Sharing and Non-sharing Happiness: Evidence from Cross-cultural Studies in the United States and Japan

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Abstract

Two studies were conducted to analyse how individuals feel and express their happiness in shared versus non-shared events. We hypothesized that Japanese (interdependence fostering culture), unlike Americans (independence fostering culture), would show higher levels of happiness in shared situations than in non-shared situations. Study 1: participants were asked to describe two types of happy events (shared and non-shared) they had experienced, and then indicate how strongly they had felt and expressed happiness. Results suggest that Japanese felt and expressed higher degrees of happiness in shared situations than non-shared situations, while Americans did not report this difference. Study 2: participants read the descriptions generated in Study 1 and answered how they would feel and express happiness. Japanese scored higher in feeling and expressing happiness in shared situations than in non-shared situations. Americans showed the same pattern, but with a smaller difference. While Japanese tend to experience more happiness in shared situations than in non-shared situations, Americans experience happiness similarly in both situations. These results may be related to the function of emotions in each culture.

Keywords: happiness, shared emotion, culture.

Imagine that you are alone watching a funny comedy show. You might think about someone, such as your romantic partner or a roommate, and wish he or she was there with you. Would thinking about this person make you feel less happy? Some people experience difficulty in enjoying this kind of situation when they are not with other people, while other people may enjoy and laugh at the comedy show regardless of the presence of others.

In the present research, we examine cultural differences between participants from Japan and the United States in the effects of sharing a happy situation. Here we define a shared situation as when individuals experience events with other people, usually individuals with whom they share some kind of relationship, such as friends or relatives. The interaction usually happens in person, but it can happen through a call or online communication as well. In these situations, people may share their emotions with others directly and simultaneously when the event happens (shared emotions). By contrast, a non-shared situation would be defined as one when individuals experience events by themselves, without the presence of or interaction with other people.

Culture and Positive Emotion in Shared Situations

It has been shown that what people feel and how they express what they feel can be different across cultures. Markus and Kitayama (1991) argued that whether self-construal is more independent or interdependent has an influence on how people feel and express emotions. For instance, people in cultures where an independent self-construal is fostered (e.g., Euro-Americans) might express emotions for the sole purpose of externalizing inner feelings and communicating their own desires; conversely, people in cultures where an interdependent self-construal is fostered (e.g., Japanese) might express emotions as a means of maintaining and promoting social harmony, and even suppress emotions that are not shared (Murata et al., 2013).

Some cultures are oriented towards the collective and interdependence with others while other cultures are oriented towards the individual and autonomy; this affects how people interact within the culture as well as their own thoughts, behaviours, and emotions (Markus & Kitayama, 1991; Uchida et al., 2009). In interdependent cultural contexts, whether or not an emotion is shared matters more than in independent cultural contexts. In the case of happiness, since Japanese culture is oriented towards interdependence, it is expected that shared positive situations are more likely to be related to happiness than non-shared situations; on the other hand, in the North American culture, the magnitude of the influence of shared and non-shared situations on happiness is likely to be similar.

Similar to the importance of shared versus non-shared situations for emotional experience, Kitayama, Markus, and Kurokawa (2000) proposed a disengaging-engaging dimension of emotions. Engaging emotions such as friendly feelings and respect are defined as emotions focused on connectedness with others in social relationships, whereas disengaging emotions such as pride relate to emotions focused on individual agency and separation from others. They found that Japanese participants were more likely to associate good feelings with engagement and social relationships, placing a higher value on these emotions and situations than American participants (Kitayama et al., 2006).

In another study, Uchida and colleagues (2009) found that emotion is experienced and understood as an interpersonal or "between people" concept in the Japanese cultural context, while in North American cultural contexts, emotion is understood as a primarily individualized or "within people" concept. In a cross-cultural comparison of television interviews of Olympic athletes, Markus et al. (2006) found that Japanese athletes used significantly more emotion-related words than American athletes when replying to questions about their relationships. Also, after reading an athlete's self-description, Japanese participants inferred more emotions when the athlete mentioned relationships,

whereas American participants inferred more emotions when the athletes focused only on themselves.

Lastly, it has been shown that Asian American participants were more likely to experience and express emotion after thinking about a close other than European American participants (Chentsova-Dutton & Tsai, 2010). In Chentsova-Dutton and Tsai's (2010) study, participants were shown emotion-evoking video clips (e.g., amusing films). Before seeing the films, half of the participants were induced to be self-focused, by being asked to think about themselves and write a few sentences describing their personality and recent events in their lives. The other participants were induced to be family-focused, by being asked to think of their family members and to describe their family as well as recent family events. The results suggested that European Americans experienced and expressed more positive emotion in response to the film than Asian Americans after they were self-focused, but Asian Americans experienced and expressed more positive emotions than European Americans after they were family-focused. Related to this finding, in a study with Japanese participants, Matsunaga et al. (2017) showed that the presence of a friend experiencing positive or negative feelings influenced participants' ratings of their own positive or negative feelings. The same study also suggested that this experience had some influence on their salivary serotonin levels.

The meaning and predictors of positive emotions such as happiness also differ across cultures. The Japanese tend to feel happy when they are in harmonious relationships with others, and the meaning of happiness is more related to relationships in this culture, thus expressing personal emotions may hinder relationships, jeopardizing happiness as well. Conversely, North Americans may not necessarily associate happiness with relationships, thus personal achievement, free choice and emotional expression are common themes in happy events in this culture (e.g., Hitokoto & Uchida, 2015; Uchida et al., 2004). A study

conducted by Oishi and colleagues (2004) showed that Japanese tend to feel more positive emotions, including happiness, when with friends or a romantic partner than when alone, while Americans did not show such a difference.

This effect can probably be explained by the fact that in Japan, individuals are encouraged to adjust their own needs and behaviour to fit into their environment; to accomplish this they subdue and regulate their emotions, so as not to disturb or harm the harmony in the group. On the other hand, individuals in North American contexts are encouraged to influence, change, and have an impact on their environment to achieve their needs and desires, and consequently, they tend to be assertive and expressive (Morling et al., 2002). This tendency also reflects the emotions that are idealized in each culture. In East Asian cultures affective states such as being calm and serene (e.g., low-arousal positive states) are valued since these emotions facilitate paying attention to others and do not interfere with harmony in the group. On the other hand, in North American cultures affective states such as being elated and excited (e.g., high-arousal positive states) are valued because these states facilitate standing out and influencing others (Tsai, 2007).

Matsumoto and colleagues (2008) showed that culture influences emotion regulation in terms of expression, not feeling itself, implying that cultural differences in emotion merely follows emotion expression norms and that internal emotional experiences do not vary across cultures. However, some evidence has suggested that internal emotional experience itself also varies across cultures beyond culturally reinforced expressive norms (e.g., Murata et al., 2013). In this paper, we would like to examine cultural differences both in feeling and expression to test this prediction.

Current Research

So far, there are no direct cross-cultural comparisons regarding shared versus non-

shared emotions' effects on happiness. Therefore, we conducted two studies comparing an East Asian culture (Japan) and a Western culture (the United States).

Based on the previous studies presented above, we predicted that Japanese people will feel and express higher degrees of happiness in shared situations than in non-shared situations, since interdependence is prevalent in their society. Americans in contrast will have high degrees of happiness in non-shared situations, because their society fosters independence, as well as in shared situations, as previous research shows.

We expect this hypothesis to hold true for both feeling and expressing emotions. In the studies presented here, we analyse the differences between feeling and expression of happiness in shared versus non-shared situations in Japanese and American cultures ¹.

Study 1

In Study 1, we asked participants in the United States and Japan to describe shared and non-shared happy situations and then investigated the intensity with which they felt and expressed emotions in each situation.

Method

Participants were 29 European-Americans in the United States (12 females and 17 males, M age = 19.1 and SD = 0.9), and 31 Japanese in mainland Japan (10 females and 21 males, M age = 18.6 and SD = 0.8) 2 .

They were recruited from the available subject pool of a university psychology class and reimbursed with course credit. Data was collected individually in the lab. Participants were asked to describe two happy events, one in a shared and one in a non-shared situation, they had experienced in the past. The *shared situation* was a situation in

which they felt happy when they were with other(s). The *non-shared situation* was a situation in which they felt happy when they were alone. Afterward, participants were requested to indicate how strongly they had felt and expressed happiness in each situation on a 7-point scale (1 = Just a little, 7 = Very strongly).

Two participants from the Japanese sample were excluded from the analysis because they did not follow the instructions regarding the types of situations to be described. Japanese (American) situations were translated into English (Japanese) and back translated in order to check the consistency of the translation. Two US coders and two Japanese coders coded the same 10 situations (5 US situations and 5 Japanese situations). The reliability between all coders was checked and established based on these 10 situations. Then the two US coders coded the rest of the US situations, and the Japanese coders coded the rest of the Japanese situations. Descriptions of events were classified into situation type (i.e., shared or non-shared), type of event (i.e., "achievement", "interaction with other people", "unexpected event", and "ordinary things"), and company (i.e., "friend", "group member", "romantic partner", "senior", and "other"). We obtained over 85% consistency between all coders. Inconsistent cases were discussed until both coders reach an agreement.

Table 1 about here

Results

There was no cultural difference in the type of events in the shared situation $\chi^2(3, N = 58) = 2.18$, p = .535, Cramer's V = .18, the most common situations being "interaction with other people" (Japanese sample = 62.1%, US sample = 86.2%) and "achievement" (Japanese sample = 20.7%, US sample = 20.7%). There was also no significant difference in type of events in the non-shared situation $\chi^2(6, N = 58) = 3.29$, p = .771, Cramer's V = .23, the most common situations being "achievement" (Japanese sample = 41.4%, US

sample = 48.3%) and "ordinary things (weather, food, etc.)" (Japanese sample = 27.6%, US sample = 20.7%).

The samples did not differ regarding who shared the situations with the participants in shared situations χ^2 (4, N=58) = 5.76, p=.218, Cramer's V = .03, friends (Japan = 72.4%, US = 75.9%) being the most mentioned, followed by "group member" (Japanese sample = 37.9%, US sample = 34.5%).

Shared feeling and shared expression were significantly correlated (r(56) = .56, p < .001) and of different magnitudes (feeling M = 5.1, SD = 1.0; expression M = 4.4, SD = 1.5, t(57) = 4.5, p < .001). Non-shared feeling and non-shared expression were also correlated (r(56) = .75, p < .001) and of different magnitudes (feeling M = 4.9, SD = 1.5; expression M = 3.5, SD = 2.2, t(57) = 6.96, p < .001).

In order to analyze each culture's influence on how individuals feel and how they express emotions, we conducted a mixed model 2 (culture: European American and Japanese) x 2 (situation: shared and non-shared) ANOVA for each dependent variable (intensity of feeling of happiness and intensity of expression of happiness). For intensity of feeling, the interaction term was significant (F (1,56) = 4.19, p = .045, η_p^2 = .07). Bonferroni p-value adjusted post-hoc tests showed that Americans felt the same intensity of happiness in both shared (M = 5.3, SD = 1.1) and non-shared situations (M = 5.4, SD = 1.3), a non-significant difference (p = .639). On the other hand, Japanese participants reported stronger intensity of happiness in the shared situation (M = 4.9, SD = 1.0) than in the non-shared situation (M = 4.3, SD = 1.5, p = .034) (see Figure 1).

Additionally, we identified a main effect of culture $(F(1,56) = 7.82, p = .007, \eta_p^2 = .12)$, showing that, in general, American participants (M = 5.4, SD = 1.2) reported feeling higher degrees of happiness than Japanese participants (M = 4.6, SD = 1.3). The main effect of situation was not significant $(F(1,56) = 2.14, p = .149, \eta_p^2 = .04)$.

Figure 1 about here

For the intensity of expression of happiness, we found a slightly different pattern. The interaction term was not significant $(F(1,56) = 1.54, p = .219, \eta_p^2 = .03)$. However, there was a main effect of culture $(F(1,56) = 8.77, p = .004, \eta_p^2 = .14)$, as American participants (M = 4.5, SD = 1.8) reported expressing higher degrees of happiness than Japanese participants (M = 3.4, SD = 2.0); and situation $(F(1,56) = 7.37, p = .009, \eta_p^2 = .12)$, as participants reported expressing higher degrees of happiness in shared (M = 4.4, SD = 1.6) than non-shared situations (M = 3.5, SD = 2.2).

Figure 2 about here

Study 2

Study 2 was a follow up study to examine whether the findings of Study 1 derived from the differences in types of situations that commonly occur or are socially desirable in each culture, or from the differences in cognition of people from each culture. It was possible to confirm the results of Study 1 utilizing the situation sampling method (see Kitayama et al., 1997; Morling et al., 2002), in which the generated situations obtained in Study 1 were showed to a new group of participants. For example, when asked to produce happy shared and non-shared situations, Japanese individuals might be biased towards producing shared situations that elicit higher degrees of happiness than non-shared situations, while Americans might be biased to produce shared and non-shared situations that elicit similar degrees of happiness. This method is used to examine whether cultural differences are inherently present in individuals' psychological tendencies or found also in situations reproduced within certain cultural contexts.

Method

Participants were 62 European-Americans (undergraduate students in the US, 15 males and 47 females, M age = 22.3 and SD = 2.8) and 60 Japanese (undergraduate students in Japan, originally from Japan, 34 males and 26 females, M age = 19.2 and SD = 1.1). They were recruited from the available subject pool of psychology classes and reimbursed with \$5 for Americans and 500 yen for Japanese. Because of missing data, only 59 Americans were included in the data analysis.

We presented situations obtained from Study 1 and asked participants to judge how strongly they would feel and express happiness if they were in each of the described situations. Data was collected individually in the lab, and the presentation order of each type of situation was counterbalanced and randomly ordered.

In order to maximize the number of situations presented to each participant, without overloading them, 16 situations collected in Study 1 (see Table 1 for examples) were randomly selected for this study. They consisted of four shared situations generated by Japanese, four non-shared situations generated by Japanese, four shared situations generated by Americans, and four non-shared situations generated by Americans. The shared/non-shared situations were confirmed to be matched to the categories by the coding we did in Study 1. During the selection, if two or more situations were too similar to each other (e.g., all involving parties), then another situation was selected to avoid having similar kinds of situations in each category.

The following instructions were given to the participants: "Below are situations that undergraduate students like you have experienced and described. There are various kinds of situations, and all the descriptions were written by undergraduates about their actual experiences. We would like you to tell us how *you* would feel if you were to experience each situation. Please read each situation carefully and imagine that you are in the situation.

Some of the situations are easy to imagine, whereas some others are difficult to imagine. In either case, try to imagine as clearly as possible how *you* would feel if you were in each situation." After this, the situations and instructions for the items were presented. For each situation the following instruction was presented "Please indicate how much you agree or disagree with the statement by circling a number below." Feeling and expressing happiness were each measured with a 7-point scale (1 = not at all, 7 = strongly).

Participants read each situation and answered according to their feelings. For each participant, this procedure was repeated for 16 situations in total.

Results

For situations generated by Japanese participants, shared feeling and shared expression were significantly correlated (r(117) = .65, p < .001) and of different magnitudes (feeling M = 5.8, SD = 0.8, expression M = 5.0, SD = 0.9, t(118) = 12.44, p < .001), and so were non-shared feeling and non-shared expression (r(117) = .59, p < .001; feeling M = 5.7, SD = 0.9, expression M = 4.5, SD = 1.2, t(118) = 12.99, p < .001). The same pattern was found for situations generated by Americans, shared feeling and shared expression (r(117) = .71, p < .001; feeling M = 5.7, SD = 0.9, expression M = 5.1, SD = 0.9, t(118) = 9.19, p < .001), and non-shared feeling and non-shared expression (r(117) = .67, p < .001; feeling M = 5.2, SD = 1.0, expression M = 4.2, SD = 1.2, t(118) = 11.52, p < .001).

In order to investigate differences of culture, sharedness and origin of situations in their relationship to happiness, we performed a 2 (participants' culture: JP and US; between subjects) x 2 (situation's culture of origin: Japanese-made vs. American-made; within subjects) x 2 (situation sharedness: shared vs. non-shared; within subjects) mixed ANOVA for each of the dependent variables, feeling of happiness and expression of happiness (see Figures 3 and 4 for mean comparisons).

Feeling of Happiness

The main effect of culture of the participants was significant (F(1, 117) = 11.11, p = 11.11)001, $\eta_{\rm p}^2$ = .09), as American participants reported they would feel a higher degree of happiness (M = 5.8, SD = 0.7) than Japanese (M = 5.4, SD = 1.0), corroborating Study 1. The main effect of origin of the situation was also significant (F(1,117) = 33.14, p < .001, η_p^2 = .22), as participants reported feeling higher degrees of happiness in Japanese-made situations (M = 5.7, SD = 0.9) than in American-made situations (M = 5.5, SD = 1.0). The main effect of sharedness of the situation was also significant (F(1, 117) = 38.25, p < .001, $\eta_p^2 = .25$), as shared situations elicited greater feeling of happiness (M = 5.8, SD = 0.8) than non-shared situations (M = 5.4, SD = 1.0). In addition, the interaction between culture of the participants and origin of the situation was significant $(F(1,117) = 12.66, p < .001, \eta_p^2)$ =.10), as well as culture and sharedness (F(1,117) = 16.54, p < .001, $\eta_p^2 = .12$), and sharedness and origin (F(1,117) = 14.72, p < .001, $\eta_p^2 = 11$). The three-way interaction was significant (F(1,117) = 11.44, p < .001, $\eta_p^2 = .09$). Bonferroni p-value adjusted post-hoc tests showed that Japanese participants rated the Japanese-made shared situations the most happiness-inducing (M = 5.8, SD = 0.9), and the American-made non-shared situations the least (M = 4.9, SD = 1.1, p < .001), while American participants rated the American-made shared situations (M = 6.0, SD = 0.7) and the Japanese-made non-shared situations (M = 6.0, SD = 0.7) the highest, and the American-made non-shared situations the lowest (M = 5.5, SD = 0.7, p < .001 and p < .001 respectively).

Considering only sharedness and culture of participants, results from Study 1 were partially replicated. Bonferroni p-value adjusted post-hoc tests showed that Japanese rated shared situations as more happiness-inducing (M = 5.6, SD = 0.9) than non-shared situations (M = 5.1, SD = 1.0, p < .001) situations as expected, and Americans also showed

a significant difference between shared (M = 5.9, SD = 0.7) and non-shared (M = 5.8, SD = 0.8, p = .025) situations.

Considering only sharedness and cultural origin of the situations, Bonferroni p-value adjusted post-hoc tests showed that there was no significant difference between Japanese-made (M = 5.8, SD = 0.8) and American-made shared situations (M = 5.7, SD = 0.9), but Japanese-made (M = 5.7, SD = 0.9) non-shared situations were rated as more happiness-inducing than American-made non-shared situations (M = 5.2, SD = 1.0, p < .001).

Japanese participants reported feeling higher degrees of happiness in Japanese-made shared situations (M = 5.9, SD = 0.9) than in Japanese-made non-shared situations (M = 5.4, SD = 0.9, p < .001), and presented the same pattern in American-made shared situations (M = 5.4, SD = 0.9) compared to American-made non-shared situations (M = 4.9, SD = 1.1, p < .001). Conversely, American participants reported feeling higher degrees of happiness in American-made shared situations (M = 6.0, SD = 0.7) than in American-made non-shared situations (M = 5.5, SD = 0.7, p < .001), but did not differ significantly regarding Japanese-made shared situations (M = 5.7, SD = 0.7) and Japanese-made non-shared situations (M = 6.0, SD = 0.9, D =

Figure 3 about here

Expression of Happiness

The main effect of culture of the participants was significant (F(1, 117) = 4.93, p = .028, $\eta_p^2 = .04$), as American participants reported greater expression of happiness (M = 4.9, SD = 1.0) than Japanese (M = 4.5, SD = 1.2). The main effect of origin of the situation was not significant (F(1,117) = 0.97, p = .326, $\eta_p^2 = .01$). However, the main effect of sharedness was significant (F(1,117) = 99.45, p < .001, $\eta_p^2 = .46$), as participants reported

expressing higher degrees of happiness in shared (M = 5.0, SD = 0.9) than in non-shared situations (M = 4.4, SD = 1.2).

The interaction between culture of the participants and origin of the situation was significant (F(1,117) = 10.99, p = .001, $\eta_p^2 = .09$), as were those between culture and sharedness (F(1,117) = 21.00, p < .001, $\eta_p^2 = .15$), and sharedness and origin (F(1,117) = 16.09, p < .001, $\eta_p^2 = .12$). The three-way interaction was significant (F(1,117) = 9.09, p = .003, $\eta_p^2 = .07$). Regarding the origin of the situation, Bonferroni p-value adjusted posthoc tests showed that Japanese participants rated the Japanese-made shared situations the highest (M = 5.1, SD = 0.9,), and the American-made non-shared situations the lowest (M = 3.9, SD = 1.2, p < .001), while American participants rated the American-made shared situations (M = 5.3, SD = 0.9) the highest, and the American-made non-shared situations the lowest (M = 4.6, SD = 1.1, p < .001).

Similarly to the feeling of happiness, considering only sharedness and culture of participants, results from Study 1 were again partially replicated. Bonferroni p-value adjusted post-hoc tests showed that Japanese rated shared situations as more happiness-inducing (M = 5.0, SD = 0.9) than non-shared (M = 4.0, SD = 1.2, p < .001) situations, and Americans also showed a significant difference between shared (M = 5.1, SD = 0.9) and non-shared (M = 4.7, SD = 1.1, p < .001) situations.

Considering only sharedness and cultural origin of the situations, Bonferroni p-value adjusted post-hoc tests showed that there was no significant difference between Japanese-made (M = 5.0, SD = 0.9) and American-made shared situations (M = 5.1, SD = 0.9, p = .131), but Japanese-made (M = 4.5, SD = 1.2) non-shared situations were rated as more happiness-inducing than American-made non-shared situations (M = 4.2, SD = 1.2, p = .009).

Japanese participants reported expressing higher degrees of happiness in Japanese-

made shared situations (M = 5.1, SD = 0.9) than in Japanese-made non-shared situations (M = 4.2, SD = 1.2, p < .001), and presented the same pattern in American-made shared situations (M = 4.9, SD = 0.9) compared to American-made non-shared situations (M = 3.9, SD = 1.2, p < .001). While American participants reported expressing higher degrees of happiness in American-made shared situations (M = 5.3, SD = 0.9) than in American-made non-shared situations (M = 4.6, SD = 1.1, p < .001), but did not differ significantly regarding Japanese-made shared situations (M = 4.8, SD = 0.9) and Japanese-made non-shared situations (M = 4.8, SD = 1.1, D = 1).

Figure 4 about here

Discussion

Through the completion of two studies using a situation sampling method, we found that for Japanese participants whether the emotional situation was shared with others was highly important for feeling and expressing happiness. These findings are consistent with past studies on cultural differences in happiness, which suggest that in the Japanese culture, happiness is less individualized and more likely to be connected with other people's happiness (Hitokoto & Uchida, 2015; Uchida et al., 2004).

American participants, on the other hand, showed a complex pattern. In Study 1 they reported no significant difference in intensity between shared and non-shared situations in either feeling or expressing happiness, albeit scoring slightly higher in shared situations. In Study 2, they scored higher in shared than non-shared situations. These results show that Americans may experience a happiness boost in shared situations just as much as (Study 1), and sometimes more (Study 2) than in non-shared situations. On average Americans scored higher than Japanese on both expression and feeling of happiness in both

studies as suggested in the previous literature. One possible explanation for Americans rating both expressed and felt happiness higher than Japanese is that during the random selection of eight situations from each culture in Study 2, the more intense shared situations of Japanese might be selected by chance, and as a consequence, shared situations generated happiness even for the Americans. Other possibilities include cross-cultural differences in response styles (see Heine et al., 2002) and general attitudes to seeking positive emotions and happiness (Uchida et al., 2004; Uchida & Kitayama, 2009). Furthermore, in East Asian cultures even positive emotions can be suppressed when they are too intense and could negatively affect others. In this case moderation, leaning towards neutral emotions, is preferred. On the other hand, participants in the United States tend to prefer positive emotions even if they are highly intense and this does not seem to affect their social relationships (Miyamoto & Ma, 2011). Another related example is the case of "capitalization," which refers to when someone tells others about positive events they have experienced as a way to maximize their positive experience (see Gable et al., 2004; Langston, 1994). Koreans are less likely to capitalize than Americans because in East Asian cultures individuals might be concerned about potential negative consequences of talking about (sharing) a positive event one has experienced, while in Western cultures individuals tend to be rewarded for talking about such positive events (Choi et al., 2018). Future research could also explore the relationship between suppressing positive emotions and social consequences.

Feeling and expression of emotions were highly correlated in both studies, showing that there is a direct connection between feeling and expressing happiness. However, scores of feeling were significantly higher than scores of expression, showing that participants did not express emotions to the same extent that they felt them, which can indicate an emotional regulation mechanism operating (Matsumoto et al., 2008). Future studies can

further investigate the relationship between feeling and expression of emotions and how this relationship might be mediated by culture.

From the situation sampling method, we could confirm that there was a cultural difference regarding non-shared situations, as Japanese-made situations tended to elicit higher degrees of happiness than American-made situations. However, there was no significant difference regarding the origin of the situation for shared situations, thus the observed cultural difference between the samples was not merely the consequence of the cultural differences in the nature of the situations that participants described. Rather, it might be related to how emotions work in each of the studied cultures.

The results of Study 1 suggest that, in the two studied cultures, there is little difference between descriptions of happy situations, either shared or non-shared. However, there was a difference in how people feel and express happiness in these situations across cultures. In Study 2, from the situation sampling method, we could confirm the observed cultural difference between the samples was not merely the consequence of the cultural differences in the nature of the situations that participants described. Rather, it might be related to how emotions work in each of the studied cultures. In other words, this result suggests that the emotions that a description of a situation elicits in a participant is influenced by the participant's cultural background.

In Study 2, Japanese showed stronger emotional reactions to shared situations which were generated by both Japanese and American participants in Study 1 than they did to non-shared situations. However, Americans did not differentiate much between situations made by Japanese participants, but they scored higher in both experiencing and expressing happiness in American-made shared situations than in American-made non-shared situations. For the Japanese sample, these results correspond to the hypothesis and the theory discussed above: it is clear that shared situations elicit stronger emotions than

non-shared situations. In the second study there was possibly a culturally specific component of the Japanese-made situations since they elicited stronger emotions than the American-made situations. For the American sample, feeling of happiness in the experiments can be explained by the above-mentioned hypothesis, but when it comes to expression of happiness, these participants showed a higher score in response to American-made shared situations than to other situations, showing that here too there might be some cultural component to these social events. Finally, it is puzzling that on average participants from both cultures rated Japanese-made situations as more happiness-inducing, which was expected for Japanese participants, but not for American participants. Future research could study how situations created in one culture elicit higher levels of happiness in individuals from that culture than from another culture.

A future study could use the same paradigm with different emotional expressions, such as other positive emotions (e.g., calmness, awe), negative emotions (e.g., sadness, enviousness), or ambiguous emotions (e.g., pride).

A major limitation of the studies presented here is that the sample was composed of university students from both countries, which can limit the generalizability of the results (see Henrich et al., 2010). For instance, the situations generated by the participants may be considerably different to situations experienced by people in other age groups, or those who are not attending university. Also, compared to other studies in psychology, the samples studied here can be considered small. Future research can explore situations created by samples from other age groups and main occupations.

In the studies presented here, we assumed that independence/interdependence was the main factor that distinguished the cultures we compared. Although it is well known that the social orientation of a culture influences how emotions are developed, felt, and expressed in that context, there are other factors underlying this issue. For example, Latin Americans prefer high arousal positive emotions, while East Asians prefer low arousal positive emotions, despite both cultures being collectivist (Ruby et al., 2012). According to each culture's specific environment, some emotions will be fostered so individuals can fit in and function well while other emotions will not be accepted. Future research could address how other mechanisms influence people's emotional experience in shared and non-shared situations in cultures with similar social orientations. Also, we assumed the social orientation of each studied culture based on previous research; we did not measure independence or interdependence in the present studies.

In conclusion, the current research presented evidence suggesting that there are relevant differences between how participants from different cultural backgrounds experience and express happiness in shared and non-shared situations.

Conflict of Interests

The authors declare no conflicts of interest associated with this manuscript.

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- 2. Due to the Covid-19 pandemics, it was not possible to expand the sample of Study 1 and Study 2.

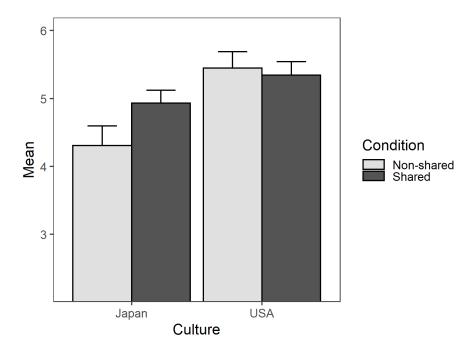


Figure 1. Intensity of Feeling of Happiness of Study 1. Error bars indicate standard error of the mean.

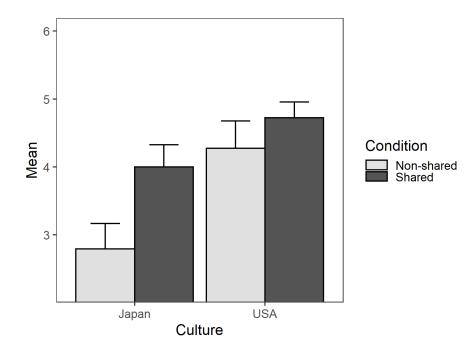


Figure 2. Intensity of Expression of Happiness of Study 1. Error bars indicate standard error of the mean.

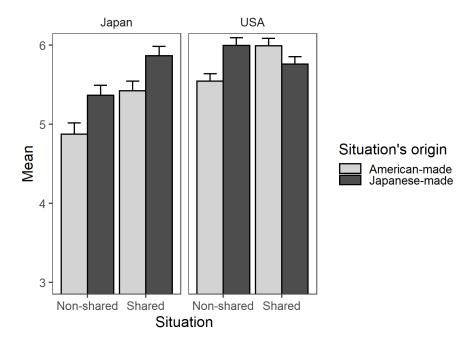


Figure 3. Intensity of Feeling of Happiness of Study 2. Error bars indicate standard error of the mean.

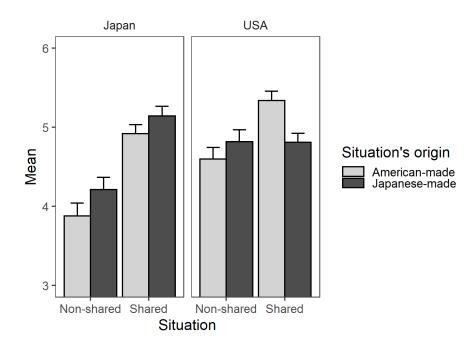


Figure 4. Intensity of Expression of Happiness of Study 2. Error bars indicate standard error of the mean.

Table 1

Examples of Situation Categories

	Japanese-made Situations	American-made Situations
Shared	e.g., I went out for a meal with other people. During the meal, a person behaved in a friendly way toward me.	e.g., I went shopping for a friend's birthday with my friend.
Non-shared	e.g., I received the result of the exam I had taken a week ago. The score was above that required to pass.	e.g., When I went for a walk, the weather was gorgeous and sunny.

Note. the complete list of situations can be obtained upon request