likely to provoke various emotions, European American preschoolers outperform their Chinese peers regardless of age, and they make more rapid progress in emotion knowledge over time (Wang, 2003; Wang, Hutt, Kulkofsky, McDermott, & Wei, 2006).

Paralleling this cultural difference in emotion knowledge, our studies have consistently shown that when asked to recount autobiographical events (e.g., one thing the child did recently that was special and fun), European American preschoolers often recall more specific episodes (e.g., “getting a new toy”) as well as more specific details from the episodes than do Chinese children, who tend to report more general routine events (e.g., “playing with a toy every day”) and fewer event-specific details (Han, Leichtman & Wang, 1998; Wang, 2004, 2006b; Wang, Capous, Koh, & Hou, 2014). Thus, there appears to be a connection between emotion knowledge and autobiographical memory at the group level: European American preschoolers exhibit greater emotion knowledge and remember more event details than do Chinese children.

This connection makes sense from a cognitive perspective: Emotion knowledge may provide an organizational structure for individuals to appraise, process, and represent significant personal event information, allowing the information to be well integrated into an existing autobiographical knowledge base and be effectively stored and retrieved (Conway & Bekerian, 1987; McGaugh, 2003). As a result, an autobiographical memory with event-specific details may be formed. During development, the acquisition of emotion knowledge may help children understand the personal meaning of specific events, experience appropriate emotions during the events, and organize the event information in a structured fashion, thereby facilitating the retention of and access to the event memories over the long term (Wang, 2001b, 2013). Conceivably, the greater emotion knowledge in European American children may help them better understand, evaluate, and thus remember autobiographical event details for long-term retention, when compared with Chinese children.

Following the theoretical analysis, we conducted a longitudinal study to examine the developmental connection between emotion knowledge and autobiographical memory at both group and individual levels (Wang, 2008b). Confirming previous observations (Wang, 2003; Wang et al., 2006), we found that, at the group level, European American children showed overall greater understanding of emotion situations and also recalled more detailed autobiographical memories than did mainland Chinese and Chinese American children across the preschool years. More important, at the individual level, children who exhibited greater emotion knowledge early on recalled memories with more specific details both concurrently and longitudinally, regardless of culture. Furthermore, emotion knowledge functioned as a potent mediator that accounted for cultural differences in memory recall.

Thus, by following up on our initial group-level analysis, we are able to identify an individual-level mechanism responsible for early memory development. Had we neglected

the parallel cultural differences in emotion knowledge and autobiographical memory in the first place, we might not have considered emotion knowledge to be a candidate mechanism for autobiographical memory and might not have made the subsequent investigation. Thus, abandoning the assumption that cultural psychology only concerns group-level analysis will allow researchers to recognize and further examine the influence of culture on psychological functioning across individuals. It will further help researchers appreciate and engage in research of multi-level analysis. With the initial group-level analysis casting critical light on a psychological construct or process, researchers can examine the construct or process from a new perspective and uncover individual-level mechanisms that might otherwise be obscured in general psychology.

Furthermore, attending to individual-level analysis facilitates the study of culture as a dynamic, internalized meaning system that can vary within groups, across individuals, and even within an individual. Between-group differences, even with a large effect size, do not diminish individual variations that can be traced to differences in internalized goals, values, and worldviews (Masamoto, Grissom, & Dinnel, 2001). Individuals play an active role in cultural learning and thus exhibit variations in their cultural attitudes and identification. This, in turn, can result in individual differences in thinking and behavior (Hermans, 2001; Mascolo & Li, 2004). For example, we have found that, regardless of cultural background, adults and children who exhibit heightened autonomous self-goals tend to recall more detailed and self-focused memories, compared with those who exhibit heightened relational self-goals (Wang, 2001a, 2004, 2006b). Mothers who endorse more autonomous relative to relational self-goals more frequently engage their young children in elaborate memory conversations to encourage autonomy and detailed remembering of the personal past (Wang, 2007).

The dynamic, multi-level influences of culture are especially salient among individuals living in multicultural worlds. Racial and ethnic minority individuals, in particular, tend to grow up in environments with mixed and often contrasting cultural norms, values, and practices. Their cultural experiences are not likely to be the same as those of people in their heritage culture or those of people from the mainstream culture, but are influenced by an array of interacting social and individual factors (Chao & Tseng, 2002; Coll & Marks, 2009; Phinney & Ong, 2007; Syed & Azmitia, 2010). Apart from individual differences in cultural identification, situational factors can further influence the manifestation of culture within an individual (Hong et al., 2000). For instance, when Asian American college students thought of themselves as being American, they recalled more self-focused memories, whereas when they thought of themselves as being Asian, they recalled more socially oriented memories (Wang, 2008a). Similarly, when bilingual Hong Kong Chinese children spoke in Chinese, they endorsed more strongly interdependent values, exhibited greater relational self-goals, and recalled more socially oriented memories, than they did when speaking in English (Wang et al., 2010). These within-group and within-individual processes highlight psychological functioning as a joint product of the individual and the cultural agenda of the community.

Taken together, cultural psychology is more than the typical between-group comparisons. To study cultural influences at multiple levels of analysis and further examine the interaction

between the individual, community, and culture will significantly enrich our understanding of the overarching and dynamic role of culture in human behavior.

Assumption 4: Cultural psychology is irrelevant to basic psychological processes

As my stories at the beginning showed, even some seasoned researchers still hold the assumption that culture should not matter for basic psychological processes. I do not intend to spend much space to argue against this erroneous assumption, as numerous theories and abundant studies have shown that human behavior unfolds as a dynamic transaction between an active individual and his changing environment (e.g., Coll & Marks, 2009; Hermans, 2001; Hong et al., 2000; Kitayama & Cohen D., 2007; Shweder et al., 1998; Sternberg, 2014). Many “basic” psychological processes and constructs for which culture is typically assumed to be irrelevant, such as neuronal functioning (Chiao et al., 2013; Park & Huang, 2010), sensation (Levitan, Ren, Woods, Boesveldt, Chan, McKenzie et al., 2014; Yeshurun & Sobel, 2010), visual illusions (Kitayama, Duffy, Kawamura, & Larsen, 2003; McCauley & Henrich, 2006), face processing (Kelly, Liu, Rodger, Miellet, Ge, & Caldara, 2011), and color perception (Roberson, Davidoff, Davies, & Shapiro, 2005; Taylor, Clifford, & Franklin, 2013), have been shown to be sensitive to cultural influences. Even simple taste preferences are subject to local community practices rather than being part of human genetic composition as commonly assumed. Whereas Indian medical students show the same pattern of preferences as Westerners do, favoring sweetness and finding concentrated sourness and bitterness to be unpleasant, Indian laborers from the Karnataka region have high preferences for sour and bitter tastes (Moskowitz, Kumaraiah, Sharma, Jacobs, & Sharma, 1975). Another example may further help to put this false assumption to rest.

One of the most important findings in perceptual psychology, as relevant to autobiographical memory, is the phenomenon of event segmentation, an automatic perceptual process that separates “what is happening now” from “what just happened.” Cognitive psychologists Jeffery Zacks, Khena Swallow and colleagues, in extending the early work by Newtson (1976), have conducted extensive research on this phenomenon (Swallow, Barch, Head, Maley, Holder, & Zacks, 2011; Zacks, Speer, Vettel, & Jacoby, 2006; Zacks & Swallow, 2007). Data from their behavioral and neuroimaging studies have shown that when presented with a continuous stream of information, just as when one is experiencing an ongoing activity in daily life (e.g., doing laundry), people spontaneously segment the information into discrete meaningful events. These event segments subsequently form the units of encoding and determine what people remember. Event segmentation is therefore a naturally occurring human perceptual mechanism that makes memory for everyday events possible. Because event segmentation is closely related to basic perceptual and conceptual features of the observed activity (e.g., changes in motion) and is relatively unaffected by familiarity and perceived intentionality (Hard, Tversky & Lang, 2006; Kurby & Zacks, 2008), it has been generally assumed (albeit implicitly) to be insusceptible to cultural influences.

Yet findings from cultural psychology have suggested otherwise. Research by Nisbett and colleagues has shown that Asians often engage in holistic perceptual processing, attending to

relationships and similarities among diverse objects and events, whereas Westerners tend to engage in analytic perceptual processing, focusing on salient features of individual objects and events (Nisbett & Miyamoto, 2005; Nisbett, Peng, Choi, & Norenzayan, 2001). These distinctive perceptual styles reflect cultural differences in the basic allocation of attention during stimulus processing (Kitayama & Murata, 2013). They are further supported by the characteristics (e.g., complexity, ambiguity) of the physical environments in respective cultures (Miyamoto, Nisbett, & Masuda, 2006) and are sustained by neural mechanisms (Goh, Hebrank, Sutton, Chee, Sim, & Park, 2013; Hedden, Ketay, Aron, Markus, & Gabrieli, 2008). Conceivably, the holistic processing of information in Asians may lead them to view different objects and events as interrelated. As a result, they may perceive fewer discrete episodes in a continuous flux of information and thus segment the information into smaller number of meaningful units. In comparison, European Americans, attending to salient properties of individual objects and events, may analytically segment the information into a greater number of units.

This is indeed what we found (Wang, 2009a). In one study, Asian and European American college students were presented with a narrative text and were asked to segment the text into discrete events by indicating wherever, in their judgment, one meaningful event ended and another event began. As expected, Asians parsed the text into a smaller number of units than did European Americans. Furthermore, the cultural difference in event segmentation had direct consequences for memory, whereby at an immediate memory test following the reading, Asians recalled fewer event episodes from the text than did European Americans. These findings are significant by suggesting that event segmentation is not a mere product of neural reactions to the perceptual environment, but is shaped by cultural experiences deeply embedded in the environment. They further reveal a perceptual-cognitive mechanism underlying cultural influences on episodic event memory (Wang, 2009b).

Thus, just like other attentional and perceptual processes that can be influenced by culture (Goh et al., 2013; Kelly et al., 2011; Kitayama & Murata, 2013), event segmentation as an automatic perceptual mechanism is also subject to cultural influences. Culturally characteristic environments, beliefs, symbols, artifacts, metaphors, and practices structure the micro and macro contexts of everyday life and further offer varied affordances, requirements, and preferences for distinctive patterns of psychological functioning to unfold (e.g., Coll & Marks, 2009; Hermans, 2001; Hong et al., 2000; Kitayama & Cohen D., 2007; Shweder et al., 1998; Sternberg, 2014). It would be premature to assume any basic psychological processes to be immune to experience and culture. Setting aside the assumption that cultural psychology is irrelevant to basic psychological processes can open the door for researchers to examine human psychological processes and constructs in new perspectives.

Assumption 5: Cultural psychology is only to confirm the generalizability of theories

Cultural psychology is indispensable in confirming the generalizability of theories. Indeed, one of the major contributions of cultural psychology is to allow researchers to test their

theories and hypotheses outside of their usual WEIRD participant pool, namely, participants from Western, Educated, Industrialized, Rich, Democratic societies (Henrich, Heine, & Norenzayan, 2010). Needless to say, a participant pool that represents 16% of world's population and yet constitutes 96% of the samples in psychological research can hardly yield data and theories about *human* behavior without further verification (Hardin et al., 2014). Thus, when developing and testing theories, researchers should consider including multiple cultural groups in their studies to examine the expected mechanism within each group and independent of culture. This is "an extremely useful corrective" for the tendency to over-generalize their findings among Western psychologists (Shweder, 2000, p. 212). The research I described earlier about the relation of emotion knowledge to autobiographical memory (Wang, 2008b, Wang et al., 2006) is an example in which we tested our theory simultaneously across different cultural groups and found the expected effect regardless of culture. Furthermore, including diverse cultural groups when developing and testing theories can help researchers avoid the mistake of treating WEIRD samples as the default or baseline when their response patterns are in fact often extreme and in need of explanation (Apfelbaum et al., 2014). Not only can studies exclusively focus on non-WEIRD samples, but also should treat WEIRD samples, if included, as one of the conditions rather than a "control" group.

Yet to assume that confirming the generalizability of theories is the only purpose of cultural psychology can seriously curtail research efforts and result in the loss of potentially great discoveries. To cultural psychologists, the goal is not just to confirm an existing theory so that the researcher can claim that his theory holds for all human beings across cultures (Shweder, 2000). When that happens, it is great and one can celebrate. However, not all theories developed based on WEIRD populations can prove valid across cultures. When one fails to confirm a theory in non-WEIRD populations, that is when things get more interesting, to cultural psychologists at least. Let me use an example to put this into perspective.

In the general developmental literature, it has been consistently shown that, among middle-class Western children, emotion knowledge is closely associated with a wide range of positive outcomes, including social competence, academic performance, and psychological adjustment (for a review, see Trentacosta & Fine, 2010). Children with higher levels of emotion knowledge are more socially competent and exhibit lower levels of internalizing problems (e.g., Denham, Blair, DeMulder, Levitas, Sawyer, Auerbach-Major, & Queenan, 2003; Fine, Izard, Mostow, Trentacosta, & Ackerman, 2003). These findings are consistent with the notion in Western psychology: Emotion is a critical component of personal experience, an indication of one's true self, and a determinant of behavior. Consequently, being able to anticipate and understand emotional signals and their causes and consequences is necessary for maintaining smooth social transactions and achieving emotion regulation competencies (Halberstadt, & Lozada, 2011; Markus & Kitayama, 1991; Wang, 2006c). However, for people from interdependently oriented societies, norms, roles, and obligations are often more important determinants of behavior than one's psychological states and emotions (Halberstadt, & Lozada, 2011; Markus & Kitayama, 1991). Emotion knowledge is not critical for one's understanding of the self, others, or social situations and therefore may be irrelevant to social adjustment. In fact, advanced emotion knowledge in this cultural

context may suggest an excessive focus on inner psychological states, which makes one at odds with cultural norms and expectations and may further result in negative outcomes.

In two longitudinal studies of European American and Chinese immigrant children in the US, we have obtained just these results (Doan & Wang, under review; Yang & Wang, 2015). In one study, for example, we assessed children's emotion knowledge at 3.5 years of age, using a task to elicit their understanding of situational antecedents of discrete emotions (Doan & Wang, under review). Children's mothers reported on the children's internalizing problems (including anxiety, depression, somatization) using the Behavior Assessment System Children (BASC; Reynolds & Kamphaus, 2002) when children were 7 years of age. After taking into account all group and individual variables (e.g., gender, verbal skills), there was a significant interaction between emotion knowledge and culture in predicting children's internalizing problems. Consistent with the general findings with Western children (Trentacosta & Fine, 2010), advanced emotion knowledge at the preschool age was associated with decreased internalizing problems for European American children more than 3 years later. However, advanced emotion knowledge was associated with increased internalizing problems for Chinese immigrant children.

Thus, the theory about the positive effects of emotion knowledge on social adjustment and well-being is not confirmed in our Chinese samples. Instead, culture plays a moderating role by shaping the meaning and importance of emotion knowledge and in turn, its implications for well-being. Emotional intelligence is construed differently and therefore serves varied functions in different cultures (Chen, Liu, Ellis, & Zarbatany, 2016). These findings challenge the current theory by showing that it is the interaction between individual social-cognitive skills and cultural expectations that ultimately determines developmental outcomes. The lack of generalizability of a theory across cultures can provide researchers with unique opportunities to revise and extend the theory and further contribute to the general understanding of human behavior. Cultural psychology plays a critical role in not only the confirmation but also, equally if not more important, the modification and enrichment of existing theories.

Yet, in an even more exciting situation, cultural psychology allows us to uncover mechanisms that are unique to non-Western populations, mechanisms that would be difficult, if not impossible, to detect in research with WEIRD samples. An example is called for here. It has been a well-established finding in middle-class Western families that parental discussion of mental states with young children and children's own references to mental states in their independent narratives are associated with advanced theory of mind (e.g., Ruffman, Slade, & Crowe, 2002; Symons, 2004; Symons, Fossum, & Collins, 2006). Yet we have observed in our research with Chinese and Chinese Americans samples that, in line with their cultural emphasis on being reticent about subjective experiences (Wang, 2013), Chinese mothers do not frequently discuss mental states with their preschoolers (Wang, 2001b; Wang & Fivush, 2005), and that Chinese youngsters themselves do not frequently talk about mental states when recounting their experiences (Han, Leichtman, & Wang, 1998; Wang, 2004). On the other hand, compared with their Western counterparts, Chinese mothers and children more frequently talk about other people, discussing their behaviors, actions and roles or merely referring to their presence (Han et al., 1998; Wang, 2001b,

2004). Given the importance of significant others and social relations in defining the personhood in Chinese culture (Markus & Kitayama, 1991; Shweder et al., 1998; Wang, 2013), would such talk about others, not necessarily about their mental states but mere references to them, constitute a unique pathway for Chinese children's development of theory of mind? If so, this practice would seem to be an adaptive strategy that facilities children's sociocognitive skills on the one hand and conforms cultural expectations for reticence about subjective states on the other.

We set out to test this hypothesis (Lu, Su, & Wang, 2008, study 1). First, we followed a group of 3- to 4-year-old Chinese children for a year. We tested their theory of mind using false-belief tasks and interviewed them for their autobiographical memory. The preschool age is a critical time when children come to pass false-belief tasks (e.g., Hogrefe, Wimmer, & Perner, 1986; Ruffman et al., 2002) and rapidly develop autobiographical memory skills (Nelson & Fivush, 2004). Understandably, some children failed the false-belief tasks at the initial time point. One year later, we tested the children again on their theory of mind and autobiographical memory to examine whether the increase in talking about others in autobiographical memory would contribute to children's understanding of false beliefs. We found that among the children who initially failed the false-belief tasks, only those who increased references to others in their memories between the two time points were able to succeed in the tasks a year later. Those who did not increase other-references in their memories continued to fail the tasks. Interestingly, whether the children were able to pass the false-belief tasks was unrelated to their references to mental states in their memories, in contrast to the general findings with Western children (e.g., Ruffman et al., 2002; Symons, 2004; Symons et al., 2006).

In a follow-up study, we used a training paradigm directly to examine whether attending to others facilitates the development of theory of mind in Chinese children (Lu et al., 2008, study 2). Preschool children received four short story-telling sessions within a period of two weeks. In each session, a researcher first told children a story and then asked children questions that embedded the experimental manipulation. For children in the experimental group, the researcher asked questions that directed the children's attention to the characters in the story, such as who were present in the story and what they did. For children in the control group, the researcher asked questions about the physical features and objects in the story, such as where the story took place and what colors the objects were. Children's theory of mind was tested before and after the sessions. We found that after merely 2 weeks' training, children in the experimental group performed substantially better in the posttest than in the pretest, whereas children in the control group showed no improvement in their theory-of-mind performance. Training children to attend to story characters' roles and behaviors thus facilitated the children's theory of mind. This training procedure closely resembles the children's everyday experience in a cultural context that emphasizes attending to others while devaluing explicit talk about inner thoughts and desires.

Thus, we are able to identify an important pathway to the development of theory of mind in Children preschoolers. Had we mindlessly committed ourselves to the "common wisdom" that talking about the mind facilitates the understanding of mind, had we not wondered how Chinese children develop theory of mind given their limited exposure to explicit discussion

about internal states, had we not considered the cultural conditions that shape the form, content, and function of communication, and had we not worked with Chinese children and families in the first place, we would not have found that talking about others constitutes a mechanism for the development of theory of mind. Setting aside the assumption that cultural psychology is only to confirm the generalizability of theories will allow researchers to look beyond exiting paradigms and uncover new mechanisms.

Integrating Cultural Psychology in Research

"Cultural psychology is not just nice," as Robert Sternberg puts it (2014, p. 208). It is necessary for a true psychological science that can self-reflect and reduce and eliminate culture-bound biases and preconceptions, a true psychological science that constructs a universal system of knowledge about human behavior not on a local set of laws and principles but diverse cultural experiences. Without cultural psychology, we would be blindfolded to think that we are seeking the truth about human nature but in fact we are failing to fully understand even basic processes like perceptual analysis and basic constructs like emotional intelligence. In many ways, cultural psychology functions as a mirror that compels psychologists to reflect on their work and critically evaluate their theories and findings, to go beyond the surface and convenience to question what truly matters, and to embrace the complexity of human experiences with an open mind and open heart.

Our 20 years of research on social cognition and development, although with its limits in the methodological scope of the subject matters and the range of cultural groups involved, has highlighted five important lessons. These lessons allow us to see through some of the most condescending assumptions and myths about cultural psychology, and to appreciate the pivotal role of cultural psychology in building a true psychological science.

Lesson 1: Cultural psychology is not just about finding group differences; it goes beyond "Different cultures are different" and explains, predicts, and even eliminates group differences.

Lesson 2: Cultural psychology cares about not only group differences but also group similarities and, in so doing, allows researchers to examine the interplay between cultural variables and biological-cognitive constraints in determining behavioral outcomes.

Lesson 3: Cultural psychology simultaneously involves multiple levels of analysis, in which it uncovers underlying individual-level mechanisms that give rise to group differences and highlights the active role of individuals in shaping their cultural experiences.

Lesson 4: Cultural psychology is relevant to basic psychological processes and can provide critical information about experiential correlates underlying the processes.

Lesson 5: Cultural psychology is not only to confirm the generalizability of theories across cultural groups, but also to examine the variability of commonly assumed "universal" laws and principles in non-Western cultural contexts and to further discover unique psychological mechanisms in these contexts.

Yet simply acknowledging the importance of culture and cultural psychology is not enough. Neither is it enough to simply acknowledge the limitations of one's findings due to a focus on WEIRD samples. In our increasingly multicultural world, it is a pressing, necessary and pragmatic task for us all to actively incorporate cultural psychology into our research programs. For seasoned researchers and students in training alike, there are some important steps to take:

- *Keep an open mind*. No matter whether we are studying basic neural-cognitive processes or complex social behaviors, stay open to the idea that these processes and behaviors may be subject to cultural influences.
- *Do our homework*. Familiarize ourselves with existing cultural theories and empirical data relevant to the psychological process or construct of our interest. There are many excellent accessible resources (e.g., Heine, 2016) for us to learn basic principles and methods of cultural psychology.
- *Embrace our multicultural samples*. Multicultural, multiethnic samples have become increasingly common in our typical Psych 101 participant pools. Welcome them with open arms. Encourage and actively recruit participants from non-Western cultures in our research and ensure sufficient sample sizes.
- *Take culture into account*. Systematically collect participants' demographic information, including their cultural and ethnic backgrounds, as well as gender, social-economic status, religion, geographical region and other information pertinent to our research questions.
- *Appreciate "incidental" findings*. Remain sensitive and attuned to group variations that may unexpectedly emerge in our multicultural samples. Do not discard them but stay intellectually curious. Follow up on the earlier observations with high-powered studies.
- *Conduct hypothesis-based research*. Using our knowledge in cultural psychology, develop hypothesis-based research to systematically investigate, confirm, and further explain the observed group variations.
- *Do not settle*. Do not stop at just finding differences between cultural groups. If we suspect that certain cultural variables may play a role, find or develop appropriate measures for these variables and include them in the research design.
- *Consider nature X nurture*. Reflect on cultural differences and similarities in earlier observations. Examine the interaction between culturally variant and invariant factors in shaping human cognition and behavior.
- *Be a cultural methodologist*. Take advantage of the unique methodological tools of cultural psychology. Examine the psychological construct of our interest at both group and individual levels and understand the dynamic relations across different levels of analysis.

- *Study culture within the person*. Understand culture as not only shared norms, values, and practices within a group, but also internalized norms, values, and practices within an individual. Measure individuals' cultural attitudes and identification and test the effects on psychological processes and functions.
- *Build theories*. Test our theories in diverse cultural groups. Continue our pursuit even when the generalizability is not confirmed, so as to enrich our research programs and guide them to previously unthought-of new directions.

When we set aside any presumptions, we can better see that cultural psychology represents a unique theoretical perspective equipped with unique methods. It provides us with additional tools to understand human behavior and psychological processes. It helps us recognize, reduce, and eliminate biases, uncover new mechanisms and develop new theories, and understand human cognition and behavior as a constructive process that takes place in the interaction between a person and her residing environment. And when we set aside any presumptions, we can come to strategically evaluate and plan the integration of cultural psychology into our research programs.

We all *should* and *can* be cultural psychologists.

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