

# Culture and Judgment and Decision Making: The Constructivist Turn

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## Abstract

Cultural influences on individual judgment and decision making are increasingly understood in terms of dynamic constructive processing and the structures in social environments that shape distinct processing styles, directing initial attentional foci, activating particular judgment schemas and decision strategies, and ultimately reinforcing some judgment and decision making (JDM) patterns over others. These structures include the society's observable patterns of normative actions and responses, its prevalent forms of interpersonal interaction, the typical size and density of social networks, the ideational frames represented publically in texts and institutions, and so forth. We review this emerging perspective on culture and JDM in both economic and social domains, noting the distinctive insights it yields. We suggest new ways that cultural research is becoming relevant to mainstream JDM researchers, while also recognizing issues in need of further research.

## Keywords

judgment and decision making, culture, preference construction, social construction.

The field of judgment and decision making (JDM) encompasses the study of economic and policy choices that involve assessing risks and benefits (Kahneman & Tversky, 1984) and of interpersonal and social choices that involve attributions and expectancies (Nisbett & Ross, 1980). Although traditionally cultural psychology and JDM scarcely overlapped, an informal analysis of representative journals<sup>1</sup> suggests that interest in culture within JDM is increasing; the culture literature features increasing rates of social choice (11% vs. 15%) and economic choice (2% vs. 3%) research and, correspondingly, the rate of culture-focused research is increasing in the social JDM (1% vs. 5%) and economic JDM fields (2% vs. 3%).

The uptick in JDM attention to culture may reflect changes in how psychologists model cultural influence. The dominant past model accounts for country effects, usually contrasts between Western and East Asian nations, in terms of traits such as individualist versus collectivist value orientations (Schwartz, 1992; Triandis, 2001), independent versus interdependent self-concepts (Markus & Kitayama, 1991), or individuating versus holistic cognitive styles (Nisbett, 2003). Drawing tools from personality psychology, the trait approach offered a way to go beyond using nationality as a proxy for culture. Yet it may be ultimately limited in its appeal to JDM, a field in which theoretical tastes favor task and context effects rather than individual difference effects.

In the past decade, trait approaches to culture have encountered empirical challenges. The central hypothesis that cross-national differences in JDM would be mediated by individual-difference measures of values, self-concepts, and cognitive style has not found consistent support (Cole, 1996; Oyserman, Coon, & Kimmelmeier, 2002). Whereas trait accounts posit stable worldviews, cultural differences in JDM have been found to vary with task conditions, such as attentional load, time pressure, and choice format (e.g., Briley, Morris, & Simonson, 2000; Chiu, Morris, Hong, & Menon, 2000; Knowles et al., 2001). Finally, whereas trait models hold that to change worldviews imprinted by early socialization requires a sustained and traumatic enculturation process (Berry, 1992), recent research highlights that many immigrants and other biculturals switch effortlessly between heritage and host culture styles of judgment as the situation demands (Hong, Morris, Chiu, & Benet-Martinez, 2000).

In response to such evidence, researchers increasingly propose that cultural styles of JDM reflect not fixed worldviews but evoked frames of mind—situated meaning construction

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processes reflecting internal cultural representations from memory as well as external structures in the cultural environment (e.g., Morris, Menon, & Ames, 2001). On this constructivist view, cultures are traditions of thought and practice, and living in one imbues a person with a host of representations (schemas, categories, rules, procedures, goals, etc.) that are discrete yet loosely associated in memory. Cultural representations guide judgments and decisions to the extent that they become activated in framing a problem so as to constrain attention, evidential search, and inference. Activation depends largely on applicability and accessibility, which in turn hinges on recency and frequency of use (Higgins, 1996). Frames coalesce through integrating internally accessible schemas with features of the external task as it is encountered by the perceiver, including its many layers of context: the place, the people present, the relationships a perceiver carries into the situation, the institutionalized practices or activities surrounding the task, and so forth. In its attention to the many roles of external environmental structures, constructivism has much in common with sociocultural approaches (Cole, 1996) rooted in Vygotsky's (1962/1986) emphasis on the proximal environment and also with contemporary models of situated cognition (Smith & Semin, 2007).

Within JDM research, constructivist approaches are not new. A theoretical impetus of JDM research on economic decisions (Kahneman & Tversky, 1984; Simon, 1957) is challenging the economists' assumption of stable, prestored preferences by demonstrating that decisions depend on features of the decision and task context. These features affect constructed preferences through selective attention (Weber & Johnson, 2009) and memory processes, including activation of knowledge structures (Weber & Johnson, 2006) and task environment conditioned retrieval processes (Johnson, Haubl, & Keinan, 2007; Weber et al., 2007). Likewise, research on social judgment and choice emphasizes the role of contextual and task features in activating schemas and of schemas in constraining attention and interpretation (Higgins, 1996; Nisbett & Ross, 1980). The constructivist turn in cultural psychology has the potential to inform JDM literatures by drawing attention to a yet wider range of constructive processes, especially ways in which choice schemas and procedures are primed or reinforced by culturally specific features of the social environment that provide the contexts of judgment and decision making.

In this article, we review emerging constructivist, structuralist accounts in several JDM areas. In the social domain, we consider causal attribution judgments and conflict decisions. Turning to the economic domain, we examine the literature on overconfidence, risk perception, and the related area of risky choice. Finally, we consider the fast-growing area of intertemporal choice.

## Causal Attributions

The "fundamental attribution error" (Nisbett & Ross, 1980) refers to excessive attention to others' personal dispositions as an explanation of their behavior while overlooking

situational causes. Cultures differ in this tendency in everyday explanations (Miller, 1984) and judgments of causal relevance (Choi, Dalal, Kim-Prieto, & Park, 2003). Morris and Peng (1994) tested online causal perceptions with animated displays—for example, one fish swimming in front of others could be traced to internal goals (leading) or situational pressure (being chased)—and found that American perceivers attributed more to the actor's internal properties, whereas Chinese perceivers attributed more to the situational context. Masuda and Nisbett (2006) presented fish displays followed by a memory task and found that American perceivers remembered more about the central figure in the scene and that East Asians remembered more about the surrounding context. Similar differences show in saccadic eye movements (H.F. Chua, Boland, & Nisbett, 2005) and change detection accuracy (Boduroglu, Shah, & Nisbett, 2009). In sum, starting with basic visual attention and continuing to attribution of causality for behavior, Westerners tend to focus in on the central figure, whereas Easterners focus more broadly on the context.

Could this difference in constructive processing reflect features in the environments of Western and East Asian perceivers? One feature that differs between the two cultures is behavioral norms. First, perceivers observe different norms of action. The contingencies of action differ—for instance, personality accounts for more variance and situational constraints account for less variance in Britain as compared with Japan (Argyle, Shimoda, & Little, 1978). Investigating differences in the press of situations across 35 countries, Gelfand and collaborators (Gelfand, 2008; Gelfand, Nishii, & Raver, 2006) found that perceived situational constraint is associated with institutional "tightness" (e.g., strictness of rule enforcement by family, school, and legal institutions) and psychological "uptightness" about situations (e.g., high impulse control, self-monitoring, and prevention focus). Situational action norms may give rise to situational attribution biases: Frequent observation of situation-driven behavior would render perceivers' situational-causality schemas chronically accessible, and the accuracy (or ecological rationality) of situational attributions would reinforce their use as a default attributional strategy.

In addition to norms of action, settings also differ in norms of judgment. Perceivers notice the modal attributions of their peers and consciously and nonconsciously imitate these strategies. Several recent studies find strikingly that East–West differences in attribution are mediated less by personal beliefs in values or implicit theories than by perceived norms of judgment or perceived consensus (Shteynberg, Gelfand, & Kim, 2009; Zou et al., 2009). Consistent with this, Chiu et al. (2000) found that culturally typical attribution differences are most likely when individuals are motivated to think consensually or conventionally (Kruglanski, Pierro, Mannetti, & De Grada, 2006).

If the dynamic through which norms influence people is like marination (immersion and slow permeation), then the influence of *cultural primes* is more like detonation (triggering an internal buried device). Cultural tendencies in judgment can be primed in two distinct ways. Direct semantic priming of

individualism–collectivism, independence–interdependence, and individuation–contextualization has been demonstrated by engaging these schemas with prior tasks, such as reading and commenting on stories (Trafimow, Triandis, & Goto, 1991) or circling “I” and “we” (Gardner, Gabriel, & Lee, 1999). This manipulation primes individuating and contextualizing processing, even for nonsocial stimuli (Kuhnen & Oyserman, 2002; Oyserman & Lee, 2008). East Asian environments contain ubiquitous primes including collectivistically structured relationships, organizations, and institutions (Hofstede, 1991); holistic intellectual and medical traditions (Nisbett, 2003); and even contextually stimulating architecture and urban design (Miyamoto, Nisbett, & Masuda, 2006). Self-conceptions may also be differentially primed by distinctive linguistic practices, such as the East Asian practices of dropping first-person pronouns or addressing groups rather than individuals (Kashima, 2008).

In addition to direct priming, there is indirect or associative priming. In every culture there are representative emblems and symbols—images, sounds, and activities—that act like magnets of meaning in that they powerfully evoke or make accessible other representations of the culture. For an American, the sound of jazz music, the taste of apple pie, or the sight of a baseball game might stir up culturally related memories and emotions, as well as independence, individualism, and individuating schemas, not because of any semantic overlap, but simply because these American icons are central nodes in the cognitive network of American representations. Hong et al. (2000) exposed Western-Chinese biculturals in Hong Kong (HK) to iconic images of Western (Chinese) culture and found shifts toward more dispositional (contextual) biases in attributions. Cultural symbols are encountered not only visually but verbally, in the subtle references to shared concepts that ground ingroup conversations (Kashima, 2008). Fu et al. (2007) showed that being primed by subtle verbal references, like getting inside jokes, requires insider knowledge. Chinese-American biculturals were primed by both American references (e.g., “A game played with diamond, glove, and a ball” for baseball) and Chinese references (“An underground army” for the terra cotta soldiers of Xi’an), whereas monocultural participants were only primed by references to their own culture. In sum, associative priming can be triggered by the culturally laden images and discourses that saturate a cultural environment. Although the mechanism of behavioral norms would contribute to the chronic accessibility of culturally typical schemas, direct and associative priming would add frequent bursts of enhanced temporary accessibility. Hence, without positing fixed worldviews, it still may be the case that these schemas shape frames of judgment much of the time.

## Conflict Decisions

Cooperate or compete, accommodate or resist, conform or dissent? Such decisions within social interactions involve conflict between collective interests and self interest. In ingroup interactions, East Asians have a stronger tendency toward

collective-interest strategies than do Westerners (Triandis, 2001). These preferences may arise from Easterners’ broader attentional focus and their more (charitably) contextualist attributions (Morris, Leung, & Iyengar, 2004; Valenzuela, Srivastava, & Lee, 2005). Also there is evidence that the cross-national differences in group-oriented choices are mediated by perceived norms beyond effects of personal values (Ohbuchi & Saito, 2007; Zou et al., 2009), and, consistent with the norm mechanism, differences are exhibited most when individuals have motivations to think consensually or conventionally (Fu et al., 2007). Priming is also important. In HK biculturals, compromising tendencies are elicited by exposure to collectivist (individualist) words (Briley & Wyer, 2002) or Chinese (English) language instructions (Briley et al., 2000). Questions about Chinese (American) holidays induced Chinese-Americans toward more cooperative decisions in a prisoner’s dilemma game and toward preferences for majority rather than unique options in a set (LeBoeuf, Shafir, & Bayuk, 2009). Wong and Hong (2005) showed bicultural HK students either Chinese (kung fu), American (football), or culturally neutral pictures, and then gave them a prisoners’ dilemma facing ingroup or outgroup counterparts. Cooperation was highest in the Chinese prime condition for ingroup but not outgroup counterparts; that is, more typically Chinese decisions were made when the cultural schema was accessible and applicable.

In addition to behavioral norms and primes, other environmental properties may figure in culturally typical conflict decisions. Particularly important in formal negotiations are the constituencies to whom a negotiator must answer. Gelfand and Realo (1999) argued that because accountability to audiences with known views creates a tendency to adhere to these views (Lerner & Tetlock, 1999), negotiators accountable to cultural ingroups would adhere to cultural norms about conflict resolution. They found that such accountability made collectivistic negotiators more cooperative, whereas it made individualistic negotiators more competitive.

In informal conflicts, the pattern of greater Eastern ingroup cooperation may reflect differences in social networks. Because of higher population density and lower levels of geographic, social, and career mobility, Eastern societies feature dense networks, meaning that a person’s associates or contacts are likely to be themselves interconnected. Network surveys show for instance that Chinese managers have denser professional networks than matched American managers (R.Y.J. Chua, Morris, & Ingram, 2009). Density entails that relationships are embedded within ties to mutually known third parties, which enables reputational sanctioning against defection and hence provides social insurance (Menon & Morris, 2001). The pattern of Asians being more likely than Americans to avoid conflict and compromise with friends but not with strangers has been traced to different values (Leung, 1988), but it may instead reflect decision frames constructed in response to different network contexts (Morris, Podolny, & Ariel, 2000). Likewise, whereas Kim and Markus (1999) interpreted cultural differences in preference for unique rather than majority

options in terms of dispositional need for uniqueness, Yamagishi, Hashimoto, and Schug (2008) argued that Japanese default to the collective-interest strategy because of the high costs in dense networks being sanctioned for acting selfishly, showing that the Japanese preference for majority options declines when sanctioning is inapplicable (i.e., when the participant is the last of the group to choose) or infeasible (when the participant's choice is anonymous). Similarly, Japanese in trust games do not decide to trust more in general; they are more likely to trust others with whom they have initiated a relationship and they are less likely to trust strangers (Kuwabara et al., 2007). In sum, a penchant to cooperate within enduring, committed relationships may be an equilibrium response to dense networks.

Further research highlights the structure of interpersonal interaction situations. In a research program on cultural differences in self-related emotions, Kitayama and colleagues (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Kitayama, Mesquita, & Karasawa, 2006; Morling, Kitayama, & Miyamoto, 2002) sampled the everyday interaction situations that Americans and Japanese experience most frequently, then presented representative sets of described situations (with their cultural provenance obscured) to fresh sets of participants, asking for their (simulated) response to each. They consistently found situation-culture effects: American situations tend to evoke feelings of self-enhancement and efficacy, and Japanese situations tend to evoke self-critical feelings yet relatedness to others. Kitayama et al. (1997) proposed that the American and Japanese settings are conducive to these different modes of self experience because they make different biased pools of symbolic resources available for the construction of meanings and emotional responses. Results also show participant-culture effects in which Americans were generally more likely to exhibit the independent-self responses and Japanese were more likely to exhibit the interdependent responses, suggesting that the responses afforded or invited by the modal situations in a given society become default responses.<sup>2</sup>

Taking this approach to the domain of conflict decisions, Savani, Morris, Naidu, Kumar, and Berlia (in press) have proposed that the situation-scapes found in America and those found in India differentially reinforce accommodative responses to influence attempts. Content analysis of sampled situations showed that Indian influence attempts are twice as likely to be driven by other-serving motives, whether sampled from influencees or influencers. Participants were shown a large set of representative Indian and American situations and asked to report their expectation about the consequences of accommodation and their decision to accommodate or not. Results showed predicted situation-culture and participant-culture effects; situations from India evoked more positive expectations and more accommodation decisions, and Indian participants generally accommodated more than did the American participants. It is interesting to note that the participant-culture effect diminished over the many trials (with increasing exposure to situations from the other culture), whereas the situation-culture effect did not. This suggests participants'

decision tendencies are tuned to the affordances of their society's situation-scape while still being dynamically adaptive to recent experiences.

## Confidence Judgments

Judging the accuracy of one's beliefs is important in both social and economic domains. Although overconfidence is present in Western cultures, Yates, Lee, and Bush (1997) found it to be stronger in East Asian societies (albeit not Japan). A common strategy for constructing confidence judgments is comparing reasons for and against one's answer. Yates, Lee, and Shinotsuka (1996) prompted American, Japanese, and Chinese respondents to generate reasons that argued either for or against the correctness of their answers to general knowledge questions. For the Japanese and American sample, 48% and 41% of generated reasons were reasons that critically argued against respondents' answers. This was only true for 24% of reasons for the Chinese sample. Yates et al. (1996) traces this to differences in educational practices encouraging critical thinking, which reinforce counterarguing as a mental habit.

## Risk Perception

Perceptions of risk in a societal policy or choice option are not just reflections of objective information; they are constructed judgments that differ across individuals and cultures. Luce and Weber (1986) proposed that such perceptions can be modeled as conjoint expected risk (CER): the linear combination of the probability of breaking even, of a gain, and of a loss; and the conditional expectations of power-function transformed gains and losses, respectively. The CER model captures both similarities in people's risk judgments (by a common functional form through which probabilities and outcomes of risky options are combined) and individual and group differences (by model parameters that reflect the relative attention and thus weight given to different components). When the CER model was fitted to financial risk judgments of business students and security analysts in HK, Taiwan, the Netherlands, and the United States, the differences in model parameters corresponded to a Chinese-Western division (Bontempo, Bottom, & Weber, 1997) consistent with country level differences in uncertainty avoidance (Hofstede, 1991). Also, positive outcomes reduced risk perceptions less for the Chinese than it did for the Western samples, and the magnitude of losses had a larger effect on the risk perceptions for the Chinese samples.

The psychometric paradigm (Slovic, Fischhoff, & Lichtenstein, 1986) treats risk perception as a multidimensional construct, incorporating more than just possible outcomes and their probabilities. Laypeople's perceptions of risk are systematically biased (compared with experts) in the way they overweight risk associated with infrequent, catastrophic, and involuntary events and underweight the risk associated with frequent, familiar, and voluntary events. Although some cultural differences in risk perception for technological hazards have been found, respondents across countries or cultures seem

to share the same factor structure. Differences in where cultures placed a particular hazard (e.g., nuclear power) within this factor space are interpretable given their specific national exposures and socioeconomic concerns (see Weber & Hsee, 2000).

Hypotheses about cultural differences in perceptions of technology hazards and other societal risks follow from Douglas and Wildavsky's (1982) theory that, through collective-level processes of selectively attending and ignoring evidence, cultures construe particular activities as dangerous in order to maintain their structure of social relationships and corresponding cultural worldviews. According to the theory, individualist cultures where people interact according to market logic should dismiss risks of environmental catastrophe from overconsumption, as it suggests failure of market institutions, yet should exaggerate risks associated with socialized medicine. Hierarchist cultures should minimize the risk of nuclear power, as such technologies inherently involve deference to experts, yet should exaggerate the dangers of civil disobedience, as this empowers nonelites. While rejecting the functionalist assumptions of Douglas and Wildavsky's theory, researchers have investigated its assertions about the affinities between particular risk perceptions and worldviews by surveying individual and group differences. Dake (1991) found individual differences in social attitudes related to the cultural dimensions correlated systematically with perceived political and technological risks (albeit not with economic risks). Much evidence suggests that White males have more individualistic and hierarchist attitudes and more reduced perceptions of technological risks than do other Americans (e.g., Finucane et al., 2000). In a representative sample of Americans (Kahan, Braman, Gastil, Slovic, & Mertz, 2007), attitudinal measures of cultural worldviews predicted perceived policy risks beyond that predicted by race and gender. Results suggest risk perceptions are distorted by identity-protective motivated reasoning. A question for future research is to what extent the distinctive cultural attitudes and risk perceptions of White males are evoked constructively by their distinctive interaction, relationship, and institutional structures.

## Risky Choice

Preference for risk in the financial domain has traditionally been modeled within the expected utility framework, inferring risk aversion or risk seeking from the shape of the utility function inferred from a set of choices. However, alternative formalizations exist, including the risk–return framework (Weber & Milliman, 1997), in which willingness to pay (WTP) for a risky option is seen as a compromise between the option's return and its risk, a tradeoff between greed and fear. Whereas finance models equate “return” with the expected value of the option and “risk” with its variance and assume that decision makers seek to minimize the risk of a portfolio for a given level of expected return, psychophysical models treat risk and return as psychological variables that can vary as a function of situational contexts, including cultural settings. Weber and Hsee (1998) presented American, German, Polish, and Chinese

participants with a set of financial investment options and measured WTP and perceived riskiness, finding cross-national differences on both. Chinese showed lowest risk perception and highest WTP, and Americans were the opposite extreme. In a regression of WTP on expected return and perceived risk, the coefficient on perceived risk (i.e., risk attitude) did not differ as a function of nationality. Cross-national differences in WTP were completely accounted for by those in risk perception.

How is it that Chinese and Americans construct and act on different perceptions of the same financial choice options? Compelling evidence suggests the perceived risk of financial choices depends on the implicit context of the decision maker's social network (Weber & Hsee, 1999). Collectivist societies are often described as tightly knit social fabrics in which individuals are suspended in a web of interdependent relationships. Hsee and Weber (1999) compared the size and nature of social networks of students in the United States, the People's Republic of China, and a range of other Western countries and found that economic support networks tend to be larger in collectivist settings than they are in individualist settings. Recent research reveals that, compared with Americans, Chinese managers' economic support relationships overlap more with their friendships and are more likely to be imbued with affective trust; in short, Chinese society involves more relationships combining economic support and affectivity, like family ties (R. Y. J. Chua, Morris, & Ingram, 2009). The *cushion hypothesis* (Weber & Hsee, 1998) argues that large networks of these economic support ties insure individuals against financial worst-case outcomes, and Hsee and Weber (1999) found that the size of this network mediated cross-cultural differences in risk preferences. The cushion hypothesis also correctly predicted that cross-cultural differences in risk preference between Chinese and Americans were restricted to outcomes that can be transferred between members of a network (i.e., money, but not health or grades; Hsee & Weber, 1999).

Weber, Hsee, and Sokolowska (1998) compared the content of Chinese and American proverbs, using ratings by both Chinese and American evaluators, to gain further insight into the sources of cultural differences in risk taking—in particular, whether observed differences in behavior reflect long-standing differences in cultural values or differences in the current socio-economic or political situation. Regardless of the nationality of the raters, Chinese proverbs were judged to advise greater risk taking than American proverbs, suggesting that observed differences in risk-taking stem, at least in part, from norms encoded in traditional teachings. In addition, Chinese raters perceived both Chinese and American proverbs to advocate greater risk taking than did American raters, but only for financial risks and not for social risks, as expected because collective financial (or material) risk insurance requires that social networks will be maintained and social risks avoided.

## Intertemporal Choice

Economic choices often involve dilemmas between options that vary in amount and timing. Surprisingly little research has

examined cultural influences on intertemporal choice, given that cultures differ in perceptions of time, attitudes towards time, and valuation of the long term (Gell, 1992; Hofstede, 1991). Researchers may assume that the drivers of people's discounting of delayed outcomes are mostly biological and thus (more) universal across cultures. A hyperbolic discount function, which models steep discounting for initial delays and more moderate discounting for subsequent delays, seems to fit not just human choices but those of a wide range of other species (Green & Myerson, 2004). For instance, a recent paper reporting Japanese studies of delay discounting does not consider cultural influence (Ohmura, Takahashi, & Kitamura, 2005).

Yet there is also much evidence that delay decisions vary with individual and contextual differences, suggesting they involve constructive processing and not just hardwired biological responses. Age greatly affects delay discounting (Read & Read, 2004). Discounting is greater for delayed gains than for losses, for smaller outcomes than for larger outcomes, and for health than for monetary or environmental outcomes (Hardisty & Weber, 2009). Discounting is also lower in the context of accelerating consumption than it is for delaying consumption (Weber et al., 2007). Further, the link between Asian cultures and patience is suggested by the higher savings rates and educational attainments among Asian-Americans in comparison with White Americans (Springstead & Wilson, 2000; Sue & Okazaki, 1990). An initial test by Du, Green, and Myerson (2002) compared American, Chinese, and Japanese graduate students in the United States in both an intertemporal and a risky choice task. The risky choice results replicated Weber and Hsee's (1998) results (i.e., the Chinese were significantly less risk averse than the Americans and Japanese students). The intertemporal choice results showed hyperbolic discount functions for all three groups, but Americans and Chinese discounted delayed rewards more than the Japanese. Cross-national differences in pace of life are unable to account for these differences, as Japan and Western countries are similarly fast-paced (Levine & Norenzayan, 1999). On measures of long-term orientation (Hofstede, 1991), Japan scores far higher than the U.S. but so do the culturally Chinese countries. So what features of Japanese communities may be conducive to cultural patience? Perhaps their financial-support networks are, if not larger, more enduring and this cushions against delay. Also, it may be that Chinese societies as well as Japanese societies have relational and institutional structures conducive to patience, yet Chinese graduate students in the U.S. are comparatively more cut off from these than are their Japanese counterparts. More research is needed, and constructivist analyses call our attention to the influence of decision makers' present, proximal environment and not just their cultural heritage.

Evidence that Chinese culture supports financial patience like other East Asian cultures comes from priming studies with bicultural populations. Chen, Ng, and Rao (2005) exposed bicultural Singaporean students to Western (vs. Singaporean) icons and found they increased several measures of impatience, including WTP for 1-day book delivery as opposed to 5-day

book delivery. Benjamin, Choi, and Strickland (in press) made Asian-Americans' ethnic identity salient by varying the presence of questions about family languages and immigration history within a background questionnaire and then presented them with dozens of intertemporal choices, finding that Asian identity salience begets more patient choices.

## Insights From the Constructivist Approach

Although cultural constructivist research is just beginning in some areas of JDM, our review illustrates ways in which this approach elucidates novel aspects of cultural influences. Two distinguishing features of the constructivist view are its emphasis on the dynamics of schema activation and the external features of social environments that play numerous roles in perpetuating cultural patterns of judgments and decisions.

The premise that cultural representations are dynamic schemas rather than ever-present personality traits has sensitized researchers to the variability in how much a person's cultural background affects his or her judgments and decisions from one occasion to the next. The notion that cultural representations are not always active also enables an understanding of how bicultural or polycultural individuals can be fluent in more than one culture without simply blending their biases. In these ways, the premise of dynamic representations moves cultural psychology away from some simplifying assumptions of the trait model that bordered on stereotyping.

The assumption of dynamism has opened up new topics of research. Whereas previously mixed findings with different task conditions discouraged cultural researchers, for constructivists task context effects suggest insights about how the cultural influence operates. The question has shifted from "Does culture matter?" to "When does culture matter?" Some task conditions (attentional load) increase reliance on prior knowledge rather than attention to stimulus details. Some response formats (requiring reasons) lead people to recruit verbalizable decision rules rather than more intuitive perceptual processes. Hence, for constructivists, the conditions under which a cultural difference appears and disappears are probative to what cultural representations or environmental features are at play in the frames that produce the cultural difference.

The constructivist emphasis on dynamism underlies the method of studying bicultural participants with priming experiments. This method is appealing to JDM researchers, as it has greater internal validity than is possible in comparative, quasi-experimental studies. It has also elucidated the psychological process of switching between cultural frames in response to situational cues. This process is by no means unique to biculturals—it is descriptive of anyone who balances a cultural identity with other identities. Constructivism views people as active rather than passive in the interpretations that guide their responses, and hence predicts that conscious and nonconscious motivations moderate individuals' assimilation to salient cultural cues (Briley, Morris, & Simonson, 2005; Fu et al., 2007). Moreover, recent research documents reactance to cultural primes in the judgments of biculturals with

disidentification motives or conflicted identities (Benet-Martinez, Leu, Lee, & Morris, 2002; Zou, Morris, & Benet-Martinez, 2008).

Other insights relate to the constructivist emphasis on the role of external environments. The notion that cultural habits of thinking in some ways are reflections of cultural environments suggests that adopting those of another culture may not always require the traumatic process of internalizing a new worldview. Intriguing evidence shows that Western sojourners in Japan take on East Asian processes of attending to context, even in nonsocial judgments (Kitayama, Duffy, Kawamura, & Larsen, 2003). Perhaps only moderate familiarity with a culture is enough to begin marinating in its behavioral norms and thereby internalizing some of its norms of judgment. Sojourners would also experience priming from the environment, such as the direct semantic priming or all the associative priming that affects natives. Although sojourners are likely excused from social sanctioning for many norm violations, to the extent that a culture's situations directly present rewards that reinforce particular response tendencies, newcomers to a culture should also be acculturated this way. Overall, some external mechanism of cultural influence may help newcomers swiftly take on some cultural patterns of judgment and decision making.

The emphasis on external carriers of culture also suggests novel insights about persistence and change in cultural patterns. Persistence across generations is a defining feature of cultural patterns. A trait-centered view, like national character theories in anthropology, accounts for persistence in terms of the early inculcation of traits that reproduce themselves by shaping childrearing in the next generational cycle. An emphasis on external carriers of culture, instead, elucidates that much of the persistence of cultural patterns arises from the continuity of institutions, texts, practices, and designs. Also, structures of interaction, like game-theoretic equilibria, can become self-sustaining through the incentive structures they create (Yamagishi et al., 2008).

Constructivist emphasis on external carriers of culture also elucidates cultural change. Cultural values and practices sometimes shift dramatically, even within a generation. For instance, when tendencies are perpetuated by people's adherence to perceived behavioral norms, then shifts in the behavior of a fraction of the community can cascade into larger shifts in constructed preferences, as the perceived norm passes its tipping point (Cohen, 2001). This dynamic suggests quite different strategies for fostering change than are implied by a view of cultural preferences as expressing deeply inculcated values.

## Future Research Directions

A challenge ahead for cultural constructivist research is mapping the mechanisms that underlie different cultural patterns of judgments and decisions. Such mapping should also be done for more than a single behavior at a time, to see which different cultural affordances and/or values determine which clusters of behavior. Whereas there has been a fair amount of research on risky choice, there is a need for more cultural research on

intertemporal choice and its connection to other tasks (e.g., risky choice). There is also a need for research that looks at connections between JDM in the social and economic domains. It is unfortunate that these two lines of inquiry have advanced in parallel—largely published in different sets of journals—when they would have benefitted more from mutually informing each other.

There is a need for more research that investigates (rather than casually invokes) external structural mechanisms. For instance, Chinese social networks are more dense, enduring, and multiplex than American social networks, and these are independent dimensions (Morris, Podolny, & Sullivan, 2008), so researchers need to test which features of networks relate to particular judgment and decision biases. Finally, there is a need for research integrating constructivist mechanisms with trait mechanisms. Some cultural differences in behavior are more directed by values and some by norms (Fischer et al, 2009), and it is likely that the same is true for differences in JDM.

## Conclusion

Research on JDM has traditionally focused on the contextual factors that influence on-line constructive processes. Individual differences and, by extension, cultural differences conceptualized as value- or trait-based differences in judgment and choice have gotten short(er) shrift. The movement of reconceptualizing cultural differences from differences in modal personalities to differences in constructive processes, cued and maintained by differences in the structure of a culture's social environment, should result in a much closer alignment of the explanatory frameworks of JDM and culture research, with the hope for more fruitful interactions.

## Notes

1. Weber and Hsee (2000) tallied the rate of economic judgment and choice articles in the *Journal of Cross-Cultural Psychology* and of cultural articles in the economic JDM journals *Organizational Behavior and Human Decision Processes* and *Journal of Behavioral Decision Making* for the two decades from 1976 to 1995. Following their method, we tallied the same for 2000–2009. In the culture journal for both periods, we tallied social JDM and narrowly defined it as person judgments and interaction choices (excluding self-judgments, face perception, attitudes, values, or stereotypes, etc.). Finally, we also tallied the rate of cultural articles for both periods in a social JDM journal, *Journal of Personality and Social Psychology*.
2. Gibson (1979) defined affordances as directly perceived invariances in the person–environment relationship; for example, retinal optical flow indicates direction of heading and thereby affords wayfinding (Warren, Morris, & Kalish, 1988). Kitayama's constructivist account is more compatible with Baron and Boudreau's (1987) definition of social affordances as everything an interaction invites subjectively or objectively, which encompasses many different specific mechanisms such as priming and sanctioning.

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