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Are the windows to the soul the same in the East and West? Cultural differences in using the eyes and mouth as cues to recognize emotions in Japan and the United States

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Abstract

The current research investigated the hypothesis that, depending on an individual's cultural background, facial cues in different parts of the face are weighted differently when interpreting emotions. Given that the eyes are more difficult to control than the mouth when people express emotions, we predicted that individuals in cultures where emotional subduction is the norm (such as Japan) would focus more strongly on the eyes than the mouth when interpreting others' emotions. By contrast, we predicted that people in cultures where overt emotional expression is the norm (such as the US) would tend to interpret emotions based on the position of the mouth, because it is the most expressive part of the face. This hypothesis was confirmed in two studies, one using illustrated faces, and one using edited facial expressions from real people, in which emotional expressions in the eyes and mouth were independently manipulated. Implications for our understanding of cross-cultural psychology, as well of the psychology of emotional interpretation, are discussed.

Keywords: Culture; Emotions; Facial expressions; Emotion recognition; Cognition

Facial expressions are our primary means of communicating emotions. As such, recognizing facial cues is an important component of social interaction, critical to interpreting the emotional states of others. Indeed, an abundance of empirical evidence over the last several decades suggests that facial expressions of basic emotions can be universally recognized, suggesting the importance of emotional expressions for human communication (for reviews, see Ekman, 1989, 1992; Matsumoto, 2001). However, consistent with the current zeitgeist in which psychologists continue to uncover cultural boundaries in even the most robust psychological phenomena, more recent research has also found evidence that there are clear but subtle variations regarding how people from different cultures interpret emotions differently (Elfenbein & Ambady, 2002, 2003; Elfenbein, Mandal, Ambady, Harizuka, & Kumar, 2004; Marsh, Elfenbein, & Ambady, 2003; Matsumoto, 1989; Matsumoto & Ekman, 1989).

One particular finding of interest is the idea that individuals have an ingroup advantage in emotion recognition. In other words, people are more accurate at judging emotional expressions by members of a cultural ingroup rather than members of a cultural outgroup (Elfenbein & Ambady, 2002, 2003). Interestingly enough, this effect has been found to be rather dynamic; the more familiar individuals are with a particular culture, the more accurate they are in judging emotions of individuals from that culture, suggesting that the ingroup advantage can change depending on the level of one's knowledge of, or exposure to, a given culture (Elfenbein & Ambady, 2002, 2003; Elfenbein et al., 2004; Marsh et al., 2003; Shimoda, Argyle, & Ricci Bitti, 1978). Researchers have suggested that this ingroup advantage exists because there are facial 'dialects' or 'accents'

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(Elfenbein & Ambady, 2002, 2003; Marsh et al., 2003) in nonverbal communication, which are practiced and understood in a shared manner within a particular culture, and that people routinely rely on this culturally specific information when interpreting other's emotions. However, research has yet to identify specifically what these 'accents' may be (Marsh et al., 2003). In the current research, we sought to extend these findings by proposing one specific factor that may contribute to emotion recognition differences across cultures. Specifically, we propose that depending on individuals' cultural background, facial cues in different parts of the face are weighted differently when interpreting emotions.

Emotions and facial cues

Although emotion *recognition* and emotion *expression* are two distinct and separate psychological phenomena, our hypothesis concerning cultural differences in emotion recognition is based on cultural differences in how emotions are expressed in different cultures. Researchers have noted that cultures of individualism or independence emphasize the direct and explicit expression of emotions (e.g., Markus & Kitayama, 1991). In fact, in Western cultures, where people tend to have an independent self-construal, denying the expression and experience of feelings is often equated with denying one's true self (Heine, Lehman, Markus, & Kitayama, 1999; Markus & Kitayama, 1991). By contrast, in East Asian countries such as Japan, China, and Korea, where people are more collectivistic and interdependent, it is more important for emotional expressions to be controlled and subdued, and a relative absence of affect is considered crucial for maintaining harmonious relationships, such that individuals do not impose their feelings on others (Heine et al., 1999; Markus & Kitayama, 1991).

Evidence from the facial expression literature supports this notion. For example, in Friesen's (1972) classic study, Japanese and American participants were asked to view highly stressful films while their facial expressions were recorded. Results indicated that Japanese participants tended to mask the expression of negative emotions such as disgust, fear, sadness, and anger when the experimenter was observing them, although they freely displayed those emotions when they were alone. Moreover, recent evidence has shown that Japanese control (e.g., neutralize, mask, etc.) not only the display of negative feelings, but also feelings of happiness more than do Americans (Matsumoto, Takeuchi, Andayani, Kouznetsova, & Krupp, 1998). It stands to reason, then, if Japanese are especially concerned with controlling the expression of their emotions, then, in turn, their *interpretation* of the emotions of others may be most effective if they focus on parts of the face that are relatively difficult to control intentionally, since this type of area may be most diagnostic of one's true emotions.

Indeed, research on the physiology of facial expressions suggests that emotional expression can be controlled, but with varying success across the particular muscle groups involved. For example, smiling and frowning both involve the combined contraction of two groups of muscles: the zygomatic major (around the mouth) and the orbicularis oculi (around the eyes) (e.g., Duchenne, 1862–1990; Ekman, 1992). Research has shown that the orbicularis oculi muscles around the eyes are more difficult to control than the zygomatic major muscles around the mouth area (Duchenne, 1862–1990; Ekman & Friesen, 1975; Ekman, 1992; Ekman, Friesen, & O'Sullivan, 1988). In fact, a true smile, or "Duchenne smile," involves the contraction of the orbicularis oculi muscles around the eyes, while other types of "fake smiles" (smiles that do not indicate genuine happiness) involve only the zygomatic major muscles but not the orbicularis oculi (e.g., Ekman et al., 1988; Ekman, 1992). Thus, in terms of diagnosticity of true emotions, the eyes may be a more accurate cue than the mouth. However, the mouth is also an important cue because it is the most expressive part of the face, perhaps because it evolved as the primary means of verbal communication for human beings (Ekman & Friesen, 1975; Fridlund, 1994; de Bonis, 2004).

Thus, we propose that cultural norms for the expression of emotions will impact the predominant facial cues individuals use to recognize emotions, with the eyes being a more diagnostic cue for Japanese, and the mouth being a more diagnostic cue for Americans. We investigated this hypothesis across two studies. In Study 1, we investigated how American and Japanese participants interpreted the happiness/sadness of illustrated faces that varied in the type of cues present in the eyes and mouth. Study 2 used computer editing techniques to create faces that had various combinations of eyes and mouths taken from happy and sad faces of real individuals. Across both studies, we predicted that compared to judgments made by Japanese, Americans' judgments would be affected more strongly by the cues contained within the mouth, whereas Japanese judgments would be more strongly affected by cues in the eyes.

Study 1

Our initial empirical investigation concerned the construals of emotions as displayed in computer emoticons. Emoticons are combinations of certain keystrokes that combine to form an approximate facial expression, which can be used to convey the emotional state of the writer. For example, in the United States the emoticons :) and :-) denote a happy face, whereas the emoticons :(or :-(denote a sad face. However, Japanese tend to use the symbol (^_^) to indicate a happy face, and (; _ ;) to indicate a sad (or crying) face (Pollack, 1996). Consistent with our hypothesis, the Japanese emoticons for happiness and sadness vary in terms of how the eyes are depicted, while American emoticons vary the direction of the mouth.

Thus, in Study 1, we showed American and Japanese participants computer-generated (i.e., ☺ or ☹) emoticons with several different combinations of happy and sad eyes and mouths (see Fig. 1). Again, we predicted that compared to judgments by Japanese, American judgments would be affected more strongly by the cues in the mouth, whereas Japanese judgments would be more affected by cues in the eyes.