



## Review Article

# Cultural differences in emotion: differences in emotional arousal level between the East and the West

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## ABSTRACT

Whether emotion is universal or social is a recurrent issue in the history of emotion study among psychologists. Some researchers view emotion as a universal construct, and that a large part of emotional experience is biologically based. However, emotion is not only biologically determined, but is also influenced by the environment. Therefore, cultural differences exist in some aspects of emotions, one such important aspect of emotion being emotional arousal level. All affective states are systematically represented as two bipolar dimensions, valence and arousal. Arousal level of actual and ideal emotions has consistently been found to have cross-cultural differences. In Western or individualist culture, high arousal emotions are valued and promoted more than low arousal emotions. Moreover, Westerners experience high arousal emotions more than low arousal emotions. By contrast, in Eastern or collectivist culture, low arousal emotions are valued more than high arousal emotions. Moreover, people in the East actually experience and prefer to experience low arousal emotions more than high arousal emotions. Mechanism of these cross-cultural differences and implications are also discussed.

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## 1. Introduction

Whether emotion is universal or social is a recurrent issue in the history of emotion study among psychologists.<sup>1–3</sup> Some researchers view emotion as a universal construct and that a large part of emotional experience is biologically based.<sup>4,5</sup> Ekman<sup>6</sup> argued that emotion is fundamentally genetically determined, so that facial expressions of discrete emotions are interpreted in the same way across most cultures or nations.

In addition, similar emotions are experienced in similar situations across cultures. In a study conducted by Matsumoto and colleagues,<sup>7</sup> Japanese and American participants reported to feel happiness, pleasure, sadness, and anger in similar situations. In other words, people experienced positive emotions when they are in positive antecedent situations (e.g., meeting friends or achievements) but negative emotions when they encounter negative antecedent events (e.g., traffic or injustice), regardless of culture.

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However, culture also influences emotion in various ways. Culture constrains how emotions are felt and expressed in a given cultural context. It shapes the ways people should feel in certain situations and the ways people should express their emotions.<sup>52</sup> In a large number of studies,<sup>3,8,9</sup> some aspects of emotion have been shown to be culturally different, because emotion is not only biologically determined, but also influenced by environment, and social or cultural situations.<sup>10</sup> The role of culture in emotion experience has also been stressed in sociology theories. For example, Shott<sup>53</sup> argued that to experience emotion, people first experience physiological arousal and then they label this arousal as emotion. In this process, culturally defined and provided emotion words are used. Some other examples of emotional aspects that have cultural differences are ways of emotion expression,<sup>11</sup> ways of facial expression and recognition of emotions,<sup>9</sup> nature of emotions commonly experienced,<sup>7,12,13</sup> and affect valuation.<sup>14</sup>

## 2. Individualist and collectivist cultures

Cultural differences in various aspects of emotion have been studied and reported. Now, what is culture and how is it defined? In cross-cultural psychology, culture is referred to as “shared elements that provide the standards for perceiving, believing, evaluating, communicating, and acting among those who share a language, a historic period, and a geographic location (p. 408).”<sup>15</sup> Since Markus and Kitayama<sup>8</sup> published a monumental paper on comparisons of the self between the West (e.g., America) and the East (e.g., Japan), most cross-cultural studies have compared Western versus Eastern cultures.<sup>16</sup> Eastern culture commonly indicates culture of East Asian countries such as Korea, Japan, and China. Western culture includes the culture of North American and Western European countries.

Markus and Kitayama<sup>8</sup> introduced the term “self-construal” for establishing the differences between the two cultures. Westerners construe self as independent and separate from other people. This is referred to as *independent self-construal*. Those who have independent self-construal consider that the basic unit of society is the individual, and groups exist to promote individual’s well-being.<sup>17</sup> For this reason, Western culture is identified as individualist culture.<sup>16</sup> In individualist culture, individual’s uniqueness is important. People are encouraged to express their inner states or feelings, and to influence other people.<sup>18</sup>

By contrast, Easterners construe self as fundamentally connected to, and interdependent on, others. This is called *interdependent self-construal*. For those who have interdependent self-construal, the core unit of society is the group. In addition, individuals must adjust to the group so that society’s harmony is maintained.<sup>17</sup> For this reason, Eastern culture is identified as collectivist culture.<sup>16</sup> In a collectivistic cultural atmosphere, individuals try to modify themselves and not influence others to fit in the groups they are in.<sup>18</sup> Although, in both individualist and collectivist cultures, all individuals have both independent and interdependent self-construals,<sup>8,19,20</sup> each culture normally encourages to more strongly cultivate its promoted self-construal than the other.<sup>16</sup>

## 3. Two-dimension structure of emotion: Valence and arousal

Myers<sup>58</sup> argued that “physiological arousal, expressive behaviors, and conscious experience” are fundamental elements of emotion (p. 500). In other words, emotional arousal is one of the most important research topics in psychology literature. In line with this, one of the many researched aspects of emotion that shows cultural differences is emotional arousal level. Affective states (i.e., emotion, mood, and feeling) are structured in two fundamental dimensions: valence and arousal level.<sup>21–23</sup> Russell<sup>24</sup> proposed the *circumplex model of affect*. The circumplex model of affect proposes that all emotions are the product of two independent neurophysiological systems.<sup>25</sup> In other words, affective states are systematically organized and represented as two bipolar dimensions: pleasure–displeasure (or valence) and degree of arousal. The degree-of-arousal dimension, which is also called activation–deactivation<sup>26</sup> or engagement–disengagement,<sup>24</sup> refers to the perception of the physiological activation level during affective experience.<sup>21,27</sup> In other words, high affective arousal can be understood as the activation of the autonomic nervous system.<sup>55</sup> Literature shows that both emotional valence and arousal affect brain activity<sup>28,29</sup> and cognitive behaviors such as decision making and memory.<sup>56</sup>

Russell<sup>24</sup> categorized verbal expressions of emotion in the English language in the two dimensions of valence and arousal. Since then, this two-factor structure of emotion has been demonstrated numerously by many studies in different methods.<sup>30</sup> This two-dimensional structure of emotion was also proved to be appearing in many different nations and cultures.<sup>24,30–32</sup> In other words, valence and arousal can account for all emotional states.<sup>33</sup> Table 1 lists high and low arousal emotions as categorized in previous literature.

Emotions with different arousal levels have different purposes or functions.<sup>34</sup> Russell<sup>26</sup> argued that high arousal emotions are energized states that prepare action. These emotions correspond to situations where mobilization and energy are required. When a high arousal emotion is induced, decision making becomes focused and simplified.<sup>26</sup> Moreover, high arousal emotions such as joy or anger are known to amplify the nervous system in various ways.<sup>35</sup> By contrast, low arousal emotions are enervated states that prepare inaction or rest.<sup>26</sup>

## 4. Cultural differences in emotional arousal level

Cross-cultural differences in emotional arousal level have consistently been found. Western culture is related to high arousal emotions, whereas Eastern culture is related to low arousal emotions. These cultural differences are explained by the distinct characteristics of individualist and collectivist cultures. In Western culture, people try to influence others.<sup>8</sup> For this purpose, high arousal emotions are ideal and effective.<sup>18</sup> By contrast, in Eastern culture, adjusting and conforming to other people is considered desirable.<sup>8</sup> To meet this goal, low arousal emotions work better than high arousal emotions.<sup>18</sup>

**Table 1 – List of high and low arousal emotions**

Studies	High arousal emotions	Low arousal emotions
Russell (1980) <sup>24</sup>	Afraid, alarmed, angry, annoyed, aroused, astonished, delighted, distressed, excited, frustrated, glad, happy, tense	At ease, bored, calm, contented, depressed, droopy, gloomy, miserable, pleased, relaxed, sad, satisfied, serene, sleepy, tired
Feldman (1993) <sup>51</sup>	Afraid, enthusiastic, nervous, peppy	Calm, relaxed, sleepy, sluggish
Tsai (2007) <sup>36</sup>	Elated, enthusiastic, excited, fearful, hostile, nervous	Calm, dull, peaceful, relaxed, sleepy, sluggish
Suh & Koo (2011) <sup>32</sup>	Irritated, joyful	Helpless, peaceful

In fact, in terms of positively valenced emotions, the arousal level of *ideal affect* differs by cultures. Ideal affect, or “affective state that people ideally want to feel” (p. 243) is important because people are motivated to behave in certain ways so that they feel the emotions they want to experience.<sup>36</sup> Therefore, people in certain culture tend to experience the emotional state that are considered to be ideal in their culture. Tsai<sup>36</sup> argued that Westerners value high arousal emotions more than Easterners, so they promote activities that elicit high arousal emotions. Actually, Americans, compared with East-Asians, are reported to prefer high arousal emotional states such as excitement<sup>37</sup> or enthusiasm.<sup>38</sup> Even children of the West learn through storybooks that high arousal emotions are ideal, and the opposite is true for children of the East.<sup>39</sup> Conception of happiness is also different in arousal level by culture. Lu and Gilmour<sup>40</sup> conducted a cross-cultural study on the conception of happiness; they found that the American conception of happiness emphasized on being upbeat, whereas the Chinese conception of happiness focused on being solemn and reserved. This means that, in America, high arousal positive emotional states are considered as happiness, a desirable state. By contrast, low arousal positive emotional states are considered as happiness in China. This was replicated in another study. Uchida and Kitayama<sup>57</sup> showed that Japanese people conceptualized happiness as experiencing low arousal positive emotions more than high arousal positive emotions, and it was vice versa for American people.

Owing to the cultural difference in the norm about emotional arousal level, differences in the actual arousal levels of emotional experience also emerge. In fact, Kacen and Lee<sup>41</sup> conducted a cross-cultural study comparing Caucasians and Asians. Researchers used an arousal scale composed of four bipolar items, which consists of emotion adjectives representing different arousal levels. Emotion items in the arousal scale were stimulated–relaxed (reversed), calm–excited, frenzied–sluggish (reversed), and unaroused–aroused. The result showed that Caucasians were more likely to be in high arousal emotional states (i.e., stimulated, excited, frenzied, and aroused) than Asians, whereas Asians were more likely to be in low arousal emotional states (i.e., relaxed, calm, sluggish, and unaroused). In addition, Tsai and colleagues<sup>42</sup> reported that the closer the participants to American rather than Chinese cultural orientation, the higher their cardiovascular arousal level during interpersonal tasks.

Another example of the difference of actual arousal levels of emotional experiences between individualist and collectivist cultures can be found from emotion scale research. Affect scales measuring positive and negative emotional experiences developed in America consist mostly of high arousal emotions. This is because emotion scale items are

selected based on the emotional experience of people of their own cultural background. This suggests that American people experience high arousal emotions more than low arousal emotions.<sup>32</sup> For example, one of the most widely used emotion scale, Positive and Negative Affect Scale, was developed by American researchers.<sup>43</sup> Emotion items in the Positive and Negative Affect Scale are weighted toward high arousal emotions such as enthusiasm, activation, and excitement.

Furthermore, cultural differences are also found in physiological and behavioral aspects of emotion. Research conducted by Scherer et al<sup>54</sup> showed that Japanese participants, compared with American and European participants, reported significantly fewer physiological symptoms. Mesquita and Frijda<sup>2</sup> suggested that one possible explanation is that their physiological reactions in emotions are actually different. In addition, behaviors corresponding to emotional arousal level differ by culture. Westerners prefer to participate in more active sports than Easterners to elicit high arousal emotions.<sup>44</sup> Moreover, parents lead their children to engage in activities that are likely to elicit valued emotions in the culture. For example, Western mothers are reported to encourage their children to play games that increase emotional arousal level.<sup>45</sup> Therefore, cultural differences in emotional arousal level emerge at a relatively young age.<sup>39</sup>

Support for cultural difference in the level of emotional arousal has also been found in value studies. According to Schwartz,<sup>46</sup> individualism and independent self-construal are closely related to *stimulation* values. Individuals who have strong stimulation values are motivated to live an exciting and varied life, and to seek novelty and challenges in life. Behaviors derived from these goals are likely to induce high arousal emotions. Therefore, Schwartz's<sup>46</sup> study indirectly support that high arousal emotions are more frequently experienced in Western culture than in Eastern culture. This is also in line with the fact that impulsiveness and sensation-seeking behavior, which are closely related to emotional arousal,<sup>47</sup> are also more profound in individualist countries than in collectivist countries.<sup>41</sup>

The fact that Asian cultural norm discourages experiencing or expressing high arousal emotions can also be explained from the perspective of traditional Asian medicine. In Korean or Chinese medicine, it is assumed that humans experience seven emotions (七情), including joy, anger, sadness, pleasure, love, greed, and hatred. From this standpoint, excessive emotional experience can be harmful and cause diseases, no matter how positive the emotions are.<sup>48,49</sup> For example, Hwabyung, also known as “anger syndrome,” a disease frequently reported in Korean culture, is argued to be resulted in suppression of anger, a high arousal emotion.<sup>50</sup>

## 5. Conclusion

Emotional arousal is a fundamental and important dimension of affective experience, along with valence. Findings consistently support cultural differences in the levels of emotional arousal between the West and the East. Westerners value, promote, and experience high arousal emotions more than low arousal emotions, whereas the vice versa is true for Easterners. As discussed above, emotion has a biological base. In addition, two fundamental dimensions of emotion, valence and arousal, are related to physiological aspect as well as brain activities. Therefore, cultural differences in emotion, especially in arousal level of emotion, can also have implications in other adjacent areas, such as neuroscience and science of medicine.

However, so far only a few researches on this aspect of emotion have been conducted in Asian medicine. As mentioned above, findings about emotion in psychology literature and Asian medicine are in line, in that Korean medicine cautions against excessive emotional activation, which can be translated as high emotional arousals in psychology. However, compared with studies on cultural differences in norms about emotional arousal level, fewer studies on cultural differences in emotional arousal level, *per se*, have been conducted, especially those with physiological measures. Therefore, additional research on cultural differences of emotional arousal level from the perspective of Asian medicine may become the stepping stone to an integrative medicine research on Asian medicine and psychology.

## Conflicts of interest

The author has no conflict of interest to disclose.

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