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Cultural Influences on Emotion:
Established Patterns and Emerging Trends

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Abstract

Over the last decade, significant empirical research has examined the influence of culture on a variety of emotional and affective processes. In this chapter, we review three established empirical differences in emotion between Western and East Asian cultures that stem from independent vs. interdependent models of self. These patterns concern the: (1) focus of emotion, (2) value placed on emotional expression vs. suppression, and (3) value placed on experiencing positive (vs. negative) affective states, and on high vs. low arousal positive states. This work reveals that many assumptions about emotion that stem from Western views of emotion are less applicable to East Asian contexts. We then discuss the importance of considering cultural differences in emotion for health, business, and other applied settings. We end with a description of some emerging trends in the culture and emotion literature, which broaden existing research by including different independent and interdependent contexts; examining interactions with age, gender, and social class; studying acculturative processes; comparing different religions; exploring other cultural constructs; and using neuroimaging and genetic methods. Together, this research reveals the myriad ways in which culture shapes emotional life.

Introduction

Emotions and other affective states play a critical role in our daily lives. They allow us to respond to environmental events rapidly and in a coordinated way. They help us make decisions about what to do and how to act. They can drive our actions and preferences. They tell us about the intentions of others and make it easier for us to predict their actions. For these reasons, many scholars have long believed that emotions are hardwired and universal. At the same time, scholars (as early as Darwin [1872/1998]) have also noted the considerable “diversity” of emotional expression, which has led scholars to wonder about the degree to which emotions and other affective states are socially transmitted and culturally variable. Although empirical research, including our own, has demonstrated considerable cultural similarities in emotional experience and expression (e.g., Breugelmans et al. 2005; Scherer, 1997; Tsai, Chentsova-Dutton, Friere-Bebau, & Przymus, 2002; Tsai & Levenson, 1997; Tsai, Levenson, & Carstensen, 2000), a significant body of research conducted within the last decade has also demonstrated considerable cultural differences. We focus on these differences in this chapter.

The chapter is divided into four main sections. In the first section, we provide a brief description of the origins of Western models of emotion, which dominate current research in affective science. In the second section, we describe three consistent empirical patterns of cultural differences in emotion that have emerged in the last decade, what we refer to as “established” cultural patterns. These patterns suggest that the dominant model of emotion in many East Asian contexts differs from that of many Western contexts. In the third section, we discuss the practical implications of these cultural differences. Finally, in the fourth section, we discuss emerging trends in the field that promise to reveal new insights about culture and emotion in the decades to come. But first, we define our terms.

Definitions

By “culture,” we refer to shared and historically derived ideas that are instantiated and transmitted through practices, artifacts, and institutions (Kroeber & Kluckhohn, 1952; Markus &

Conner, 2013). People create these ideas, and these ideas in turn shape how people think, feel, and behave, a process that Markus & Conner (2013) refer to as the “culture cycle.” Among the many functions of culture, one is to teach people what is moral, virtuous, good, and right, as well as what is immoral, sinful, bad, and wrong (Shweder, 2003). Because most cross-cultural research on emotion has focused on comparisons between Western and East Asian cultures, we focus on these contexts in this chapter, although we discuss other cultural differences in the final section. Initially, research compared Western and East Asian cultures because ethnographic accounts and personal observation suggested that they differed emotionally (e.g., Benedict, 1946; Hsu, 1953; Kleinman, 1988; Potter, 1988); however, as described below, research later focused on these comparisons for theoretical reasons as well (Markus & Kitayama, 1991).

In the literature, researchers use the terms “emotion,” “affect”, and “feeling” to refer to a broad range of phenomena that involve changes in subjective experience, neural and physiological response, and behavior at varying intervals of time (seconds, minutes, days). “Emotional responses” such as anger, fear, and disgust typically refer to short-lived, highly arousing states that occur in response to a meaningful event (Ekman, 1994). “Affect” refers to feelings that can be described in terms of valence (positive to negative) and arousal (high to low) (Feldman Barrett & Russell, 1999; Larsen & Diener, 1992; Watson & Tellegen, 1985; Thayer, 1989; see Figure 1). For instance, excitement and enthusiasm are “high arousal positive states;” calm and relaxation are “low arousal positive states” fear and nervousness are “high arousal negative states,” and dullness and sluggishness are “low arousal negative states.” Both emotion and affect can occur for a few seconds (“states”), may last a few days (e.g., “moods”), or can be general tendencies to feel a certain way (“traits”) (Davidson, 1994; Watson & Clark, 1994). Cross-cultural studies have focused on all of these different phenomena, as illustrated below.

INSERT FIGURE 1 HERE

I. Western Models of Emotion

Dominant models of emotion in the psychological literature are based on the theories of three primary 19th-20th century Western thinkers: Charles Darwin, William James, and Sigmund Freud. Darwin (1872) first proposed an evolutionary view of emotion by observing connections between “man” and “animals” in his book, “The Expression of Emotion in Man and Animals.” He believed that in order to survive, organisms had reflex-like responses that allowed them to respond to environmental threats and rewards instantaneously and automatically, and that emotional expressions were residues of these responses (Oatley, Keltner, & Jenkins, 2006). Later, William James (1890) proposed that the bodily changes that occurred in response to a meaningful event were the core part of the emotional response. He also proposed a cathartic-hydraulic view of emotion, in which verbal, facial, and physiological responses were different channels for releasing emotional energy elicited by a stimulus. Moreover, if one channel were blocked (e.g., people could not express their emotions verbally), emotional energy would be released more intensely through other channels (e.g., physiologically). This theorizing was consistent with Sigmund Freud’s view of the psyche as a fluid flowing through a system (Freud, 1946/1921). While Freud never used the term “hydraulic model” himself, he viewed emotions as placing pressure and tension on a system that would explode if those emotions were not expressed. Moreover, Freud saw emotions as the basis of different forms of psychopathology (Oatley et al., 2006). James was also interested in the links between emotion and “healthy mindedness” (James, 1902). He believed that people create their own happiness by believing in the meaning of life---even if the belief is not rational---and that depression, anxiety, and other forms of distress resulted from having pessimistic beliefs (James, 1907/2000).

Although there have been many other emotion theorists since Darwin, James, and Freud, the views of these three scholars have provided the foundation for many core assumptions about emotion that dominate the Western empirical literature. From this perspective, emotions at their core are intrapsychic experiences that are expressed through multiple channels of

response. If one of those channels is suppressed or blocked, the emotional response is diverted to another channel. Moreover, according to this model, frequent emotional suppression places too much pressure on the system, resulting in poor mental and physical health. This is particularly true for aggressive impulses and other negative emotions, which can result in severe psychopathology, if not expressed in socially acceptable ways. As shown below, these theories, while products of individual thought, also reflect the cultures in which Darwin, James, and Freud lived.

While empirical research on emotion started in the early 1900's, cross-cultural research on emotion did not begin until the 1960s and 70s. Most of this research predicted that while there might be cultural differences in the triggers and displays of emotion, there would be no differences in the core aspects of emotional response. For instance, in Ekman's neurocultural model of emotion, he proposed that the triggers of emotion, the display rules regarding emotional expression, and even the consequences of emotional expression, were culturally variable. The one exception was the "facial affect program," or the facial expressions associated with specific emotional states, which he proposed was a core aspect of emotional response and therefore universal (Ekman, 1972). To test this model, Ekman and his colleagues presented individuals of different nations photos of facial expressions that represented different specific emotional states. Across the different nations sampled, individuals were able to recognize the emotions depicted in the photos at above chance levels (Ekman et al., 1987), leading Ekman and others to conclude that emotions could be recognized across cultures. Thus, many researchers concluded that the Western model was a universal model of emotion.

II. Cultural Differences in Emotion: Established Empirical Patterns

Although some scholars continued to conduct cross-cultural studies of emotion in the 1970s and 80s, a significant resurgence of interest in culture and emotion began in the 1990s, after Hazel Markus and Shinobu Kitayama (1991) proposed that national differences in individualism-collectivism (Hofstede, 1980; Triandis, 1989) produced different models of the self.

In particular, Markus & Kitayama (1991) focused on North American and East Asian contexts, and described how these contexts promoted “independent” and “interdependent” models of self, respectively. In “independent” models of self, individuals are viewed as being distinct from others; defined in terms of their beliefs, desires, and preferences; taught to prioritize their own needs over those of others; and encouraged to influence others (i.e., change their environments to be consistent with their own beliefs, desires, and preferences). In contrast, in “interdependent” models of self, individuals are viewed as being connected to others; defined in terms of their duties and relationships with others; taught to prioritize others’ needs over their own; and encouraged to adjust to others (i.e., change their beliefs, desires, and preferences to be consistent with their environments). Markus & Kitayama (1991) proposed that these different models of self would shape emotion (as well as cognitive and motivation) in specific ways. In the next section, we describe three empirical patterns based primarily on research conducted within the last decade that test the ideas laid out by Markus & Kitayama (1991). These patterns are graphically represented in Figure 2.

INSERT FIGURE 2 HERE

Pattern 1: Emotions Are More Interpersonally Focused in East Asian Than Western Contexts

Because cultures with independent models of self value personal achievement, autonomy, and distinctiveness, emotions in these cultures should focus on the personal self and emphasize distinctiveness. Conversely, because cultures with interdependent models of self value group achievement, interpersonal connectedness, and fitting in with others, emotions in these cultures should focus on others and emphasize connection with others. In other words, members of Western cultures should experience emotions that distinguish themselves from others more, whereas members of East Asian cultures should experience emotions that connect them with others more. Furthermore, emotions should be most intense for Westerners when they think about their uniqueness, whereas emotions should be more intense for East Asians when they think about their connections with close others.

Consistent with these hypotheses, several studies have demonstrated that Japanese report experiencing socially engaging emotions (e.g., feeling connected, friendly, guilty, ashamed) more frequently and intensely, and experiencing socially disengaging emotions (e.g., feeling superior to, proud, angry, and frustrated) less frequently and intensely than members of many different Western countries (i.e., Germany, United Kingdom, and United States) (Kitayama, Mesquita, & Karasawa, 2006; Kitayama, Park, Sevincer, Karasawa, & Uskul, 2009). These cultural differences have been replicated among children, suggesting that they emerge relatively early in life (Furukawa, Tangney & Higashibara, 2012). These differences are directly related to the types of situations that individuals encounter: situations eliciting anger are more frequent in American than Japanese contexts, whereas situations eliciting shame are more frequent in Japanese than American contexts (Boiger, Mesquita, Uchida, & Barrett, 2013).

Similarly, and consistent with the above hypotheses, emotional experiences seem to be more self-focused and less other-focused in independent than interdependent contexts. For instance, Chentsova-Dutton & Tsai (2010) primed individuals to think about themselves or their family members by listing three events that involved themselves or their family members. Participants then watched emotional film clips. Asian Americans reported and expressed more intense emotions during the film clips when they had focused on family members vs. themselves prior to watching the clips. In contrast, European Americans reported and expressed more intense emotions during the film clips when they had focused on themselves vs. family members prior to watching the clip. Similarly, in Uchida, Townsend, Markus, & Bergsieker (2009), Japanese athletes used more emotion words than American athletes when asked about their relationships; Japanese implicated others more often than American participants when describing an athlete's emotional reaction to winning; Japanese participants inferred more emotions than Americans did when athletes mentioned relationships in their self-descriptions; and Japanese inferred more emotions for athletes pictured with teammates, whereas American

participants inferred more emotions for athletes pictured alone. Thus, emotions appear to focus on others more in East Asian vs. Western contexts.

These different foci are also reflected in people's perceptions of others' emotions (for a review, see Barrett, Mesquita, & Gendron, 2011). Several studies show that European Americans rely primarily on the information displayed by a central target when identifying how that central target feels, while East Asians tend to also rely on information provided by the other people in the target's environment (e.g., Masuda et al., 2008). For instance, Masuda and colleagues (2008) showed European American and Japanese participants cartoons depicting a central target displaying a happy, sad, angry, or neutral face. The central target was surrounded by four other people, who displayed either the same or different emotional facial expressions as the central target. Participants were then asked to rate the degree of joy, sadness, and anger displayed by the central target. As predicted, Japanese participants' judgments of the central target's emotion were more influenced by the expressions of other people surrounding the central target than were American participants' judgments of the central target's emotion (Masuda et al., 2008). Moreover, Japanese ratings of the central targets' emotional intensity increased when that target's emotions were consistent with the expressions of the other people surrounding him or her. In contrast, American ratings of the target's emotional intensity did not vary as a function of the other people's expressions.

In a follow-up study, Masuda and colleagues (2008) used eye-tracking to demonstrate that Japanese attended to the other people surrounding the central figure more than did Americans when judging the central target's emotional expression. These findings hold when real faces are used, when the size of the target is the same as the size of the target's conspecifics, and when the amount of observation time was controlled (Masuda, Wang, Ishii, & Ito, 2012). Similarly, Goto, Yee, Lowenberga, & Lewisa, (2013) compared Asian American and European American participants' N400 responses, which are sensitive to semantic matches and mismatches between figures and background images, to facial expressions that were paired

with either congruent or incongruent background affective pictures (e.g., a happy face with a positive or negative scene). As expected, Asian Americans showed greater N400 responses to incongruent vs. congruent picture–face pairs than did European Americans, suggesting that the Asian Americans were more sensitive to the background picture when they viewed the central target’s emotional face than European Americans were.

Interestingly, compared to European Americans, East Asian participants seem to be particularly attuned to surrounding faces. In Ito, Masuda, and Li (2013), European Canadian and East Asian participants were asked to rate the intensity of a central target’s emotional expression surrounded by either affectively salient landscape scenes or by other people’s emotional expressions. Both European Canadians and East Asians reported higher intensity of the central target’s emotion when the landscape scenes were affectively congruent vs. incongruent (e.g. smiling target paired with a beautiful beach vs. a decrepit old building). However, while East Asians’ ratings of the central target’s emotion were influenced by the emotional expressions of other people, European Canadians’ ratings were not.

In sum, as predicted by independent and interdependent models of self, considerable research now demonstrates that emotions in Western contexts are focused more on the individual separate from others (intrapersonal), whereas emotions in East Asian contexts are focused more on individuals in the context of others (interpersonal) (top panel of Figure 2).

Pattern 2: East Asian Contexts Value Emotional Expression Less and Suppression More Than Western Contexts

A second pattern that has received considerable attention in the empirical literature is the display of emotion; indeed, much of the first work on culture and emotion focused on cultural differences in “display rules,” or attitudes about what is appropriate to show on one’s face in a given situation (Matsumoto, 1990, 1993). In Western independent cultural contexts, openly and freely expressing one’s emotion is strongly encouraged because it reinforces the self as separate and unique. As a result, emotional control and suppression in Western contexts is

associated with experiential avoidance (Su, Wei, & Tsai, 2014; Wei, Su, Carrera, Lin, & Yi, 2013) or the unwillingness to accept and experience distressing thoughts or other internal events (Hayes, Strosahl, & Wilson, 1999). This construct reflects cathartic and hydraulic models of emotion, in which emotional expression is critical to psychological health. In interdependent cultural contexts, however, the open expression of emotions may hurt interpersonal harmony by making others feel bad (see Butler, Lee, & Gross, 2009; Soto, Levenson, & Ebling, 2005; Su et al., 2014; Wei et al., 2013). Consequently, East Asian cultural contexts value emotional expression less and suppression more than Western cultural contexts (Ford & Mauss, 2015; Matsumoto, 1990; Su et al., 2014; Wei et al., 2013).

This cultural difference in the value placed on emotional expression vs. suppression suggests that the consequences of emotional expression and suppression might differ in Western and East Asian contexts. For instance, studies have demonstrated that suppressing the facial expression of an emotion increases physiological arousal, as suggested by cathartic-hydraulic models (Gross & Levenson, 1993, 1997). But is this true in East Asian contexts? To answer this question, Butler and colleagues (2009) compared the emotional responses of Asian American and European American female dyads while they discussed a distressing film. While emotional expression reduced European American participants' cardiovascular arousal (reduced blood pressure), it actually increased Asian American participants' cardiovascular arousal (increased blood pressure). Thus, emotional expression rather than suppression was associated with increased physiological arousal for Asian Americans, a pattern that is the opposite of what cathartic-hydraulic models predict. Similarly, in another study, Mauss and Butler (2010) induced anger in European American and Asian American women. For Asian American women, valuing emotional control was associated with reduced anger experience and behavior, and a pattern of cardiovascular responding that is consistent with viewing events as challenges and effective emotion control. For European American women, while valuing emotional control was also associated with reduced anger behavior, it was not associated with

changes in anger experience. Moreover, valuing emotional control was associated with a pattern of cardiovascular responses that is consistent with viewing events as threats and less effective emotion control. In other words, emotional control seems to be beneficial for Asian Americans but harmful for European Americans.

Suppressing emotions may be harder in European American contexts because it runs contrary to the cultural ideal. Indeed Murata, Moser, & Kitayama (2013) instructed European Americans and East Asians to suppress their emotions in response to negative images. While both groups showed an equally pronounced initial parietal late positive potential (LPP), which is associated with emotional processing, Asians subsequently showed a significant decrease of the parietal LPP in the suppression condition 600 ms post-stimulus, and the LPP completely disappeared 2000ms post-stimulus. In contrast, European Americans exhibited a pronounced and lasting parietal LPP while asked to suppress their emotional response. These results seem to suggest that for East Asians, who are culturally encouraged (and trained) to down-regulate their emotions, suppressing emotional expression requires fewer resources than it does for European Americans.

Finally, Yuan and colleagues (2014) examined the effects of expressive suppression on depressive mood induced by a frustrating arithmetic task in a Chinese sample. Participants were randomly assigned one of three different instructions before the frustrating task: (1) to suppress (i.e. "try to control your negative emotional expression"), (2) to accept (i.e. "let your emotions run naturally"), or (3) to simply perform the task without any further emotional instruction. Participants' reports of negative affect (distressed, upset, irritable, guilty, ashamed, and depressed) and skin conductance response (SCR) were recorded before, during, and after the frustration task. Participants who were instructed to suppress their emotions reported less negative affect and less SCR activity (suggesting less physiological arousal) during the frustrating task compared to participants who were given no emotional instruction or who were asked to accept their emotions. In addition, the participants assigned to the suppression

condition showed better emotional recovery after the frustrating task (Yuan, Liu, Ding, & Yang, 2014). Although this study did not have a Western comparison sample, the results suggest that the effects of suppression on this Chinese sample were beneficial, which runs contrary to the Western, cathartic-hydraulic view of emotional suppression.

Another way to assess the “value” of emotional expression vs. suppression is to examine its effects on health. Consistent with cathartic-hydraulic models of emotion, emotional suppression is associated with poor physical health and increased risk for coronary and cardiovascular diseases (Mauss & Gross, 2004) as well as worse psychological health (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Gross & John, 2003; Kashdan, Barrios, Forsyth, & Steger, 2006) and poor social functioning (English & John, 2013; Srivastava, Tamir, McGonigal, John, & Gross, 2009) in North American samples. While some research finds similar effects in independent and interdependent cultural contexts (English & John, 2013; Roberts, Levenson, & Gross, 2008), more studies find that culture moderates the effects of expressive suppression on physical and psychological well-being (e.g., Butler, 2012; Butler & Gross, 2009; Butler, Lee, & Gross, 2007; Cheung & Park, 2010; Consedine, Magai, & Bonanno, 2002; Consedine, Magai, Cohen, & Gillepsie, 2002; Kwon, Yoon, Joormann, & Kwon, 2013; Lee, Suh, Chu, Kim, & Sherman, 2009; Soto, Perez, Kim, Lee, & Minnick 2011; Su, Lee, & Oishi, 2012). For instance, in one survey, European Americans and Hong Kong Chinese reported their tendency to suppress their emotions (e.g., keep emotions to oneself, control one’s emotion by not expressing it), their experience of depressive symptoms over the past few weeks (e.g., feeling lonely, feeling sad, feeling like a failure), and their overall life satisfaction. As expected, suppression was associated with more depressive symptoms and lower life satisfaction for European American, but not for Hong Kong Chinese participants (Soto et al., 2011).

Other studies have examined the suppression of specific emotions. In one survey, Cheung and Park (2010) showed that whereas suppressing anger is associated with increased depressive symptoms among both Asian Americans and European Americans, this association

was attenuated for East Asian participants, and for participants with more interdependent self-construals. Similarly, in another study, greater reports of anger suppression were more strongly associated with depressive symptoms for North Americans than for Koreans (Kwon et al., 2013). Su and colleagues (2012) took this work one step further, arguing that the suppression-depression association also depends on the type of emotion being suppressed. They proposed that in East Asian contexts, the suppression of socially disengaging emotions should not be associated with poor psychological functioning, while the suppression of socially engaging emotions should, whereas in European American contexts, the opposite should be true. As predicted, the expressive suppression of socially disengaging emotions such as pride was associated with more depressive symptoms for European Americans but not for Chinese Singaporeans. Contrary to predictions, however, no cultural difference was found in the links between the suppression of socially engaging emotions (e.g., respect) and depressive symptoms.

These cultural differences also emerge in specific situations. Le & Impett (2013) found in a daily diary study of an ethnically diverse Canadian sample that the more interdependent individuals were, the more likely they were to report greater well-being and higher relationship quality when they suppressed their negative emotions specifically in adjustment situations (i.e., when they did something they didn't like, or when they gave up something they liked for their partner). The opposite relationships emerged for individuals who were low in interdependence.

Interestingly, these cultural differences in the value placed on emotional suppression vs. expression may also influence how people process faces. For example, Yuki and colleagues (2007) hypothesized that individuals in interdependent cultures, for whom expressive suppression is valued, should focus more on the eyes and less on the mouth when interpreting facial expressions given that the eyes tend to be more difficult to control when expressing emotions than the mouth (Ekman, Friesen, & O'Sullivan, 1988). On the other hand, individuals in independent cultures, for whom emotional expression is valued, should focus more on the

mouth when interpreting facial emotions because it is the most expressive part of the face (Yuki, Maddux, Masuda, 2007). To test these hypotheses, Yuki and colleagues (2007) conducted two studies designed to investigate which parts of the face were crucial when participants were interpreting emoticons (Study 1) and edited expressions of real people (Study 2). In both studies, Japanese weighted the eyes more heavily than did Americans when making their emotional judgments, whereas Americans weighted the mouth more heavily than did Japanese when making their emotional judgments. Indeed, in another series of studies, while categorizing different emotions, East Asian participants fixed their attention to the eye region whereas Western Caucasian participants distributed their attention more equally across the face (Jack, Blais, Scheepers, Schyns, & Caldara, 2009; Jack, Garrod, Yu, Caldara, Schyns, 2012).

In summary, as predicted by independent and interdependent models of self, many Western cultural contexts value emotional expression more and expressive suppression less than East Asian contexts (see panel 2, Figure 2). While differences in display rules have been documented for decades, the differential effects of emotional expression and expressive suppression on physiological response and health across cultures have only been established in the last decade. Recent research also suggests that cultural differences in the value placed on emotional expression vs. suppression results in cultural differences in attention to the eyes vs. mouth when processing faces, although direct links have yet to be made.

Pattern 3: East Asian Contexts Value Different Affective States Than Western Contexts.

Whereas the second pattern in the literature focuses on expressive norms and values, the third pattern in the literature focuses on experiential ideals and values, or how people ideally want to feel, what we refer to as people's "ideal affect." With a few exceptions (Eid & Diener, 2001; Izard, 1971), most research on emotion has focused on how people actually feel, or what we refer to as people's "actual affect." In Affect Valuation Theory (Tsai, 2007), we integrate ideal affect into existing models of emotion by arguing that: (1) how people actually feel differs from how they ideally want to feel, (2) culture shapes how people want to feel even more than how

they actually feel, whereas temperament shapes how people actually feel more than how they ideally want to feel, and (3) ideal affect shapes what people consciously and unconsciously do to feel good, as well as what decisions they make, how they conceive of health and well-being, and how they perceive and respond to others. To date, we have documented two main differences in ideal affect between East Asian and Western contexts: (1) East Asians value a balance of positive to negative states more than members of Western contexts, and (2) East Asians value low arousal positive states (LAP) more and high arousal positive states (HAP) less than members of Western contexts.

a. East Asian Contexts Value Balance of Positive and Negative States More Than Western Contexts

As mentioned above, independent models of the self---particularly in US contexts---privilege differentiating the self from others in positive ways---standing out, being unique, demonstrating how special one is. In contrast, interdependent models of self---particularly in East Asian contexts---privilege fitting in with others, adjusting to others, conforming to the group, and demonstrating how similar one is to others. These different interpersonal goals have consequences for how people want to feel. While positive emotions might make individuals feel that they are special and better than others, they might also elicit envy from others and make individuals less sensitive to others' needs. Negative emotions might make individuals feel bad about themselves, but might elicit less envy from others and make people more sensitive to other people's pain. Thus, members of Western contexts may want to feel positive more and negative less than members of East Asian contexts.

Consistent with these hypotheses, we have demonstrated that although most individuals want to feel positive states more than negative ones, the magnitude of this difference varies by culture. Using experience sampling methods in which we asked people to rate how much they actually felt and ideally want to feel various affective states at a given moment, we found that European Americans and Chinese Americans wanted to feel positive more and negative less

(across all levels of arousal) than Hong Kong and Beijing Chinese. These cultural group differences were mediated by the degree to which individuals endorsed independent vs. interdependent values: the more individuals valued independent over interdependent values, the more they wanted to feel positive vs. negative states (Sims, Tsai, Jiang, Wang, Fung, & Zhang, 2015). Importantly, these differences held after controlling for how much individuals actually felt negative and positive emotions, demonstrating that cultural differences in ideal affect exist above and beyond cultural differences in actual affect.

These cultural differences in the desire to maximize positive and minimize negative affect have consequences for affective experience as well as health and well-being. For instance, numerous studies find that in Western contexts, the relationship between positive and negative states is highly negative: the more individuals report experiencing pleasant emotions, the less they report experiencing unpleasant emotions, both in terms of intensity and frequency. In contrast, in many East Asian contexts (i.e. Chinese, Koreans, Japanese, and Asian Americans), the relationship between positive and negative emotion is consistently less negative, zero, or even positive (Bagozzi, Wong, & Yi, 1999; Goetz, Spencer-Rodgers, & Peng, 2008; Kitayama, Markus, & Kurokawa, 2000; Miyamoto & Ryff, 2011; Perunovic, Heller, & Rafaeli, 2007; Schimmack, 2009; Schimmack, Oishi, & Diener, 2002; Scollon, Diener, Oishi, & Biswas-Diener, 2005; Shiota, Campos, Gonzaga, Keltner, & Peng, 2010; Spencer-Rodgers, Williams, & Peng, 2010). Many scholars refer to these differences as evidence of the greater experience of “mixed” emotions (co-occurrence of positive and negative emotion) among members of East Asian cultures compared to those of Western cultures.

Although considerable work has demonstrated that cultural differences in mixed emotions are due to cultural differences in “dialectical beliefs,” or the tolerance for contradiction, holism, and acceptance of change (Hui, Fok, & Bond, 2009; Kim, Seo, Yu, & Neuendorf, 2014; Spencer-Rodgers, Peng, & Wang, 2010), we have found that variation in the experience of mixed emotions is also due to differences in ideal affect, independent of dialectical beliefs. As

mentioned earlier, we observed that European Americans and Chinese Americans reported wanting to feel positive relative to negative emotions to a greater degree than Hong Kong and Beijing Chinese. These differences in ideal positive relative to negative were related to cultural differences in the experience of mixed emotions: Americans reported less mixed emotional experiences than their Chinese counterparts, and these differences were due to differences in the degree to which individuals wanted to maximize positive and minimize negative affect. To directly assess causality, we experimentally manipulated the desire to maximize positive and minimize negative by instructing participants to either: (1) focus only on their good feelings and to ignore any bad ones (i.e., maximize positive and minimize negative more), or (2) focus on the negative feelings (i.e., maximize positive and minimize negative less). Across European American, Chinese American, and Hong Kong Chinese groups, participants experienced less mixed emotions during a pleasant television clip when they were instructed to maximize positive and minimize negative more than when they were told to instructed to maximize positive and minimize negative less (Sims et al., 2015). These findings were not due to dialectical beliefs.

Further support for the role of independent vs. interdependent models of self in shaping mixed emotions is provided by Grossmann, Huynh & Ellsworth (2015) at the country level. They found that more interdependent countries had texts with more mixed emotion sentences (i.e. a positive and a negative emotion in the same sentence). Similarly, in a cross-culturally diverse sample (i.e. India, Japan, Germany, Russia, the UK, and the US), they found that in more interdependent countries, individuals were more likely to report experiencing more mixed emotions. These findings again held when dialecticism was controlled for, suggesting that interdependence and independence exert a distinct influence on mixed emotional experience.

Research also demonstrates that East Asians are more comfortable with mixed affective experiences than Westerners (Aaker, Drolet, & Griffin, 2008; Hong & Lee, 2010; Kim et al., 2014; Williams & Aaker, 2002), tend to perceive events---especially “positive” ones--- as more mixed than European Americans (e.g., Leu et al., 2010; Miyamoto, Uchida, & Ellsworth, 2010),

have more mixed descriptions of happiness (Uchida & Kitayama, 2009), and are more likely to purchase and prefer consumer products (e.g., photo albums, films) with mixed emotional messages (Hong & Lee, 2010; Kim et al., 2014) than members of Western cultures. The degree to which these differences are due to the value placed on maximizing the positive and minimizing the negative, however, has yet to be established.

In addition to mixed emotional experience, empirical findings suggest that cultural differences in the value placed on positive vs. negative experience may affect the consequences of experiencing negative and positive emotions for health. A growing body of work has shown that negative emotions are associated with negative physiological and psychological outcomes (for reviews, see Consedine & Moskowitz, 2007), including increased cardiovascular disease (e.g., Kubzansky & Kawachi, 2000), increased cancer (e.g., Penninx et al., 1998), increased pain, fatigue, as well as disease (e.g., Geisser, Roth, Theisen, Robinson, & Riley, 2000; Watson, 1988), decreased life satisfaction (Suh, Diener, Oishi, & Triandis, 1998), and even faster mortality (e.g., Pinquart & Duberstein, 2010). Indeed, Pressman, Gallagher, and Lopez (2013) surveyed over 150,000 individuals from 142 countries about their emotions and health and observed that in both industrialized and developing nations, the more people experienced negative affect, the worse their health.

While negative affect predicts negative physiological and psychological outcomes across cultures, however, the magnitude of this effect appears to vary across cultures (e.g., Consedine et al., 2002; Diener & Suh, 2000; Miyamoto et al., 2013; Miyamoto & Ryff, 2011). For instance, Curhan and colleagues (2014) compared the effect sizes of the association between negative affect and health in large representative samples of community adults in the United States and Japan. While negative affect significantly predicted poorer health in both samples, negative emotions were more strongly associated with more chronic conditions, worse physical functioning, worse psychological well-being, and lower self-esteem in the United States than in Japan. Similarly, in a large study of emotion and life satisfaction in 46 different nations,

(Kuppens, Realo, & Diener, 2008) negative emotions predicted poorer life satisfaction more in individualistic than in collectivistic nations. These differences are likely due to the fact that negative affect is more culturally desirable (or less undesirable) in collectivistic nations, although this is yet to be tested directly.

Do such cultural differences emerge when more objective markers of physical health are used? The answer is yes. Higher levels of pro-inflammatory biomarkers, such as interleukin-6 (IL-6), are believed to be one of the biological pathways that mediate the relationship between negative emotions and health in US samples (Everson-Rose & Lewis, 2005; Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002); however, this appears not to be the case in Japan. Miyamoto and colleagues (2013) examined whether negative emotions predict higher levels of pro-inflammatory biomarkers among Americans and Japanese. Americans and Japanese rated their negative emotions for the past 30 days and then provided blood samples from which serum IL-6 levels were determined. While negative emotions predicted higher IL-6 among Americans, they did not for Japanese. In the same sample, Kitayama and colleagues (2015) examined the links between anger expression and biological markers of health in the US and Japan, and again found that whereas anger expression was associated with increased health risk (as measured by pro-inflammatory markers such as interleukin-6 and C-reactive protein and indices of cardiovascular malfunction such as systolic blood pressure and ratio of total to HDL cholesterol) in the US, the reverse was observed for Japanese. These results remained significant after controlling for age, gender, health status, health behaviors, social status, and reported experience of negative emotions.

Similar findings hold for positive emotions. In the study of emotion and life satisfaction in 46 different nations described above, (Kuppens et al., 2008) observed that while positive emotions were more strongly related to life satisfaction than negative emotions across nations, positive emotions had a stronger positive effect on life satisfaction in nations valuing self-expression (e.g., Australia, Canada, the Netherlands, the US) than in nations valuing survival

(e.g., China, Hungary, Russia, Zimbabwe). In another study, although reported experience of positive emotions was negatively associated with depression symptoms among European Americans and US-born Asian Americans, the magnitude of the association between positive emotions and depressive symptoms was greater for European American than Asian-American participants (Leu, Wang, & Koo, 2011). Furthermore, positive emotions were not associated with depressive symptoms for Asian immigrants to the US.

Finally, cultural differences in the desire to maximize positive relative to negative emotions may explain why East Asians are more likely to dampen their experiences of positive emotion compared to their Western counterparts (Miyamoto & Ma, 2011). For instance, when asked to recall a positive event in their lives, Japanese were less likely to have savored and more likely to have dampened their happiness during the positive event.

In summary, consistent with independent and interdependent models of self, Western contexts value maximizing positive and minimizing negative emotion more than East Asian contexts, as illustrated in the third panel (a) of Figure 2. These differences have consequences for individuals' likelihood of experiencing mixed emotions. They also potentially explain cultural differences in the links between emotions and health.

b. East Asian Contexts Value Low Arousal Positive States More and High Arousal Positive States Less Than Western Contexts

Although most people want to feel positive over negative states, people vary in terms of the specific types of positive states they ideally want to feel. Again, these differences are related to different models of self: for individuals with independent models of the self, influencing others--changing one's environment to be consistent with one's beliefs, desires, and preferences---is ideal. In order to influence others, people have to act on their environments, and action requires increases in physiological arousal. Therefore, the more people (and cultures) value influence, the more likely they will value high arousal positive states [HAP] like excitement, energy, and enthusiasm. In contrast, for individuals with interdependent models of self, adjusting to others---

changing one's own beliefs, desires, and preferences to be consistent with those of others ----is ideal. In order to adjust to others, people have to assess what others want, and then change their own actions to be consistent with what others want. This requires decreases in action, and decreased action is accompanied by decreases in physiological arousal. Therefore, the more people (and cultures) value adjustment, the more likely they will value low arousal positive states [LAP] like calm, peacefulness, and serenity (Tamir et al., 2015; Tsai, Knutson, & Fung, 2006; Tsai, Miao, Seppala, Yeung, & Fung, 2007).

Consistent with these predictions, across a series of studies, we have consistently observed that European Americans report wanting to feel excitement, enthusiasm, and other HAP more than Hong Kong Chinese, and Hong Kong Chinese report wanting to feel calm, peacefulness, and other LAP more than European Americans. Chinese Americans, who are oriented to both cultural contexts, value HAP as much as their European American counterparts, and value LAP as much as their Hong Kong Chinese counterparts (Tsai et al., 2006; Tsai et al., 2007). These differences are reflected in widely distributed products, including children's storybooks, women's magazines, Facebook profile photos, and even the official photos of leaders in government, business, and academia (e.g., Tsai, Louie, Chen, & Uchida, 2007; Tsai et al., 2016). Moreover, these differences are mediated by cultural differences in influence and adjustment goals. In a both survey and experimental studies, across cultures, the more people want to influence others, the more likely they are to value HAP, and the more people want to adjust to others, the more likely they are to value LAP (Tsai, Miao, et al., 2007). Again, in all of our analyses, we control for differences in how much people actually feel HAP and LAP demonstrating that cultural differences in ideal affect exist above and beyond cultural differences in actual affect.

As predicted by Affect Valuation Theory, these differences in the value placed on high and low arousal positive states have important implications for what people do to feel good, how people conceive of well-being and illness, and how they perceive others. For instance, in their

ideal vacations, European Americans describe more exciting and fewer calm activities than do Hong Kong Chinese (Tsai, 2007). When given a choice between calm and excited music, European Americans are more likely to choose excited music than Asian Americans (Tsai, 2007; Tsai et al., 2007). In another study, we manipulated ideal affect, and then gave participants a choice of exciting vs. calm consumer products. Across cultures, participants in the “Value Excitement” were more likely to choose excited vs. calm products, and across conditions, European Americans were more likely to choose the excited (vs. calm) products than Chinese Americans, Beijing Chinese, and Hong Kong Chinese (Tsai, Chim, & Sims, 2015).

These cultural differences in ideal affect also have implications for health and well-being. In Tsai et al. (2006) we observed that for European Americans, Chinese Americans, and Hong Kong Chinese, greater discrepancies between how people actually felt and how they ideally wanted to feel were associated with more depressive symptoms. However, the type of discrepancy that was associated with depression varied across cultures: for European Americans, discrepancies in actual and ideal HAP predicted depressive symptoms, whereas discrepancies in actual and ideal LAP did not. For Hong Kong Chinese, only discrepancies in actual and ideal LAP predicted depression. For Chinese Americans, who were equally oriented to both cultures, both types of discrepancies were associated with depression. These findings suggest that conceptions of well-being and depression are related to ideal affect. Indeed, when asked to identify the emotions that were centrally associated with depression, European Americans mentioned the absence of HAP more than Hong Kong Chinese, whereas Hong Kong Chinese mentioned the absence of LAP more than European Americans (Tsai, Sim, & Hong, 2015). Similarly, Young, Sims, Charles, & Tsai (2013) observed that whereas for European Americans, increased physical health problems were associated with feeling dull, sluggish, and other low arousal negative states (the opposite of high arousal positive states), for Chinese Americans, increased physical health problems were associated with feeling nervous, afraid, and other high arousal negative states (the opposite of low arousal positive states), see Figure 1.

In recent work, we have examined the effects of cultural differences in ideal affect on how people judge others. Specifically, we predict that when there is a match between how people want to feel and the emotional expression of a specific target (“ideal affect match”), people will rate that target more positively. Indeed, in an American sample, we observed that the more people valued HAP, the more trustworthy they rated an excited physician (i.e., one who promoted an “energetic” lifestyle), and the more they valued LAP, the more trustworthy they rated a calm physician (i.e., one who promoted a “tranquil” lifestyle) (Sims, Tsai, Koopmann-Holm, Thomas, & Goldstein, 2014). In comparisons of European Americans and Hong Kong Chinese, we find that European Americans rate excited targets (regardless of targets’ ethnicity or gender) as more friendly compared to Hong Kong Chinese, whereas Hong Kong Chinese rate calm targets (again regardless of targets’ ethnicity or gender) as more friendly compared to European Americans (Tsai, Blevins, Chim, Bencharit, Koopmann-Holm & Fung, 2015). And when given a choice between seeing an excited vs. calm target again, European Americans are more likely to choose the excited target compared to Hong Kong Chinese (Park, Tsai, Chim, Blevins, & Knutson, 2015). Again, all of these findings held after controlling for differences in actual HAP and LAP, demonstrating that ideal HAP and LAP independently predict how people judge others.

This preference may impact how people respond to others. For instance, in one study, European Americans and Koreans played as the “proposer” in multiple trials of a modified Dictator Game, in which they were given an amount of money and give the option of sharing some of that money with their partner (the “recipient”), who had no choice but to accept the offer. During each game, they played with different “excited” or “calm” recipients. European Americans offered more money to excited (vs. calm) recipients whereas Koreans offered more money to calm (vs. excited) recipients. Moreover, these cultural differences were mediated by how much participants’ trusted recipients, which were mediated by how much participants wanted to feel HAP (but not how much they actually felt HAP). These findings suggest that

people not only prefer a target whose expressions match their ideal affect, but also trust them more, and therefore, are willing to give them more (Park, Blevins, Knutson & Tsai, 2016). Because these cultural differences held regardless of recipients' race (White, Asian) or sex (male, female), it is possible that ideal affect match is an even more powerful signal of ingroup membership than race or sex.

In summary, consistent with independent and interdependent models of self, European American contexts value HAP more and LAP less than many East Asian contexts, as illustrated in the third panel (b) of Figure 2. These differences have consequences for what people do to feel good, how they think of health and well-being, and their perceptions of and responses to others. Currently (as described below), we are expanding this work to examine cultural differences in the valuation and devaluation of negative states (Koopmann-Holm & Tsai, 2014; Clobert & Tsai, 2016).

Together, a considerable literature conducted primarily over the last decade now demonstrates at least two culturally different models of emotion. One model pervades many Western contexts; in this model, emotions are more intrapersonally and less interpersonally focused; emotional expression is encouraged and results in a host of beneficial outcomes; individuals value maximizing the positive and minimizing the negative; and individuals are encouraged to feel high vs. low arousal positive states. In the second model that pervades many East Asian contexts, emotions are less intrapersonally and more interpersonally focused; expressive suppression is encouraged and has beneficial outcomes; individuals want to feel more of a balance between positive and negative emotions, and individuals want to feel low vs. high arousal positive states. In order to achieve a broader understanding of emotion and other affective phenomena, both models must be considered in future theory and empirical research.

III. Real World Applications

As mentioned at the beginning of this chapter, cross-cultural studies of emotion were originally conducted to test theoretical models of emotion. However, researchers have also

been interested in understanding the influence of culture on emotion for applied reasons as well, and increasing research is directly examining these links. For instance, in our own work, we are examining how cultural differences in ideal affect influence patient-provider interactions in clinical settings. Asian Americans and members of other ethnic minority groups often report poor patient-provider communication, even when they speak the same language as their often European American provider (Ngo-Metzger, Legedza & Phillips, 2004; Saha, et al., 2003). To examine whether cultural differences in ideal affect might play a role, European American, Chinese American, and Hong Kong Chinese participants were asked to imagine that their regular primary care provider was no longer available, and that they needed to choose a new provider for their care. Participants were then presented with either an “excited” or “calm” physician. European Americans were more likely to choose the excited (vs. calm) physician than Chinese Americans and Hong Kong Chinese, and these differences were mediated by influence vs. adjustment goals, and the valuation of high vs. low arousal positive states. These findings suggest that one way to increase communication between patients and their providers may be to match patients with providers whose expressions match patients’ ideal affect (Sims, Tsai, & Fung, 2015).

Similarly, we have also been interested in whether cultural differences in ideal affect play a role in occupational settings. For instance, despite being highly qualified as a group, Asian Americans assume a disproportionately small percentage of top leadership positions in business, politics, and academia, suggesting that there exists a “bamboo ceiling” (Hyun, 2005). We propose that this bamboo ceiling may be due to cultural differences in the emotions associated with leadership, which may reflect cultural ideals. Based on our own work, American leaders show more excited (open, toothy) smiles in their official photos than Chinese leaders. It is possible that American employers may not promote Asian Americans to top leadership positions because they are unknowingly using their own cultural ideals of high arousal positive affect to judge Asian Americans who value low arousal positive states. Indeed, in one study, we

asked European Americans, Asian Americans, and Hong Kong Chinese to imagine that they were applying for summer internships and to indicate the emotions they wanted to convey. European Americans reported wanting to convey more positive (relative to negative) emotions and more HAP (vs. LAP) compared to Hong Kong Chinese (Zhang, Tsai, Jiang, & Fung, 2015). We are currently examining whether applicants with different emotional profiles are more likely to be hired in American vs. Chinese settings. These findings suggest that cultural differences in ideal affect play a role in work settings, and may be particularly important in determining who gets hired and promoted.

Cultural differences in ideal affect may also shape prejudice and discrimination (Clobert et al., 2015). Previous research suggests that the more likely individuals are to actually experience high arousal negative emotions such as anger, fear, or disgust, the more likely they are to hold negative attitudes toward different outgroups such as African Americans, foreigners, or homosexuals (Cottrell & Neuberg, 2005; Smith & Mackie, 2010; Vanman, Saltz, Nathan, Warren, 2004). Furthermore, the more fear people actually feel, the more likely they are to engage in passive harm of outgroups (i.e. avoidance of the outgroup; Mackie, Devos, & Smith, 2000; Skitka, Bauman, Aramovich, & Morgan, 2006), whereas the more anger people feel, the more likely they are to engage in active harm (i.e. confrontation with the outgroup; Mackie et al., 2000; Skitka et al., 2006). However, only a handful of studies have examined how the *valuation* of these states might influence reactions to outgroups (Porat, Tamir, & Halperin, 2016). For instance, Porat et al. (2016) examined how preferences for anger vs. empathy or anger vs. fear influenced endorsement of policies against outgroups. We examined whether the valuation of high arousal and low arousal negative affect was related to interpersonal reactions to potential outgroups (e.g., a new family from a different cultural background who moves in your neighborhood). The more individuals valued high arousal negative affect, the more negative were their reactions toward various out groups. In addition, the valuation of anger over fear predicted active (e.g., supporting an initiative asking the new family to move) over passive (e.g.,

avoiding interaction with the family) negative reactions towards foreigners (Clobert et al., 2015). Importantly, these relationships held after we controlled for how much people actually experienced these negative states. One implication of these findings is that as a culture we may be inadvertently encouraging people to respond to outgroups in a specific way by encouraging people to feel specific types of negative emotions. Indeed, we found that American newspaper articles contained more anger vs. fear as well as more active vs. passive negative responses to minority groups (Clobert & Tsai, 2016). In our current work, we are examining whether cultural differences in ideal negative affect might be related to cultural differences in attitudes towards and responses to outgroups.

In this section, we have described a few ways in which we are examining the implications of cultural differences in ideal affect for different applied settings. Given the increasingly multicultural and global world in which we live, future research should focus on the implications of other cultural differences (e.g., in the focus of emotion and in expressive norms and values) for health, business, and other applied settings.

IV. Emerging Empirical Trends

Although clear patterns of cultural differences in emotion have emerged that are consistent with independent and interdependent models of self, there are several other important trends that promise to reveal other ways in which culture shapes emotion.

Not All Independent and Interdependent National Contexts Are The Same

We have primarily focused on Western and East Asian contexts because they have received the most empirical attention. However, there is considerable variability among different independent and interdependent cultural contexts, and growing research is beginning to explore this variability. For instance, we have compared European American and German views of negative emotion and their consequences for expressions of sympathy (Koopmann-Holm & Tsai, 2014). Although European Americans and Germans share a Western, individualistic heritage, one significant difference between the two groups is how their ancestors responded to

economic hardship and religious persecution in Europe. Whereas early American settlers decided to immigrate to the New World in search of a better life, their European counterparts decided to remain in their homelands and adjust to their dire circumstances. We predicted and observed that these differences in “frontier spirit” are related to views of negative emotion. Indeed, European Americans endorse frontier values more than Germans, and these differences explain why European Americans report wanting to avoid negative states more than Germans. Moreover, these differences in avoided negative affect predicted cultural differences in how people express sympathy for another person. When imagining that a close acquaintance has lost a loved one, European Americans were more likely to send a sympathy card that focused on the positive (e.g., “Remembering . . . let time heal your soul”) than one that focused on the negative (“A severe loss... take time to grieve”) compared to Germans.

Another example comes from a study comparing Americans and Belgians. Boiger, De Deyne, and Mesquita (2013) predicted that anger should be more beneficial to American individualism, which is more competitive, while shame should be more beneficial to the Belgian individualism, which is more egalitarian. Whereas competitive individualism emphasizes the value of standing out among others, having high self-esteem, and achieving personal success, egalitarian individualism emphasizes the integrity of the individual within a social network of equal rights (Schwartz & Ros, 1995). In this context, while anger is a socially disengaged emotion, it works against egalitarian individualism by emphasizing one’s own desires over others’. In contrast, shame signals an effort to mend damaged social relationships, which is more consistent with the egalitarian emphasis on conformity and the maintenance of egalitarian relationships. Consistent with these predictions, using experience sampling, American participants reported experiencing anger more and shame less than Belgian participants over a period of seven days.

In the same way that there is heterogeneity among independent contexts, there is considerable heterogeneity among different interdependent contexts (e.g. for emotion in

Russian contexts, see Balatsky & Diener, 1993; Chentsova-Dutton, Choi, & Ryder, 2014; Grossman & Kroos, 2010; Lyubomirsky, 2000). While some similar emotional patterns are observed across different interdependent cultural contexts (e.g., engaging vs. disengaging emotions among Japanese and Mexicans compared to Americans, Savani, Alvarez, Mesquita, & Markus, 2013), some interesting differences in the valuation of affective states exist. For instance, in two studies looking at the valuation of HAP and LAP, Mexican participants showed a significant preference for HAP versus LAP while Chinese participants showed a preference for LAP over HAP. In those studies, the Mexican pattern of ideal affect looked similar to that of European Canadians (Ruby, Falk, Heine, Villa, & Silberstein, 2012), demonstrating that not all collectivistic contexts share the same ideal affect. Future research is needed to examine the source of differences among various interdependent contexts.

National Differences in Emotion Vary By Age, Gender, and Social Class

Researchers are also beginning to examine how cultural differences at the national level interact with other social categories such as age, gender, and social class. For example, we observed that the effects of age on ideal affect varied for European American, Chinese American, and Hong Kong Chinese between the ages of 18-90 (Tsai, Sims, Thomas, Jiang, & Fung, 2015). For European Americans, there was no effect of age on ideal affect: older European Americans wanted to feel as much HAP and LAP as their younger counterparts. In contrast, for Chinese Americans and Hong Kong Chinese, there was an effect of age on ideal affect: older Chinese Americans and Hong Kong Chinese wanted to feel less HAP and LAP than their younger counterparts. We propose that these cultural differences in the effects of age on ideal affect are due to cultural differences in ideals of healthy aging, with American ideals focusing on acting young, and Chinese ideals focused on acting one's age. However, in another study, Grossmann, Karasawa, Kan, & Kitayama (2014) found age differences among Americans (older adults reported fewer negative emotions in unpleasant situations than younger

Americans), but not among Japanese. Future research is needed to explain why the effects of age may vary across cultures and how this impacts different aspects of emotion.

Another social category is gender. Across different cultures, specific emotional “display rules” seems to prevail for women and men (Brody & Hall, 2008). For instance, females are perceived to and tend to be more emotional than men across several different cultures (Simon & Nath, 2004; Timmers, Fischer, & Manstead, 2003). However, gender also interacts with culture. Although women reported more intense emotions and more overt emotional expressions than men in 37 countries (Fischer & Manstead, 2000), the magnitude of gender differences in the intensity of experiences and expression of joy, shame, disgust, and guilt were greater in independent than in interdependent contexts. This is likely related to previous findings that gender inequality (as measured by the Gender Empowerment Measure) is positively correlated with individualism (e.g., Brandt & Henry, 2012), although more empirical research is needed to directly test this hypothesis.

Finally, an increasing number of studies are examining the effects of social class on emotion (Kraus, Côté, Keltner, 2010; Kraus, Piff, & Keltner, 2009). Because working class contexts endorse more interdependent and less independent models of self than middle class contexts (Conner Snibbe & Markus, 2005), working class individuals should show emotional patterns that are similar to East Asians. Indeed, Kraus and colleagues (2009) found that when asked to rate a target emotional expression, lower-class participants took the faces of the background figures into greater account than upper-class individuals (Kraus et al., 2010). However, social class also appears to interact with national culture to shape emotional expressions and other domains such as health (for a discussion, see Ryff et al., 2015). For instance, in one study investigating the role of both social status and culture in the expression of anger, Park and colleagues (2013) showed that Americans with lower (vs. higher) social status (measured both objectively and subjectively) expressed more anger, while Japanese adults with higher (vs. lower) social status expressed more anger. It is possible that in the US, individuals

with lower social status report more anger due to frustrations associated with unequal access to resources, whereas in Japan, individuals with higher social status have license to act against cultural ideals, and therefore, express anger. Another possibility would be that in interdependent cultures, only individuals with elevated status in the hierarchy are allowed to enforce norms in which case the expression of anger may be useful. Again, more research is needed to test these possible explanations more directly.

Religious Cultures Influence Emotion

Like national culture, religion can also be conceived as a cultural system or a form of culture (Cohen, 2009; Saroglou & Cohen, 2013) that shapes people's emotions (Tsai, Koopmann-Holm, Ochs, & Miyaki, 2013). Individuals who are religious are more interdependent than those who are not (Cohen & Rozin, 2001; Cukur, de Guzman & Carlo, 2004, Triandis, 1995, p. 83). But religions also vary in their degree of interdependence and interdependence, perhaps depending on whether they are monotheistic (more independent) or nontheistic (more interdependent). Indeed, in previous work, we observed that individuals who identified with a religion (Christianity or Buddhism) valued LAP more than those who did not. Moreover, Christians valued HAP more and LAP less than Buddhists (Tsai, Miao, Seppala, 2007). Using text content analyses, we also observed that HAP were more frequently encouraged in Christian texts and books than in Buddhist classical texts and self-help books. These findings parallel documented cross-cultural differences in the valuation of high versus low arousal positive affect in North American (primarily Christian) versus East Asian (primarily Buddhist) cultures (Tsai et al., 2006).

Similarly, Kim-Prieto and Diener (2009) investigated the desirability of nine discrete emotions (i.e. happiness, love, gratitude, pride, sadness, anger, guilt, shame, and jealousy) and found Christians to experience and want to experience love more frequently than Muslims and Buddhists. Muslims reported experiencing and wanting to experience sadness and shame more than Christians, Buddhists, Jews, and Hindus. Finally, Buddhists reported fewer peaks or dips

for any emotion compared to Christians, Jews, Muslims, and Hindus (Kim-Prieto & Diener, 2009).

Recent work is even explicitly testing some of Freud's assumptions about the suppression of emotion in different religions. For instance, in a series of studies, Kim, Zeppenfeld, & Cohen (2013) examined the suppression of anger and its consequences for sublimation, which Freud defined as the rechanneling of unacceptable urges into creative pursuits (Freud, 1905/2000). Protestant, Catholic, and Jewish participants were either asked to recall an anger-provoking incident and suppress thinking about it, recall an anger-provoking incident and suppress thinking about another innocuous topic (e.g., a horse), or to recall a neutral event and suppress thinking about an innocuous topic. After the manipulation, participants engaged in several creative tasks (e.g., making a sculpture, creating captions for cartoons, making a collage). As predicted, Protestants who recalled an anger-provoking incident and then suppressed thinking about it produced the most creative (and the most angry) work, as rated by expert judges. However, suppressing anger had no effect on creativity for Catholic and Jewish participants. These findings suggest that the usefulness of emotional suppression and the product or consequences of suppressed emotions may also vary across religions. Future studies should not only broaden studies of emotion across different religions, but also should examine whether religious differences in independence and interdependence account for some of this variation.

Immigrants Emotionally Acculturate To Their Host Cultures

Although decades of research have examined how immigrants acculturate to their host cultures as a way of understanding socialization processes, few researchers have examined acculturative processes in the domain of emotion. Mesquita and colleagues have demonstrated that the more Korean immigrants in the US and Turkish immigrants in Belgium engage in the host cultures, the more their emotional patterns overlap with that of the host cultures (e.g. De Leersnyder, Mesquita, & Kim, 2011, 2013). Similarly, Consedine and colleagues surveyed

immigrant women in the United States from various regions (i.e. Haiti, the Dominican Republic, the English-speaking Caribbean and Eastern Europe). More time spent in the US predicted a greater emotional similarity between the immigrants and members of US culture. Moreover, emotional acculturation seems to be highly functional for immigrants and has positive consequences for both physical and psychological well-being (e.g., Consedine, Chentsova-Dutton, & Krivoshekova, 2014; De Leersnyder, Kim, & Mesquita, 2015a; De Leersnyder, Mesquita, Kim, Eom, & Choi, 2014). For example, individuals who displayed greater cultural fit (i.e., fit between the immigrant's and the host culture's emotional patterns) had greater levels of relational well-being (De Leersnyder et al., 2015a). Interestingly, in another study, these authors observed that emotional fit predicted psychological well-being but only in culturally desirable situations (i.e., in autonomy-promoting situations in the U.S., in relatedness-promoting situations in Korea, and in both in Belgium) (De Leersnyder et al., 2015a).

Increasing research is also examining how immigrants emotionally switch between their native cultures at home and their host cultures at school or work. Indeed, the emotional patterns of Korean and Turkish immigrants in the US and Belgium, respectively, fit the emotional patterns of Korean and Turkish natives when they are at home (in their host cultures), but fit those of Americans and Belgians when they are at work, respectively (De Leersnyder, Kim, & Mesquita, 2015b). These findings suggest that immigrants and other bicultural individuals consciously or unconsciously emotionally switch depending on the situation. Future research should examine how this process occurs, and what factors facilitate or hinder these processes.

Other Cultural Factors Influence Emotion

Although most research has focused on cultures that differ in terms of independence and interdependence, new research is examining other cultural factors as well. For example, Niedenthal and colleagues have begun to examine the links between national differences in historical heterogeneity, or “the extent to which a country's present-day population descended from migration from numerous vs. few source countries over a period of 500 years”

(Rychlowska et al., 2015, p. 1) and emotional expression. Whereas members of historically homogeneous societies share common norms, language, and practices, members of historically heterogeneous societies by definition do not. Thus, Niedenthal and colleagues argued that in order to convey their feelings accurately, members of historical heterogeneous societies must amplify their emotional expressions in order to be accurately read by others. In a reanalysis of data on display rules in over 32 countries (Matsumoto, Yoo, & Fontaine, 2008), the more historically heterogeneous a country was, the more individuals believed that emotions should be openly expressed vs. suppressed (Rychlowska et al., 2015) and the more individuals believed that smiling served social bonding vs. status signaling functions (Rychlowska et al., 2015).

Neuroscience Methods Reveal How Culture Influences Emotion

Finally, although neuroscience methods have been used to study various emotional phenomena, researchers have only recently begun using them to study culture (e.g., Chiao et al., 2008, Han & Northoff, 2009). Cultural neuroscience is an emerging field that examines how cultural values, beliefs, and practices are shaping genetic and neural processes related to emotion, and how neurobiological mechanisms are facilitating the appearance and transmission of cultural ideas (for a review, see Chiao, 2009, Chiao et al., 2013; Rule, Freeman, Ambady, 2013; Park et al., 2015). For instance, to examine the specific mechanisms that drive cultural differences in social preference, we had European Americans and Hong Kong Chinese view and then rate excited vs. calm targets that varied in terms of race (White, Asian) and sex (male, female) in a MRI scanner (Park et al., 2015). As expected, we found cultural differences in activity in brain regions associated with affect and reward (i.e. bilateral ventral striatum and left caudate) suggesting that compared to European Americans, Chinese found the excited (versus calm) faces to be less rewarding, regardless of the target race or sex. In addition, Chinese showed greater activity in brain regions associated with identity (i.e., medial prefrontal cortical activity) when viewing calm Asian faces. These findings suggest that when people view faces that match their cultural ideal, they find the faces more rewarding and identify with them more

(Park et al., 2015). Thus, culture shapes neural responses associated with affective and higher order cognitive processes.

Other researchers are examining the interaction of culture and genetics (e.g., Chiao & Blizinsky, 2010; Kim et al., 2010; 2011; Kitayama, King, Yoon, Tompson, Huff, & Liberzon, 2014). For instance, Kim and colleagues (2010; 2011) examined whether individuals with a genetic predisposition toward socioemotional sensitivity (i.e., those homozygous for the G allele of the OXTR rs53576 site on the oxytocin receptor gene) were more likely to adhere to cultural norms of emotion regulation in South Korea and the United States. As expected, they showed that individuals who were genetically more sensitive to socioemotional information (GG genotype) reported using emotional suppression more than those who were genetically less sensitive to socioemotional information (AA genotype) among the Korean sample, whereas European Americans with the GG genotype reported using emotional suppression less than those with the AA genotype. These studies suggest that individuals with specific genetic predispositions may be more likely to endorse as well as to adhere to cultural norms and values. Again, future research will reveal whether these trends (and the others described above) hold over time.

Conclusion

Over the last decade, considerable empirical research demonstrates the existence of at least two models of emotion. One stems from independent views of the self and pervades Western cultures; the other stems from interdependent views of the self and pervades East Asian cultures. These two models of emotion differ in their focus of emotion (intrapersonal vs. interpersonal), the value they place on expression vs. suppression, the degree to which they value maximizing the positive and minimizing the negative, and the degree to which they value high vs. low arousal positive states. Scientists studying emotion need both models to broaden their understanding of emotion and other affective processes, and both models are needed to understand the role that culture plays in a variety of applied settings. Emerging trends suggest a

myriad of other ways in which culture shapes emotion and other affective processes, which will reveal themselves in the decades to come.

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