

## CHAPTER 11

# Cultural Influences on Emotion

### *Established Patterns and Emerging Trends*

Jeanne L. Tsai and Megali Globert

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 patterns of differences in emotion between Western and East Asian cultures that stem from (1) independent versus interdependent models of self, (2) the value placed on emotional expression versus suppression, and (3) the value placed on experiencing positive (vs. negative) affective states, and on high- versus low-arousal positive states. This work reveals that many assumptions that stem from Western views of emotion are not 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 that broaden existing research by including differences independent and interdependent contexts; examining interactions with age, gender, and social class; studying acculturative processes; comparing different religions; exploring other cultural factors; and using neuroimaging and genetic methods. Together, these research efforts reveal the varied ways in which culture shapes emotional life.

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 expressions, which has led them 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., Breugnots et al., 2005; Scherer, 1997; Tsai, Chrysos-Dutton, Priore-Hoban, & Pappas, 2002; Tsai & Levenson, 1997; Tsai, Levenson, & Carstensen, 2009), a significant body of research within the last decade has also demonstrated considerable cultural differences. We focus on these differences in this chapter.

This 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 the dominant model of emotion in 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. In brief, 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 and Conner (2013; Markus & Hamelka, Chapter 1, this volume) 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, 2001; Miller, Wu, & Goyal, Chapter 16, this volume). 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, 1953/1981; Kleinman, 1988; Porter, 1988; Wierzbicka, 1994); however, as we describe below, research later focused on these comparisons for theoretical reasons as well (Markus & Kitayama, 1991).

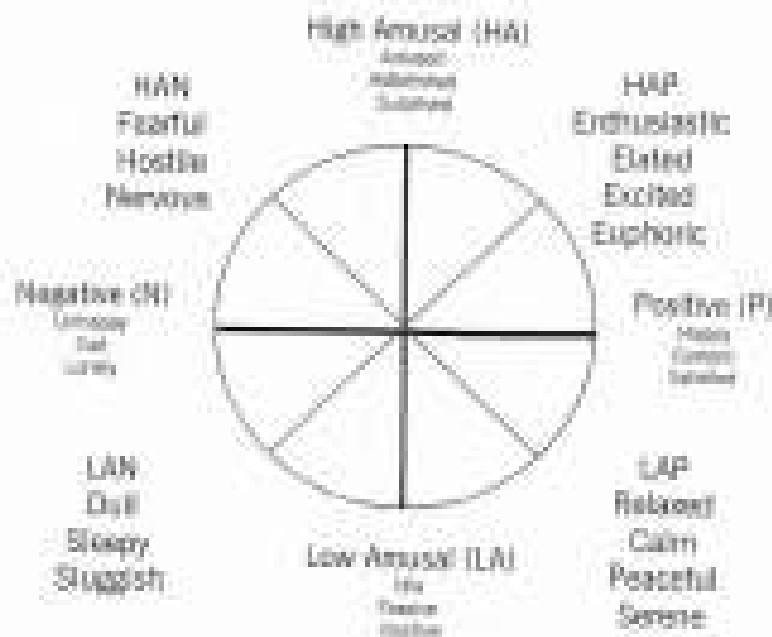
In the literature, researchers use the terms “emotion,” “affect,” and “feeling” to refer

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 discrete, 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 or negative) and arousal (high or low) (Feldman Barrett & Russell, 1999; Larsen & O’Brian, 1992; Watson & Tellegen, 1985; Thayer, 1989; as illustrated in Figure 11.1).

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 may occur for a few seconds (“states”), may last a few days (“moods”), or may 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.

## WESTERN MODELS OF EMOTION

Dominant models of emotion in the psychological literature are based on the theories of three primary 19th- and 20th-century Western thinkers: Charles Darwin, William James, and Sigmund Freud. Darwin (1872/1998) 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 automatically and nonarbitrarily, and that emotional expressions were residues of these responses (Oxley, Kahner, & Jenkins, 2006). Later, William James (1890) proposed that the bodily changes that occurred in response to a meaningful event were the core part of an 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. If one channel were blocked (e.g., people



**FIGURE 11.1.** Two-dimensional model of affect. HAP, high arousal positive states; LAP, low arousal positive states; HAN, high arousal negative states; LAN, low arousal negative states.

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, 1921/1946). 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., 2008). James was also interested in the links between emotions 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 unpsychic experiences that are expressed through multiple channels of response. If one of these 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 could 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.

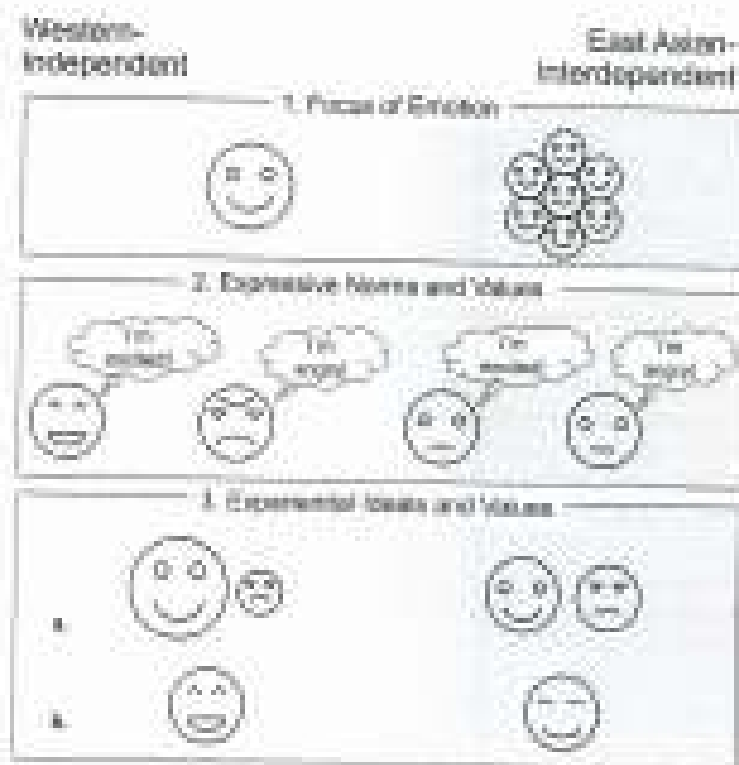
While empirical research on emotion started in the early 1900s, cross-cultural research on emotion did not begin until the 1960s and 1970s. Much of this research predicted that while there might be cultural differences in the triggers and displays of emotion, there would be no differences in the core aspects of emotional response. For instance, in Ekman's cross-cultural 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 about 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.

### CULTURAL DIFFERENCES IN EMOTION: ESTABLISHED EMPIRICAL PATTERNS

Although some scholars continued to conduct cross-cultural studies of emotion in the 1970s and 1980s, a significant resurgence of interest in culture and emotion began in the 1990s, after Hazel Markus and Shimada Kitayama (1991) proposed that national differences in individualism–collectivism (Hofstede, 1980; Triandis, 1989) produced different models of the self. In particular, Markus and Kitayama (1991) focused on Western and East Asian contexts, and described how

these contexts produced “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 and Kitayama proposed that these different models of self would shape emotion (as well as cognition and motivation) in specific ways. In the next section, we describe these empirical patterns based primarily on research conducted within the last decade that test the ideas laid out by Markus and Kitayama. These patterns are graphically represented in Figure 11.2.



**FIGURE 11.2.** Three empirical patterns of differences in emotion between Western (independent) and East Asian (interdependent) cultures.

### **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 connections 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 themselves with others more. Furthermore, emotions should be most intense for Westerners when they think about their acquaintances, whereas emotions should be most 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 irritated) less frequently and intensely than members of many different Western countries (i.e., Germany, the United Kingdom, and the United States) (Kikarawa, Mesquita, & Karasawa, 2006; Kitayama, Park, Seiner, Karasawa, & Ueda, 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 occur more frequently in U.S. American than in Japanese contexts, whereas situations eliciting shame occur more frequently in Japanese than in U.S. American contexts (Boiger, Mesquita, Uchida, & Barrett, 2011b).

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 and Tsui (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 versus 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 versus family members prior to watching the clip. Similarly, in Uchida, Townsend, Markus, and Bergander (2009), Japanese athletes used more emotion words than did U.S. athletes when asked about their relationships; Japanese participants implicated others more often than did U.S. American participants when describing athletes' emotional reactions to winning; Japanese participants inferred more emotions than European Americans did when athletes mentioned relationships in their self-descriptions; and Japanese inferred more emotions for athletes pictured with teammates, whereas European American participants inferred more emotions for athletes pictured alone. Thus, emotions appear to focus on others more in Japanese versus U.S. 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., Marsula et al., 2008). For instance, Marsula and colleagues 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 European American participants' judgments

of the central target's emotion (Masuda et al., 2008). Moreover, Japanese ratings of the central target's emotional intensity increased when that target's emotions were consistent with the expressions of the other people surrounding him or her. In contrast, European 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 Westerners 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, Imai, & Ito, 2012). Similarly, Goto, Yoo, Losenberg, and Lewis (2015) 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 versus congruent picture-face pairs than did European Americans, suggesting that Asian Americans were more sensitive to the background pictures than were European Americans when they viewed the central target's emotional face.

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 versus 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 also influenced by the

emotional expressions of other people, European Canadians' ratings were not.

In summary, 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 11.2).

### **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 concerns 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 (Ekman, 1990, 1993). In Western independent cultural contexts, openly and freely expressing one's emotions is strongly encouraged because it reinforces the self as separate and unique. As a result, emotional control and suppression in Western contexts are 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, Stosahl, & 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 emotion may hurt interpersonal harmony by making others feel bad (see Butler, Lee, & Gross, 2009; Soto, Levenson, & Ebling, 2011; Su et al., 2014; Wei et al., 2013). Consequently, East Asian cultural contexts value emotional expression less and suppression more than do Western cultural contexts (Ford & Mousa, 2015; Matsumoto, 1990; Su et al., 2014; Wei et al., 2013).

This cultural difference in the value placed on emotional expression versus 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, Barber 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 Barber (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 stress as challenges and with more effective emotional control. For European American women, valuing emotional control was also associated with reduced anger behavior, but it was not associated with changes in anger experience. Moreover, valuing emotional control was associated with a pattern of cardiovascular responding that is consistent with viewing stress as threats and with less effective emotional control. In other words, while valuing emotional control appears to be beneficial for Asian Americans, it appears to be harmful for European Americans.

Suppressing emotions may be harder in European American contexts because it runs contrary to the cultural ideal. Indeed Murara, Moser, and Kitayama (2013; Kitayama, Varrault, & Suvanto, Chapter 3, this volume) 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 (90 ms poststimulus), and the

LPP completely disappeared 2,000 ms poststimulus. In contrast, European Americans exhibited a pronounced and lasting parietal LPP in the suppression condition. 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, Liu, Ding, and Yang (2014) examined the effects of expressive suppression on depressive mood induced by a frustrating arithmetic task in a Chinese sample. Participants were randomly assigned to 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 showed 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 et al., 2014). Although this study did not have a Western comparison sample, the results suggest that the effects of suppression in this Chinese sample were beneficial, which again runs contrary to the Western, cathartic-hydraulic view of emotional suppression.

Another way to assess the value of emotional expression versus 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, & Schweitzer, 2010; Gross & John, 2003; Kashdan, Barron, Forreth, & Soper, 2006) and poor social functioning primarily (English & John, 2013; Srivastava, Tamir,

McGonigal, John, & Gross, 2009) in U.S. American samples. While some researchers find similar effects in independent and interdependent cultural contexts (English & John, 2013; Roberts, Levetown, & Gross, 2008), most researchers 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; Conradine, Magai, & Benarino, 2002a; Conradine, Magai, Cohen, & Gillespie, 2002b; Kwon, Yoon, Joormann, & Kwon, 2013; Lee, Suh, Cha, Kim, & Steerman, 2009; Soto, Peres, 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 U.S. Americans than for Koreans (Kwon et al., 2013). Su and colleagues (2012) took this work one step further, by arguing that the suppression–depression association 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. Lu and 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 did not 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 versus expression may also influence how people process faces. For example, Yuki, Maddux, and Masuda (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 than the mouth when expressing emotions (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 et al., 2007). To test these hypotheses, Yuki and colleagues conducted two studies designed to investigate which parts of the face were crucial when participants were interpreting emotions (Study 1) and actual expressions of real people (Study 2). In both studies, Japanese weighted the eyes more heavily than did U.S. Americans when making their emotional judgments, whereas U.S. 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 European American participants distributed their attention more



equally across the face (Jack, Nais, Schopers, Schyns, & Caldara, 2009; Jack, Gormol, 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 do East Asian contexts (see Fiedl 2, Figure 11.2). 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 (Miyamoto, Yoo, & Wilcox, Chapter 13, this volume). Recent research also suggests that cultural differences in the value placed on emotional expression versus suppression results in cultural differences in attention to the eyes rather than the 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 (Tsu, 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 think about 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 and 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.

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

As mentioned earlier, independent models of the self—particularly in U.S. contexts—privilege differentiating the self from others in positive ways by standing out, being unique, and 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 implications for how people want to feel. For instance, although 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. While negative emotions might make individuals feel bad about themselves, they might at the same time elicit less envy from others and make people more sensitive to other people's pain. Thus, given their different interpersonal goals, members of Western contexts may want to feel positive more and negative less than members of East Asian contexts do.

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 wanted 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 did Hong Kong and Beijing Chinese. These cultural group differences were mediated by the degree to which individuals endorsed independent versus interdependent values: The more individuals valued independent over interdependent values, the more they wanted to feel positive more than negative states (Siu, Tsai, Jiang, Wang, Fung, & Zhang, 2013). Importantly, these differences held after we controlled for how much individuals actually felt nega-

five 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 indicate that in Western contexts, the correlation between positive and negative states is highly negative: The more individuals report experiencing positive emotions, the less they report experiencing negative emotions, both in terms of intensity and frequency. In contrast, in many East Asian contexts (i.e., Chinese, Koreans, Japanese, and Asian Americans), the correlation between positive and negative emotion is consistently less negative, zero, or even positive (Baggett, Wong, & Yi, 1998; Geera, Spencer-Rodgers, & Peng, 2008; Kitayama, Markus, & Kurokawa, 2008; Miyamoto & Ryff, 2011; Perunovic, Heller, & Raabou, 2007; Schimmack, 2009; Schimmack, Oishi, & Diener, 2002; Scribbo, Diener, Oishi, & Biswas-Diener, 2005; Shiota, Campos, Gonzaga, Keksel, & 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 emotions) 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 (Hai, Foll, & Bond, 2009; J. Kim, Seo, Yu, & Nouwendorf, 2014; Spencer-Rodgers, Peng, & Wang, 2010a), 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 did Hong Kong and Beijing Chinese. These differences in ideal positive relative to ideal negative affect were related to cultural differences in the experience of mixed-emotions: European Americans and Chinese Americans reported lower mixed emotional experiences than did

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 (1) focus only on their good feelings and to ignore any bad ones (i.e., maximize positive and minimize negative most), or (2) focus on the negative feelings (i.e., maximize positive and minimize negative least). Across European American, Chinese American, and Hong Kong Chinese groups, participants experienced lower mixed emotions during a pleasant television clip when they were instructed to maximize positive and minimize negative most than when they were instructed to maximize positive and minimize negative least (Sims et al., 2015). These findings were not due to dialectical beliefs.

Further support for the role of independent versus interdependent models of self in shaping mixed emotions is provided by Grossmann, Hayib, and Ellsworth (2016) 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 United Kingdom, and the United States), individuals in more interdependent countries were more likely to report experiencing mixed emotions than those in less interdependent countries. These findings again held when the researchers controlled for dialecticism, which suggests that interdependence and independence exert a distinct influence on mixed emotional experiences.

Research also demonstrates that East Asians are more comfortable with mixed affective experiences (Aaker, Drolet, & Griffin, 2008; Hong & Lee, 2010; J. Kim et al., 2014; Williams & Aaker, 2002), and to perceive events—especially "positive" ones—as more mixed (e.g., Liu 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; J. Kim et al., 2014) than members of Western cultures

are. 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 experiences, empirical findings suggest that cultural differences in the value placed on positive versus 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 Comas-Forgas & Moskowitz, 2007), including increased cardiovascular disease (e.g., Kobayashi & Kawachi, 2000); increased cancer (e.g., Penning et al., 1998); increased pain, fatigue, and disease (e.g., Geiser, Roth, Thielen, Robinson, & Riley, 2000; Watson, 1988); decreased life satisfaction (Suh, Diener, Oishi, & Triandis, 1998); and even lower mortality (e.g., Pinquart & Duberstein, 2010). Indeed, Pechmann, Gallagher, and Lopez (2013) surveyed over 130,000 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 was 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., Comas-Forgas et al., 2002b; Diener & Suh, 2000; Miyamoto et al., 2013; Miyamoto & Ruff, 2011; Miyamoto et al., Chapter 12, this volume). For instance, Carstaus 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, Beals, & 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 has 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 proinflammatory 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 U.S. samples (Everson-Rose & Lewis, 2005; Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002); however, this appears not to be the case in Japan. Miyamoto and colleagues (2010) examined whether negative emotions predict higher levels of proinflammatory biomarkers among U.S. Americans and Japanese. U.S. Americans and Japanese rated their negative emotions for the past 30 days, then provided blood samples from which serum IL-6 levels were determined. Whereas negative emotions predicted higher IL-6 among U.S. 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 United States and Japan, and again found that whereas anger expression was associated with increased health risk (as measured by proinflammatory markers such as IL-6 and C-reactive protein, and indices of cardiovascular malfunction such as systolic blood pressure and ratio of total to high-density lipoprotein [HDL] cholesterol) in the United States, the reverse was observed for Japanese. These results remained significant after researchers controlled 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 earlier, 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 United States) than in nations valuing survival (e.g., China, Hungary, Russia, Zimbabwe). In yet another study, although reported experience of positive emotion was negatively associated with depression symptoms among

European Americans and U.S.-born Asian Americans, the magnitude of the association between positive emotions and depressive symptoms was greater for European Americans than for Asian American participants (Lou, Wang, & Koo, 2011). Furthermore, the experience of positive emotions was not associated with depressive symptoms for Asian immigrants to the United States.

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, East Asians were less likely to have savored and more likely to have dampened their happiness during the positive event compared with European Americans.

In summary, consistent with independent and interdependent models of self, Western contexts value maximizing positive and minimizing negative emotions more than do East Asian contexts, as illustrated in the third panel (c) of Figure 11.2. These differences have consequences for individuals' likelihood of experiencing mixed emotions. They also potentially explain cultural differences in the links between emotions and health and in how people respond to positive events.

#### East Asian Contexts Value LAP More and HAP Less Than Western Contexts

Although most people want to feel positive states more than 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 HAP such as 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 first 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 LAP such as calm, peacefulness, and serenity (Tarr et al., 2016; Tsai, Kwanon, & Fung, 2006; Tsai, Miao, Seppala, Fung, & Yeung, 2007c).

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 do Hong Kong Chinese, and Hong Kong Chinese report wanting to feel calm, peacefulness, and other LAP more than do 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, 2007c). 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, 2007a; Tsai et al., 2016). Moreover, these differences are mediated by cultural differences in influence and adjustment goals. In 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, Seppala, & Fung, 2007c). 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 (Tsai, 2007, 2017), these differences in the value placed on HAP and LAP have important implications for what people do to feel good, how people think about 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 calming and exciting music, European Americans are more likely to choose exciting music than are Asian Americans (Tsai, 2007; Tsai et al., 2007). In another study, we manipulated ideal affect, and then gave participants a choice of exciting versus calming consumer products. Across cultures, participants in the "Value Excitement" condition were more likely to choose exciting versus calming products than those in the "Value Calm" condition were, and across conditions, European Americans were more likely to choose the exciting (vs. calming) products than were Chinese Americans, Beijing Chinese, and Hong Kong Chinese (Tsal, Chen, & Siu, 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 states that are the opposite of HAP (e.g., dull, bored, and other low-arousal negative states; see Figure 11.1) more than Hong Kong Chinese did, whereas Hong Kong Chinese mentioned states that are the opposite of LAP (e.g., nervous, anxious, and other high-arousal negative states; see Figure 11.1) more than European Americans did (Qu et al., 2018). Similarly, Young, Siu, Charles, and Tsai (2013) observed that whereas for European Americans, increased physical health problems were associated with low-arousal negative states, for Chinese Americans, increased physical health problems were associated with high-arousal negative states.

In recent work, we have examined the effects of cultural and individual differences in ideal affect on how people judge and respond to 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 a U.S. American sample, we observed that the more people valued HAP, the more trustworthy they rated an extroversion-focused physician (i.e., one who promoted an "energetic" lifestyle), and the more they valued LAP, the more trustworthy they rated a calm-focused physician (i.e., one who promoted a "tranquil" lifestyle; Siu, Tsai, Koehnman-Holt, Thomas, & Goldstein, 2014). 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.

In comparisons of European Americans and Hong Kong Chinese, we find that European Americans rate excited targets (regardless of targets' race or sex) as more affable (extraverted, agreeable) compared to Hong Kong Chinese (Tsai et al., 2018a). Furthermore, when given a choice between using an excited vs. calm target again, European Americans are more likely to choose the excited target compared to Hong Kong Chinese (K. Park, Tsai, Chen, Blevins, & Kounios, 2016).

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 the option of sharing some or even all 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" and "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 was in turn due to 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 more willing to share resources with them (B. Park, Hwang, Kwon, & Tsai, 2017). Because these cultural differences held regardless of respondents' 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 11.2. These differences have consequences for what people do to feel good, how they think about health and well-being, and how they judge and respond to others. As described below, we are expanding this work to examine cultural differences in the valuation and devaluation of negative states (Koopmans-Holm & Tsai, 2014; Chabot & Tsai, 2018).

Together, a considerable literature conducted primarily over the last decade demonstrates at least two culturally different models of emotion. In the first model that pervades many Western contexts, 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 HAP more and LAP less. In the second model that pervades many East Asian contexts, emotions are less intrapersonally and more interpersonally focused; expressive suppression is encouraged and has harmful outcomes; individuals want to feel more of a balance between positive and negative emotions, and individuals want to feel HAP less and LAP more. In order to achieve a broader understanding of emotion and other affective phenomena, both models must be considered in future theory and empirical research.

## REAL-WORLD APPLICATIONS

As we 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 increasingly, research is directly examining these applications. 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 health care provider, who is often European American (Nao-Matzer, Legedza, & Phillips, 2004; Saha, Arora, & Cooper, 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 "excitement-focused" or a "calm-focused" physician. European Americans were more likely to choose the excitement- (vs. calm-) focused physician than were Chinese Americans and Hong Kong Chinese, and these differences were mediated by influence versus adjustment goals, and the valuation of HAP versus LAP. These findings suggest that one way to increase communication between patients and their providers may be to pair patients with providers whose expressions match patients' ideal affect (Sims, Koopmans-Holm, Young, Jiang, Fung, & Tsai, 2017).

Similarly, we have also been interested in whether cultural differences in ideal affect play a role in employment 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, U.S. leaders show more excited (open, toothy) smiles in their official photos than do Chinese leaders (Tsai et al., 2016). It is possible that European American employees 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 LAP. 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 in their applications. European Americans reported wanting to convey more HAP (vs. LAP) compared to Hong Kong Chinese. Moreover, European Americans viewed the ideal job candidate as more HAP and less LAP than did Hong Kong Chinese (Borchardt et al., 2018). Asian Americans fall in between the two other groups. And when given a choice between equally qualified excited and calm applicants, European Americans were more likely to choose the excited (vs. the calm) applicant than were Hong Kong Chinese (Borchardt et al., 2018; Tsai et al., 2018a). 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.

Cultural differences in ideal affect may also shape prejudice and discrimination (Clobert & Tsai, 2018). 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 and foreigners (Cunliff & Neuberg, 2015; Smith & Mackie, 2010; Vanman, Salts, Nathan, & Warren, 2004). Furthermore, the more fear people actually feel, the more likely they are to engage in passive harm against outgroups (i.e., avoidance of the outgroup; Mackie, Devos, & Strick, 2000; Morik, Bauman, Aramovich, & Morgan, 2006), whereas the more anger people feel, the more likely they are to engage in active harm against outgroups (i.e., confrontation with the outgroup; Mackie et al., 2000; Strick et al., 2006). However, only a handful of studies have examined how the valuation of these states might influence reactions to outgroups (Focis, Tanti, & Halperin, 2016). For instance, Piant et al. examined how preferences for anger versus sympathy or anger versus 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 into the neighborhood). The more individuals valued high-arousal negative affect, the more appropriate they viewed harmful acts against various outgroups (e.g., supporting an initiative asking the new family to move), and the more likely individuals said they would engage in those harmful acts (Clobert & Tsai, 2018). Importantly, these relationships held after we controlled for how much people actually experienced those 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 U.S. newspaper articles about minority groups contained more high-arousal negative words than low-arousal negative words, as well as more harm words (e.g., attack, hurt, avoid, separate) than facilitation words (e.g., care, help, accept, tolerate) (Clobert & Tsai, 2018). In our current work, we are examining whether cultural differences in ideal negative affect might be related to cultural differences in attitudes toward 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).

## 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 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. How-

ever, 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 & Tsui, 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 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 are related to European Americans reporting that they want to avoid negative states more than Germans do. Moreover, these differences in avoided negative affect predicted cultural differences in how people expressed 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 U.S. Americans and Belgians. Boiger, De Dreu, and Mesquita (2013a) predicted that anger should be more beneficial in U.S. individualism, which is more competitive, whereas shame should be more beneficial to 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, although anger is a socially disengaged emotion, it works against egalitarian individualism by emphasizing one’s own desires over the desires of others. In contrast, shame signals an affect 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, U.S. American participants reported experiencing anger more and shame less than did Belgian participants over a period of 7 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 & Dierker, 1998; Chouinard-Durois, Choi, & Rydstedt, 2014; Gammann & Karas, 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 European Americans; Savani, Abaro, 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 these studies, the Mexican pattern of ideal affect looked similar to that of European Canadians (Ruby, Falk, Hine, 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 Americans, Chinese Americans, and Hong Kong Chinese between the ages 18 and 90 (Jui et al., 2015b). 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 a consistent effect of age on ideal affect: Older Chinese Americans and



Hung-King Chinese wanted to feel less HAP and LAP than their younger counterparts. These cultural differences in the effects of age on ideal affect may reflect 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, Kim, and Katayama (2016) found age differences among U.S. Americans (older adults reported fewer negative emotions in unpleasant situations than did 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 (Brady & Hall, 2008). For instance, women are perceived as and tend to be more emotional than men across several different cultures (Simon & Nuri, 2004; Timmers, Fischer, & Manstead, 2003). However, gender also interacts with culture. Although women reported more intrinsic 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 expressions of joy, shame, disgust, and guilt were greater in countries with higher levels of individualism and gender equality (which are positively correlated; Brandt & Heary, 2012). Follow-up research is needed to examine why this might be.

Finally, an increasing number of researchers 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 do middle-class contexts (Scribne & Markus, 2005; Markus & Hamada, Chapter 1, this volume), working-class individuals should show emotional patterns that are similar to those of East Asians. Indeed, Kraus and colleagues (2009) found that when asked to rate a target's emotional expression, lower-class participants took the faces of the background figures into greater account than did upper-class individuals (Kraus et al., 2010). However, social class also appears to interact with national culture so shape emotional expression 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, J. 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 United States, 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 learned to act against cultural ideals and therefore express anger. Another possibility is 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 Cultural Influence Emotion

Like national culture, religion may also be conceived as a cultural system or a form of culture (A. Cohen, 2009; Saroglou & Cohen, 2013; A. Cohen & Neuberg, Chapter 12, this volume) that shapes people's emotions (Tsu, Koopmans-Holm, Ochi, & Miyaki, 2013). Individuals who are religious are more interdependent than those who are not (A. Cohen & Eozin, 2001; Cukur, de Groot, & Clark, 2004; Triandis, 1995, p. 83). But religions also vary in their degree of independence 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. However, Christians valued HAP more and LAP less than did Buddhists (Tsu, Miao, & Seppala, 2007b). Using text content analysis, we also observed that HAP was more frequently encouraged in Christian texts and self-help books than in Buddhist classical texts and self-help books. These findings parallel documented cross-cultural differences in the valuation of HAP versus LAP in U.S. American (primarily Christian) versus East Asian (primarily Buddhist) cultures (Tsu 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 that Christians experienced and wanted to experience love more frequently than did Muslims and Buddhists. Muslims reported experiencing and wanting to experience sadness and shame more than did Christians, Buddhists, Jews, and Hindus. Finally, Buddhists reported lower peaks or dips for any emotion compared to Christians, Jews, Muslims, and Hindus (Kim-Prieto & Diener, 2009).

More recent work has even explicitly tested some of Freud's assumptions about the suppression of emotion in different religions. For instance, in a series of studies, E. Kim, Zepfenthal, and Cohen (2011) 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 asked to recall an anger-provoking incident and suppress thinking about it, to 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., creating a sculpture, writing 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 angriest) 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 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 acculturation processes, few researchers have examined acculturative processes in the domain of emotion. Mesquita and colleagues have demonstrated that the more Korean immigrants in the United States and Turkish immigrants in Belgium engage in their host cultures, the more their emotional patterns overlap with that of their host cultures (e.g., De Leersnyder, Mesquita, & Kim, 2013, 2014; see Mesquita, De Leersnyder, & Jasri, Chapter 19, and Morris, Fischer, & Savani, Chapter 18, this volume). Similarly, Considine 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 United States predicted a greater emotional similarity between the immigrants and members of U.S. culture. Moreover, emotional acculturation seems to be highly functional for immigrants and has positive consequences for both physical and psychological well-being (e.g., Considine, Chertsova-Dutton, & Krivoshekova, 2014; De Leersnyder, Kim, & Mesquita, 2013; 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., 2015). Interestingly, in another study, these authors observed that emotional fit predicted psychological well-being but only in culturally desirable situations (i.e., autonomy-promoting situations in the United States, relatedness-promoting situations in Korea, and both in Belgium) (De Leersnyder et al., 2015).

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 United States and Belgium, respectively, fit the emotional patterns of Korean and Turkish natives when immigrants are at home, but fit those of Americans and Belgians when immigrants are at work, respectively (De Leersnyder, Kim, & Mesquita, 2018). These findings suggest that immigrants and other bicultural individuals consciously or unconsciously switch emotionally 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, Nussimbaum 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., 2013, p. 2429) and emotional expressions. Whereas members of historically homogeneous societies share common norms, language, and practices, members of historically heterogeneous societies by definition do not. Thus, Rychlowska et al. (2015) 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 roles 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 versus suppressed (Rychlowska et al., 2015), and the more individuals believed that smiling served social bonding versus 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 ideas and practices shape genetic and neural processes related to emotion, and how neurobiological mechanisms shape engagement in and transmission of cultural ideas and practices (for a review, see Chiao, 2009; Chiao et al., 2013; Ruse, Freeman, & Arnsperg, 2013; B.

Park et al., 2016). For instance, to examine the specific mechanisms that drive cultural differences in social preference, we had European Americans and Chinese view and then rate excited versus calm targets that varied in terms of race (White, Asian) and sex (male, female) in a magnetic resonance scanner (B. Park et al., 2016). As expected, we found cultural differences in activity in brain regions associated with affect and reward (i.e., bilateral ventral striatum and left caudate nucleus) suggesting that compared to European Americans, Chinese found the excited (vs. calm) faces to be less rewarding, regardless of the target's race or sex. In addition, Chinese showed greater activity in brain regions associated with identity and self-relevance (i.e., medial prefrontal cortex) 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 (B. Park et al., 2016). 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 & Hong, 2010; H. Kim et al., 2010, 2011; Kitayama et al., 2014). For instance, H. 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 rs13576 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 predisposed to be more sensitive to socioemotional information (GG genotype) reported using emotional suppression more than those who were genetically predisposed to be less sensitive to socioemotional information (AA genotype) among the Korean sample. In contrast, European Americans with the GG genotype reported using emotional suppression less than did those with the AA genotype. These studies suggest that individuals with specific genetic predispositions may be more likely both to embrace and to adhere to dominant cultural norms and values. Again, future research

will reveal whether these trends (and the others described earlier) hold over time.

## CONCLUSION

Over the last decade, considerable empirical research has demonstrated the existence of two models of emotion. One stems from independent views of the self and prevails in Western cultures; the other stems from interdependent views of the self and prevails in East Asian cultures. These two models of emotion differ in their focus of emotion (intrapersonal vs. interpersonal), the value they place on expression versus suppression, the degree to which they value maximizing the positive and minimizing the negative, and the degree to which they value high versus low arousal positive states. Scientists studying emotion need both models to broaden their understanding of emotion and other affective processes, and teachers, employers, and clinicians need both models to understand the role that culture plays in the everyday lives of their students, employees, and patients. Emerging trends suggest myriad other ways in which culture shapes emotion and other affective processes, which will reveal themselves in the decades to come.

## ACKNOWLEDGMENTS

Preparation of this chapter was funded by National Science Foundation Grant No. BCS-132446 awarded to Jaume Triai, and by Belgian American Education Foundation and Belgian National Fund for Scientific Research fellowships awarded to Magali Gilbert. We thank Elizabeth Blarasin, DeKyung Park, Lucy Bencharnt, Huzai Markou, Day Cohen, and Shinobu Kitayama for their very helpful comments on multiple drafts of this chapter.

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