

Culture and Mixed Emotions: Co-Occurrence of Positive and Negative Emotions in Japan and the United States

Yuri Miyamoto
University of Wisconsin-Madison

Yukiko Uchida
Kyoto University

Phoebe C. Ellsworth
University of Michigan

Previous cross-cultural comparisons of correlations between positive and negative emotions found that East Asians are more likely than Americans to feel dialectical emotions. However, not much is known about the co-occurrence of positive and negative emotions in a given situation. When asked to describe situations in which they felt mixed emotions, Japanese and American respondents listed mostly similar situations. By presenting these situations to another group of respondents, we found that Japanese reported more mixed emotions than Americans in the predominantly pleasant situations, whereas there were no cultural differences in mixed emotions in the predominantly unpleasant situations or the mixed situations. The appraisal of self-agency mediated cultural differences in mixed emotions in the predominantly pleasant situations. Study 2 replicated the findings by asking participants to recall how they felt in their past pleasant, unpleasant, and mixed situations. The findings suggest that both Americans and Japanese feel mixed emotions, but the kinds of situation in which they typically do so depends on culture.

Keywords: culture, mixed emotions, co-occurrence of positive and negative emotions, appraisal

Cross-cultural evidence suggests that East Asians tend to engage in dialectic thinking, emphasizing change, contradiction, and the importance of context (Ji, Nisbett, & Su, 2001; Norenzayan, Choi, & Peng, 2007; Peng & Nisbett, 1999). Is this propensity to dialecticism in thinking also reflected in dialecticism in feeling? That is, are East Asians more likely than westerners to experience contradictory emotions?

Researchers have long debated whether people can feel pleasant and unpleasant emotions simultaneously. Some researchers consider positive and negative emotions to be at opposite ends of a bipolar continuum, and thus assume that people cannot feel both at once (Green, Goldman, & Salovey, 1993; Russell, 1980; Russell & Carroll, 1999). Others see positive and negative valence as independent dimensions and thus think that a person can feel both positive and negative emotions at the same time (Cacioppo & Berntson, 1994; Diener & Iran-Nejad, 1986; Larsen, McGraw, & Cacioppo, 2001; Schimmack, 2001).

Larsen and his colleagues (2001) examined emotions in situations that are especially conducive to mixed emotions, such as a

moving-out day, and found that Americans report feeling both positive and negative emotions (e.g., happy and sad). More recently, Larsen, McGraw, Mellers, and Cacioppo (2004) demonstrated that mixed emotions can be elicited simultaneously rather than sequentially by disappointing wins or relieving losses in gambles, suggesting that mixed emotions are familiar even in Western culture despite its emphasis on self-consistency (Heine & Lehman, 1997; Hoshino-Browne, Zanna, & Spencer, 2005; Kitayama & Markus, 1999; Kitayama, Snibbe, Markus, & Suzuki, 2004; Markus & Kitayama, 1991).

The purpose of the present research was to investigate cultural similarities and differences in mixed emotions. We predicted that both Americans and Japanese feel mixed emotions, but the situations in which they do so depend on contexts in their culture. We wanted to discover the kinds of situations that elicit mixed emotions in Americans and Japanese, and their associated appraisals and action tendencies.

Cultural Differences in Dialectical Emotions: Correlation Between Positive and Negative Emotions

Cross-cultural studies of dialectical thinking have identified potential sources of cultural differences in mixed emotions. Peng and Nisbett (1999) proposed that Chinese dialectical thinking is characterized by a belief that reality is constantly changing and full of contradictions and that everything is connected. Compared to Americans, Chinese tend to expect the present state of affairs to change, and to view those who predict changes as wise (Ji et al., 2001). Furthermore, Chinese are more likely than Americans to prefer dialectical proverbs containing contradictions, such as “be-aware of your friends not your enemies” (Peng & Nisbett, 1999).

Yuri Miyamoto, University of Wisconsin-Madison; Yukiko Uchida, Kyoto University; and Phoebe C. Ellsworth, University of Michigan.

Support for this research was also provided by a Japan Society for the Promotion of Science Fellowship to Yuri Miyamoto and by a Russell Sage Foundation Visiting Fellowship to Phoebe C. Ellsworth. We thank Rebecca Barasky, Erin Besinger, Theresa Burrige, Amanda Eggen, Tessa Freeman, Courtney Flynn, Carrie Roulet, and Brooke Wilken for their help at various stages of this project.

Correspondence concerning this article should be addressed to Yuri Miyamoto, Department of Psychology, 1202 West Johnson Street, University of Wisconsin-Madison, Madison, WI 53706. E-mail: ymiyamoto@wisc.edu

Williams and Aaker (2002) also provide evidence supporting Asian preference for dialectic argument; Asian Americans liked advertisements that conveyed mixed emotions (e.g., happy and sad) more than European Americans did. East Asians' dialectical thinking may lead them to see broader and sometimes even contradictory connotations of an event and to experience dialectical emotions.

On the other hand, in Western culture, contradiction is something to be avoided (Peng & Nisbett, 1999). When approaching contradictions, Americans tend toward polarizing attitudes, whereas East Asians tend to seek a middle way (Peng & Nisbett, 1999). At the same time, it has been widely documented that in Western culture people have more positive views toward themselves (Heine & Hamamura, 2007; Heine, Lehman, Markus, & Kitayama, 1999) and a cultural norm of valuing positive emotions and discouraging negative emotions (Eid & Diener, 2001) compared to the case in Eastern culture. The tendency to focus on the positives, as well as the tendency to polarize attitudes, may lead Americans to avoid experiencing dialectical emotions, mainly by maximizing positive emotions and minimizing negative emotions.

The coexistence of cultural differences in dialecticism and positivity suggests that the nature of the situation—specifically, the overall valence of the situation—may influence cultural differences in emotional dialecticism. Easterners may be more likely to experience dialectical emotions than westerners especially in predominantly positive situations, because easterners are attuned to broader and more negative consequences of a positive event due to their dialectical thinking style (Ji et al., 2001; Peng & Nisbett, 1999). However, in predominantly negative situations, both easterners and westerners may experience dialectical emotions because even westerners tend to look for positive implications in order to maximize positive emotions. Research found that even when going through an extremely stressful event such as the death of a partner, Americans engage in positive reappraisal and report experiencing a considerable amount of positive emotion (Folkman, 1997). These data suggest that there would be larger cultural differences in predominantly positive situations because Japanese may see broader and more negative implications of happy situations than Americans.

Previous studies that examine correlations between positive and negative emotions across cultures showed cultural differences and similarities in emotional dialecticism. Several studies have shown that the correlation between positive and negative emotions tends to be negative for Americans, but for Asians it is weaker, nonexistent, or even positive (Bagozzi, Wong, & Yi, 1999; Kitayama, Markus, & Kurokawa, 2000; Schimmack, Oishi, & Diener, 2002). In addition, using a daily experience sampling method, Scollon, Diener, Oishi, and Biswas-Diener (2005) found that between individuals, in Asians but not European Americans, positive and negative affects are positively correlated, whereas within individuals, both groups showed strong negative correlations. Recently, examining emotions experienced at a specific moment, Yik (2007) also found strong negative correlations between positive and negative emotions across cultures (i.e., English, Chinese, Spanish, Japanese, and Korean). This suggests that neither European Americans nor Asians typically experience positive and negative emotions simultaneously in a specific situation. None of these studies controlled for or manipulated the nature of situations.

However, some emotion researchers have suggested that emotional dialecticism depends on the nature of situation, such as its complexity, and have shown that even Americans sometimes feel both positive and negative emotions at the same time (Erner-Hershfield, Mikels, Sullivan, & Carstensen, 2008; Larsen et al., 2001; Wildschut, Sedikides, Arndt, & Routledge, 2006). The overall valence of the situation may also influence emotional dialecticism and its cultural differences. Recently, Leu and her colleagues (in press) examined emotional responses to standardized situational stimuli depicting episodes in a protagonist's daily life to discover whether cultural differences in dialectical emotion depend on the nature of the situation. They found that cultural differences are more pronounced in pleasant situations than in uncertain situations or unpleasant situations. Whereas Americans and Asians were equally likely to demonstrate a strong negative association between positive and negative emotions in response to unpleasant situations and uncertain situations, Americans demonstrated a significantly stronger negative association in response to pleasant events than Asians did. Whereas Americans consider positive and negative emotions to be generally opposite and rarely experience both positive and negative emotions together, East Asians may consider those emotions to be more independent in some situations.

Cultural Differences in Mixed Emotions: Co-Occurrence of Positive and Negative Emotions

Our study extended the previous research in two ways: by focusing on co-occurrence of positive and negative emotions and by using actual situations experienced by Americans and Japanese in their daily lives. Previous cross-cultural studies on dialectical emotions have mainly focused on correlations between positive and negative emotions. The correlational data do not examine whether positive and negative emotions are simultaneously experienced in the moment, because correlations assess the degree of association between positive and negative emotions across or within individuals, rather than their co-occurrence in a specific situation. Research has shown that even Americans sometimes feel both positive and negative emotions at the same time (Erner-Hershfield et al., 2008; Larsen et al., 2001; Wildschut et al., 2006). Unlike previous cross-cultural studies of mixed emotions, Larsen et al. (2001) examined the actual co-occurrence, instead of correlation, of positive and negative emotions. Although Americans have generally shown strong negative correlations between positive and negative emotions, in some situations they seem to feel both. Previous cross-cultural studies might have underestimated American experiences of mixed emotions by focusing exclusively on correlations.

In addition, Leu et al. (in press) examined responses to standardized scenarios (i.e., diary entries of a protagonist) which were carefully created to have equivalent meanings across cultures. We took a more bottom-up approach—asking Americans and Japanese to remember past situations in which they had experienced mixed emotions and identifying situations that are commonly found in both cultures (Pilot Study). By using these situations as stimuli, Study 1 examined whether the nature of the situations (pleasant, unpleasant, or mixed) moderate cultural differences in mixed emotions. In Study 2, we asked Americans and Japanese to remember

pleasant, unpleasant, and mixed situations that they had actually experienced and to describe the emotions they felt in the situations.

In a pilot study, we first explored whether types of mixed emotional situations differ across cultures by asking both Americans and Japanese to describe situations in which they had felt both positive and negative emotions. Using these situations, we asked whether the nature of the situation influences the propensity to feel mixed emotions in the two cultures. Consistent with Leu et al. (in press), we predicted that Japanese would be more likely than Americans to feel both positive and negative emotions in predominantly pleasant situations, but that Americans and Japanese would be equally likely to feel mixed emotions in predominantly unpleasant situations. In unpleasant situations, both Americans and Japanese would try to “think positively” in order to cope with the situation. On the other hand, in pleasant situations, the Japanese would be alert to any negative implications and thus feel mixed emotions, but Americans would not. In addition, we examined situations of mixed valence (Larsen et al., 2001), predicting that in such situations both Americans and Japanese would feel mixed emotions.

None of the previous studies described appraisals or action tendencies (Frijda, 1986; Smith & Ellsworth, 1985) underlying mixed emotions. We thus explored whether the appraisal of responsibility (agency) and the motivation to control the situation are associated with cultural differences in mixed emotions. Specifically, we examined whether cultural differences in predominantly positive situations would be mediated by Japanese vigilance to the broader consequences of their actions (i.e., how responsible they would feel for other people’s feelings). We predicted that, in predominantly positive situations, dialectical thinking style would lead Japanese to attend to broader implications of their own behavior for other people’s feeling, which may partly explain why Japanese experience mixed emotions in predominantly positive situations. In addition, for exploratory purposes, we examined the motivation to control. Previous studies suggest that Japanese are less likely than Americans to try to change the situation (Morling, Kitayama, & Miyamoto, 2002; Weisz, Rothbaum, & Blackburn, 1984). For Americans, but not for Japanese, positive emotions are associated with a sense of control (Ellsworth & Smith, 1988; Mauro, Sato, & Tucker, 1992).

Pilot Study

A pilot study was conducted to identify situations that elicit mixed emotions in the United States and Japan. Thirty-three non-Asian American undergraduates (16 men and 17 women) at the University of Michigan and 32 Japanese undergraduates (18 men and 14 women) at Kyoto University were asked to remember and describe situations in which they had felt both good (positive) and bad (negative) emotions.

Although there was a great variety of situations (ranging from social situations such as, “When I am talking with my classmates, I found myself keeping a distance from them even when somewhat having fun” to nonsocial situations such as, “Eating vegetables”), the most frequently mentioned situations were shared across cultures. These included transition into a new life or starting a new activity (e.g., the day one moved to college for the first time; 61% of American respondents and 22% of Japanese respondents listed this at least once), self–other comparison (e.g., getting worse, or

better, grades than one’s sibling; 33% of American respondents and 38% of Japanese respondents), romantic relationships (e.g., breaking up; 70% of American respondents and 22% of Japanese respondents), and guilty conduct (e.g., smoking marijuana or drinking; 30% of American respondents and 16% of Japanese respondents).¹ Self–other comparisons included 1) those in which the self outperformed the other, and 2) those in which the other outperformed the self. Whereas 18% of American respondents and 25% of Japanese respondents listed at least one of the former, 15% of Americans and 13% of Japanese listed at least one of the latter. Mixed emotions in the self–other comparison situations can be predicted from the extended self-evaluation maintenance model (Beach et al., 1998) and are also reported in previous research on mixed emotions (Larsen et al., 2001). We found interesting that 24% of American respondents listed at least one situation that involved the loss of someone close (e.g., grandfather dying), which none of the Japanese respondents mentioned.

Some predominantly pleasant and predominantly unpleasant situations were common in both cultures. The predominantly pleasant situations were self–other comparison situations in which the self outperforms the other (“self-success”), whereas the predominantly unpleasant situations were self–other comparison situations in which the other outperforms the self (“self-failure”). In self-success situations Japanese may perceive negative consequences of their success and experience more mixed emotions than Americans (Uchida & Kitayama, in press), whereas in self-failure situations both Japanese and Americans may try to cope with negative situations and feel mixed emotions (Leu et al., in press). Both Japanese and American respondents frequently described a “transition into a new life” theme, which is a typical mixed emotional episode that has been repeatedly identified by previous research (e.g., Larsen et al., 2001). In addition, we also included the loss situations found only in the United States to explore whether such situations also elicit mixed emotions across cultures. We did not use the romantic relationship or guilty conduct situations because these situations tended to be more extreme in the United States than in Japan (e.g., having sex or smoking marijuana) and we felt that the American situations would sound implausible to Japanese participants.

Thus, based on the pilot study, four kinds of mixed emotion situations were included in the main study: self-success, self-failure, transition, and loss of someone close. We predicted that Japanese would expect to feel more mixed emotions than Americans in the predominantly pleasant self-success situations, but Americans would feel mixed emotions as much as Japanese in the predominantly unpleasant self-failure situations and in the pre-

¹ The proportion of respondents who listed each category tends to be higher for Americans than for Japanese mainly because Americans, especially American women, described more situations than Japanese. There was a cultural main effect, $F(1, 61) = 28.91, p < .001$, as well as a culture \times gender interaction, $F(1, 61) = 7.41, p < .01$, in the number of situations listed by each participant. American female respondents listed a larger number of situations ($M = 10.94$) than any other group (American males, $M = 6.81$; Japanese females, $M = 5.07$; Japanese males, $M = 4.89$, $t_s(61) = 4.08, 5.59, 6.15$, respectively, $p_s < .01$). This may reflect women’s tendency to recall emotional experiences more frequently and quickly than men (Davis, 1999), in the United States.

dominantly mixed transition situations. We had no specific predictions about the loss situation.

Study 1

Method

Participants. Twenty-eight European American undergraduates (17 men and 11 women) at the University of Michigan and 22 Japanese undergraduates (13 men and 9 women) at Kyoto University participated in the study. Michigan students were given course credit, whereas Kyoto students were given a book coupon (equivalent to \$4.50) for their participation. Each session was conducted in a small group with a maximum of five participants.

Situations. Situations were drawn from the pool of mixed-emotion situations collected in the pilot study. For each type of situation (i.e., self-success, transition, and self-failure), we chose two situations from Japan and two from the United States at random. For the loss situation, we included one situation from the United States (none of the Japanese mentioned this kind of situation). Thus there were a total of 13 situations. (See the Appendix for examples.) References to culturally specific events or locations (e.g., Michigan) were changed to equivalent terms in the other culture (e.g., Kyoto). The order of the situations was randomized and presented to participants in a fixed order.

Procedure. Participants were told that they would read descriptions written by undergraduates about experiences that had happened in their actual lives, and were instructed to report how *they* would feel if they were in each situation. Given the frequency with which these situations were mentioned in the pilot research, it is quite likely that many of the participants had experienced similar events in their own lives, and could draw on their own memories. It was stressed that even though some of the situations mentioned the feelings of the person who wrote them, participants might not feel the same way.

For each situation, participants were first asked to rate the extent to which they would feel positive emotion and negative emotion, using 5-point scales with labels at 0 (*not at all*) and 4 (*very strongly*). They were then asked to rate the extent to which they would feel specific positive emotions (happiness, pride, sympathy, relief, hope, and friendly feeling) and specific negative emotions (sadness, anxiety, anger, self-blame, fear, anger at oneself, shame, guilt, jealousy, frustration, embarrassment, resentment, and fear of troubling someone else), using 6-point scales with labels at 0 (*not at all*) and 5 (*very strongly*).

We were also interested in whether cultural differences in participants' emotional experiences would be correlated with their appraisals of agency and responsibility, and with their motivation to control the situation ("action tendency," Frijda, 1986). Past research has found that Americans are more concerned with agency and control than Asians (Mauro et al., 1992; Mesquita & Markus, 2004). Following the emotion ratings, participants answered two appraisal questions: First, how responsible *they would feel for other people's feelings*, and second how much *other people were responsible for their feelings*, using 5-point scales with labels at 0 (*no responsibility at all*) and 4 (*very much responsibility*). Finally, in order to examine participants' motivation to control the situation, they were asked, "*how much would you think about influencing or changing the surrounding people, events, or objects*

according to your own wishes?," using a 5-point scale with labels at 0 (*not at all*) and 4 (*very much*). For all of the appraisal questions, participants were also given an option to choose *Not Applicable* if the situation was irrelevant to the appraisal. Questions on which participants chose N/A were not included in the analyses.²

Results

Manipulation Check: General Valence

The ratings of overall positive and negative emotion were analyzed to check the general valence of each type of situation.³

In order to examine whether the self-success situations were perceived as more positive than the self-failure situations, we performed a 2 (situations: self-success vs. self-failure) \times 2 (valence) \times 2 (culture) ANOVA. It revealed a significant valence \times situation interaction, $F(1, 47) = 51.99, p < .001$, suggesting that the self-success situations were perceived to be relatively more positive than negative ($M_s = 3.04$ and 1.99) compared to the self-failure situations ($M_s = 2.21$ and 2.67) as we intended. This interaction was further qualified by culture, $F(1, 47) = 5.50, p < .05$, suggesting that the valence \times situation interaction was more pronounced for American than for Japanese participants. However, a simple interaction between valence and situation performed only with the Japanese participants was also significant, $F(1, 21) = 9.30, p < .01$, suggesting that the Japanese perceived the self-success situations to be relatively more positive than negative compared to the self-failure situations.

In the transition situations, participants reported stronger positive emotions ($M = 3.08$) than negative emotions ($M = 2.53$), $F(1, 47) = 10.55, p < .01$, but negative emotions were also rated higher than the midpoint of the scale, $t(47) = 4.58, p < .01$. No cultural differences were observed, indicating that the transition situations induced both positive and negative emotions in both American and Japanese participants.

In the loss situation, participants reported stronger negative emotions ($M = 3.40$) than positive emotions ($M = 1.32$), $F(1, 45) = 98.87, p < .001$. No cultural differences were observed, suggesting that the loss situations induced predominantly negative emotions for both American and Japanese participants.

Co-Occurrence of Overall Positive and Negative Emotions

To examine the extent of mixed emotions, we focused on the co-occurrence of positive and negative emotions (Cacioppo & Berntson, 1994). For each type of situation, we computed the number of situations in which participants rated both positive and negative emotions greater than 0 (*not at all*), regardless of the

² Out of 13 situations, respondents chose N/A in 1.62 situations for self-responsibility appraisal, 1.66 situations for other-responsibility appraisal, and 0.76 situations for change appraisal. No cultural differences were observed ($ps > .5$).

³ Because some participants skipped some of the questions, the degrees of freedom vary across analyses.

intensity of the emotions (Carrera & Oceja, 2007; Larsen et al., 2001).⁴

In order to test our hypothesis about the difference between the self-success and self-failure situations, we performed a 2 (culture) \times 2 (type of situation: self-success vs. self-failure) ANOVA.⁵ The interaction between culture and situation was marginally significant, $F(1, 47) = 3.69, p = .06$. As can be seen in Table 1, the Japanese respondents reported mixed emotions ($M = 3.64$) marginally more frequently than the American respondents did ($M = 3.15$), $t(47) = 1.82, p < .10$. However, the Japanese and the American respondents were equally likely to report mixed emotions in the self-failure situations ($M_s = 3.27$ and 3.48 , respectively), $t(47) = 0.77, ns$.

In the transition situations, the cultural main effect was not significant, $F(1, 47) = 1.48, p > .2$. The Japanese and the American respondents reported feeling mixed emotions to a similar degree in the transition situations ($M_s = 3.91$ and 3.63 , respectively). Consistent with our second hypothesis, both Japanese and Americans were equally likely to feel mixed emotions in situations especially conducive to mixed emotions.

Because there was only one loss situation, we compared the proportions of respondents who felt both positive and negative emotions in this situation. We found that 85% of the American respondents and 76% of the Japanese respondents reported feeling mixed emotions. The cultural effect was not significant, $\chi^2(1, N = 47) = 0.53, p > .4$. This suggests that Japanese feel mixed emotions as much as Americans do in the loss situation, even though none of the Japanese pilot respondents spontaneously described a loss situation as an instance of a situation that elicited mixed emotions.

Co-Occurrence of Specific Positive and Negative Emotions

Because research on mixed emotions typically examines the co-occurrence of specific positive and negative emotions (Larsen et al., 2001), we also examined the specific emotions in more detail. We first identified the strongest positive emotion and negative emotions mentioned for each type of situation (see Table 2). We then examined the co-occurrence of these two emotions, as we did for the co-occurrence of overall positive and negative emotions.

Self-success situations. *Happiness* was the strongest positive emotion and *fear of troubling someone else* was the strongest negative emotion for both American and Japanese participants. It is noteworthy that positive emotions dominated the first five ranks in the American rank-order of emotions, while fear of troubling others appeared in the second place in the Japanese rank-order. To test our hypothesis, we examined the co-occurrence of happiness and fear of troubling others. There was a cultural difference in the frequency with which respondents reported both happiness and fear of troubling others in self-success situations, $F(1, 48) = 11.01, p < .005$. The Japanese participants reported both happiness and fear of troubling others in the self-success situations more frequently than the American participants did so ($M_s = 3.32$ and 2.14 , respectively).

Self-failure situations. *Jealousy* was the strongest negative emotion and *happiness* was the strongest positive emotion for both American and Japanese participants, although happiness was lower

in the Japanese rank-order of emotions. There was no cultural difference, $F(1, 48) < 1$. The Japanese and the Americans were equally likely to report both happiness and jealousy in the self-failure situations ($M_s = 3.05$ and 3.32 , respectively). In combination with the results of the self-success situations, these findings provide evidence that Japanese feel more mixed emotions than Americans in predominantly positive situations, but Americans feel mixed emotions as much as Japanese in predominantly negative situations.

Transition situations. *Happiness* was the strongest positive emotion and *anxiety* was the strongest negative emotion for both American and Japanese participants, though there were cultural differences in the relative intensity. Supporting our hypothesis, there were no cultural differences in the frequency with which participants reported both happiness and anxiety in the transition situations, $F(1, 47) = 1.45, p > .2$. The Japanese and the Americans were equally likely to report both happiness and anxiety in the transition situations ($M_s = 3.91$ and 3.71 , respectively).

A loss situation. *Sadness* was the strongest negative emotion for both American and Japanese participants, but the strongest positive emotion was *relief* for American participants and *sympathy* for Japanese participants. We thus examined the co-occurrence of sadness and relief as well as the co-occurrence of sadness and sympathy. Because there was only one loss situation, the proportions of respondents were compared. On average, 66% of the participants reported both sadness and relief and 57% reported both sadness and sympathy. We found no cultural effects for either combination, $\chi^2(1, N = 50) = 0.83, p > .3$, for sadness and relief; $\chi^2(1, N = 49) = 0.06, p > .8$, for sadness and sympathy. These results suggest that Japanese feel mixed emotions as much as Americans do in the loss situation.

In addition, there was an interesting cultural difference in anger in the loss situation. Americans respondents reported more anger ($M = 2.19$) than Japanese respondents, ($M = 0.86$), $F(1, 45) = 6.84, p < .05$. Although not directly relevant to the main focus of our study (i.e., co-occurrence of positive and negative emotions), we looked at the co-occurrence of sadness and anger to understand potential cultural differences in reactions to loss situations. Whereas 70% of the American respondents reported both sadness and anger, only 41% of the Japanese respondents did, $\chi^2(1, N =$

⁴ We also used the MIN index as another measure of mixed emotions (Priester & Petty, 1996; Schimmack, 2001). The index is based on the intensity of the weaker of positive and negative emotions. Using the MIN index, we performed the same set of analysis to examine overall positive and negative emotions. The index provided results consistent with the measure of co-occurrence. In the self-success and self-failure situations, the culture by situation interaction was significant, $F(1, 47) = 6.08, p < .05$, indicating that the degree of mixed emotions was higher for Japanese than for Americans in the self-success situations ($M_s = 1.76$ and 1.49 , respectively), but the pattern was reversed in the self-failure situations ($M_s = 1.40$ and 1.73 , respectively). The Japanese and the American respondents reported feeling mixed emotions to a similar degree in the transition situations, $M_s = 2.33$ and 2.07 , respectively, $F(1, 47) = 1.02, p > .3$, and in the loss situation, $M_s = 1.14$ and 1.35 , respectively, $F < 1$.

⁵ Since the cultural origin of the situations did not have significant effects on the co-occurrence of positive and negative emotions, we combined the situations generated by Japanese with those generated by Americans in the following analyses.

Table 1
Means and Standard Deviations of the Number of Situations Where Positive and Negative Emotions Co-Occurred and the Proportion of Respondents Who Showed Co-Occurrence of Positive and Negative Emotions by Situation and Culture

Situations and emotions	Americans	Japanese	<i>p</i>
Number of situations where positive and negative emotions were rated as co-occurring			
Self-success situations			
Overall positive and negative	3.15 (1.26)	3.64 (0.66)	+
Happy and troubling others	2.14 (1.46)	3.32 (0.89)	**
Self-failure situations			
Overall positive and negative	3.48 (0.75)	3.27 (0.88)	<i>ns</i>
Happy and jealous	3.32 (0.98)	3.05 (1.32)	<i>ns</i>
Transition situations			
Overall positive and negative	3.63 (1.01)	3.91 (0.43)	<i>ns</i>
Happy and anxious	3.71 (0.71)	3.91 (0.29)	<i>ns</i>
Proportion of respondents who reported both positive and negative emotions			
Loss situation			
Overall positive and negative	0.85	0.76	<i>ns</i>
Sad and relief	0.71	0.59	<i>ns</i>
Sad and sympathy	0.56	0.59	<i>ns</i>
Sad and angry	0.70	0.41	*

Note. Standard deviations are shown in parentheses.
 + $p < .10$. * $p < .05$. ** $p < .01$.

49) = 4.30, $p < .05$. When faced with a death of someone close, Americans may try to cope with their sadness by trying to change a hopeless situation, which may lead them to feel frustrated and angry. Japanese may use this coping strategy less than Americans do (Morling et al., 2002; Weisz et al., 1984). In the following section we explore this possibility by examining action tendencies.

Appraisals and Coping Strategies

Self-success situations. We found cultural differences in appraisals that correspond to the results for mixed emotions. As shown in Table 3, Japanese participants said they would feel more responsible for other people's feelings ($M = 2.77$) than American participants did ($M = 1.99$), $F(1, 46) = 7.16$, $p < .01$. Feelings of responsibility may have led Japanese to report fear of troubling other people in addition to happiness. In fact, a mediation analysis showed that feeling responsible marginally mediated cultural differences in the co-occurrence of happiness and fear of troubling others, Sobel test = 1.78, $p = .07$.

In an interesting finding, American participants reported less motivation to change the situation ($M = 1.44$) than did Japanese participants ($M = 2.27$), $F(1, 46) = 6.68$, $p < .05$. Although Americans in general tend to be motivated to change situations (Morling et al., 2002; Weisz et al., 1984), they may not have felt any need to do so in the predominantly pleasant situations, whereas Japanese may have felt the need to change something because for them these situations were not entirely pleasant.

Self-failure situations. Although both Americans and Japanese reported mixed emotions in the predominately unpleasant self-failure situations, we found interesting cultural differences in their appraisals. American participants attributed more responsibility to other people for their feelings ($M = 2.74$) than Japanese participants did ($M = 2.03$), $F(1, 45) = 3.48$, $p < .07$, whereas Japanese participants attributed more responsibility to themselves

for other people's feelings ($M = 1.75$) than American participants did ($M = 0.91$), $F(1, 45) = 12.23$, $p < .001$. In addition, Americans reported a greater desire to change the situation ($M = 2.48$) than Japanese participants did ($M = 1.56$), $F(1, 46) = 12.61$, $p < .001$. These cultural differences in appraisals and coping strategies suggest that although no cultural differences were observed in the extent of mixed emotions, there may be cultural differences in the way people construe and deal with negative situations. The same feelings may provoke different action tendencies (Frijda, 1986).

Transition situations. No cultural differences were found in any of the appraisal or coping questions, although the means were in the same direction as those in the self-failure situation, with Japanese more likely to see themselves as responsible for other people's feelings, and Americans more likely to see their own feelings as caused by others.

A loss situation. Again the pattern of the results was similar to the self-failure situations. American participants attributed more responsibility to other people for their feelings ($M = 2.50$) than Japanese participants did ($M = 1.53$), $F(1, 46) = 6.89$, $p < .05$. In addition, American participants reported more motivation to change the situation ($M = 2.52$) than Japanese participants did ($M = 1.38$), $F(1, 45) = 7.98$, $p < .01$. This supports our speculation that Americans may be more likely than Japanese to try to cope with the loss situation by actively trying to change it.

Acquiescence Response Style?

Researchers have suggested that random and systematic measurement error can attenuate the inverse relationship between positive and negative emotions (Feldman Barrett & Russell, 1998; Green et al., 1993; Russell & Carroll, 1999). It is possible that the Japanese showed more mixed emotions than the Americans in the predominantly pleasant situations, but not in the predominantly unpleasant situations, because the Japanese were more acquiescent

Table 2
Means and Standard Deviations of Most Strongly Rated Emotions Under Each Type of Situation. Emotions Are Rank-Ordered Until Each List Includes at Least One Positive Emotion and One Negative Emotion

Situations and rank orders	Americans		Japanese	
	Emotion	<i>M</i> (<i>SD</i>)	Emotion	<i>M</i> (<i>SD</i>)
Self-success situations				
First	Happy*	4.19 (0.77)	Happy*	3.33 (0.80)
Second	Proud	3.91 (0.84)	Troubling others*	3.13 (1.21)
Third	Sympathy	2.47 (1.19)		
Fourth	Relief	2.31 (1.31)		
Fifth	Troubling others*	1.85 (1.47)		
Self-failure situations				
First	Jealous*	3.70 (1.05)	Jealous*	3.33 (1.11)
Second	Happy*	2.57 (0.96)	Anger at oneself	2.28 (1.47)
Third			Frustrated	2.13 (1.37)
Fourth			Happy*	2.09 (0.93)
Transition situations				
First	Happy*	3.51 (1.06)	Anxious*	3.88 (0.99)
Second	Anxious*	3.45 (1.07)	Happy*	3.67 (0.95)
Loss situations				
First	Sad*	4.22 (1.28)	Sad*	4.05 (1.25)
Second	Relief**a	2.22 (1.65)	Anxious	1.86 (1.70)
Third	Angry	2.19 (1.80)	Anger at oneself	1.73 (1.61)
Fourth	Frustrated	1.96 (1.58)	Fear	1.55 (1.60)
Fifth	Sympathy**b	1.81 (1.92)	Sympathy**b	1.45 (1.57)
Sixth			Relief**a	1.18 (1.14)

Note. The responses were made on 6-point scales with labels at 0 (*not at all*) and 5 (*very strongly*).

* Indicates the most strongly rated positive and negative emotions under each type of situation. **a Indicates the strongest positive emotion for American participants, and **b indicates the strongest positive emotion for Japanese participants in the loss situation.

or more likely to endorse the items randomly in the predominantly pleasant situations than in the predominantly unpleasant situations, whereas Americans remained the same. In order to test these possibilities, we computed the proportion of emotion items which

Table 3
Means and Standard Deviations of Appraisal Questions by Situations and Culture

Situations and appraisal questions	Americans, <i>M</i> (<i>SD</i>)	Japanese, <i>M</i> (<i>SD</i>)	<i>p</i>
Self-success situations			
Self-responsible	1.99 (1.04)	2.77 (1.04)	**
Other-responsible	1.35 (1.05)	1.54 (0.94)	<i>ns</i>
Motivation to control	1.44 (1.19)	2.27 (0.91)	*
Self-failure situations			
Self-responsible	0.91 (0.70)	1.75 (0.94)	***
Other-responsible	2.74 (1.11)	2.03 (1.26)	+
Motivation to control	2.48 (1.11)	1.56 (0.88)	***
Transition situations			
Self-responsible	1.40 (1.07)	1.81 (1.03)	<i>ns</i>
Other-responsible	1.72 (1.05)	1.38 (0.86)	<i>ns</i>
Motivation to control	2.06 (1.01)	2.09 (0.88)	<i>ns</i>
Loss situations			
Self-responsible	0.88 (1.15)	1.42 (1.07)	<i>ns</i>
Other-responsible	2.50 (1.50)	1.53 (1.35)	*
Motivation to control	2.52 (1.58)	1.38 (1.16)	**

Note. The responses were made on 5-point scales ranging from 0 to 4. + $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

the respondents rated higher than 0 and ran a culture \times situation type (pleasant vs. unpleasant) ANOVA with the proportion as a dependent variable. There was no cultural main effect, $F(1, 48) = 2.04, p > .15$, but there was a main effect of situation type, $F(1, 48) = 11.63, p < .001$. The respondents endorsed 53% of the emotion items in the predominantly unpleasant situations, whereas they endorsed only 47% in the predominantly pleasant situations, which is possibly because our emotion items contained a larger number of negative valence items than positive ones. More important, this effect was not qualified by a culture \times situation type interaction, $F(1, 48) = 1.60, p > .2$. Therefore, neither acquiescence nor random error seems to explain the situational dependency of the cultural differences.

Discussion

The results of Study 1 showed that Japanese reported more mixed emotions than Americans in the predominantly pleasant situations, whereas there were no cultural differences in mixed emotions in the predominantly unpleasant situations or the mixed situations. The findings suggest that both Americans and Japanese feel mixed emotions, but the kinds of situation in which they typically do so depends on culture.

Although these findings provide support for our hypotheses, the findings are based on responses to hypothetical situations and thus may reflect participants' beliefs about their feelings rather than their actual feelings. Cultural differences tend to be larger when self-reports are based on one's beliefs (e.g., responding to hypo-

thetical situations) rather than their actual feelings (e.g., reporting immediate experience or recalling actual specific situations; Robinson & Clore, 2002). Because previous research also examined responses to hypothetical scenarios and did not examine actual feelings (Leu et al., in press), it is unclear whether these findings are limited to responses to hypothetical situations or can be generalized to actual experiences. In addition, because we used situations written by participants who were specifically instructed to write about situations in which they felt mixed emotions, some of our situations mentioned the actual emotions of the person who wrote them (e.g., "I had mixed emotions"), and these emotion labels might have influenced the participants in Study 1. It is noteworthy that, despite the presence of emotion words, Americans reported fewer mixed emotions than Japanese in pleasant situations. At the same time, the emotion words might have increased the report of mixed emotions, even though we stressed to the participants that they might not feel the same way.

In Study 2, we thus examined whether we could replicate this pattern of results when participants recalled their actual experience (rather than responding to the hypothetical situations) and freely described the emotions experienced in the situation without being given names of specific emotions. We also explored whether the findings of Study 1 extend to pleasant and unpleasant situations beyond self-other comparison. We thus asked participants to remember the situations in which they either succeeded or failed in something important, without mentioning the performance of others. As a mixed situation, we asked participants to remember the first day of college. We predicted that Japanese would report feeling more mixed emotions than Americans in the self-success situations, but Americans would feel mixed emotions as much as Japanese in the self-failure situations and in the transition situations.

Study 2

Method

Participants. Twenty-eight European American undergraduates (12 men and 16 women) at the University of Wisconsin-Madison and 27 undergraduates (12 men and 15 women) at Kyoto University in Japan participated in the study.⁶ Students in the United States were given course credit whereas Kyoto students were given a book coupon (equivalent to \$5) for their participation. Each session was conducted in a small group with a maximum of five participants.

Procedure. We focused on self-success (i.e., "when you as an individual succeeded in something important") as a pleasant situation, self-failure (i.e., "when you as an individual failed in something important") as a unpleasant situation, and transition (i.e., "the day you started classes in college") as a mixed situation. For each type of situation, participants were first asked to describe the nature of the incident in detail by referring to what they were feeling and thinking, what they said, if anything, and how they said it, and what they did, how they acted, and were asked to describe all the emotions they felt (Shaver, Schwartz, Kirson, & O'Connor, 1987). The order of the situations was counterbalanced across participants. After describing the three situations, participants were asked to rate the extent to which they felt positive emotion and

negative emotion in each situation, using 5-point scales with labels at 0 (*not at all*) and 4 (*very strongly*).

Results

Co-Occurrence of Positive and Negative Emotions in the Free Descriptions

We coded the content of the free descriptions. Two coders independently coded whether each situation involved positive emotions/events and negative emotions/events. In self-success situations, typical positive emotions/events involved happiness and appreciation for others, whereas typical negative emotions/events involved anxiety and consideration for other people's negative state. Sample responses are provided below:

I succeeded in getting into the colleges that I want/would go to. When I got the admission letters back from the schools I wanted to go to, not safety schools, and when the first one came that said I was accepted I was relieved to know I would be going to a college that I wanted to attend. I was happy that my high schoolwork paid off. I smiled and told my parents and my brother. (Response of an American participant coded as positive emotions/events only)

I passed the entrance exam. When I found my ID number on the list of successful candidates, I became filled with disbelief. Because I didn't think that I would pass, I felt more surprised than happy. But, at bottom, I felt happy and hugged my brother beside me, saying "I did it!" But I had heard that my friend failed before learning about my success, so I felt mixed. (Response of a Japanese participant coded as both positive and negative emotions/events)

In self-failure situations, typical negative emotions/events involved disappointment and crying, whereas typical positive emotions/events involved motivation to work harder in the future and social support. Sample responses are provided below:

As of yesterday, I found out that I failed the only midterm in a class relating to anthropology. Although, this experience does not reflect my career here as a student, it was mildly upsetting. I am aware of the necessary means to move on and do better. [...] Anyways, I've learned the lesson of working diligently despite poor instructing and to work in a different thorough manner. (Response of an American participant coded as both positive and negative emotions/events)

I failed in the performance for which my club members and I had been practicing. I thought of all the practice I had done and of others who had practiced together. I felt regret for not displaying my ability to the full extent and felt desire to improve myself for the next chance. (Response of a Japanese participant coded as both positive and negative emotions/events)

In transition situations, typical positive emotions/events involved excitement and motivation, whereas typical negative emotions/events involved anxiety and loneliness. Sample responses are provided below:

I was excited but also slightly nervous. I had felt that I was ready to take the next step in my education. I felt well prepared, like I belong

⁶ Participants at Kyoto University were all Japanese except for one international student from China. We will refer to the participants at Kyoto University as Japanese, since the majority of them were Japanese.

here. I was somewhat apprehensive about taking challenging classes and competing against so many other bright students. I remember trying to be friendly and joke around a little to break the ice in several of my classes. (Response of an American participant coded as both positive and negative emotions/events)

I was nervous because it was the first class after the entrance ceremony. I wondered whether I could keep up with the classes at the university. The first class was in the large lecture hall, and I felt overwhelmed by the number of people. Also, people around me were all Kyoto University students and I felt lost that I was one of them. I was chatting with my friends in an uplifting way, saying something like "I am not sure if I can keep up with the classes." I felt anxiety and excitement. (Response of a Japanese participant coded as both positive and negative emotions/events)

The same coders also coded the nature of the tasks for self-success and self-failure situations: self-achievement task (e.g., an entrance exam or individual sports), group-achievement task (e.g., a team sports or a group performance), or interpersonal task (e.g., hurting or pleasing others). The percentage of agreement between the two coders across situations and items was high (94%). Also, the average Cohen's kappa was .80, indicating substantial agreement. The two coders resolved any disagreements through discussion.

As presented in Figure 1, in the self-success situation, whereas only 14% of the American respondents stated both positive and negative emotions/events, 37% of the Japanese respondents mentioned both, $\chi^2(1, N = 55) = 3.75, p = .05$. On the other hand, in the self-failure situation, about half of both American and Japanese respondents (54% and 59%, respectively) referred to both positive and negative emotions/events, $\chi^2(1, N = 55) = 0.18, ns$. Consistent with Study 1, Japanese were more likely than Americans to feel mixed emotions in the self-success situation, whereas Americans and Japanese were equally likely to feel mixed emotions in the self-failure situation. In the transition situation, 86% of the American respondents and 74% of the Japanese respondents reported both positive and negative emotions/events, $\chi^2(1, N = 55) = 1.16, p > .2$. Both Americans and Japanese were likely to feel mixed emotions in situations typically known to induce mixed emotions.

We also explored whether there were any cultural differences in the nature of success and failure. Despite the cultural differences in the extent of mixed emotions, there were no differences in the

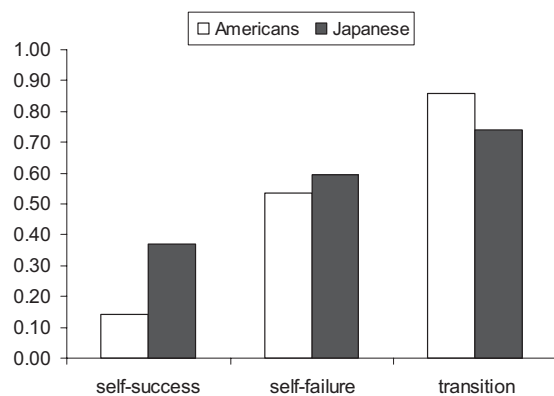


Figure 1. Proportions of respondents who mentioned both positive and negative emotions/events in their descriptions (Study 2).

nature of the success task, $\chi^2(2, N = 55) = 2.95, p > .3$. A majority of both American and Japanese success situations involved a self-achievement task (71% and 89%, respectively), such as passing the college entrance exam. On the other hand, there was a cultural difference in the nature of failure task, $\chi^2(2, N = 55) = 11.59, p < .01$. Whereas 89% of the American failure situations were about self-achievement tasks, only 52% of the Japanese situations were. In contrast, 30% of the Japanese failure situations involved interpersonal tasks, such as hurting others, whereas none of the American failure situations involved such tasks. In addition, 11% of the American situations and 19% of the Japanese situations involved a group-achievement task. It is noteworthy that, despite such differences in the nature of the failure, Americans and Japanese were equally likely to mention mixed emotions in self-failure situations.⁷

Co-Occurrence of Positive and Negative Emotions in the Rating Scales

To replicate the findings of Study 1, we first analyzed the ratings of positive and negative emotions and counted the number of participants who rated both positive and negative emotions greater than 0 (*not at all*) in each type of situation. The results are shown in Figure 2. In the self-success situation, whereas only 21% of the American respondents rated feeling both positive and negative emotions, 48% of the Japanese respondents did so, $\chi^2(1, N = 55) = 4.34, p < .05$. On the other hand, in the self-failure situation, about half of both American and Japanese respondents (57% and 56%, respectively) rated feeling both positive and negative emotions, $\chi^2(1, N = 55) = 0.00, ns$. In the transition situation, 89% of the American respondents and 96% of the Japanese respondents reported feeling both positive and negative emotions, $\chi^2(1, N = 55) = 1.00, p > .3$. These findings suggest that the findings of Study 1 replicate even when specific emotions were not suggested to the participants and when they recalled their own experience.⁸

General Discussion

In the pilot study, we collected situations in which Japanese and Americans had experienced mixed emotions and found that most of the frequently mentioned situations were common to both cultures. Imagining themselves in situations from both cultures, Japanese reported mixed emotions more than Americans in the predominantly pleasant situations, whereas both Americans and Japanese reported mixed emotions in the predominantly unpleasant situations. In fact, if anything, Americans reported more mixed

⁷ The nature of the failure task did not influence the frequency of mixed emotions among Japanese, $\chi^2(1, N = 27) = 0.43, ns$. Across self-achievement task, group-achievement task, and interpersonal task, about half of Japanese respondents (64%, 60%, and 50%, respectively) referred to both positive and negative emotions.

⁸ We also used the MIN index to measure mixed emotions and found consistent results. The MIN index was marginally higher for Japanese than for Americans in the self-success situations ($M_s = 0.70$ and 0.32 , respectively), $F(1, 53) = 3.16, p = .08$. On the other hand, there were no cultural differences in the MIN index in the self-failure situations, $F(1, 52) < 1, M_s = 0.81$ and 0.71 for the Japanese and the Americans, respectively, and in the transition situations, $M_s = 1.52$ and 1.43 , respectively, $F(1, 53) < 1$.

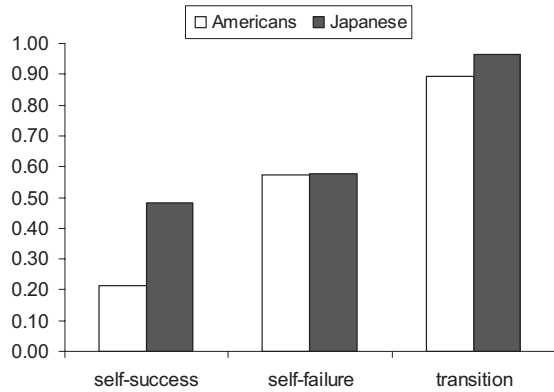


Figure 2. Proportions of respondents who reported feeling both positive and negative emotions on the rating scales (Study 2).

emotions than Japanese in the unpleasant situations. Furthermore, the same pattern was found even when participants remembered their actual past experience and freely described their emotions without being told to recall mixed emotions. These findings suggest that both Americans and Japanese feel mixed emotions but the kinds of situation in which they typically do so depend on culture. In line with Leu et al.'s (in press) findings, the present study suggests that cultural differences in mixed emotions occur predominantly in pleasant situations.

In addition, we found cultural differences in appraisals and an action tendency. In the predominantly pleasant situations, Japanese reported greater responsibility for others' feelings than Americans, which mediated cultural differences in the co-occurrence of specific positive and negative emotions. This mediation indicates that the cultural differences observed in the pleasant situations are partly due to Japanese concern for the interpersonal consequences of their actions. On the other hand, in the predominantly unpleasant situations, although both Americans and Japanese reported mixed emotions, Americans held other people more responsible for their feelings and wanted to change the situation more than Japanese. These findings suggest that previous claims that Americans are more "agentic" than Japanese are too simple. Japanese reported a higher level of agency and responsibility about causing unhappiness in others (Kitayama & Uchida, 2005), and Americans blamed others for their own unhappiness, suggesting that Americans may feel agentic about success but not failure, whereas Japanese blame themselves for failure and when they succeed they feel responsible for the disappointment of others.

It is interesting to note that whereas Japanese reported mixed emotions more than Americans in the predominantly pleasant situations, the cultural differences were absent (Study 2) or, if anything, reversed (Study 1) in the unpleasant situations. In addition, in the unpleasant situations, a positive emotion was ranked second for Americans but last for Japanese (see Table 1). In American culture, where maintaining and fostering positive self-regard is strongly encouraged (Heine & Hamamura, 2007; Heine et al., 1999), there is a cultural norm that values positive emotions and discourages negative emotions (Eid & Diener, 2001). Such a cultural norm may lead Americans to focus on positive emotions in the pleasant situations, which results in less frequent reports of mixed emotions compared to Japanese. At the same time, the

cultural norm of positivity may encourage Americans to seek positive emotions in unpleasant situations, leading to an absence of cultural differences or even reverse cultural differences in such situations.

In the highly mixed situations, both Americans and Japanese reported mixed emotions. In fact, even without being told to write about mixed emotions, 80% of the respondents spontaneously wrote about both positive and negative emotions experienced on the first day of college (in Study 2). Previous studies that found mixed emotions among American populations (Larsen et al., 2001; Larsen et al., 2004) used such typically mixed situations, and it is likely that such highly mixed situations evoke mixed emotions across cultures.

We also explored Japanese and American responses to a loss situation. Although no such situation was spontaneously suggested by any of our Japanese respondents in the pilot study, Japanese, like Americans, reported mixed emotions in response to the death of someone close. However, we found interesting cultural differences in sadness and anger. Americans reported feeling both sad and angry. Japanese sometimes mentioned being angry at themselves, but not at others. In addition, Americans held other people more responsible for their feelings and were more motivated to change the situation than Japanese. These results indicate that Americans want to change a hopeless situation, leading them to feel anger, which is more associated with feelings of control than sadness is (Ellsworth & Smith, 1988). Japanese seem to feel less need to change the sad situation.

In the present study, we focused on success and failure situations, since the pilot respondents in both cultures generated them frequently. Although it is not clear whether Japanese feel more mixed emotions than Americans in other kinds of pleasant situations, Leu et al.'s (in press) findings suggest that they may. Using various kinds of pleasant situations (e.g., personal achievement and upcoming holiday), Leu et al. showed that Asians report more dialectical emotions than Americans. At the same time, future research may examine whether there are any specific types of pleasant situations where Japanese may not feel mixed emotions. It is possible that the relational context influences cultural differences in pleasant situations. Positive events, such as winning a prize, that may cause unhappiness to others, may elicit mixed emotions in Asians; whereas positive events with no interpersonal implications (such as a sunny day) or events where close others also feel positive emotions (such as when one's team wins a prize) may not.

By examining responses to hypothetical scenarios (Study 1) and memory of one's actual past experience (Study 2), the present research consistently showed that whereas Japanese report mixed emotions more than Americans in the predominantly pleasant situations, both Americans and Japanese report mixed emotions in the predominantly unpleasant situations or the mixed situations. However, even recall of one's actual emotional experience sometimes diverges from the online report of one's immediate emotional experience because memory of specific episodic details declines over time (Robinson & Clore, 2002). Future research should reproduce the predominantly pleasant and unpleasant situations in a laboratory setting and see whether Japanese and Americans actually report feeling mixed emotions while they are experiencing the situations.

In America, there are dialectical proverbs such as “every cloud has a silver lining” that encourage positive interpretations of negative situations. In East Asia, there are also dialectical sayings such as “too much happiness invites misfortune” that foresee negative consequences of positive situations, and “fortune and misfortune are like the twisted strands of a rope” that talk about the inseparability of positive and negative. Our results, like those of others, suggest that Americans are far less likely than Japanese to see that even happy events can have negative implications.

References

- Bagozzi, R. P., Wong, N., & Yi, Y. (1999). The role of culture and gender in the relationship between positive and negative affect. *Cognition and Emotion, 13*, 641–672.
- Beach, S., Tesser, A., Fincham, F., Jones, D., Johnson, D., & Whitaker, D. (1998). Pleasure and pain in doing well, together: An investigation of performance-related affect in close relationships. *Journal of Personality and Social Psychology, 74*, 923–938.
- Cacioppo, J. T., & Berntson, G. G. (1994). Relationship between attitudes and evaluative space: A critical review, with emphasis on separability of positive and negative substrates. *Psychological Bulletin, 115*, 401–423.
- Carrera, P., & Oceja, L. (2007). Drawing mixed emotions: Sequential or simultaneous experiences? *Cognition & Emotion, 21*, 422–441.
- Davis, P. J. (1999). Gender differences in autobiographical memory for childhood emotional experiences. *Journal of Personality and Social Psychology, 76*, 498–510.
- Diener, E., & Iran-Nejad, A. (1986). The relationship in experience between various types of affect. *Journal of Personality and Social Psychology, 50*, 1031–1038.
- Eid, M., & Diener, E. (2001). Norms for experiencing emotions in different cultures: Inter- and intranational differences. *Journal of Personality and Social Psychology, 81*, 869–885.
- Ellsworth, P. C., & Smith, C. A. (1988). From appraisal to emotion: Differences among unpleasant feelings. *Motivation and Emotion, 12*, 271–302.
- Erner-Hersfield, H., Mikels, J. A., Sullivan, S. J., & Carstensen, L. L. (2008). Poignancy: Mixed emotional experience in the face of meaningful endings. *Journal of Personality and Social Psychology, 94*, 158–167.
- Feldman Barrett, L., & Russell, J. (1998). Independence and bipolarity in the structure of current affect. *Journal of Personality and Social Psychology, 74*, 967–984.
- Folkman, S. (1997). Positive psychological states and coping with severe stress. *Social Science & Medicine, 45*, 1207–1221.
- Frijda, N. H. (1986). *The emotions*. Cambridge: Cambridge University Press.
- Green, D., Goldman, S., & Salovey, P. (1993). Measurement error masks bipolarity in affect ratings. *Journal of Personality and Social Psychology, 64*, 1029–1041.
- Heine, S., & Lehman, D. (1997). Culture, dissonance, and self-affirmation. *Personality and Social Psychology Bulletin, 23*, 389–400.
- Heine, S., Lehman, D., Markus, H., & Kitayama, S. (1999). Is there a universal need for positive self-regard?. *Psychological Review, 106*, 766–794.
- Heine, S. J., & Hamamura, T. (2007). In Search of East Asian Self-Enhancement. *Personality and Social Psychology Review, 11*, 1–24.
- Hoshino-Browne, E., Zanna, A. S., & Spencer, S. J. (2005). On the cultural guises of cognitive dissonance: The case of Easterners and Westerners. *Journal of Personality and Social Psychology, 89*, 294–310.
- Ji, L. J., Nisbett, R. E., & Su, Y. (2001). Culture, change, and prediction. *Psychological Science, 12*, 450–456.
- Kitayama, S., & Markus, H. R. (1999). Yin and yang of the Japanese self: The cultural psychology of personality coherence. In D. Cervone & Y. Shoda (Eds.), *The coherence of personality: Social cognitive bases of personality consistency, variability, and organization* (pp. 242–302). NY: Guilford Press.
- Kitayama, S., Markus, H. R., & Kurokawa, M. (2000). Culture, emotion, and well-being: Good feelings in Japan and the United States. *Cognition and Emotion, 14*, 93–124.
- Kitayama, S., Snibbe, A. C., Markus, H. R., & Suzuki, T. (2004). Is there any “free” choice?: Self. *Psychological Science, 15*, 527–533.
- Kitayama, S., & Uchida, Y. (2005). Interdependent agency: An alternative system for action. In R. M. Sorrentino, D. Cohen, J. M. Olson, & M. P. Zanna (Eds.), *Cultural and social behavior: The Ontario Symposium* (Vol. 10, pp. 137–164). Mahwah, NJ: Erlbaum.
- Larsen, J. T., McGraw, A. P., & Cacioppo, J. T. (2001). Can people feel happy and sad at the same time? *Journal of Personality and Social Psychology, 81*, 684–696.
- Larsen, J. T., McGraw, A. P., Mellers, B. A., & Cacioppo, J. T. (2004). The agony of victory and thrill of defeat: Mixed emotional reactions to disappointing wins and relieving losses. *Psychological Science, 15*, 325–330.
- Leu, J., Mesquita, B., Ellsworth, P. C., ZhiYong, Z., Huijian, Y., Buchtel, E., Karasawa, M., et al. (in press). Situational differences in dialectical emotions: Boundary conditions in a cultural comparison of North Americans and East Asians. *Cognition & Emotion*.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253.
- Mauro, R., Sato, K., & Tucker, J. (1992). The role of appraisal in human emotions: A cross-cultural study. *Journal of Personality and Social Psychology, 62*, 301–317.
- Mesquita, B., & Markus, H. R. (2004). Culture and Emotion: Models of Agency as Sources of Cultural Variation in Emotion. In A. S. R. Manstead, N. Frijda, & A. Fischer (Eds.), *Feelings and emotions: The Amsterdam symposium* (pp. 341–358). New York: Cambridge University Press.
- Morling, B., Kitayama, S., & Miyamoto, Y. (2002). Cultural practices emphasize influence in the U.S. and adjustment in Japan. *Personality and Social Psychology Bulletin, 28*, 311–323.
- Norenzayan, A., Choi, I., & Peng, K. (2007). Cognition and perception. In S. Kitayama & D. Cohen (Eds.), *Handbook of Cultural Psychology* (pp. 569–594). New York: Guilford Press Publications.
- Peng, K., & Nisbett, R. E. (1999). Culture, dialectics, and reasoning about contradiction. *American Psychologist, 54*, 741–754.
- Priester, J. R., & Petty, R. E. (1996). The gradual threshold model of ambivalence: Relating the positive and negative bases of attitudes to subjective ambivalence. *Journal of Personality and Social Psychology, 71*, 431–449.
- Robinson, M. D., & Clore, G. L. (2002). Belief and feeling: Evidence for an accessibility model of emotional self-report. *Psychological Bulletin, 128*, 934–960.
- Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology, 39*, 1161–1178.
- Russell, J. A., & Carroll, J. M. (1999). On the bipolarity of positive and negative affect. *Psychological Bulletin, 125*, 3–30.
- Schimmack, U. (2001). Pleasure, displeasure, and mixed feelings: Are semantic opposites mutually exclusive? *Cognition & Emotion, 15*, 81–97.
- Schimmack, U., Oishi, S., & Diener, E. (2002). Cultural influences on the relation between pleasant emotions and unpleasant emotions: Asian dialectic philosophies or individualism-collectivism? *Cognition & Emotion, 16*, 705–719.
- Scollon, C. N., Diener, E., Oishi, S., & Biswas-Diener, R. (2005). An experience sampling and cross-cultural investigation of the relation between pleasant and unpleasant affect. *Cognition & Emotion, 19*, 27–52.
- Shaver, P., Schwartz, J., Kirson, D., & O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology, 52*, 1061–1086.

- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, *48*, 813–838.
- Uchida, Y., & Kitayama, S. (in press). Happiness and unhappiness in East and West: Themes and variations. *Emotion*.
- Weisz, J., Rothbaum, F., & Blackburn, T. C. (1984). Standing out and standing in: The psychology of control in America and Japan. *American Psychologist*, *39*, 955–969.
- Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: Content, triggers, functions. *Journal of Personality and Social Psychology*, *91*, 975–993.
- Williams, P., & Aaker, J. L. (2002). Can mixed emotions peacefully coexist? *Journal of Consumer Research*, *28*, 636–649.
- Yik, M. (2007). Culture, gender, and the bipolarity of momentary affect. *Cognition & Emotion*, *21*, 664–680.

Appendix

Examples of Situations Used in the Study

Location	Self-success situations
United States	When I got my first college paper back I received a 98%, which made me happy but my friend got a 65% so I had mixed emotions.
Japan	When I was studying for the entrance exam, I felt glad when I scored higher than my friends in the school exams or prep-tests. At the same time, I felt sorry for my friend because he scored lower than me despite the fact that he worked harder than I did and I hated myself for feeling superior.
Self-failure situations	
United States	Getting worse grades than my sister. I was proud she did so well, but was disappointed when I compared my own grades to hers.
Japan	When my brother succeeds in something or accomplishes something, I feel proud of it, but feel jealous of the brother who is praised and congratulated by my parents and people around.
Transition situations	
United States	When I was getting ready to leave and come to Michigan (Kyoto in the Japanese version) for college I was excited to meet new people, be on my own, and start classes. But I was sad to leave all of my family and friends.
Japan	When I started to live alone, I was anxious and concerned about the new life, but I was also enjoying and hopeful that the life with freedom is waiting for me.
Loss situation	
United States	When my grandpa passed away after several strokes and time spent in the hospital. I was glad because he was no longer suffering and in pain, but I was mad because I didn't have him in my life anymore.

Received March 20, 2009

Revision received September 14, 2009

Accepted October 9, 2009 ■