Culture Three Ways: Culture and Subcultures Within Countries

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Abstract

Culture can be thought of as a set of everyday practices and a core theme—individualism, collectivism, or honor—as well as the capacity to understand each of these themes. In one's own culture, it is easy to fail to see that a cultural lens exists and instead to think that there is no lens at all, only reality. Hence, studying culture requires stepping out of it. There are two main methods to do so: The first involves using between-group comparisons to highlight differences and the second involves using experimental methods to test the consequences of disruption to implicit cultural frames. These methods highlight three ways that culture organizes experience: (*a*) It shields reflexive processing by making everyday life feel predictable, (*b*) it scaffolds which cognitive procedure (connect, separate, or order) will be the default in ambiguous situations, and (*c*) it facilitates situation-specific accessibility of alternate cognitive procedures. Modern societal social-demographic trends reduce predictability and increase collectivism and honor-based go-to cognitive procedures.

Contents

INTRODUCTION

> The worlds in which different societies live are distinct worlds, not merely the same world with different words attached.
>
> —Edward Sapir 1929, p. 209

> Nothing evades our attention so persistently as that which is taken for granted.
>
> —Gustav Ichheiser 1949, p. 1

Culture can be defined as the part of the environment made by humans. It is the set of meanings that a group in a time and place come to adopt or develop, and these meanings facilitate smooth social coordination, clarify group boundaries, and provide a space for innovation (e.g., Geertz 1984, Markus et al. 1996, Oyserman 2011, Packer & Cole 2016). The possibility that people who live in different places not only act and think differently but also have different minds has been considered at least since ancient times, when Herodotus reported on the practices of the people he saw in his far-flung travels (Jahoda 2014). The possibility that people act differently in different places and might even have different minds has two implications for cultural psychologists. The first is that the questions that seem relevant differ in different places and as a result the theories developed to answer questions that seem pressing in one place may not be meaningful in other places (Kruglanski & Stroebe 2012). The second implication is that the field of psychology needs to do a better job of documenting whether a theory that is developed and tested in one place is useful for making predictions elsewhere (Kruglanski & Stroebe 2012).

Noticing culture requires some way of stepping out of it in order to gain perspective on it. The promise of cultural psychology is that making this effort matters because it results in new insights

that matter, regardless of whether one is a cultural psychologist. However, because all of life takes place within culture, as Ichheiser (1949) notes, it is easy to fail to see that a cultural lens exists and instead to think that there is no lens at all—just reality.

Figure 1 depicts how culture might matter to a great extent when viewed from outside and be almost entirely unnoticed, thus seeming not to matter at all, when viewed from within. Colored rows describe processes and white rows describe the associative networks that are probabilistically cued as a result of activation of the particular cues that are part of these networks. People typically live in one context, not many; as a result, perception, judgment, and behavior (**Figure 1**, *top row*, *blue*) seem to flow directly from cues (**Figure 1**, *bottom row*, *orange*) rather than being the probabilistic result of intermediate processes. Culture feels like reality—not like an interpretation of reality (Morris et al. 2015b, Mourey et al. 2015). Cultural psychology focuses on the universal mechanisms (that is, the probabilistic intermittent processes) by which the everyday cues that are particular to a society, time, and place are interpreted to form perception, judgment, and behavior.

As depicted in **Figure 1**, cues, which can be features of the immediate situation or chronically or momentarily activated information in memory, are interpreted via associative knowledge networks that include social, emotional, physiological, and other content (**Figure 1**, *third row from bottom*, *red*). These knowledge networks activate one or another cultural mindset that includes relevant content, procedures, and goals (**Figure 1**, *third row from top*, *brown*). Which cultural mindset is activated is a probabilistic function of how central the cue is to the knowledge network, which cultural mindset has been most recently activated, and which cultural mindset is most typically activated.

This probabilistic process is largely understudied because psychologists operating and testing their theories within one culture are likely to fail to notice culture operating at all, assuming that their perspective is reality rather than, for example, individualism (but see Lun & Bond 2013, Machery 2010). If an activated individualistic cultural mindset is not noticed at all, psychologists may infer that culture matters in other settings but not in Western settings with educated and well-off participants. Even if psychologists in these settings infer that an individualistic cultural mindset is activated, they are likely to assume that this mindset is chronically activated. Only by directly examining the likelihood that a particular contextual cue activates an individualistic, a collectivistic, or an honor mindset can psychologists unpack the probabilistic process by which a particular cultural mindset is activated. However, research on this topic will likely begin to emerge because of changes in modern societies as a result of immigration, differential fertility of groups within societies, and increased social stratification (e.g., Frey 2015, Grusky & MacLean 2016).

These trends are important because, as detailed below, each is likely to lead to an increased propensity for activation of collectivistic and honor culture mindsets, even in wealthy modern societies currently assumed to have chronically activated individualistic mindsets. These trends thus imply that collectivism and honor will become more salient in wealthy modern societies (e.g., Mesoudi et al. 2016, Nowak et al. 2016). These trends involve both the possibility of a general shift toward collectivism and honor throughout these societies and the likelihood of a shift toward collectivism and honor in subcultures within these societies. The development of subcultures is predicted both from increased immigration and segmented assimilation of new immigrants into particular parts of the host society and from increased wage inequality within the host society, as articulated in sociological (Portes & Zhou 1993) and political science (Grusky & MacLean 2016) frameworks.

These processes of increased collectivism and honor are the result of sociodemographic changes: Wealthy countries are experiencing low fertility, higher migration, and either increasing (e.g., Australia, Canada, the United States) or flat (e.g., Germany, France, the Netherlands) wage inequality (Grusky & MacLean 2016). An exception to these general trends is Japan: Although Japan is experiencing low fertility, it is neither a target of large-scale migration nor a site of

Individualism: independence; propensity to interpret ambiguous experiences as being about autonomy and process for a discrete, main point

Honor: face; propensity to interpret ambiguous experiences as being about reputation-respect and process for rank and relative position

Collectivism: interdependence; propensity to interpret ambiguous experiences as being about belongingness-connection and process for relationships and group membership

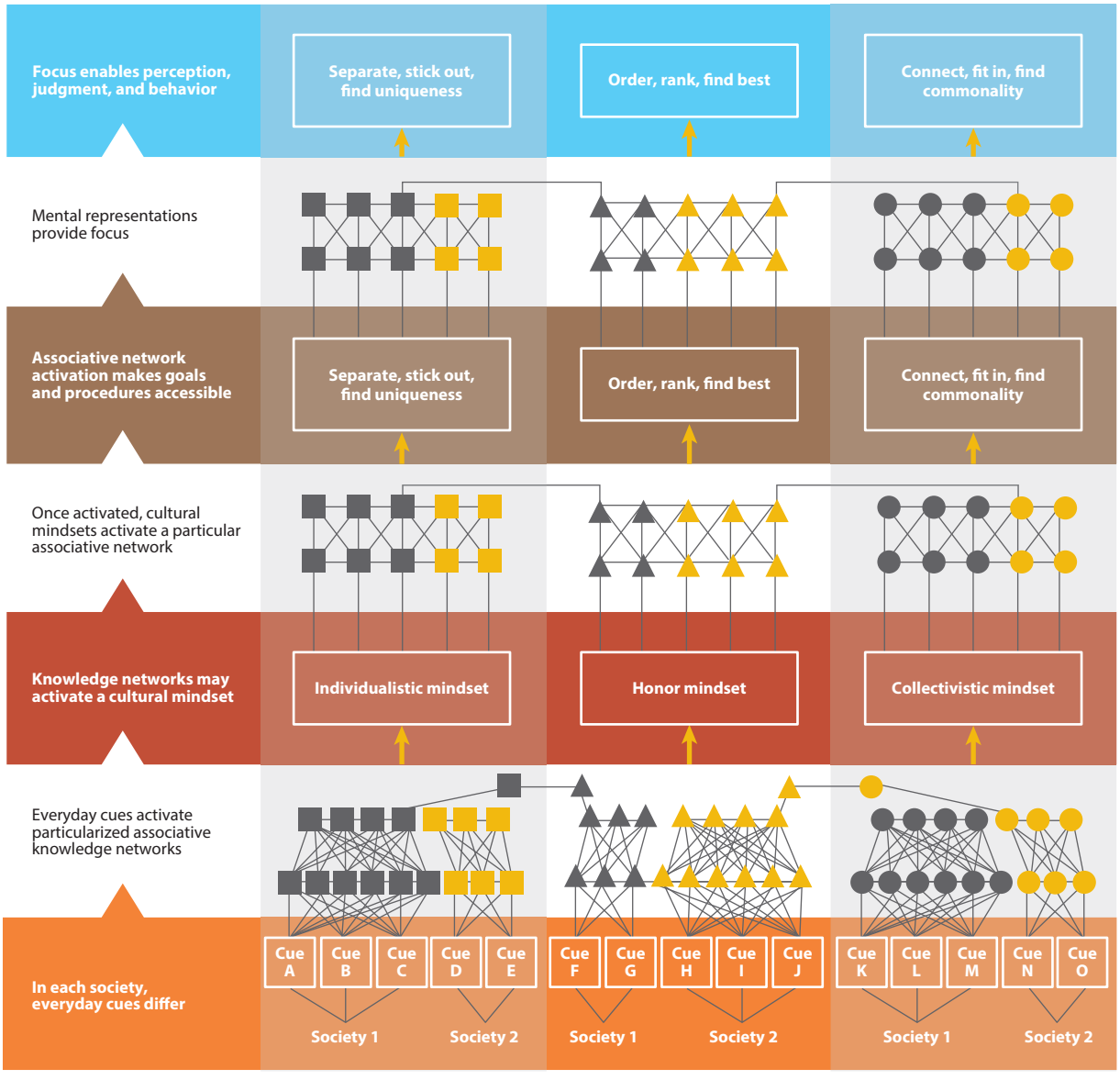

Figure 1

The universal mechanisms, specific cues (UMSC) model. The UMSC model articulates a probabilistic understanding of the brain-culture interface. Because processing is fundamentally associative, whether an initial cue results in a predicted response is highly dependent on the associations that come to mind at each stage. The process is considered from the bottom up. (*Orange row*) The UMSC model proposes that each society includes everyday cues. (*First white row*) These cues activate associative knowledge networks that are specific to the particular society. (*Red row*) The nodes in these networks can activate an individualistic mindset, an honor mindset, or a collectivistic mindset. (*Second white row*) Once one of these cultural mindsets is activated, it cues an associative network. (*Brown row*) The associative network makes mindset-congruent contents, goals, and procedures accessible. (*Third white row*) The result is activation of congruent associative networks, which probabilistically increase accessibility. (*Blue row*) As a result of spreading activation, mindset-congruent actions, perceptions, emotions, and cognitive procedures are ready for use. Figure adapted with permission from Oyserman et al. (2014).

increasing wage inequality (Grusky & MacLean 2016, PricewaterhouseCoopers 2015). In wealthy countries other than Japan, low fertility combined with migration and higher fertility among newcomers means that diversity is higher among the younger generation (e.g., Frey 2015). Wage inequality is likely to increase both the salience of social class as a subcultural frame (e.g., Grusky & MacLean 2016) and the salience of collectivism (e.g., Stephens et al. 2014) and honor (e.g., Nowak et al. 2016).

The idea of subcultures within cultures makes intuitive sense, even though whether something is identified as a culture or a subculture depends in large part on the question being addressed. Take the example of American culture: There can be no definitive answer to the question of whether there is a single American culture or many American subcultures, or whether American culture is really a subculture within modern, postindustrialized, educated, wealthy Western culture (e.g., Bellah 1985, Henrich et al. 2010, Swidler 1986). Each of these formulations is true in some way and each differs in their utility in addressing questions about culture depending on the level of analysis the question requires.

The idea of subculture also makes sense when considering categories such as race-ethnicity, religion, and social class as groups that are experienced as fixed and are linked to placement in the social hierarchy (also called caste-like groups; Bourdieu 1984, Lewis 1966). These caste-like groups are central to everyday understanding of what culture is (Spencer 2014). Though often relegated to studies of stereotyping, caste-like groups have been fruitfully rediscovered by cultural psychologists who are attempting to predict when cultural messages from larger culture will be experienced as matching or mismatching in-group messages and with what consequences (e.g., Oyserman et al. 1995; for reviews, see Oyserman 2007, 2015; Stephens et al. 2014).

Between-group comparison method: attribution of group-based differences in features, behaviors, or traits to culture; the most common method of studying culture

Experimental method: testing of group-based differences attributed to culture by manipulating the predicted proximal active ingredients; the alternative method of studying culture

TWO WAYS TO STUDY CULTURE

Cultural psychologists use two different methods to step out of culture in order to study it. The first and by far the most common method is to use between-group comparisons to identify differences that might be due to culture or subculture (e.g., Henrich et al. 2010, Rychlowska et al. 2015). The second method is to use experimental techniques to observe the consequences of disruptions to implicit cultural frames (e.g., Oyserman 2011, Oyserman et al. 2014). Both methods are compatible with the premise that culture and humans coevolved (Kurzban & Neuberg 2005, Legare & Nielsen 2015).

Each method is useful in addressing some questions and not others. Consider the between-group comparison method. This method elucidates differences between groups but cannot test assertions about what these differences mean. Finding a difference in one between-group comparison, while interesting, may or may not generalize to other comparisons (e.g., Henrich et al. 2010, Machery 2010, Matsumoto 1999). Moreover, the between-group comparison method carries the risk of reifying differences as large, inherent, deeply rooted, and fixed, yet coevolution does not imply that current between-group differences are fixed, that comparison groups generalize to populations, or that otherwise hidden cultural themes will not emerge if context changes (e.g., Ceci et al. 2010).

The alternative to the between-group comparison method is the experimental method, which entails either activating a particular cultural mindset or activating disjuncture between culturally grounded expectations and actual experience (Oyserman in press). This method thus provides a way to articulate and test a possibility not testable in the between-group comparison method, which is that between-group differences provide a lens to see generally available but differentially accessible features of the human mind (Oyserman et al. 2014). As detailed in the following sections, the experimental method, unlike the between-group comparison method, can test whether observed

differences between and within groups imply differences in the accessibility (what is usually activated) or in the availability (what can be activated) of cultural values, norms, and meaning-making schemas.

Particular practices: anthropology-based way of describing culture focusing on the everyday, expected, and ordinary; what people do, and when and how they do it

Core themes: group-based differences, typically individualism (independence), collectivism (interdependence), or honor (face); most common psychological way of describing culture

Thus, rather than think of one method as competing with the other, it is more useful to consider each method as capable of addressing some questions and not others. Moreover, neither method can fully address the question of whether a theory has universal applicability—that would require sampling from all peoples, times, and places that have ever existed, which is impossible (Henrich et al. 2010). Whether or not this is a problem depends on perspective: Psychologists typically study the living and, in the same vein, cultural psychology focuses on currently existing cultures.

THREE WAYS THAT CULTURE SHAPES EXPERIENCE

Cultural psychologists use three operationalizations of culture to highlight different aspects of how culture shapes the meaning people make of their everyday experiences. First, culture can be thought of as the particular practices of a group; knowing these practices makes everyday life feel predictable and frees up cognitive resources. These practices include mundane things such as what the rules for public transportation are—whether one can eat and drink, for example—and whether these rules can be broken (Morris et al. 2015b, Mourey et al. 2015, Zou et al. 2009). Second, culture can be thought of as a particular core theme—individualism, collectivism, or honor—that scaffolds what and how people think about ambiguous situations (Oyserman 2011). Third, culture can be thought of as a set of core themes that vary in their accessibility depending on situational cues. For example, even if collectivism is a group's core theme, people can make sense of the world through an individualistic or honor lens (Oyserman 2015, Oyserman & Lee 2008).

Each operationalization highlights a different aspect of what culture is and does. Each is vital because it makes accessible for study something that other operationalizations do not and because the assumptions and methods connected to it are suitable for a particular kind of prediction about culture's consequences. Some operationalizations highlight the situated, dynamic nature of culture's instantiation in norms, values, and self-concept, and others highlight the stable nature of culture. By combining operationalizations, it is possible to make predictions about when cultural change, whether the result of immigration or migration, will be experienced as additive (a both/and experience of multiple cultures merging) and when it will be experienced as subtractive (an either/or experience of competing loyalty). Each way of considering culture highlights different aspects of both the content (what people think about) and the process (how thinking itself proceeds) of culture, as detailed in the following sections.

Particular Practices

A particular practices formulation highlights culture's effects on prediction and the consequences of mismatch between prediction and observation on processing style—whether thinking entails systematic, effortful reasoning or remains automatic and effortless (Mourey et al. 2015, Oyserman et al. 2014). The unique predictions from this formulation are depicted in **Figure 2** as a prediction-observation match-mismatch model of culture.

The prediction-observation match-mismatch model provides insight into when people are likely to shift to systematic processing. Being a part of a culture means knowing, implicitly, how things are likely to unfold, and, as outlined in **Figure 2**, when observations match implicit cultural expectations, there is no need to reason carefully because everything is as it should be. However, if observations mismatch implicit cultural expectations, something might be amiss, calling for careful reasoning—that is, systematic or reflective reasoning rather than associative or reflexive

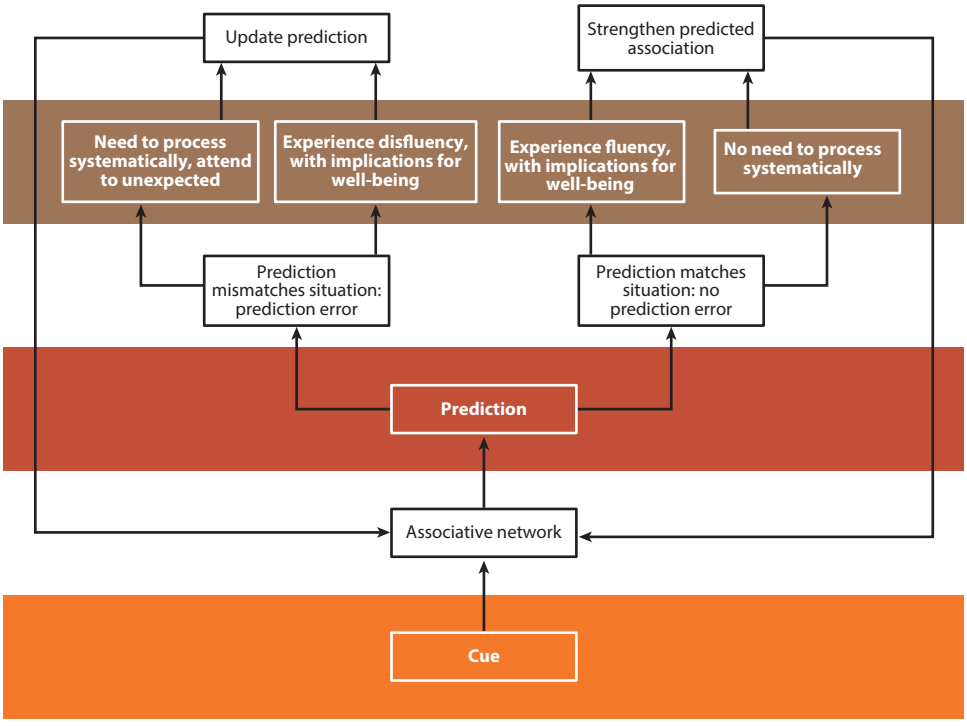

Figure 2

The prediction-observation match-mismatch model articulates how the brain updates and, by implication, why fit between personal and societal style and between prediction and experience influences both processing style in the moment and well-being over time. Note that in spite of high sensitivity to context, acculturation is difficult, and not fitting into a society's typical cultural style can be undermining of well-being. Starting at the bottom, an environmental cue (*orange row*) activates an associative network (*first white row*), which in turn generates predictions about the situation. If predictions (*red row*) match the situation, no error response is generated (*second white row*, *right side*), fluency is experienced (*brown row*, *right side*), and associative processing is task focused. If predictions (*red row*) mismatch the situation, an error response is generated (*second white row*, *left side*), and disfluency is experienced (*brown row*, *left side*), cuing systematic processing to attend to the unexpected. In cases both of experienced fluency and of experienced disfluency, the associative network is updated (*top white row*). In the case of fluency, the update is to strengthen an existing prediction (*top white row*, *right side*). In the case of disfluency, the update is to add new information (*top white row*, *left side*). Note that systematic processing to attend to the unexpected (*brown row*, *left side*) may or may not improve prediction at the next round since the reason an unexpected situation was encountered cannot be ascertained from registering that an unexpected situation was encountered. The general process model can also be used to understand the process by which fit and misfit between cultural norm and personal style can yield consequences for well-being. Figure adapted with permission from Oyserman et al. (2014).

reasoning. Findings with Chinese and American participants support the core prediction of the role of cultural fluency and disfluency. People from both countries reason more systematically in culturally disfluent, as compared to fluent, cultural contexts (Mourey et al. 2015). This formulation is congruent with models that highlight the importance of social norms in predicting how culture matters (Morris et al. 2015b, Zou et al. 2009). However, instead of what people think the norms are, the focus is on what happens to reasoning when norms are violated versus when they are upheld.

Core Theme

Variable accessibility: examination of situation-based differences in which of the core cultural themes is momentarily accessible; alternative psychological way to describe culture

A core theme formulation highlights culture's effects on norms, values, self-concept, and cognitive procedures used to process information—people use a variety of procedures in their everyday lives, but in ambiguous situations, core cultural theme matters (Miyamoto 2013). The core theme formulation is depicted in **Figure 1** in the three columns. The networks in each column are differentially dense to depict differences in chronic accessibility of each core theme between societies. For simplicity, the two societies in **Figure 1** are labeled simply 1 and 2. When a theme is core, the cognitive procedure associated with it is likely to come to mind when another procedure is not specified by contextual cues. As a result, depending on how associative networks respond to cues, a particular procedure—exclusion based (e.g., contrast, pull apart), inclusion based (e.g., assimilate, connect), or ordering based (e.g., hierarchical)—is more or less likely to be applied (Miyamoto 2013; Novin & Oyserman 2017; Oyserman et al. 2009; D. Oyserman & S. Novin, unpublished data).

The core theme formulation focuses on processing style (i.e., exclude, include, or order) and asks which people are likely to use which style to process information (Miyamoto 2013, Spencer-Rodgers et al. 2010). Each of these styles can involve the application of rules and, as a result, systematic reasoning or can proceed at low-level associative levels; thus, processing style is distinct from cognitive style, which is the focus of the particular practices formulation of culture. The two core cultural themes that have been the focus of research to date are individualism and collectivism, also termed independence and interdependence; their associated processing styles are sometimes termed analytic and holistic reasoning, respectively (Miyamoto 2013). A number of processing style differences between individualistic (independent) and collectivist (interdependent) mindsets have been documented. A chronically activated individualistic mindset (analytic) entails processing for a decontextualized main point (e.g., a rule), whereas a chronically activated collectivistic mindset (holistic) entails processing for related connections (e.g., family resemblance). Findings from between-group comparisons (e.g., between Japan and the United States or between China and the United States) support the prediction that there is a match between processing style and dominant cultural theme. That is, Chinese people are more likely to describe a visual scene in terms of all of its elements. In contrast, Americans are more likely to identify individual and specific parts. Japanese people are more likely to make mistakes when trying to reproduce line segments while ignoring the context in which they saw them. In contrast, Americans are more likely to make mistakes when trying to reproduce the relative size of line segments while recalling the context in which they saw them (Miyamoto 2013).

Variable Accessibility

A variable accessibility formulation highlights that each of the core themes is available, though differentially accessible, across cultures and subcultures (Oyserman & Lee 2008). The variable accessibility formulation is depicted in **Figure 1** as the propensity of getting from a particular cue (A to O) in a society to a particular perception, judgment, or behavior. As can be seen (for example, by looking at cues A to C in Society 1), these cues typically activate knowledge structures that turn on an individualistic mindset. However, as shown in **Figure 1**, the final outcome of activation of a knowledge structure is probabilistic. That is, the outcome depends on a variety of factors, including whether a knowledge structure has been recently activated or not and how central a particular cue is to a knowledge structure. For example, a cue might typically activate an individualistic mindset, but whether or not it does at any particular time is probabilistic. Thus, as depicted by the link between squares and triangles and the link between triangles and circles in **Figure 1**, a cue that typically activates an individualistic or a collectivistic mindset might activate a different mindset under particular circumstances.

The variable accessibility formulation provides insight into when people are likely to use one or another processing style (Oyserman 2011, Oyserman & Lee 2008, Oyserman et al. 2016). Findings support the prediction that momentarily activated cultural mindsets influence processing style. In these studies, Asian participants can be made to process like American participants and the reverse, implying that cultural mindsets that are not chronically activated can be momentarily activated (e.g., Oyserman 2011). For example, on divided attention tasks in which context information must be ignored, Koreans and Americans guided to use a collectivistic mindset do worse than Koreans and Americans guided to use an individualistic mindset (Oyserman et al. 2009). Although prior research has focused on basic cognitive processing, emerging research suggests that activating a cultural mindset influences the performance of complex reasoning tasks as well (D. Oyserman, S. Novin, B. Lam, S.X. Chen, E. Newman, & V. Yan, manuscript under review). Collectivistic mindsets cue processing for connection whereas individualistic mindsets cue processing for main points, and evidence indicates that honor mindsets cue processing for order (D. Oyserman, S. Novin, & V. Yan, unpublished data).

CULTURE AS INHERENT MEANING: PARTICULAR PRACTICES

As detailed in **Figures 1** and **2**, thinking about how culture matters starts with the fact that each culture has a particular set of practices (e.g., Geertz 1984, Triandis et al. 1973) that activates core themes (e.g., honor-face, individualism-independence, and collectivism-interdependence) (e.g., Markus et al. 1996, Nisbett & Cohen 1996, Oyserman et al. 2002a). Having cultural expertise means knowing how "we" think, what "we" value, and how "we" do things (e.g., Oyserman 2011, Swidler 1986). Thinking occurs in culture, and culture structures what seems obvious, normative, and real.

From within a culture, cultural expertise is transparent—it is experienced as if it is reality itself. Hence, culturally laden concepts are not experienced as concepts but as something real (e.g., Geertz 1984, Triandis 2007). Given this transparency of culture, people typically assume that others see the world as they do, and if others say they do not have the same perspective, then their alternative perspectives seem funny, strange, or deviant (e.g., Ichheiser 1949, Oyserman 2011, Triandis 2007). This naïve realism (i.e., the experience of one's own perspective as reality) aspect of culture can contribute to between-group tensions. For example, in the United States, liberal and conservative Americans experience their own beliefs as inherently superior to others' beliefs (Toner et al. 2013).

Because "thinking is for doing" and "doing" cues relevant thinking (e.g., Fiske & Taylor 2013), it is instructive to learn that activating a cultural mindset is associated with particular neural responsivity in preparation for action (e.g., Wang et al. 2013). Importantly, neural activity does not imply endorsement—culture's effects do not actually require that culturally sanctioned interpretations be endorsed, just that they be assumed to be the way that others in one's group experience the world (e.g., Morris et al. 2015b, Mourey et al. 2015). That is, just as stereotypes can influence perception among people who do not explicitly endorse stereotype content (e.g., Bigler & Clark 2014), some of culture's effects may be due to illusions of universality or what has been termed pluralistic ignorance (Allport 1924, O'Gorman 1986).

Naïve realism means that culture's presence will go unnoticed until things do not unfold as culturally expected (e.g., Mourey et al. 2015, Oyserman 2011). One method used to see culture in action is to examine the consequences of perturbing cultural expectations. Telltale signs that something did not fit one's cultural frame include a shift to systematic reasoning, a reduced sense of inherence (the feeling that things are as they ought to be), and an increased desire to defend the traditional values of one's culture (Mourey et al. 2015; Y. Lin & D. Oyserman, unpublished manuscript). As shown in **Figure 2**, when observations match cultural expectations, there is no

need to shift to systematic processing, but when cultural expectations are not met, higher-level processing is necessary.

The particular practices formulation builds on dual-processing models of reasoning, which distinguish between two neurally distinct processing systems (Chaiken & Trope 1999, Lieberman 2007). The effortless, reflexive system involves associative links that are turned on via spreading activation; the effortful, reflective system involves systematic and sequential processing of information (Lieberman 2007, Strack & Deutsch 2004). The reflexive system is always at work, whereas the reflective system becomes active when one has the time, resources, and desire to consider carefully (e.g., Strack & Deutsch 2004). Reflexive reasoning feels inherent, intuitive, spontaneous, and effortless—"I just feel it in my gut"; in contrast, reflective reasoning feels effortful because it requires one to think about and apply a set of rules or explicit strategies to problem solve—"I know it in my head."

Because reflexive processing seems to occur without intention or effort, its products have been called natural assessments (Tversky & Kahneman 1983) that are immediately available as bases for choice and action. Examples of natural assessments are abstract properties such as similarity, causal propensity, surprisingness, affective valence (e.g., whether something is good or bad), and mood (Kahneman & Frederick 2002). Applying this to culture yields the following principle: The reflexive system characterizes culture as a natural assessment, whereas the reflective system characterizes culture as a set of current practices. Thus, when the reflexive system is activated, people automatically infer that what is culturally normative is the way things naturally should be and morally ought to be. In contrast, when the reflective system is activated, people may take into account or choose to ignore cultural values and norms. In the reflective system, gaps between personal and cultural norms can be reasoned through.

Because the reflexive system is always working and produces judgments that feel inherent to the situation, people inside a cultural frame are unlikely to notice the need for correction—they experience perception (**Figure 1**, *top row*, *blue*) as flowing directly from cues (**Figure 1**, *bottom row*, *orange*). People with other things on their mind (i.e., under cognitive load) often process only reflexively unless they are motivated to do otherwise. Moreover, because the reflexive system is not deactivated when the reflective system is activated, culture is always experienced as a natural and immediate basis for choice and action. Thus, even though the reflective system provides choices, people often experience their culture-based responses as emerging from inherent features of the situation and fail to notice cultural processes at work. **Figure 2** shows the processes of processing reflexively and reflectively. Note that reflexive thinking is the result of a match and reflective thinking of a mismatch between observation and expectation.

When cultural scripts (i.e., expectations) are preserved, reflexive processing will likely be the default, but when cultural scripts are disrupted, the mismatch between expectations and observations can lead to a switch to reflective processing. For example, in one experiment, participants were given a set of word problems to solve (Mourey et al. 2015). Each problem had two characteristics: First, it was correctly solvable using a simple rule (which rule should be used differed between problems); second, an alternative, incorrect solution came immediately to mind upon reading the problem. The correct, rule-based solution was evidence of reflective processing, whereas the incorrect but seemingly obvious solution was evidence of reflexive processing. Participants were randomly assigned to a condition: They saw the problems on a screen with either a pink border, a black border, or a white border (no border) and saw the problems either on Valentine's Day or a week later. Participants who saw the pink border on Valentine's Day (the culturally expected color for the day, as compared to black or no color) were more likely to use reflexive, heuristic processing, which undermined test performance. A week later, however, pink had no cultural significance and had no effect on reasoning skills. Parallel effects were found for disruptions of the cultural

scripts for funerals (expressions of sadness being expected and happiness being unexpected) and weddings (a white dress being expected and a dress in another color being unexpected). Participants read obituaries or looked at wedding pictures and later performed a separate cognitive task. Disruption shifted processing to reflective reasoning and improved performance. Sticking to the cultural script keeps processing reflexive. For example, on Chinese New Year, the color red is culturally expected and the color black is not; this holds true, of course, only if the holiday is part of one's cultural frame. Chinese participants proceeded reflexively by choosing more food when given red-bordered rather than black-bordered plates, but only on Chinese New Year; the plate border had no effect on American participants for whom there was no associative link between Chinese New Year and red (Mourey et al. 2015). Another set of studies focused on the experienced naturalness of reflexive thinking. For example, in these studies, Chinese participants scored lower on essentialist beliefs if presented with Chinese New Year greetings in black rather than in red (Cimpian & Salomon 2014), an effect that disappeared when it was no longer Chinese New Year (Y. Lin & D. Oyserman, unpublished manuscript).

As has been discussed, mismatch and the consequent shift to reflective thinking shift processing, as well. However, this may or may not change the outcome of reasoning. To understand this somewhat abstract distinction, let us consider how this can play out in a classroom student-teacher interaction. Suppose a teacher witnesses a student behaving in a particular manner. The seemingly natural and automatic implications of this behavior will be culture bound, differing depending on the content that composes the associative network firing for the teacher at that moment. Teachers with different cultural scripts as to how students should behave and what misbehavior means—e.g., whether it signals exuberance or lack of respect for the teacher—would arrive at different conclusions about what the behavior means. Each interpretation would be experienced as natural, and teachers are likely to experience the student's behavior as expressing something essential about the student, whether that essence is biological, social, or something else (Baron 2014).

Say this content includes "male," "African American," and "respect." Although an African American teacher may see the student's behavior as fitting in the normal range of youthful exuberance and therefore either not indicating misbehavior at all or, if indicating misbehavior, not indicating a lack of respect, a white teacher may see the same student's behavior differently. A white teacher might experience the behavior as outside the normal range of behavior and as indicating a lack of respect for the teacher—and thus as a cause for disciplinary action (Wright 2015). Say that the white teacher is highly motivated to consider each student individually or was expecting behavior within the normal range of behavior; in either case, he or she might experience mismatch with expectations and switch to reflective reasoning. Unfortunately, shifting to reflective thinking will not necessarily change the conclusion a teacher draws. For example, suppose the student's behavior is unexpected and cues a cultural stereotype about African American males as dangerous. Reflective thinking is rule-based reasoning, but the rule itself matters. If the rule that comes to mind is to maintain control, then the result of reflective processing, the need to maintain order, might be the same as the result of reflexive processing. In contrast, if the rule that comes to the teacher's mind is to avoid stereotyping, then the teacher may notice the possibility that he or she would experience the behavior itself differently if it was not exhibited by an African American male student. In that case, the reflective processing might result in reframing the behavior as exuberance.

SOCIAL AND DEMOGRAPHIC TRENDS

A criticism of psychological research is that psychologists tend to study students and that both research participants and researchers themselves are typically wealthy, Westernized, and educated, hailing from the United States, other English-speaking countries, and the European

Union (Henrich et al. 2010). Note that Henrich and colleagues (2010) include as Westernized any society with Western-style education, including Japan, Korea, and China (Henrich et al. 2010). This might mean that psychological theories are limited either because the questions they address are chiefly relevant to people in these countries or because, even though the questions are of general importance, the answers that theories provide to these questions only fit people from this subset of the world. Henrich and colleagues' (2010) recommendation, which is to study the few nonmodernized peoples to really understand culture, is one possible next step. An alternative, as outlined here, is to consider how psychological theory and research can benefit from identifying who psychologists are typically trying to generalize to and where these people are located.

Fertility, Population Growth, and Immigration and Linked Cultural Themes of Honor and Collectivism

Even though psychological theorizing is meant to provide explanations for human behavior, the methods of psychological research are limited to study of the present—they do not lend themselves to the study of the past since data are typically obtained from living humans rather than from secondary analyses of other kinds of data. Before dismissing psychological research as narrowly built on students, it is useful to consider who the students in modern societies with Western-style education—including the United States, the European Union, China, and India—are likely to be. As noted in the first section below, due to fertility, population changes, and immigration in the United States and the European Union, student samples are more likely to yield an increasingly diverse snapshot that includes individualistic, collectivistic, and honor mindsets. However, before assuming that this diversity is sufficient, it is useful to consider which societies have the largest and the most rapidly growing populations and what psychological theorizing is needed to make predictions for people in these societies. These issues are tackled next.

The United States and the European Union. The United States and the European Union, the regions associated with individualism, have a combined population of 830 million people. Education is compulsory through secondary school, and most people attend some form of postsecondary training (though not all graduate; 44% of 25- to 34-year-old Americans and Europeans hold postsecondary degrees) (Will 2014).

These individuals form the basis of most psychological research and are likely to be the population to which psychological research can most easily generalize. Thus, it is useful to consider who these people are. Although it is largely not discussed by psychologists (perhaps because effects have not yet been felt on the student subject pools psychologists rely on), the United States and European Union are rapidly diversifying (Chamie 2012, Eur. Comm. 2007, Frey 2015, Hackett 2015, PricewaterhouseCoopers 2015, Rebala & Wilson 2015). These trends are straightforward: Majority groups are aging and have low birthrates, minority group are younger and have higher birthrates, and immigration is bringing people from different regions of the world (e.g., Frey 2015). Immigrants to the European Union (since World War II) are primarily from Turkey, North Africa, and the Middle East (Eur. Comm. 2007, Hackett 2015). Immigrants to the United States (since 1965) are primarily from Mexico, Central and South America, and Asia (China, India, Frey 2015).

By 2020, American psychologists who use students as their participants—though they are often trying to generalize to people more generally—will have diverse subject pools. Since 2011, most children born in the United States have been "minorities," and demographers estimate that by 2020, most Americans under 18 will be "minorities" (Frey 2015). In the United States, minority status is associated with social class; Mexican heritage is associated with lower educational

attainment, and Asian heritage is associated with higher educational attainment (Frey 2015, US Census 2011). Lack of college education is associated with collectivism (Stephens et al. 2007, 2014, 2016). In addition, religious traditions associated with cultures of honor are brought by Catholic immigrants (from Mexico and Central and South America) to the United States and by Muslim immigrants (from Turkey, the Middle East, and Africa) to the European Union (Cohen & Varnum 2016, Hackett 2015, Nowak et al. 2016, Pew Res. Cent. 2011, Rebala & Wilson 2015). This means that psychologists who are not interested in culture will be less likely to obtain monocultural participants and are thus more likely than in the past to be able to test the generalizability of their theories.

What does this imply? Just as a psychology that includes only male participants is less robust than one that includes both male and female participants even if gender is not the focus of research, a psychology that includes more culturally diverse participants is more robust than monoculturally based research even if culture is not the focus of research. Increased diversity in student populations may or may not support relevant subgroup analyses but will at least ensure that theories are less likely to be tested in monocultural samples. At the same time, rapid demographic changes mean that failures to replicate results based on theories that apply only to one core cultural theme will increase, which may push psychologists not previously interested in culture to consider its effects.

The most populous countries and biggest contributors to population growth. If psychologists are not interested in culture but do care if their theories generalize, then testing whether theories hold in the world's two most populous countries—China and India (with a combined population of 2.6 billion people)—should matter. In both of these countries, Internet-based subject pools are becoming increasingly available for testing generalizability. Other countries with large populations (in descending order, Indonesia, Brazil, Pakistan, and Nigeria, with a combined population of 920 million people) are assumed to be high in honor and collectivism but are rarely included in research.

These six countries are also responsible for most of the world's population growth and so will constitute an increasing proportion of the world's population (Chamie 2012). Their populations are young (e.g., median age is 27 in India and 18 in Nigeria) and in some cases, skewed male (e.g., in India and China) (CIA 2015). Youths are particularly concentrated in Sub-Saharan Africa, the Middle East, and North Africa—areas also home to the Sunni-Shiite religious divide (Yousef 2003). Half of Nigerians and most Indonesians and Pakistanis are Muslim; Indonesia, Pakistan, and India (three high-growth countries) are home to about one-third of the world's Muslims (CIA 2015). Given this geographic concentration, it might be useful to consider the place-based implications of religion even though this aspect of religion is not widely studied by cultural psychologists focused on religion, religiosity, and belief in a deity (e.g., Atran & Norenzayan 2004; Cohen 2009, 2015; Cohen & Rozin 2001). Culturally, Islam is associated with honor and obedience (Ahlberg 2014). Cultures of honor highlight a particular form of masculinity that is focused on male agency (e.g., Nisbett & Cohen 1996, Novin & Oyserman in press). A population with an abundance of youths is associated with innovation and economic growth if, at the same time, the proportion of the population that is beyond working years also declines (Bloom & Williamson 1998, Brake 2013); otherwise, it is associated with political upheaval, violence, and a shift to dictatorships (Urdal 2006, Weber 2013). At the same time, in some settings, an abundance of young men is associated with higher marriage rates and greater paternal investment in children (Griskevicius et al. 2012). Given the place-based link between Islam and an abundance of youths, future research examining the effects of cultural contact is needed.

Income and Wealth Inequality: Social Class

Modernity theory predicts that inequality in wealth and income is due to an inadequate supply of skilled labor; that by increasing education, societies reduce inequality; and that social mobility reduces the centrality of social class (e.g., Inglehart 1997). Thus, countries that provide free and high-quality education should see less income and wealth inequality because more people can vie for top educational slots. To the extent that education facilitates social movement and reduces economic segregation, these countries should also see less hardening of class-based subcultures. Otherwise, spatial and social segregation should increase and social classes should become more distinct and well formed. Indeed, recent analyses suggest that inequality is increasing in some wealthy countries. Thus, in contrast to other wealthy countries (e.g., Germany, France), in the United States, Australia, and Canada, inequality in wages and income has rebounded since the 1970s (Grusky & MacLean 2016). In these three countries, the richest 1% holds concentrated wealth whereas wages have stagnated or declined for those without college degrees and, even in families with college-educated earners, family time to support socialization of children has declined (Grusky & MacLean 2016). To maintain their standard of living, both parents (or multiple family members) must work (Grusky & MacLean 2016). At the same time, the recreational and cultural facilities and school systems in these countries, which were once publicly funded institutional supports for upward mobility, are increasingly subject to market forces. Taken together, these changes suggest less support for upward mobility and reduced availability of public spaces in which the rich and poor mix—a rising segregation of experience that may yield class-based homophily (Grusky & MacLean 2016).

Grusky & MacLean (2016) argue that the one reason for differences among countries is cultural. That is, in culturally individualistic countries such as the United States, Canada, and Australia, the wealthy have used an aspect of individualism—free-market ideology—to legitimize both inequality and reduced institutional support for mobility. Opportunities for mobility require access to education. In the United States, Canada, and Australia, the wealthy have used two strategies that at first glance seem congruent with individualism but that function to undermine mobility. These strategies are commodification—requiring payment for, rather than supplying free access to, public services (such as education, health care, and child care)—and localization—requiring that local entities support services that are public. Payment and localization may seem congruent with individualism (because opportunities are of one's own or one's proximal group's making), but if the means for getting ahead requires money, then the poor cannot get ahead because they do not have the money to pay either as individuals or as local communities. In this way, free-market ideology masks the opportunity-reducing consequence for the poor of commodification and localization. At the same time, it masks the opportunity-increasing consequences for the wealthy of artificially reducing supply and increasing demand for the particular set of skills that the wealthy have and the less-educated lack.

A number of different theories predict that if social class is experienced as fixed but justified, the poor will come to feel that they are to blame for their situation. Justification can be rooted in individualism and free-market ideologies, as Grusky & MacLean (2016) argue, or collectivism, as Stephens and colleagues (2007, 2014, 2016) and others (Na & Chan 2016) suggest. Both fit early formulations of the experience of poverty as stigma—a shameful, embarrassing character flaw leading to loss of face (Lewis 1966). At the same time, if blocked opportunities are experienced as illegitimate, then fixed social classes can produce political instability. Indeed, in the United States evidence indicates that social class matters in ways that parallel the cultural literature on social power (e.g., Oyserman 2006). Like low power, low social status due to low social class is associated with focusing on concrete details rather than the big picture, and with making adjustments and fitting in rather than taking charge (Oyserman 2006). Low social class is associated with seeing

oneself as connected to others and seeing one's competencies in terms of how to be part of a team—how to fit in (e.g., Stephens et al. 2016).

PLACE-BASED GROUP MEMBERSHIP AND CORE CULTURAL THEME

Culture can be operationalized as a set of structures and institutions, values, traditions, and ways of engaging with the social and nonsocial world that are transmitted across generations in a certain time and place (e.g., Shweder & LeVine 1984). One's place within a society and the social networks within which one is embedded should influence the structural and institutional aspects of a culture to which one has access (Oyserman & Uskul 2008). At the individual level, this affects the norms, policies, and practices one is exposed to. Hence, whether immigration triggers cultural change for migrants depends in part on whether social networks in the new context differ from networks in the old one (Oyserman & Uskul 2008) and on how many people are arriving at the same place at the same time (Rychlowska et al. 2015).

Comparing Groups: But Which Ones?

Comparing groups is the most common way in which cultural psychologists study culture. But determining which groups should be compared and what group comparisons imply is not straightforward. Cultural psychology's promise is to provide the means to test when and how culture matters and the methods to test the applicability of findings and theories developed in one culture for other cultures. One possible way to answer this question is to test theories against earlier historical times or among the small number of people currently living in preliterate, nonagricultural, hunter-gatherer societies (Henrich et al. 2010). Alternatively, psychologists might limit their theorizing to people living in developing and industrialized societies, many of whom have gone to school and can read and write. Indeed, one of the important triumphs of modern cultural psychology has been to decouple cultural differences from differences in economic development. Hence, rather than return to studying culture by studying hunter-gatherer societies, cultural psychologists have much to gain by unpacking the active ingredients of culture.

Psychologists are typically less concerned with whether their results generalize to the Hadza, one of the few living people who live in nonagricultural, hunter-gatherer societies (Finkel 2009), than they are that their theories fail to predict the behavior of Japanese, Chinese, or Indian individuals. The Hadza are central for some questions, such as, "What is human and separate from the adaptations that come from modernity, Western-style education, and industrialization?" For such questions, showing stability of effects from Korea to Canada is trivial, and the Hadza are needed. Clearly, testing whether a theory fits Ghanaians, Germans, and Guatemalans is not the same as asking if a theory is relevant to all people who ever lived (Ceci et al. 2010). Although this question sometimes should be asked, it might be best to leave it aside. After all, generalization at this level is problematic at best, as even the animals used in animal research may not represent animals well (Machery 2010). Instead, it might be better to be more modest in what psychology and cultural psychology can do and focus on whether a theory's generalizability is likely to be moderated or mediated by some active ingredient of culture existing in modern societies.

The question of which active ingredients to look for, although still open to new suggestions, seems to currently focus on individualism, collectivism, and honor or face. This was not always the case. In the first *Annual Review of Psychology* article about culture, Triandis and colleagues (1973) summarized and interpreted results of research documenting place-based differences in seemingly basic cognitive processes. They showed that participants from educated, Westernized societies were more susceptible to the Müller-Lyer illusion (which is that the length of line segment seems to vary when shown in the context of arrowheads) than were participants from nonmodern

societies. They explained that the source of the illusion was that participants lived in contexts with carpentered edges that yielded practice in using angles as depth cues. But what did this difference imply about culture?

Individualism and Collectivism

An enormous leap forward in addressing these goals came through simplified rubrics for studying culture that did not depend on differences in economic development and education levels. Arguably, the first to provide a simplifying rubric focused on modern societies was Hofstede (1983), who analyzed differences in preferences for working conditions and training in matched samples of employees from a single multinational firm across countries and regions at two points in time. Eventually, more than 50 countries and three regions of the world were included, with a total of 116,000 responses (Hofstede 2001). Hofstede synthesized the pattern of responses and proposed a small set of factors to describe cultures. The first factor was individualism as opposed to collectivism; this factor provided a way of organizing a huge array of between-group differences. Other proposed factors (masculinity-femininity, power distance, uncertainty avoidance, and long-term/short-term time orientation) subsequently turned out to relate to the individualism factor (Hofstede 2001).

Individualism-collectivism (also termed independent and interdependent self-construals) as a factor articulated a seemingly ubiquitous tension between belongingness and autonomy and suggested that this tension might carry over from features of the environment to norms, values, and ways of relating to others and of defining the self (e.g., Brewer 1991). It yielded a rapid explosion of comparative studies (for a meta-analysis, see Oyserman et al. 2002a). Comparisons were supported in part by Hofstede's work, which allowed researchers to attribute between-group differences to individualism and collectivism. The psychological transformation of this element of culture came in large part through the efforts of Harry Triandis (e.g., Trafimow et al. 1991, Triandis 1989) and Hazel Markus (e.g., Markus & Kitayama 1991, Markus & Oyserman 1989). By the 1990s, culture had come to mean individualism and collectivism for much of psychology; this was lauded as an important advance and remains the case (for reviews, see Oyserman et al. 2002a,b; Oyserman & Lee 2008; Taras et al. 2014; Vargas & Kemmelmeier 2013). The possibility that individualism-collectivism provides a way to organize groups and that it predicts differences in values, self-concepts, and ways thinking and engaging with others has been tested meta-analytically (for values) and with quantified syntheses (for self-concept, relationality, and cognitive process) (e.g., Oyserman et al. 2002a).

This formulation and the studies that come from it have proven invaluable in documenting one particular way in which culture matters. Seven *Annual Review of Psychology* articles on culture over the past 20 years were organized using a between-group formulation of culture based on individualism and collectivism and independent and interdependent self-construals. By synthesizing studies using group-based contrasts and either assessing or assuming differences in self-construal, culture was linked to personality, human development, cognition, children's social competence, and neuroscience (Han et al. 2013, Kitayama & Uskul 2011, Lieberman 2007, Miller et al. 2009, Morris et al. 2015a, Stephens et al. 2014, Triandis et al. 1973).

Indeed, people from modern collectivistic societies showed increased susceptibility to the Müller-Lyer illusion compared to those from modern individualistic societies (Krishna et al. 2008). These findings contrast with those of Triandis and colleagues (1973), who compared people from modern and premodern societies. To understand when and under which circumstances people from modern collectivistic cultures are sensitive to contextual information, emerging research focuses on each stage of information processing. Also being explored is the extent to which findings

based on research with Chinese participants generalize to other high-interdependence groups (e.g., Russians, Central Europeans). Some research findings clearly do generalize (e.g., Kühnen et al. 2001, Oyserman et al. 2002a), but other findings may not. For example, the finding that Chinese tend to have a tolerance for inconsistency that is higher than that of Americans might be specifically attributed to Chinese dialectical thinking rather than to collectivism (Spencer-Rodgers et al. 2010).

New research moving beyond comparisons of Americans or Canadians with Chinese or Japanese would provide building blocks for future meta-analyses to separate results that generalize from results based on more specific differences in each culture and subculture. Moreover, in spite of the continued dominance of an individualism-collectivism focus, researchers are beginning to branch out to consider other ways to operationalize what culture is and how it matters.

Honor

Constant vigilance is required to maintain honor, which involves concerns about reputation and respect, being taken seriously, and not being pushed around by others. Face, which involves concerns about worth and reputation in the eyes of others, also requires vigilance. Although face loss typically is associated with embarrassment, retribution can be sought if face was wrongly impugned. Both honor and face are often connected to collectivistic societies (Leung & Cohen 2011) and to minority race and lower social class within the United States (e.g., Kubrin & Weitzer 2003, Stephens et al. 2016).

Disputes about honor, which require a personal response and cannot be resolved by turning to authority, are concentrated in poor urban and minority neighborhoods in the United States (Kubrin & Weitzer 2003). Parents in these contexts teach and socialize to show honor—esteem and respect for authorities (Dixon et al. 2008). Indeed, honor culture thrives in contexts in which central authority is weak and social institutions are ineffective such that the police, courts, and other authorities cannot be assumed to provide redress from wrongdoing (Nisbett & Cohen 1996, Nowak et al. 2016). Honor culture is geographically located—indeed, the Middle East, Mediterranean regions, Latin America, and the southern United States are described as honor societies more so than Northern Europe and the northern United States (Gregg 2007, Mosquera et al. 2002).

Ethnographic, laboratory, and field experiments provide support for some aspects of this theoretical framework; for example, experiments show that differences in honor values are related to responses to insults (Cohen et al. 1996). However, in the United States, when honor is brought to mind, it influences perception even when honor values are not endorsed; for example, when an honor lens is used, people perceive more potent figures as more likely to be male (Novin & Oyserman in press).

When migrants from honor cultures enter new societies, they are likely to carry honor culture with them. However, whether honor culture will continue to thrive in the new setting likely depends on a number of factors. A first factor, as noted in the section on culture as inherent meaning, is that people may continue to assume honor norms exist and act in ways that fit these norms even when they personally do not endorse them. This implies stability of honor culture over time. A second factor to consider, however, is that whether or not honor responses make sense depends on the effectiveness of social institutions in one's local context (Nowak et al. 2016). This implies that some settings provide a better fit for honor cultures than others. The idea that honor, aggression, and weak social institutions feed on each other is useful in considering social movements in Islamic societies, often described as honor cultures. Consider Boko Haram, ISIS, and Al Qaeda; each thrives in weakened or failed states in which the central government cannot punish wrongdoing. Each also weakens alternative social institutions (e.g., educational systems) as

well as trust in the central government to punish wrongdoing. As these examples highlight, honor culture thrives in contexts with weak social institutions; at the same time, honor culture weakens these institutions when it gains a foothold. A third factor to consider is the place within a host society into which migrants from honor societies enter. This idea is highlighted in segmented assimilation theory (Portes & Zhou 1993). That is, migrants do not assimilate into all of their host society; rather, they assimilate into that segment of it that they live in, and this segment is often one in which public institutions are weak—poor neighborhoods with high crime rates, high joblessness, and low academic attainment. Segmented assimilation and marketization theory (Grusky & MacLean 2016) converge in predicting that waves of immigrants who enter these segments of their host cultures will need to fend for themselves. In these conditions, cultures of honor will be maintained from the source culture and are likely to take hold in the host culture as well (Nowak et al. 2016).

Remaining Questions

As described in the preceding sections, the focus on core themes has yielded important progress in understanding culture's consequences and how subcultures matter. This progress has been made in spite of a number of theoretical questions and practical issues that still remain (for a review, see Oyserman & Uskul 2008).

Disjunctures. One question is whether individualism and collectivism at the societal-structural level can be assumed to be the same as individualism and collectivism at the personal-individual level (e.g., Kitayama & Uskul 2011). Interesting results are produced at the societal level of analysis (e.g., Bond & Smith 1996). Yet the societal and personal levels are clearly not the same, as can be seen by studies showing effects of disjuncture between the two (Zou et al. 2009). Individuals who differ from their national norms experience lower well-being (Lun & Bond 2013) and less satisfaction with their personal life (Fulmer et al. 2010) and social relationships (Friedman et al. 2010). It is less stressing to move to a new culture if one's personal propensities match the new culture's core theme (Cross 1995). In organizations, cultural misfit has more negative consequences for productivity than does misfit in terms of dissimilarity in race-ethnicity or gender (Elfenbein & O'Reilly 2007).

Knowing what is normative or valued in one's society provides an interpretive lens through which to understand experiences with others and what is likely or expected in social interchange (Fiske & Taylor 2013). In this way, core themes influence perception and experience regardless of whether one personally endorses them (Zou et al. 2009) and whether most people actually endorse that theme. Therefore, a theme may be perceived as core long after it no longer is, or even if it never was, core. This has been termed the illusion of universality or pluralistic ignorance (for a review, see O'Gorman 1986).

Operationalization. Also open to debate is which countries form good bases for extrapolation of effects due to independent-interdependent self-construal or individualism-collectivism (Matsumoto 1999), which personal-level markers of culture should be used (candidates are values, norms, implicit norms, and self-construals), and how markers should be measured. For example, the most common way to assess self-construal is to use Kuhn & McPartland's (1954) Twenty Statements Test, in which open-ended responses must be content coded (Oyserman et al. 2002a). Initial work showed that people who were members of minority religious affiliation groups were more likely to describe themselves in terms of social category memberships (e.g., "I am a man," "I am a student," "I am a football player"; Kuhn & McPartland, p. 72). An early study clearly showed

the promise of this measure for cross-cultural work: Bond & Cheung (1983) found that Chinese and American students differed in the frequency that aspirations were part of their self-descriptions and that Japanese students were not much different from American students. Subsequent coding in cross-cultural contexts counted the number of responses that referred to individuating traits and aspirations and those that referred to group memberships or relationships (e.g., Bond & Cheung 1983, Gardner et al. 1999, Trafimow, et al. 1991).

Results, which were predicted to show more use of personal attributes in individualistic societies, are mixed. Indeed, a quantified synthesis of results of cross-national comparison of self-construal, mostly using the Twenty Statements Test, yielded small and heterogeneous effects (Oyserman et al. 2002b). A more recent review of the self-construal literature highlights that this heterogeneity of effects was not an artifact of the studies available at that time (Cross et al. 2010). On the one hand, both the small size of the effect and its heterogeneity might reflect a reality, and this might not be a problem. After all, chronic small and heterogeneous differences in self-concept structure across societies might be consequential. On the other hand, it is possible that the actual average between-country difference is larger but that the true effect is masked either by the common operationalization of self-concept structure into responses on the Twenty Statements Test or by variability in content coding responses to the task. Finally, it is possible that between-country comparisons show culture-level differences that are not fully attributable to differences in independent and interdependent self-concepts.

Active ingredients. Researchers are also divided on whether the active ingredient in studies involving individualism and collectivism or independent-dependent self-construals is one factor or two. Can a person think of him- or herself as both connected to others and separate from others? Do societies support both autonomy and connection? These questions are both theoretical and empirical, and evidence on both sides has been presented (Oyserman et al. 2002a,b; Oyserman & Lee 2008; Taras et al. 2014; Vargas & Kemmelmeier 2013). Because the issue involves theoretical constructs, it cannot be resolved in the abstract, and which formulation is used depends on the questions being addressed, as highlighted in the next section.

VARIABLE ACCESSIBILITY: CULTURE AS HUMAN UNIVERSAL WITH CORE THEMES

Cultures' core themes of individualism, collectivism, and honor can also be thought of as underlying human culture and as essential to human survival (e.g., Boyd & Richerson 1985, Oyserman 2011). As noted in the section on cultural inherence, cultural knowledge provides predictability. Lack of environmental predictability is stressful in itself, yielding increased vigilance and increased threat sensitivity in ambiguous contexts (for a review, see Miller et al. 2009). Beyond predictability, human culture evolves to provide working solutions to three basic problems—sustaining the group over time, organizing relationships, and facilitating individual welfare (e.g., Oyserman 2011, Schwartz & Bardi 2001). These basic problems require that people join together, cooperate with an in-group, regulate themselves to fit in, and be motivated to initiate and invest in problem solving (e.g., Boyd et al. 2011; Boyd & Richerson 1985, Johnson & Earle 2000, Oyserman 2011). Culture provides a means to stick together with others to create and share resources and solutions to the problems that arise from sticking together—from managing relationships to minimize dangerous conflict, to clarifying group boundaries—without which it may be unclear with whom to share and from whom shared resources can be expected.

Resolving how to do these things results in a series of "good enough" solutions—solutions that are not the best or most efficient solution, just better than no solution (e.g., Cohen 2001).

This means that the initial formulation of a solution may be relatively haphazard in that a variety of solutions could have been pursued. Once a good enough solution is attained, it is likely to be relatively stable, and change will be incremental, even if alternatives are available (Argote et al. 1995, Chang et al. 2011, Cohen 2001). Once developed, cultural solutions permeate all aspects of behavior and provide a blueprint or outline for how one is to behave and what one can expect of others across a variety of situations. Cultural solutions become meaning-making frameworks that both constrain and enable perception and reasoning (Nisbett & Norenzayan 2002, Shweder 1984). This permeation makes cultures sticky because once absorbed, no single specific element can be excised.

Population-specific genetic sensitivities (Way & Lieberman 2010) and historic differences in the dominance of one or the other of these basic problems have been used to explain societal focus on individualism, collectivism, and honor (e.g., Kitayama & Uskul 2011, Segall et al. 1990). For example, ecologies differ in harshness of climate (Van de Vliert 2010), environmental pathogens (Fincher et al. 2008), means of production (herding, farming, or fishing; Kitayama & Uskul 2011, Segall et al. 1990), and whether wheat or rice is the staple crop (Talhelm et al. 2014). Societies also differ in when their frontiers were settled, what their core philosophies are, and how well their central governments function to punish wrongdoers (Nowak et al. 2016). All of these historic antecedents are plausible roots of culture: Cultures develop in places, and the specific practices developed in a place are bound up with the specific demands of the ecological niche in which people find themselves (e.g., Kendal et al. 2011).

Yet at the same time, each cultural theme addresses adaptations to group living, and group living is basic to human survival (Boyd & Richerson 2005, Kurzban & Neuberg 2005). Living together requires that people have guides to coordinate and organize relationships, clarify group boundaries, and reward innovation so that it can be imitated or exploited. Evolutionarily, membership in a group is essential; humans need groups to survive (Cohen 2001, 2009). This would imply that people are sensitive to social categories, to social validation versus ostracism, and to cues about when to innovate and do one's own thing (e.g., Legare & Nielsen 2015, Oyserman 2011). Indeed, social allegiances are tightly monitored, social rejection is highly stressful, and social inclusion and physical contact are highly protective (Cohen et al. 2015, Murphy et al. 2013).

Thus, an alternative to the core themes approach to culture is needed. Rather than theorizing that cultures differ in whether particular knowledge networks or cultural mindsets are available for use, it makes more sense to posit that societal cultures differ in the likelihood that each cultural mindset is cued and in the particular ways each is instantiated (Oyserman 2011, Oyserman et al. 2014). What this would imply, as articulated in **Figure 1**, is twofold. First, whether an individualistic, collectivistic, or honor mindset is activated depends on features of the environment and the interaction between these features and their implications. This interaction is a function of the spreading activation of associative knowledge networks. Second, whether a particular experience or observation requires a shift to reflective processing depends on this same interaction. Thus, both the variable activation and the particular practices model of culture build on dual-process models of cognition. These models predict that people do not have a fixed core cultural theme through which they always make sense of their world; instead they have a form of each of the core cultural themes available as cultural mindsets. Situated cues may influence which cultural theme is momentarily activated as a cultural mindset. Third, the particular practices associated with each cultural mindset are likely to be idiosyncratic to a particular time and place. This formulation focuses attention on the (often nonconscious) impact of social contexts, human artifacts, physical spaces, tasks, and language on what and how people think (Oyserman 2011).

These predictions are supported in an emerging body of research. The same differences that have been shown in between-group comparisons have also been shown using situated activation

methods. People guided to use a collectivistic mindset automatically take context into account, whether they are Korean or American. The reverse is also true: People guided to use an individualistic mindset automatically focus on main points, whether they are Chinese or American (for a summary, see Oyserman 2011). Both Chinese and Americans can be guided to process for contextual cues, undermining performance on lower-level and complex cognitive tasks if task demands require generating rules and ignoring purposefully extraneous detail (D. Oyserman, S. Novin, B. Lam, S.X. Chen, E. Newman, & V. Yan, manuscript under review). Cross-national effects are replicated for US groups—European Americans, Asian Americans, African Americans, etc. (Oyserman et al. 2009). Complex cognitive performance improves if the activated cultural mindset matches task demands and is undermined if the activated cultural mindset mismatches task demands, in accordance with the process model depicted in **Figure 1**. In contrast to the results of studies in which a cultural mindset is momentarily activated, the results of studies using between-group comparisons capture the effect of whichever cultural mindset is on one's mind at the moment of the test. These studies are inherently less interpretable than they are often assumed to be because the cultural mindset on one's mind at the moment may be the chronically activated mindset or may be the cultural mindset unintentionally activated by some feature of the research context. Although fewer studies exist that compare participants with no activated cultural mindset (control) to participants with an activated mindset, these studies generally support the prediction that a momentarily activated cultural mindset may be either similar to or different from the chronically activated mindset (Oyserman & Lee 2008). Hence, between-group effects do not contradict the prediction that each cultural mindset is available for use, even though it may not be accessible (activated) in the moment.

Just as situations carry cues that probabilistically activate cultural mindsets linked to specific mental procedures, they also carry cues that probabilistically activate experienced cultural match and mismatch, which are linked to either remaining in the reflexive or switching to the reflective reasoning system. Match-mismatch cues are culture rich—as situations unfold, they either follow or deviate from culture-based expectations. Deviations matter because they mark that something is not going as assumed and thus trigger higher-level processing (Mourey et al. 2015). Given the nature of priming, effects are assumed to occur in part outside of conscious awareness and to be multiply determined, so that awareness of the prime should not necessarily undermine the effect. Whether a mismatch is experienced and whether it implies the need to defend one's cultural values should depend, in part, on whether cultural merging is experienced positively as an addition or negatively as a subtraction from one's cultural values.

CONCLUSION

As the world becomes a more heterogeneous place, one of the critical advances of cultural psychology has been to document that cultures can be classified according to the incorporation of a main theme: individualism, collectivism, or honor (face). From this perspective, being acculturated means knowing what is important and which lens to use to make sense of experiences. At the same time, culture is more than a single core theme; it is a detailed, rich, and particularized set of norms and implicit assumptions about how everyday life will unfold, which can be applied to everyday life. From this perspective, being acculturated means knowing how things are likely to unfold within one's society, so that systematic processing is not needed to get through the mundane details of the day. Finally, because each society includes the capacity to activate and access each core theme, psychologists can examine the moderating effects of each, both within and across societies. By focusing attention on differences in which questions seem interesting and in how constructs are operationalized, cultural psychology highlights two issues that are often otherwise

overlooked and are important to psychologists whether or not they are interested in culture. The first issue is that what is experienced as central, important, and in need of explanation need not be universal. The second issue is that conceptual rather than exact replication of research is critical in understanding the robustness of a psychological theory because the particular practices associated with the core concepts that a theory identifies are likely to differ between times and places such that operationalization of a core concept must be sensitive to a society's practices.

SUMMARY POINTS

1. Culture is three things: a set of everyday practices, a core chronically accessible theme (individualism, collectivism, or honor/face), and the capacity to understand each of these themes when they are activated. Together, these factors of culture yield a broad set of predictions about culture's consequences.
2. Culture is the lens through which experience is interpreted, but because it is pervasive, it is easy to fail to notice one's own culture and mistake it for unmediated reality. People are always embedded in culture, so studying culture requires stepping out of it. Otherwise, it is difficult to see culture: One's own cultural lens feels like reality and not like a lens at all.
3. Psychological theorizing might be culture bound. Psychologists are just as likely as other people to fail to notice culture. Taking a cultural perspective means understanding that a theory developed and tested in one culture may or may not apply to other cultures. Hence, psychologists cannot assume that theories developed and tested in one culture apply to other cultures without articulating and testing culture's potential moderating function.
4. Group-based comparisons are the most common way to study culture and are a useful first step. A group-based approach makes sense: People live in groups, and cultural practices are transmitted within groups over time, so group membership might be a simple, concrete marker for culture. Using a group-based approach to culture facilitates the inclusion of culture in sampling, making it easier to examine whether a psychological theory developed and tested in one group generalizes to another. A group-based approach also forces a deeper understanding of what a psychological theory predicts. After all, groups may differ in how best to operationalize a basic process predicted by a theory rather than in whether the theory itself applies.
5. Distinguishing culture from subculture is not a precise science. Instead, whether a group constitutes a culture or a subculture depends on perspective. For example, the United States is both a subculture within industrialized, Western-educated, individualistic wealthy societies and a culture on its own. Whether it makes sense to talk about a nation, a state, or a group as a culture depends on the specific comparisons and predictions being made.
6. Modern societal social-demographic trends mean that the United States and other societies are becoming more diverse. This increasing diversity means that these societies will be more likely to include a mix of perspectives—individualism, collectivism, and honor or face—and that everyday life is more likely to be experienced as unpredictable. Psychologists (both cultural psychologists and those with other interests) are just beginning to consider what the implications are for societies, well-being, and psychological theories.

7. Experimental methods are an important additional tool in testing predictions about culture; they address the limitations of the group-based approach and facilitate development of refutable theories about how culture works. To use these methods, researchers must operationalize the abstract idea of culture into specific active ingredients and randomize participants to conditions that differ in their implications for these ingredients. For example, participants can view pictures, unscramble sentences, read a paragraph, or circle words in a text. Researchers predict that these brief tasks will cue the cultural mindset and to-be-tested processing style. Because experimental methods are not dependent on between-group comparisons, they can test the assumption that differences in outcomes are due to differences in activated cultural mindsets or practices.
8. Culture organizes experience in three ways. First, by providing a set of particular practices or ways that "we" do things, culture shields reflexive processing by making everyday life feel predictable to in-group members. Second, by highlighting a main theme, culture scaffolds which cognitive procedure—connect, separate, or order—will be the default in ambiguous situations. Third, by structuring working solutions to universal human needs, culture facilitates situation-specific accessibility of each of the culture-derived cognitive procedures (connecting, separating, and ordering).

FUTURE ISSUES

1. Though much research has already been done on two active ingredients of culture (individualism and collectivism), the cognitive consequences of the third active ingredient (honor or face) are only just now beginning to be explored. Research to date has mostly focused on demonstrating that effects can be found. Having taken this important first step of providing evidence that a phenomenon of interest exists, the next steps will entail developing refutable predictions about the active ingredients of culture and consequences in everyday life. An example is emerging research on the consequences of match and mismatch between the demands of a task and the salient cultural mindset and how this match and mismatch might predict when cultural merging is experienced as additive and when it is experienced as subtractive.
2. What we actually mean by culture continues to be an important topic of research. By contrasting views of individualism and collectivism within industrialized, wealthy, developed, and educated groups, psychologists were able to study culture separate from economic and developmental issues. An alternative is to contrast nonmodern and modern societies, asking whether psychological theories (e.g., about motivation and fairness) developed and tested in modern societies predict behavior in nonmodern ones. The argument is that by studying samples from countries that are developed, industrialized, and relatively wealthy and have Westernized education systems, psychologists are missing a lot of what culture does. The approach of contrasting societies moves away from defining active ingredients of culture and instead highlights the possibilities of understanding how culture may have coevolved with the brain by turning to nonmodern living individuals (albeit few) and historic records. New methods for research, including the use of big data analytic techniques and data from historical records, will be useful for moving these ideas forward.

3. Emerging themes are the consequences of match and mismatch and of juncture and disjuncture between individual propensities and social-structural themes and between expectations and observations. A small literature is beginning to examine the consequences for level of processing, experience of meaning, and well-being of match and mismatch between expectation and observation and of juncture versus disjuncture between dominant social-structural themes and personal propensities. This literature updates an older literature on culture shock and moves beyond a core-theme approach to culture.
4. A significant area for future work is the reconnection of culture to social and demographic trends. Cultural psychology has in some regards been a silo, separate from political science, sociology, racial and ethnic, and poverty research, and a focus on connecting these areas of research and drawing policy implications is emerging. This focus is important because prior and current theorizing and research on racial-ethnic minorities, social class, and poverty across these fields yields insights into psychological processes as yet untested but nevertheless relevant to cultural psychologists and to psychology more generally. Future directions include experimental tests of when cultural mindsets (collectivism, individualism, and honor) predict effects and when effects are better predicted by match-mismatch, juncture-disjuncture consequences.

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