

Mutual Influence between Culture and Mind:  
The Examination of Dissonance, Emotion, and Cultural Values

by

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## **Chapter 1**

### **Introduction**

Imagine two people who went on a trip at the same time. They visited the same places, ate the same foods, and engaged in the same activities. If they were asked to tell us about the trip, their stories would not be the same. Our subjective experience varies because each of us attaches different meanings to objects and situations we encounter. Yet, the meanings we attach are not just randomly generated. On the contrary, they are shaped and reinforced by our traditions and culture (Bruner, 1990).

In this sense, culture can be understood as “variable systems of meanings,” which are “learned and largely shared by an identifiable segment of people” (Rohner, 1984, pp119-120). Because these systems of meanings are not universal but culturally bound, people in different cultures sometimes interpret situations in different ways and hold divergent views and concepts. For example, the concept of the self is considered to be contrastingly different across cultures. In North American cultural contexts, people tend to hold an independent view of the self. That is, the self is typically understood as a unique, distinct, and independent entity (Geertz, 1975; Markus & Kitayama, 1991b). For this reason, people with an independent view of the self mostly describe themselves in terms of their unique internal attributes such as personal traits, preferences, or attitudes. In East Asian cultural contexts, however, people tend to hold an interdependent view of

the self. That is, the self is typically understood through relationships with others (Markus & Kitayama, 1991b). People with this view of the self often describe themselves in terms of their social roles or group affiliations (Cousins, 1989; Trafimow, Triandis, & Goto, 1991; Rhee, Uchida, Park, & Kitayama, 2007; Uleman, Lee, & Roman, 1995).

Therefore, social others may be much more cognitively salient and an integrated part of their self-concept for East Asians than for Americans. Yet, Americans are not living in a social vacuum, and forming relationships with others is very important for Americans as well. However, how individuals relate to others is also culturally variable. While others are perceived as an integral part of the social contexts to which the self is connected and assimilated for East Asians, others serve as important sources that allow Americans to express, verify, or assert the unique internal attributes of the self (Markus & Kitayama, 1991b). Consistent with this view, Americans are more likely to remember situations in which they influenced others, but Japanese are more likely to remember situations in which they adjusted themselves to others (Morling, Kitayama, & Miyamoto, 2002). Also, cultural differences in the relational concepts between the self and others are evident in the sociogram task in which people draw a network of their friends by connecting circles for the self and their friends. Sociograms created by Americans almost always have a significantly larger circle for the self than those for others, with the self situated in the center of the network (very much like an airline hub). This is not the case for Japanese; their self circle is similar to their friends in size and more of an integrated part of the social network than that of Americans (Duffy, Uchida, & Kitayama, 2004).

Also, social others are often used as resources to affirm one's positive internal attributes for Americans. For example, Americans experience a sense of efficacy when

they influence others (Morling et al., 2002). Also, they evaluate themselves as being better and more uniquely talented than others (e.g., Campbell, 1986; Marks, 1984) and attribute their failure to external factors (e.g., Miller & Ross, 1975; Zackerman, 1977). Considering the fact that those who demonstrate a more realistic evaluations of the self tend to be depressed, such self-serving biases are considered to be conducive to Americans' mental health (Taylor & Brown, 1988). However, such self-serving biases are virtually absent among East Asians, who sometimes even show self-criticizing tendencies (Heine & Lehman, 1997; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Markus & Kitayama, 1991a). For example, East Asians are more likely to make upward social comparisons, especially in a failure context (White & Lehman, 2005) and attribute success to external factors (Kitayama, Takagi, & Matsumoto, 1995). Thus, for East Asians social others seem to provide the standards or expectations that people aim for, and they strive to meet the standards to become a better member of the group (Heine, Lehman, Markus, & Kitayama, 1999). Consistent with this view, Japanese were found to experience a sense of relatedness when they adjust themselves to others (Morling et al., 2002).

It is, therefore, apparent that the concepts of the self, others, and the relationship between the two carry culturally divergent meanings (Markus & Kitayama, 1991b). In all cultures, social others may function to actualize the concept of the self although this concept differs significantly across cultures. That is, while Americans strive to enhance and affirm their positive, unique, internal attributes, which are core components of their independent view of the self, Asians strive to become a part of harmonious relationships, which construct their interdependent view of the self.

Based on these analyses, my dissertation addresses the cognitive, behavioral, and affective consequences of the culturally divergent concepts of the self, others, and the relation between the two in various situations. Moreover, it investigates the presence of such cultural meanings not only in people's minds but also in their cultural environment.

Chapter 2 presents a research project that specifically focuses on how the presence of others influences the perception of a choice in culturally divergent ways. It is well known that people justify their choice especially when the choice is perceived as a threat to their self-images (e.g., Steele, 1988). However, because the nature of the self-concept varies across-cultures, the conditions in which the choice becomes self-threatening may also vary. Thus, the research hypothesizes that in American cultural contexts, a choice becomes self-threatening when it is made in private and thus perceived as self-expressive. In contrast, in Asian cultural contexts, a choice becomes self-threatening when it is publicly exposed and, thus, perceived as socially consequential. Chapter 2 present three experiments that tested this hypothesis by using the free-choice cognitive dissonance paradigm (Brehm, 1956). In these experiments, American and East Asian (i.e., Japanese and Asian American) participants made a choice in either the presence or absence of "eyes of others," and the extent to which they justified their choice (i.e., by increasing preference for the chosen item and decreasing preference for the rejected item) was compared between the two cultures.

Chapter 3 focuses on the function of others as an attribution target and examines the emotional consequences of causal attribution in two cultural contexts. Appraisal theories of emotion propose that the emotions people experience correspond to their appraisal of the situation (e.g., Ellsworth, 1994; Frijda, 1986; Lazarus, 1995, Scherer,

1988). Past research suggests that appraisals, particularly in the dimension of agency, significantly differ across cultures. That is, Americans tend to attribute success to themselves but failure to external factors whereas East Asians tend to attribute success to external factors but failure to themselves (Miller & Ross, 1975; Zackerman, 1977; Kitayama et al., 1995). Combining appraisal theories of emotion with the evidence of cultural differences in attributions of success and failure, I hypothesize that in similar situations, people in different cultures experience different emotions as a result of culturally divergent causal attributions of successes and failures. Chapter 3 presents two studies that tested this hypothesis. In these studies, American and Japanese participants thought about an experience or imagined themselves to be in a situation where they succeeded or failed and reported their attribution and emotion. These attribution and emotion are compared between the two cultures.

While Chapters 2 and 3 focuses on the specific cognitive and emotional consequences that occur as a result of the culturally divergent concepts of the self and others, Chapter 4 broadens its focus and questions how such culturally contingent meanings are disseminated in cultural environment, transmitted to younger generations, and internalized by individuals who maintain and reproduce their culture. The research presented in Chapter 4 specifically focuses on children's stories in American and Japanese elementary school textbooks as one of the cultural products that are shared by a large segment of the population. The studies cross-culturally compared the themes highlighted in the stories, schoolteachers' preference for the stories of different value emphasis, and children's stories freely created by American and Japanese college students.

As a whole, the present dissertation clarifies the cognitive, behavioral, and affective consequences of culturally divergent meanings of the self, others, and the relation between the two. Also, it provides strong evidence for the existence of such meanings in both the cultural environment and in people's minds. In a larger scope, the present dissertation addresses the importance of understanding people's minds in their cultural contexts and the roles culture plays in fostering people's psychological tendencies that are functional in their own societies.

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## Chapter 2

### **Watching Eyes and Self-Justification: Dissonance in Varying Cultural Contexts**

Virtually all social psychologists would agree that the idea of dissonance is among the most influential in the field. The original theory proposed by Festinger (1957) and its subsequent elaborations by Aronson (1968), Cooper and Fazio (1984), and Steele (1988) among others, spawned an unprecedented number of studies in an unusually broad spectrum of issues and domains with a variety of surprising findings. For example, against a commonsensical effect of reward as reinforcing, the theory suggested that reward can compromise intrinsic motivation (Festinger & Carlsmith, 1959). Likewise, against a widely shared view of humans as rational, the theory implied that humans in fact are rationalizing and self-justifying.

During the last decade, the interest in dissonance has been revived with yet another surprise. Markus and Kitayama (1991) have suggested that dissonance might be a uniquely Western phenomenon because it is anchored on an independent view of self. Empirical work that followed has presented a more nuanced, yet equally intriguing story. On the one hand, a clear dissonance effect has been demonstrated for Asians. Thus, at a very high level of abstraction, dissonance appears to be universal. On the other hand, the conditions in which a dissonance effect happens vary greatly across cultures (Hoshino-Browne, Zanna, Spencer, Zanna, Kitayama, & Lackenbauer, 2005; Kitayama,

Snibbe, Markus, & Suzuki, 2004). In fact, the very factor that is necessary for a dissonance effect to happen in one culture has turned out to be precisely the one that must be avoided if one is to observe the effect in another. This key factor is the presence of public eyes. The purpose of the present work is to follow up this observation and elaborate our cultural analysis of cognitive dissonance, which emphasizes significant roles played by both 1) culturally sanctioned images of the self as independent or interdependent and 2) perceived privacy or perceived public scrutiny of the choice.

### Culture and Self

It has been proposed that whereas a view of the self as independent is dominant in European American cultural contexts, a contrasting view of the self as interdependent is strongly sanctioned in Asian contexts (Kitayama, Duffy, & Uchida, 2007; Kitayama & Markus, 1999; Markus & Kitayama, 1991, 2004). These views of the self are assumed to provide a general blueprint by which individuals organize their motivations and actions in a culturally specific fashion. For example, for European Americans, the self is centrally defined by a set of attributes that are internal and bounded. Thus, to maintain positive views of the self, European Americans are motivated to identify and confirm positively valued internal attributes. In support of this analysis, European Americans tend to describe themselves with many more positive attributes than negative ones (Holmberg, Markus, Herzog, & Franks, 1995), make self-enhancing or defensive attributions for success or failure (Miller & Ross, 1975), and show a strong desire to maintain positive personal self-images such as high self-esteem and self-efficacy (Taylor & Brown, 1988). For European Americans, therefore, their own evaluation of their personal self is the most pivotal element in affirming the self as appropriate, decent, and normative.

In contrast, Asians generally construct the concept of the self in relation to social others. Thus, they constantly pay attention to social context in order to maintain harmonious relationships with others and to gain acceptance and respect from members of the group to which they belong. Accordingly, for Asians, others' evaluations of the self tend to play more important roles in affirming the self as appropriate, decent, and normative. Indeed, evidence suggests that Asians do not show any robust tendency to view themselves in a positive light. For example, they score significantly lower on the Rosenberg Self-esteem Scale (Kitayama, Markus, & Lieberman 1995; Markus, Mullally, & Kitayama, 1997), they often make negative (rather than positive) statements about themselves (Yeh, 1995), and they sometimes show self-criticizing tendencies (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). Instead of private self-images, Asians are much more concerned with their public self-images -- how others would think about them. This tendency is demonstrated by their strong concern for honor and face (e.g., Cohen et al., in press; Heine, 2007; Kitayama et al., 2004).

#### Personal Dissonance and Interpersonal Dissonance

In his original formulation, Festinger (1957) proposed that when individuals recognize an inconsistency between two cognitions, they feel negative emotional arousal called dissonance and that because the dissonance is aversive, the individuals are motivated to reduce the inconsistency. Subsequently, however, a number of theorists have suggested that self is an integral part of the dissonance process. For example, Aronson (1968) proposed that dissonance arises only when the cognitions at issue are self-relevant. Furthermore, Steele and colleagues (Steele, 1988; Steele & Liu, 1983; Steele, Spencer, & Lynch, 1993) proposed a self-image maintenance theory of dissonance,

which regards dissonance as a threat to a well-maintained image of the self. That is, when individuals commit a behavior that raises questions about their moral integrity or competence, they feel threatened and, as a consequence, they are motivated to reduce this threat by justifying the behavior.

Drawing both on the self-image maintenance theory of dissonance and on the independence-interdependence theory of cultural self, Kitayama and colleagues (2004) have proposed that dissonance can take different forms depending on the nature of the self that is threatened and thus must be defended. Given the independent view of self, which is dominant among European Americans, internal attributes of the self including moral integrity and competence are very salient and seen as self-defining. Although social relations are important and, in fact, can significantly influence self-evaluations (Leary, Tambor, Terdel, & Downs, 1995), how they view themselves depends primarily on their personal appraisal and the resulting esteem of the self. Consequently, individuals in Western cultures should experience a threat to the self when their behaviors are seen as expressive of their internal attributes. Under these conditions, individuals are most motivated to justify the choice and, thus, to organize their actions in accordance with the choice (Harmon-Jones, 2004). This proposal is consistent with numerous demonstrations that a behavior must be perceived as voluntary, freely chosen (Cooper, 1971; Linder, Cooper, & Jones, 1967), and thus diagnostic of one's own internal characteristics in order for it to produce a threat to the actor's independent self. This form of dissonance is called personal dissonance (Kitayama et al., 2004).

In contrast, given the interdependent view of self, which is dominant among Asians and Asian Americans, relational attributes of the self including appraisals and

approvals of the self by others in relations are much more salient and self-defining. Internal attributes of the self such as moral integrity and competence are certainly important. However, how they view themselves rests primarily on public appraisals such as respect and honor, which significant others confer on the self. Accordingly, individuals in Asian cultures would experience a threat to the self when their behaviors are perceived as publicly exposed and scrutinized and, thus, relevant to their reputations and public self-images. It is under these conditions that individuals are expected to justify their choice and, thus, to organize their goal priorities and other attendant cognitions accordingly (Harmon-Jones, 2004). This form of dissonance is called interpersonal dissonance (Kitayama et al., 2004).

In short, the present analysis suggests that dissonance arousal and reduction are likely to depend importantly on cultural context. In independent cultural contexts, one's choice becomes self-threatening when it is made in private and thus experienced as self-expressive. Under these conditions, there should be a strong dissonance effect. In interdependent cultural contexts, in contrast, one's choice becomes self-threatening when it is made in public and, thus, is experienced as under public scrutiny. It is under these conditions that a strong dissonance effect should emerge.

### Empirical Evidence

Evidence for the present analysis comes from several studies that use a free-choice dissonance paradigm (Brehm, 1956). In this paradigm, participants are offered a choice between two equally attractive commodities such as music CDs. Changes in the preferences of the pertinent commodities are assessed. A typical dependent variable is a spreading of alternatives (SA) – the sum of increased preference

for a chosen item and decreased preference for a rejected item. Heine and Lehman (1997) conducted the first cross-cultural study with this method and found that while European Canadians showed a sizable dissonance effect, this effect was absent among Japanese participants. At first glance, it might appear that Japanese experience no dissonance. This is not necessarily the case, however. In fact, the present analysis suggests that the failure to find a dissonance effect among Japanese may be due to the fact that participants in this study were tested in private. Accordingly, they must have perceived no public scrutiny over their choice. Under these conditions, public self-images were unlikely to be threatened. This implies that Japanese and other Asians would show a reliable dissonance effect once they were led to believe that their choice would be known to others in relationship.

Hoshino-Browne, Zanna, Spencer, Zanna, Kitayama, and Lackenbauer (2005) compared a standard free choice condition in which participants made a choice for themselves with another condition in which participants made a choice for their friends. In the “friend” condition, participants believed that the item chosen for the friends was to be delivered to them and, thus, they anticipated that their friends would come to know their choice. The researchers replicated the Heine and Lehman (1997) finding in the standard condition, in which European Canadians showed a strong dissonance effect, but Japanese or Asian Canadians did not. Importantly, however, in the “friend” condition, Japanese and Asian Canadians showed a strong dissonance effect, thus providing support to the current analysis that people with Asian cultural backgrounds perceive their choice as self-threatening when they anticipate the choice to be known to others. In contrast, in this same “friend” condition, European Canadians showed little or no dissonance effect.

The current analysis would suggest that the European Canadian participants in this condition took their friends' preferences into account in the friend condition. As a result, they saw the choice as socially constrained, less self-reflective, and, thus, not as threatening to their personal self-images.

The link from perceived scrutiny to both the emergence of dissonance among Asians and the disappearance of dissonance among European Americans (or Canadians) is likely to be well-learned and well-practiced, thus highly automatic and largely unconscious. If so, similar cross-cultural differences in dissonance may be found as a function of mere exposure to subtle cues indicative of such scrutiny. European Americans would immediately perceive their choice as constrained and thus would cease to show a dissonance effect when exposed to such cues; but in the same condition Asians would immediately perceive their choice as threatening to their public self-images and, thus, would begin to show the effect.

To investigate this possibility, Kitayama et al. (2004) unobtrusively hung a poster ostensibly prepared for a conference presentation in front of their participants. On the poster several schematic faces were printed so that the faces were placed at eye level. From the participants' perspective, the faces appeared to be "watching them." In a control condition where no poster was presented, a reliable dissonance effect was found among European Americans but not among Japanese. In the poster condition, no participants raised any suspicions about the poster. Moreover, when questioned, no one expected any effects of the poster on their behaviors. Despite the total absence of awareness of public scrutiny, participants behaved very differently in the poster condition. As predicted, a sizable justification effect was found among Japanese. Interestingly, European Americans

showed a somewhat weaker dissonance effect in the face poster condition than in the control condition. Kitayama et al. (2004) left this finding unexplained. Nevertheless, in light of the current analysis, we could argue that European Americans perceived the faces as imposing unwanted influences on them. They might have perceived their choice as socially constrained and, thus, not expressive of the personal self.

### The Present Research

In the present research, we tried to extend the initial face-poster effect (Kitayama et al., 2004) in three important ways. First, we wanted to see if the poster effect depends on the timing of the exposure to a face poster. Experiment 1 therefore tested both Japanese and American participants while manipulating the timing of the exposure to the face poster. Second, we hypothesize that the face poster has its effect because it activates face representations. Experiment 2 therefore exposed participants to a cue that sometimes activate face representations, and compared European American and Asian American participants who “saw” a face and those who did not see a face. Third, the most surprising aspect of the accumulating data pertains to the fact that European Americans lose dissonance effect when exposed to faces. Thus, Experiment 3 tested a causal mechanism for this effect.

#### **Experiment 1: Public Scrutiny During vs. After Choice**

One key assumption of the current analysis is that a face-poster (Kitayama et al., 2004) exerts its influences while participants make their choice. On the one hand, Asian Americans would experience their choice as threatening to their ever-important public self-images when they make the choice while exposed to cues indicative of public scrutiny (i.e., the face poster). On the other hand, in the same condition Americans would

experience their choice as socially constrained and, thus, as non-threatening to personal self-images, which are defining of their self. This means that the poster should have its effect as far as it is available during the choice. If true, exposure to the poster should have no effect if it takes place after the choice.

To test this idea, we manipulated the timing of the face-poster exposure in Experiment 1. In one condition, participants were exposed to the face poster used in Kitayama et al. (2004) only during the choice, but in another condition, the exposure to the poster took place only after the choice. In a control condition, the poster was absent throughout the study. We predicted that the poster effect in the Kitayama et al. (2004) study should be replicated only in the face-during-the-choice condition but not in the other two conditions. Thus, in this face-during-the-choice condition, Asians were predicted to show a greater dissonance effect than Americans would. Furthermore, we also predicted that the pattern of data in the face-after-the-choice condition should be no different from the one in the control condition. In these two conditions, Americans were predicted to show a greater dissonance effect than Asians would.

In addition, as suggested by recent findings, African Americans are at least as independent as or even more so than European Americans (e.g., Oyserman, Coon, & Kimmelmeier, 2002). Therefore, we included African American participants in Experiment 1, expecting that the pattern would be very similar between these two ethnic groups. We compared these two independent groups with an interdependent group, namely, Japanese.

## Method

Participants. Thirty-five European American and 21 African American undergraduates at the University of Michigan and 65 Japanese undergraduates at Kyoto University participated in the study individually in exchange for eight dollars or 500 yen. Six participants were eliminated from the data analysis for the following reasons. Because the music CDs used in this study were targeted on late teens and early twenties, two participants (one European American, one Japanese) who were over 35 years old were excluded. Also, three Japanese participants who did not follow the instructions and an additional Japanese who had guessed about the purpose of the study were dropped from the analysis. Thus, the present data include 34 European Americans (18 females and 16 males), 21 African Americans (13 females and 8 males), and 60 Japanese (25 females and 35 males). The mean ages of European American, African American, and Japanese participants were 20.10 ( $SD = 1.95$ ), 20.62 ( $SD = 1.84$ ), and 18.87 ( $SD = 1.17$ ) respectively.

Procedure. The study was conducted under the guise of a music consumer survey sponsored by a CD retail company. Participants were greeted by a female experimenter and presented with a list of 30 CDs of popular music. They were asked to select 10 CDs they liked most among those that they did not own. They then rank-ordered the 10 CDs based on their preferences. While participants were continuing to work on an alleged music survey, the experimenter informed participants that the sponsor of the survey was offering a CD for each participant as a token of appreciation for participating in the survey. However, the experimenter also informed them that there were only two CDs in stock and showed those two CDs to the participants. In fact, those two CDs were the ones ranked fifth and sixth by the participants earlier, thus almost equally attractive.

Participants picked one and received it as a gift. At this point, the experimenter told all participants that she would need the first table to prepare for the next session and asked them to move to another table. Participants then switched tables and continued the alleged music survey. After they finished completing the survey (approximately 10 minutes after the choice), they were told that the researchers also wanted to know how people would feel about CDs they had seen after they left a store because the impression of some CDs might remain stronger or better than others later on. Thus, participants were asked to rank-order the same 10 CDs again based on how they felt about the CDs right at the moment.

There were three conditions that differed in whether and when the face poster was presented. In the face-during-the-choice condition, the poster was placed only on the first table. In the face-after-the-choice condition, it was placed only on the second table and in the control condition, it was placed on neither.

Participants were then thoroughly debriefed about the full purpose of the study. None of participants in the two poster conditions raised any suspicions regarding the poster. When asked, they admitted that they saw the poster, but all of them denied any influences the poster could have on them. One participant, for example, said with a sense of disbelief expressed on his face: “I saw the poster, but I don’t think it had any influence on me.” All participants were politely asked to donate the CD they had received back to the study because the study was not actually sponsored by any company. All participants agreed to do so. They were thanked, and they received the initially promised payment.

### Results and Discussion

The size of the dissonance effect was measured by a spreading of alternatives (SA) -- the sum of the amount of rank change for the chosen CD and the amount of rank change for the rejected CD. For example, if the chosen CD was initially ranked 6th but became 4th later, and if the rejected CD was initially ranked 5th but became 6th later, SA was recorded as 3 (SA could be negative if the chosen CD went down and/or the rejected CD went up). Preliminary analyses were conducted to compare European Americans and African Americans – the two groups hypothesized to be independent. The mean SAs of the two groups were very similar; in fact, in none of the three conditions did the mean difference approach statistical significance (all  $t_s < 1$ ). Thus, the two groups were subsequently combined. A 2 (country: Americans, Japanese) x 2 (gender: female, male) x 3 (condition: during, after, control) ANOVA was initially performed on the SA index. However, gender showed no significant main effect or interactions, thus, it was omitted from further analyses. A 2 (country) x 3 (condition) ANOVA showed a significant interaction between country and condition,  $F(2, 109) = 7.20, p = .001, \eta_p^2 = .117$ . Pertinent means are shown in Figure 1.1.

We expected to replicate the earlier cross-cultural difference in the control condition. In this condition Americans should show a greater SA than Japanese would. We also predicted that the face effect observed by Kitayama et al. (2004) would be replicated in the face-during-the-choice condition. In this condition Japanese should show a greater SA than Americans would. Our third prediction was that the face poster would have no effect in the face-after-the-choice condition. The pattern of data in this condition should be no different from the one in the control condition.

Consistent with our first prediction, Americans showed a reliable dissonance effect in the control condition,  $t(17) = 4.05, p = .001, prep = .99$ , but the Japanese mean was not different from zero,  $t(19) = 1.63, ns$ . This replicates earlier findings (Heine & Lehman, 1997; Hoshino-Browne et al., 2005; Kitayama et al. 2004) although in the present case the cultural difference fell short of statistical significance,  $t(36) = 1.23, ns$ .

In support of the second prediction, the pattern was completely reversed in the face-during-the-choice condition. As in the Kitayama et al. (2004) study, Japanese showed a reliable justification effect, with the mean significantly greater than zero,  $t(19) = 8.94, p < .001, prep > .99$ , but the effect shown by Americans was much less although it was still significantly greater than zero,  $t(17) = 2.53, p < .05, prep = .92$ . The cultural difference in this condition was statistically significant,  $t(36) = 3.22, p < .01, prep = .97, d = 1.04$ . As predicted, Japanese showed a reliably greater SA in this condition than in the control condition,  $t(28.48) = 2.66, p < .05, prep = .94, d = .84$ . As was also predicted, Americans showed less SA in this condition than in the control condition, but this difference did not reach statistical significance,  $t(34) = 1.32, ns$ . A contrast representing the interaction between experimental condition (face-during-the-choice vs. control) and country was statistically significant,  $F(1, 72) = 7.92, p < .01, prep = .96, \eta_p^2 = .099$ .

Finally, the means in the face-after-the-choice condition were more similar to those in the control condition than to those in the face-during-the-choice condition, thus providing support for our third prediction. Specifically, the Japanese mean in the face-after-the-choice condition was no different from the corresponding mean in the control condition,  $t(38) = .34, ns$ , although it was still significantly different from zero,  $t(19) = 2.36, p < .05, prep = .91$ . In contrast, the American mean in the

face-after-the-choice condition was significantly greater than zero,  $t(18) = 5.36, p < .001, prep = .99$  as in the control condition. If anything, the mean was somewhat greater, albeit marginally, in the face-after-the-choice condition than in the control condition,  $t(33.31) = 1.77, p = .09, prep = .83, d = .58$ . An analogous effect has been observed by Baumeister and Tice (1984), who used an induced compliance paradigm to show that after a choice, a dissonance effect becomes especially pronounced if the chosen behavior is believed to be public than when it is believed to be private. It may be the case that non-Asian Americans are strongly motivated to express their personal choice if the chosen behavior is public.

### **Experiment 2: Three Dots and Dissonance**

Available evidence suggests that mere exposure to schematic faces is sufficient to moderate the cross-cultural difference in dissonance. Our assumption is that it does so by inducing an impression of public scrutiny. One can conceivably argue, however, that the schematic faces could induce some kinds of emotional reactions or simply distract attention away from the CD at issue. Although it is not immediately obvious how these possible confounds could account for the specific pattern of culture x face interaction, it is still advisable to explicitly address them.

In Experiment 2, we sought further evidence for the proposition that perception of a face critically moderates the cultural difference in dissonance in a condition that completely eliminates any possible confounds between the face-condition and the no-face condition. We did so by presenting participants with a cue that is interpretable as either a face or something else, and to compare those who perceive a face from the cue with those who do not. We predicted that both Asians who perceive a face and European Americans

who do not perceive a face would show a dissonance effect. In contrast, Asians who do not perceive a face and Europeans who perceive a face should show no dissonance effect.

Although participants in Experiment 1 were not aware of what effect the poster had on their behavior, our analysis implies that the poster may give rise to quite different subjective experiences of choice. That is, European Americans may be expected to feel the choice as socially constrained when they are under public scrutiny, which may in turn cause them to experience the choice as not reflective of their own preferences. Because of these subjective experiences of the choice, they no longer feel motivated to justify their choice. In contrast, Asians may be expected to experience public eyes not as constraint, but as a “sounding board” or as an implicit partner of social dialogue that constitutes their interdependence self. As a consequence, they may feel the choice as a genuine expression of their own preferences especially when they make the choice under public scrutiny. To test these ideas, we included two questions about subjective experience of the choice at the end of the study. They are “how much constraint they felt on their choice” and “how much their choice reflected their music preference.”

Experiment 2 tested whether the Japanese pattern could be replicated by another group known to be interdependent –Asian Americans. Hoshino-Browne et al. (2005) examined both Japanese and Asian Canadians in their free-choice dissonance studies and found the two groups to be no different. That is, people from both groups show no dissonance when they make a choice in private for themselves, but they show a strong dissonance effect when they make a choice for their friends. Experiment 2 examined whether the poster-effect among Japanese could be replicated among Asian Americans.

#### Method

Participants. The study was conducted under the guise of a music survey sponsored by a CD retail company. Sixty-seven European American and 28 Asian American undergraduate students at the University of Michigan individually participated in the study in exchange for eight dollars. Seven participants were eliminated from the data analysis because three changed their mind after their choice, two correctly guessed the purpose of the study, and two did not follow the instruction properly. Thus, the current data included 62 European Americans (39 females and 23 males) and 26 Asian Americans (20 females and 6 males). Asian American participants consisted of 16 Chinese Americans, six Korean Americans, two Japanese Americans, and two Filipino Americans. The mean age of European Americans and Asian Americans were 19.40 ( $SD = 1.29$ ) and 19.58 ( $SD = 1.60$ ) respectively.

Procedure. The procedure for the “music survey” was the same as in Experiment 1 except for two points. First, instead of a poster with faces, a letter-size sheet of paper was placed in front of participants. At the center of the sheet, within an area defined by a 30 mm radius, three black dots (each with 10 mm in diameter) were printed either in a triangular configuration or in a reversed triangular configuration (see Figure 1.2). Both configurations were expected to evoke mental representations of a face to an individually varying degree. Second, unlike Experiment 1, participants did not change seats; therefore, all participants were exposed to the three dots throughout the study. At the end of the experiment, participants were asked to help other researchers’ pilot study on “visual perception,” in which participants drew a picture incorporating the three dots on the sheet of paper. All participants agreed to do so. Regardless of the configurations or ethnicity of participants, exactly half of the participants (44) drew a face in the picture completion

task. Preliminary analysis revealed that the likelihood of drawing a face was no different whether participants had three dots in a triangular configuration or in a reversed-triangular configuration,  $\chi^2(1) = 6.60, ns$ . Participants then reported, on a 7-point scale (1 = not at all, 7 = very strongly), how much constraint they felt during the choice and how much their choice reflected their music preferences. Participants were then thoroughly debriefed, thanked, and received the promised payment.

### Results and Discussion

We compared the justification effect between the participants who drew (and thus supposedly had perceived) a face and those who did not. No gender differences were found, thus this variable was omitted from the rest of the analyses. The SA index was submitted to a 2 (drawing: face, no face) x 2 (ethnicity: European, Asian) ANOVA. As predicted, a significant interaction was found between ethnicity and drawing,  $F(1, 84) = 5.57, p < .05, prep = .93, \eta_p^2 = .062$ . As shown in Figure 1.3, European Americans who drew a face showed a significantly smaller justification effect than those who did not draw a face,  $t(60) = 2.37, p < .05, prep = .93, d = .60$ . The pattern was reversed, albeit non-significantly, for Asian Americans,  $t(24) = 1.23, ns$ .

Further evidence was obtained from the subjective feelings about their choice (see Table 1.1). As predicted, European Americans reported experiencing less constraint and, moreover, felt that their choice reflected their own preferences more strongly when they did not see a face than when they did:  $t(60) = 2.19, p < .05, prep = .91, d = .56$  and  $t(60) = 2.10, p < .05, prep = .89, d = .53$  for the two measures, respectively. Interestingly, both effects were reversed non-significantly for Asian Americans. The interaction between ethnicity and face was at least marginally significant for the perceived constraint

and the reflectiveness judgment:  $F(1, 84) = 3.44, p = .07, prep = .86, \eta_p^2 = .039$  and  $F(1, 84) = 4.71, p < .05, prep = .90, \eta_p^2 = .053$ , respectively.

### **Experiment 3: Perceived Social Influence and Dissonance**

One finding that is novel and, thus, requires a full explanation is the effect of watching others among European Americans. Our interpretation is that in European American cultural contexts, public scrutiny is interpreted as a constraint on the choice. Experiment 2 found initial evidence for this interpretation by examining subjective experience of choice. European Americans who saw a face experienced their choice as more constrained and less reflective of their preferences than those who did not see a face. However, the evidence is correlational. It is desirable to experimentally manipulate the perceived constraint or influence and see if the dissonance effect would disappear only when watching faces are seen as influential and constraining.

In Experiment 3, we manipulated impressions associated with watching others. We predicted that European Americans would continue to show a reliable dissonance effect even when they make a choice in front of eyes of others so long as they perceive these others as passive and innocuous and thus unlikely to exert any social influence.

#### Method

Participants. Thirty-six European American undergraduates (20 females and 16 males) at the University of Michigan individually participated in the study in exchange for eight dollars. Three participants were eliminated from the data analysis because one knew the experimenter personally, one guessed that we were interested in ranking changes after the choice, and one did not follow instructions. Thus, the current data

include 33 European Americans (18 females and 15 males). The mean age was 18.97 years old ( $SD = .95$ ).

Procedure. Within the procedure similar to Experiments 1 and 2, we subtly manipulated the impressions associated with watching others on the poster in Experiment 3. Upon arrival for the alleged music survey, participants were unexpectedly asked to participate in another short study on “impression formation” in exchange for an additional two dollars. All participants agreed to do so. In this “impression formation” study, participants watched one of two versions of a 5-minute video clip in which two male college students discussed their class project. In one version, a target person (see Figure 1.4) played the role of an “influencer” who took initiatives, made concrete plans, and acted in a confident, dominant manner while the other person played the role of an “influencee” who acted submissively, merely accepting the suggestions made by the target person. The other version of the video was identical except that the two actors switched the roles (i.e., the target person played an “influencee”). Participants reported their impressions of the two people. As predicted, the target person was perceived as far more confident, influential, and dominant (relative to his partner) in the former version than in the latter version ( $p < .001$ ). Thus, the manipulation was successful.

In the subsequent alleged music survey, all participants were seated in front of a poster. This time, however, the poster contained realistic images of faces rather than schematic drawings. These images were created by morphing each of 10 different Caucasian male faces with the face of the target person. As shown in Figure 1.4, general resemblances existed between the face of the target person and the faces on the poster. Importantly, however, the resemblances were not easily recognizable unless explicitly

pointed out. In fact, when later probed, no participants noticed any connections between the faces on the poster and the “impression formation” study they had participated in earlier. The rest of the “music survey” procedure was the same as in Experiment 2.

### Results and Discussion

We predicted that European Americans would show a substantial dissonance effect in the “public” choice condition only when the faces on the poster resembled someone who was very non-influential, submissive, and thus innocuous. As expected, a justification effect in the “influencer” condition ( $M = .44$ ,  $SD = 1.21$ ) was no different from zero,  $t(15) = 1.45$ , *ns*. This effect was quite comparable to the effect shown by Kitayama et al. (2004) in their “public” choice condition as well as in the face-during-the-choice condition in Experiment 1 of the present research. Thus, it seems that the schematic faces on the poster used in Experiment 1 were, by default, perceived as influencing the choice. Importantly, as predicted by the current analysis, we found a reliable justification effect in the “influencee” condition ( $M = 1.82$ ,  $SD = 1.29$ ),  $t(16) = 5.65$ ,  $p < .001$ ,  $prep > .99$ . Again this effect was comparable in size to the finding in the private conditions of the earlier studies. It therefore appears that once perceived as non-influential, the watching eyes became equal to non-existent in terms of its effect on their choice. The difference between the two conditions was statistically significant,  $t(31) = 3.18$ ,  $p < .01$ ,  $prep = .97$ ,  $d = 1.11$ . No gender differences were found.

## **General Discussion**

### Self-Esteem, Face/Honor, and Dissonance

One overarching thesis of the current work concerns two qualitatively different types of dissonance process. In independent cultural contexts, choices were expected to

become self-threatening when they were perceived as private and thus unconstrained. In support of this analysis, we found that European and African Americans show a dissonance effect only when a choice is perceived as personal and private. When a choice was made under perceived public scrutiny, their dissonance effect faded away. In contrast, in interdependent cultural contexts, choices were predicted to become self-threatening when they were experienced as publicly exposed. In support of this idea, we found that Japanese and Asian Americans show a dissonance effect only when an impression of public scrutiny is induced during choice.

A particularly important contribution of the present series of experiments is that they demonstrate the boundary conditions for a dissonance effect both among European (and African) Americans and among Asians. First, exposure to faces increased the dissonance effect for Asians but reduced it for European/African Americans. More precisely, this cross-cultural pattern was found only when exposure to faces took place during choice. The exposure caused no visible effect if it happened after the choice. Second, European Americans did not lose the dissonance effect even under perceived public scrutiny when they perceived the watching others as non-influential, submissive, and thus innocuous.

At the same time, the present analysis is in agreement with a general notion that the self is deeply involved in the dissonance process (Aronson, 1968) and, more specifically, with a hypothesis that dissonance effect is mediated by a threat to self-image (Steele, 1988). Yet, it significantly extended these analyses by proposing that the dissonance effect takes remarkably divergent forms depending on the nature of the self-images involved in the process. Cross-culturally contrasting effects of eyes of others

demonstrate that for people engaging in independent cultural contexts, a choice becomes expressive of the self and thus subjectively authentic when made in private, outside of any meaningful social context. In fact, we obtained evidence that European Americans felt their choice to be more reflective of themselves more when there were no public eyes. What is at stake in a choice like this is the evaluation of the self as seen from oneself. In agreement with current theories in social psychology (see Baumeister, 1998, for a review), a threat to self-esteem is the key in dissonance. In contrast, for those engaging in interdependent contexts, a choice becomes self-involving and thus is subjectively experienced as authentic when made in relational contexts. In support of this notion, we found that Asian Americans tended to see their choice as more reflective of themselves when they perceived public eyes. What is at stake here is the evaluation of the self that is held by others. This kind of evaluation is more akin to face or honor – a positive evaluation that is conferred on the self by others. Face or honor can be quite independent of what the self thinks him or herself to be.

#### Cultural Grounding of Dissonance

Although social psychologists have long seen dissonance as purely psychological, our findings make it clear that this psychological process is closely interwoven with the culturally specific meanings of choice. In European American cultural contexts, a choice symbolizes personal freedom. Thus, having more options to choose from is considered to be a good thing. Indeed, the United States is the only country where people prefer to have more than 50 choices of ice cream (Rozin, Fischer, Shields, & Masson, 2006), and people are more satisfied with a product they choose than a product chosen by an experimenter (Snibbe & Markus, 2005; Brehm, Stires, Sensenig,

& Shaban, 1966). By making a choice that is different from the rest, non-Asian Americans can demonstrate how uniquely different they are from others (Kim & Markus, 1999). Furthermore, individuals become more motivated and work harder on a task they have chosen by themselves (Iyenger & Lepper, 1999; Na & Kitayama, 2007). In other words, personal choice in Euro-American cultural contexts is both a symbol of freedom and one's uniqueness and a source of satisfaction and motivation.

In Asian interdependent cultural contexts, however, the notion of free choice is neither as salient nor important as it is in Euro-American independent cultural contexts. On the contrary, having a strong personal preference or opinion may become a source of stress as one has to suppress it to maintain social harmony. Yet, choice has an important function for Asians as well. For example, when Asians are given a choice, they tend to choose the one that is the same as the rest (Kim & Markus, 1999). Also, they are more motivated and work hard on a task chosen by important others (Iyenger & Lepper, 2007). In other words, choice in Asian cultural contexts provides a way to get connected with others, show their conformity, and meet others' expectations or standards. Our findings have added evidence to these ideas and shown that Asians are much more motivated to justify public choices than personal choices.

### The Cultural Unconscious

One important contribution of the current work is to establish that the extent of the post-decisional dissonance effect is importantly moderated by the activation of face representations. This activation, in turn, leads to culturally specific strategies to cope with public scrutiny. Thus, non-Asian Americans coped with public scrutiny by refraining from justifying their choice because they could defend their sense of independence by

attributing their dissonance to the influence of the watching others. In contrast, Asians and Asian Americans coped with public scrutiny by justifying their choice because the public eyes of others define a constitutive element of their interdependent self.

It is noteworthy that no participants thought that anyone was watching them. They merely saw graphic stimuli that activated face representations. This demonstrates, then, that the link between the activation of face representations and the recruitment of the coping strategies is automatic and largely unconscious. This conclusion is consistent with a large body of studies on face processing, which suggest that face-like stimuli are processed automatically by a particular region of the brain that is dedicated to face perception (Farah, Wilson, Drain, & Tanaka, 1998; Kanwisher, McDermott, & Chun, 1997). We speculate that when face representations are automatically and subconsciously activated, this activation in turn effectively triggers the culturally appropriate strategies of coping with public scrutiny. As observed by Bargh and Morsella (in press), the unconscious appears to be quite adaptive and even smart. We wish to add to this that the adaptiveness and intelligence of the unconscious is sometimes defined in relation to the cultural environment of each individual.

### Conclusions and Future Directions

In music, dissonance refers to a disagreeable combination of sounds that is considered to suggest unrelieved tension and to require resolution (The American Heritage Dictionary of the English Language, 2006). Dissonance in psychology refers to something analogous in the mental domain. It refers to patterns of cognition that are perceived as disruptive of the stable sense of things one cares about in general (Aronson, 1967; Cooper & Fazio, 1984; Festinger, 1957) and that of the self in particular (Steele,

1988). We have built on this general conceptual framework of dissonance theory in psychology and shown that dissonance takes cross-culturally divergent forms because of the corresponding differences in the culturally sanctioned forms of the self. For people engaging in cultures that emphasize independence of the self, dissonance is caused by a threat to the personal self. As such, it is propagated by choices that are perceived as private and thus revealing of the personal self. In contrast, for those engaging in cultures that sanction interdependence of the self, dissonance is caused by a threat to the public self and, as such, it is produced by choices that are perceived as under public scrutiny and thus as implicating one's honor and face.

The present work has left open three important classes of questions about dissonance. First, we did not examine any within-culture variations. Nonetheless, the present analysis does imply that the culturally divergent forms of dissonance are likely to be most pronounced for those individuals who are strongly committed to the particular views of the self that are sanctioned in a particular cultural context. Individual differences on the pertinent dimensions should be explored to see if the dissonance effects we observed in the current work might be moderated by such variables. Second, the hypothesis of dissonance as automatic and largely unconscious must be further investigated. One promising way of addressing the unconscious nature of dissonance might be to explore brain pathways that are automatically recruited when dissonance is experienced by people in varying cultural contexts. Lastly, future work should address developmental questions: How early in socialization do children begin to show the culturally appropriate forms of dissonance, and is dissonance a consequence or a precursor of the establishment of the culturally appropriate forms of the self? We believe

that by addressing these three types of questions it will be possible to fully understand the socio-cultural mechanisms of dissonance that are suggested by the present series of studies.

Table 1.1  
 Mean scores of perceived constraint on choice and choice as reflection of the self  
 (Experiment 2)

	<b>Constraint</b>				<b>Reflection of Self</b>			
	No Face		Face		No Face		Face	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b>Asian Americans</b>	4.29	1.68	3.75	1.86	3.79	1.81	4.58	1.73
<b>European Americans</b>	4.17	1.21	4.95	1.58	4.03	1.50	3.27	1.38

*Note.* Rating Scale of 1-7 (1 = not at all, 7 = very strongly).

Figure 1.1

Justification effect (as assessed by spreading of alternatives, SA) for Japanese and American participants in the no-face (control), the face-during-the-choice, and the face-after-the-choice conditions (Experiment 1). Error bars represent standard errors of the mean.

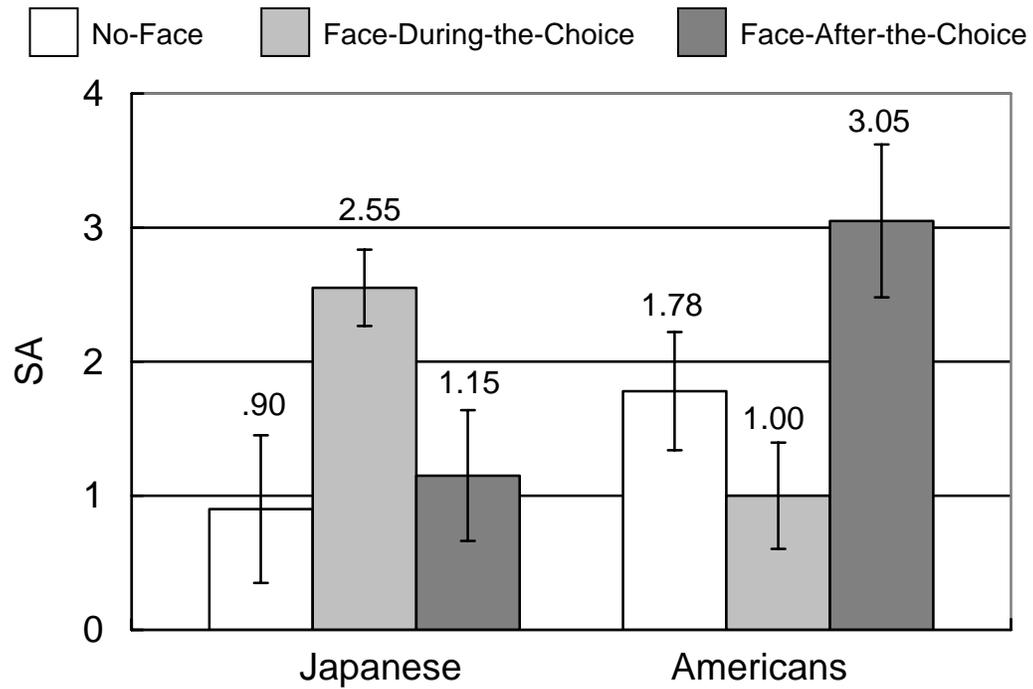


Figure 1.2  
Three dots in a triangular configuration (left) and in a reversed triangular configuration (right) presented to participants in Experiment 2



Figure 1.3  
Justification effect (as assessed by spreading of alternatives, SA) for Asian and European Americans who drew a face and who did not (Experiment 2). Error bars represent standard errors of the mean.

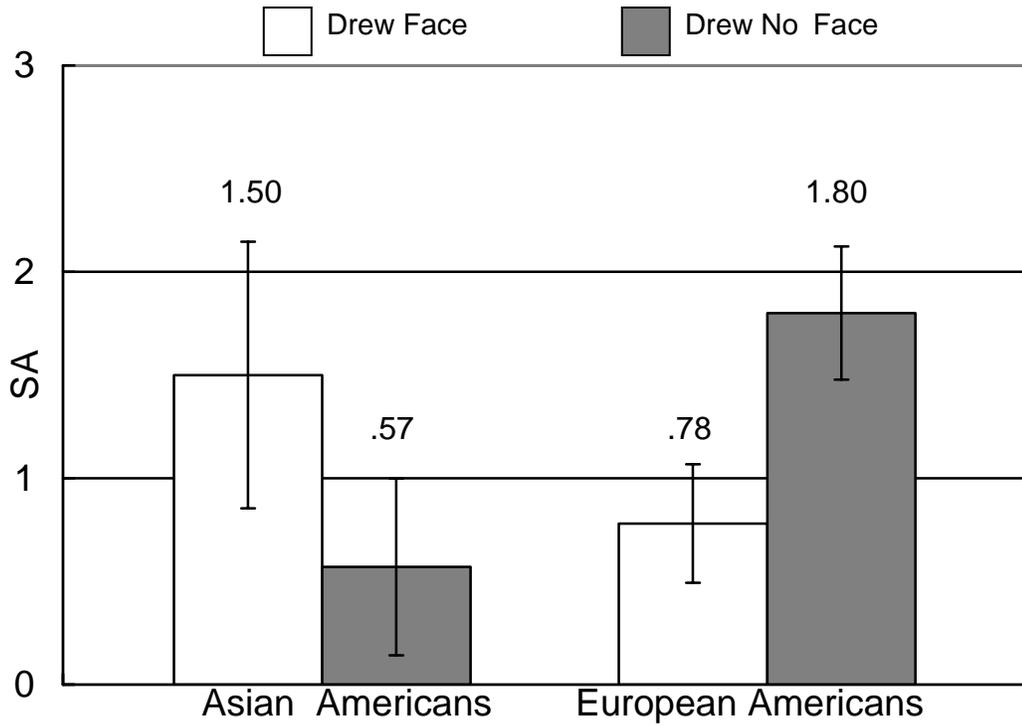
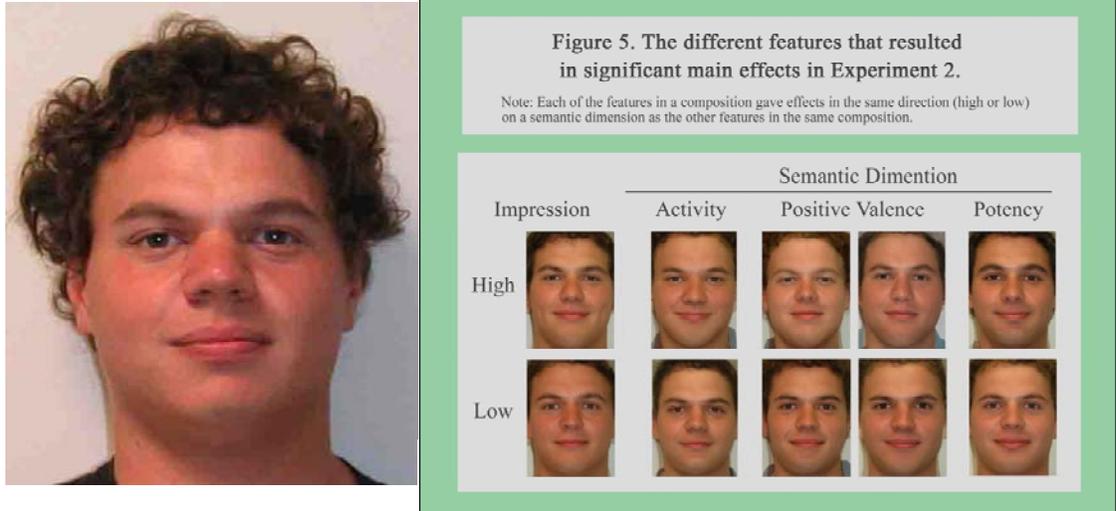


Figure 1.4

The target person in the video clip (left) and the poster (right) used in Experiment 3. The faces in the poster were created by morphing 10 different Caucasian male faces with the face of the target person.



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## Chapter 3

### **Americans Feel Proud While Japanese Feel Lucky: Cultural Differences in Appraisal and Corresponding Emotion**

Appraisal theories of emotion propose that emotions result from people's interpretations and explanations of events (e.g., Ellsworth, 1994; Frijda, 1986; Lazarus, 1995, Scherer, 1988). Thus, if individuals interpret a situation differently, they should experience different emotions. Appraisals, in turn, can be affected by motivation (Baumeister, 1998). People often see what they are looking for.

Numerous studies have documented that people select or distort information so as to see themselves in a positive light. For example, the cognitive dissonance literature has shown that people re-interpret their own behavior so that a positive self-image is protected or affirmed (e.g., Steele, 1988; Tavis & Aronson, 2007). People tend to believe that they contributed more than their partners in collaborative tasks (e.g., Ross & Sicoly, 1979; Burros, 1988) and often engage in downward social comparison in order to feel good about themselves (e.g., Hakmiller, 1996; Wills, 1981; Wood, 1989). Moreover, a majority of people see themselves as better than average on many dimensions (e.g., Lovett, 1997; Headey & Wearing, 1987; Guerin, 1994; McKenna & Myers, 1997; Svenson, 1981; Wylie, 1979) and evaluate others in terms of the dimensions on which they themselves excel (Kenny & DePaulo, 1993).

One of the most frequently studied self-serving biases involves people's causal attributions for success and failure. Many studies have demonstrated that people account for success and failure in ways that will enhance or maintain their self-esteem. For example, athletes commonly explain victories in terms of their ability and effort but attribute losses to something else, such as biased referees or the other team's dirty tactics (Grove, Hanrahan, & McInman, 1991; Lalonde, 1992; Mullen & Riordan, 1988). When participants worked on achievement tasks and received manipulated feedback, they were likely to make internal attributions for success but external attributions for failure (Miller & Ross, 1975; Zuckerman, 1977 for reviews).

In North America, these self-enhancing and self-protective biases are pervasive and considered to be conducive to mental health (e.g., Abramson, Metalsky, & Alloy, 1989; Taylor & Brown, 1988). However, accumulating cross-cultural evidence suggests that such self-serving biases are largely absent in East Asian cultures. For example, Japanese do not evaluate themselves as better than average even on attributes considered to be important in Japanese culture, such as cooperation and loyalty (Heine & Lehman, 1997; Markus & Kitayama, 1991). Canadian Asians seek more upward social comparisons than do European Canadians (White & Lehman, 2005), and Japanese tend to remember incidents that decreased their self-esteem, whereas Americans tend to remember incidents that increased it (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). Moreover, Japanese attribute failures to themselves as much as or sometimes even more than successes, failing to show the self-serving attribution biases that are pervasive among North Americans (Kitayama, Takagi, Matsumoto, 1995). In sum, people in North American cultural contexts are motivated to maintain a positive view of the self and

achieve this goal by engaging in various self-serving biases whereas people in Asian contexts not only fail to show such self-serving biases, but sometimes exhibit self-effacing or self-critical tendencies.

These cultural differences in self-serving biases should have implications for people's emotional responses to their own success and failure experiences. The universal contingency hypothesis proposes that people in different cultures will experience similar emotions to the extent that they appraise the situation in similar ways (Ellsworth, 1994; Mesquita & Ellsworth, 2001). Thus, if people's appraisal patterns differ across cultures, their emotional experiences should differ correspondingly. In the research reported here, we focus particularly on appraisals of agency. Since agency is one of the most important appraisals that differentiate negative emotional experiences (Ellsworth & Smith, 1988), cross-cultural differences in agency appraisal should have important implications for people's emotional responses.

For example, when experiencing success, people generally feel positive emotions, but the type of positive emotion depends on the attribution of agency. For example, if people attribute success to themselves, they experience emotions such as pride, satisfaction, superiority, and confidence (positive self-agency emotions), but if people believe that their success was due to other people, they experience quite different emotions such as gratitude, obligation, modesty, and friendly feelings towards those people (positive other-agency emotions). If the success is seen as caused by impersonal circumstances, people feel lucky and happily surprised (positive situation-agency emotions). We hypothesized that Americans, who tend to be self-enhancing, would attribute success to themselves and, as a result, experience strong positive self-agency

emotions such as pride. In contrast, Asians, who are more self-effacing, would attribute their success to external factors and, as a result, experience positive other-agency or situation-agency emotions such as gratitude.

Likewise, when experiencing failure, people generally feel negative emotions, but the type of negative emotion depends on the attribution of agency. If people blame themselves, they experience shame, regret, self-critical feelings, and anger towards themselves (negative self-agency emotions), but if people blame others, they experience anger, resentment, hostility, and unfriendly feelings towards those people (negative other-agency emotions). If people believe the failure is due to uncontrollable circumstances, they feel unlucky and disappointed (negative situation-agency emotions). Then, we hypothesized that Americans, who are motivated to protect their self-esteem, would blame their failures on external factors and, as a result, experience negative other- or situation-agency emotions such as anger. In contrast, we expected that Asians, who tend to be self-critical, would blame themselves for failure, and experience negative self-agency emotions such as shame.

Combining appraisal theories of emotion with evidence of cultural differences in attributions of success and failure, we hypothesized that people in North American contexts and Asian contexts experience different emotions in response to success and failure. To test this idea, we asked Japanese and American participants to think about situations in which they had succeeded or failed and describe what caused the events and to what extent they experienced various emotions (Study 1). We also hypothesized that if people in different cultures appraise situations in the same way, they should experience the same emotions. We attempted to induce Japanese and Americans participants to make

the same appraisals, and predicted that cultural differences in emotions would decrease (Study 2). We examined both personal situations (i.e., a course grade) and social situations (i.e., an interaction with another person).

### **Study 1: Appraisal and Emotion in Remembered Successes and Failures**

In Study 1 we predicted that Americans and Japanese would make different causal attributions for success and failure as past research has found, and attempted to discover whether their emotions were contingent on their attributions. We asked participants to think about successes and failures they had actually experienced in the past and describe the causes of the incidents and their emotional responses. We predicted that because of their self-enhancing and self-protecting motivations, Americans would tend to attribute success to themselves and, as a consequence, experience self-agency emotions such as pride, while they would attribute failure to external factors and experience other- or situation-agency emotions, such as anger. We also predicted that because of their self-effacing and self-criticizing tendencies, Japanese would attribute success to external factors and, as a consequence, experience other- or situation-agency emotions such as gratitude, but would attribute failure to themselves and experience self-agency emotions such as shame.

### Method

#### Participants

Sixty-seven Caucasian American undergraduates at the University of Michigan (36 females, 31 males) and 58 Japanese undergraduates at Kanazawa University (39 females, 19 males) participated in the study for partial class credit (Americans) or a 500-yen book coupon (Japanese). The mean age of the American participants ( $M = 18.73$ ,

$SD = .91$ ) did not statistically differ from that of Japanese participants ( $M = 18.40$ ,  $SD = .53$ ).

### Procedure

The study was conducted in small groups of five to ten people. Participants were told that the purpose of the study was to understand people's emotions in various situations and were given a questionnaire. The questionnaires were created in English, translated into Japanese, and back-translated to English to make sure that the English and Japanese versions had equivalent content. In the questionnaire, participants were asked to think about particular situations they had experienced in their past as vividly as possible and to write brief descriptions of the situations. Each questionnaire included two of four types of situations: 1) receiving a grade that was much better than usual (personal success), 2) receiving a grade that was much worse than usual (personal failure), 3) getting along well with someone when they did not expect to (social success), and 4) not getting along well with someone when they expected to (social failure). Each participant wrote about two of the four situations, which were counterbalanced for personal/social and success/failure: If the first situation was about personal success, the second situation was about social failure.

After briefly describing the situation, participants rated the possible causes of the incident (i.e., the self, other person, and circumstance) on a scale of 0 (not at all) to 8 (very much). Then they rated the degree to which they experienced each of 36 different emotions on a scale of 0 (not at all) to 8 (very much). These emotions included six types of emotions: positive self-agency (proud, confident, satisfied, superior), positive other-agency (grateful, friendly, obligated, humble), positive situation-agency (lucky,

happily surprised), negative self-agency (ashamed, self-critical, regretful, angry at self), negative other-agency (resentful, angry, unfriendly, hostile), and negative situation-agency (unlucky, disappointed). Also, there were 16 filler emotions such as relaxed and anxious. We pre-tested the correlation between the three types of agency appraisals and corresponding emotions and found that all but four emotions were significantly or at least marginally correlated with the corresponding agency appraisal. The four emotions that failed to show the correlations were humble, hostile, happily surprised, and disappointed. These emotions were dropped from the analysis. The reliabilities (Cronbach's alphas) for the positive self-agency, positive other-agency, negative self-agency, and negative other-agency emotions were .81, .65, .87, and .76, respectively. Cronbach's alphas were not computed for the positive and negative situation-agency emotions because each had only one emotion (i.e., lucky, unlucky).

To examine individual differences, we also included the Singelis Self-Construal Scale (1994) for independence-interdependence orientation, Rosenberg's Self-Esteem Scale (1965), the Contingencies of Self-Worth Scale (academic contingency items only; Crocker, 2003), and the Relationship Contingencies of Self-Worth Scale (Uchida, in press). Because our analysis of culturally congruent appraisals is based on the culturally sanctioned motivation for self-enhancement in the American context as opposed to the culturally sanctioned inclination to self-criticism in the Japanese context, we expected that individuals' cultural identification and self-esteem level might explain any cultural differences in appraisal and emotion we might observe. That is, we expected to find that Americans would report stronger self-agency emotions in a success situation as a result of their self-attribution, and they would report stronger other- and/or situation-agency

emotions in a failure situation as a result of their external attribution. At the same time, we expected to find the opposite patterns among Japanese. We also predicted that these cultural differences might be significantly reduced when we statistically control for the cultural identification or self-esteem variables.

## Results and Discussion

### Correlations between Appraisal and Emotion Types

To test whether attributing the incidents to a particular causal agent (i.e., self, other people, situation) corresponded to type of emotion, Pearson correlations were computed between agency appraisal and emotion. For this analysis, personal and social situations were collapsed. As shown in Table 2.1, self-agency appraisal and self-agency emotions, other-agency appraisal and other-agency emotions, and situation-agency appraisal and situation-caused emotion showed significant positive correlations except that grateful and lucky feelings did not reach significance. Also, there are some cultural variations in the degree of correlations; in comparison to Japanese, Americans' friendly and unfriendly feelings were correlated much less with appraisals of other agency. However, the majority of the correlations suggest that agency appraisals did correspond to types of emotions.

### Agency Appraisals

The four types of situation were first analyzed separately. The ratings for the agency appraisals were analyzed with mixed-design ANOVAs with culture and gender as between-subject factors and agency appraisal (self, other people, and situation) as a within subject variable. The means, standard deviations, ANOVA results, and effect sizes are shown in Table 2.2. Gender effects and interactions are reported only when they

reached significance. Independent-sample and paired-sample t-tests were also computed to further examine the between- and within-culture differences.

Personal situations. In the personal success condition, in which participants remembered receiving a good grade, the main effect for agency appraisal and the Culture x Appraisal interaction were significant. In both cultures, the self was seen as most responsible for success, while other people were seen as least responsible. The most notable cultural difference involved the degree of situation-agency appraisal. Japanese attributed their personal success to the situation significantly more than did Americans,  $t(61.43) = 4.67, p < .001, d = 1.16$ . Also, Americans' self-attribution was significantly greater than their attribution to others,  $t(33) = 6.06, p < .001$ , and than their attribution to the situation,  $t(33) = 6.92, p < .001$ . In contrast, Japanese gave as much credit to the situation as to themselves,  $t(29) = 1.37, ns$ .

In the personal failure condition, both the main effect for agency appraisal and the Culture x Appraisal interaction were again significant. While self-agency was significantly greater than other-agency or situation-agency appraisals in both cultures, Japanese self-agency appraisal was significantly higher than that of Americans,  $t(59) = 3.31, p < .01, d = .84$ .

When personal success situations were compared with personal failure situations, Japanese self-agency appraisal was marginally greater in the failure situations than in the success situations,  $t(56) = 1.86, p = .068, d = .49$ , but their attribution to others and to situational factors were greater in the personal success situations than in the personal failure situations,  $t(56) = 1.95, p = .056, d = .51$ ;  $t(56) = 4.29, p < .001, d = 1.13$ , respectively. By contrast, Americans' self-agency appraisal was significantly greater in

the personal success situations than in the personal failure situations,  $t(65) = 3.27, p < .01, d = .80$ , but their situation-agency appraisal was marginally greater for failure than for success,  $t(65) = 1.94, p = .056, d = .48$ .

Overall, these findings suggest that Americans are more likely to make self-enhancing and self-protective appraisals. While Japanese attributed personal success both to themselves and to the situation, Americans primarily attributed it to themselves. Also, Americans blamed their personal failure on others and the situation more than did Japanese.

Social situations. Not surprisingly, other people are much more salient in social situations than in personal situations in both cultures. In the social success situations, in which participants remembered a successful interaction with another person, agency appraisals were quite similar in the two cultures. While the main effect for appraisal was significant, no significant differences were found among the three types of appraisal in either culture (all  $t_s < 1.09, ns.$ ) except that Japanese situation-agency appraisal was marginally greater than their self-agency appraisal,  $t(27) = 1.76, p = .089$ .

Cultural differences were more pronounced for memories of social failure. While Japanese saw themselves, other people, and situational forces as more or less equally responsible for their social failures, Americans blamed other people more than themselves,  $t(33) = 5.09, p < .001$ , or the situation,  $t(33) = 2.84, p < .01$ , in keeping with the cultural bias towards self-enhancement. Indeed, Americans blamed themselves for social failure less,  $t(62) = 3.05, p < .01, d = .76$ , and blamed other people more,  $t(62) = 2.89, p < .01, d = .72$ , than did the Japanese. When success and failure conditions were compared, Japanese saw themselves as more responsible for their failures,  $t(65) = 2.37, p$

$< .05$ ,  $d = .62$ , while Americans saw other people as marginally more responsible for their failures,  $t(65) = 1.62$ ,  $p = .10$ ,  $d = .40$ .

In short, cultural differences in appraisal were more apparent in the social failure situations than the social success situations. As predicted, the Japanese took responsibility for social failures, whereas the Americans blamed other people.

### Agency-related Emotions

The mean rating scores for the emotions associated with the three types of agency (self, other people, situation) were submitted to a mixed-design ANOVA with culture and gender as between-subject factors and emotion type as a within subject variable. Positive emotions were analyzed in the success conditions, and negative emotions were analyzed in the failure conditions. The means, standard deviations, ANOVA results, and effect sizes are shown in Table 2.3. No significant gender effects were found. To further examine between and within cultural differences, independent-sample and paired-sample t-tests were computed.

Personal situations. In the personal success condition, the main effect for emotion type and the Culture x Emotion interaction were significant. Overall, Japanese participants' emotions reflected their agency appraisals: They reported experiencing emotions associated with self- and situation- agencies more strongly than other-agency emotions,  $t(29) = 7.54$ ,  $p < .001$ ,  $t(29) = 4.22$ ,  $p < .001$  respectively, although their self-agency emotions were stronger than their situation-agency emotion,  $t(29) = 2.20$ ,  $p < .05$ . On the other hand, Americans' emotions were less reflective of their appraisals: While they experienced self-agency emotions most strongly, they also experienced

other-agency emotions quite strongly. In fact, Americans felt other-agency emotions significantly more strongly than did Japanese,  $t(61) = 2.76, p < .01, d = .68$ .

In the personal failure condition, Japanese participants' emotions also corresponded to their appraisals: They attributed their failures to themselves, and they experienced the self-agency emotions more than other-agency or situation-agency emotions,  $t(27) = 8.00, p < .001, t(27) = 5.86, p < .001$  respectively. Americans, too, experienced self-agency emotions most strongly, but they also experienced significantly stronger other-agency emotions than did Japanese,  $t(59) = 3.31, p < .01, d = .84$ .

Overall, Japanese emotions reflected their agency appraisals. In remembering both personal successes and failures, the degree to which they attributed the incidents to each causal agent closely resembled the degree to which they experienced the corresponding emotions. However, this was less true for Americans, in particular because of their experience of other-agency emotions. Since others are little involved in the personal incidents (which is evident from their free descriptions), such strong emotion towards others seems rather peculiar. The means of the three emotions comprising the other-agency positive emotions (friendly, grateful, and obligated) in the personal success condition were all significantly different between Japanese and Americans ( $M_s = 2.90$  vs.  $6.30$ ;  $3.90$  vs.  $6.15$ , and  $3.10$  vs.  $1.06$ , for Japanese and Americans respectively), but the largest cultural difference was found for the friendly feeling,  $t(61) = 5.77, p < .001, d = 1.49$ . Also, the means of the three emotions comprising the other-agency negative emotions (unfriendly, angry, and resentful) in the personal failure condition were all significantly different between Japanese and Americans ( $M_s = 2.32$  vs.  $6.30$ ,  $3.11$  vs.  $4.58$ , and  $2.39$  vs.  $4.97$  for Japanese and Americans respectively), but the largest cultural

difference was found for the unfriendly feeling,  $t(59) = 5.52, p < .001, d = 1.62$ . As indicated in Table 2.1, these emotions were less induced by other-agency appraisal among Americans in comparison to Japanese. It therefore seems that Americans feel friendly in personal successes but feel unfriendly towards other people in personal failures even towards others who are not involved in the incidents.

Social situations. In experiences of social success, the main effect for emotion type and the Culture x Emotion interaction reached significance. Although Japanese self-attributions were not different from their attributions to other people or the situation, their self-agency emotions were significantly weaker than their other-agency and situation-agency emotions,  $t(27) = 4.80, p < .001, t(27) = 2.64, p < .05$ , respectively. Also, Japanese' self-agency emotion was significantly weaker than that of Americans,  $t(58) = 2.29, p < .05, d = .59$ . Americans, on the other hand, experienced the three types of emotions about equally (just as they attributed their social success to the three types of agency equally).

In the social failure condition, the main effect for emotion type and the Culture x Emotion interaction were significant. Americans' emotions reflected their appraisals; they experienced other-agency emotion more strongly than self-agency or situation-agency emotions,  $t(33) = 6.21, p < .001, t(33) = 2.69, p < .05$ , respectively. Japanese emotions also matched their appraisals. As we found that Japanese attributed social failure to themselves more than did Americans, they also experienced self-agency emotions more strongly than did Americans,  $t(62) = 3.24, p < .01, d = .81$ .

As the cultural difference in agency appraisals was more significant in the social failure situations than in the social success situations, the cultural difference in emotions

was also more clearly demonstrated in the social failure situations. The overall patterns of emotion resembled the appraisal pattern in both success and failure situations, except that Japanese experienced somewhat less self-agency emotion than we might expect from the degree of their self-agency appraisal.

### Measures for Individual Differences

We also included four measures that assessed individual differences, speculating that independent-interdependent cultural orientation or the level of self-esteem might contribute to the cultural differences in appraisals and emotions. As expected, Americans scored significantly higher than Japanese on three of the four measures – the Singelis Self-Construal Scale, Rosenberg’s Self-Esteem Scale, and Crocker’s Academic Contingent Self-Esteem Scale,  $t(115) = 5.14, p < .001, d = .95, t(109) = 2.44, p < .05, d = .48, t(122) = 6.86, p < .001, d = 1.23$ , respectively. The Relationship Contingencies of Self-Worth Scale did not reach significance. To examine the effect of these variables on appraisals and emotions, the mean scores were entered one at a time as a covariate in the Culture x Appraisal and Culture x Emotion mixed-design ANOVAs. This analysis was done separately for each condition (personal success, personal failure, etc.). None of these measures interacted significantly with appraisal or emotion.

The null findings on these measures suggest that neither individuals’ cultural orientation nor their level of self-esteem was responsible for the cultural differences in appraisals or emotions. However, it is also possible that these explicit self-report measures failed to capture individuals’ implicit attitudes, which might be more strongly associated with their appraisals and emotions. After all, if one were conscious of one’s self-enhancing biases, they would no longer be so effective in enhancing the self.

## **Study 2: Free and Induced Appraisal and Emotion in Hypothetical Situations**

Consistent with past research, Study 1 found that appraisals tended to be self-enhancing in Americans and self-effacing in Japanese. More important, Study 1 found that these culturally different appraisals of the situations corresponded to different emotions in Americans and Japanese. These findings support our hypothesis that Americans and Japanese experience different emotions because they appraise the same situation in different ways.

If the cultural differences in experienced emotions are largely due to culturally divergent appraisals, it should follow that if Americans and Japanese appraise the situation in the same way, the cultural differences in emotions should disappear or decrease significantly. To test this hypothesis, we prepared two types of vignettes – some with no information about the cause of the incident (free-appraisal vignettes) and others that described a specific causal factor (induced-appraisal vignettes). We expected to find that participants who read the vignettes with causal information would show significantly less cultural difference in their emotion.

Moreover, we included an additional measure to assess individuals' self-enhancing tendency. We suspected that the failure to find any effect of cultural orientation or self-esteem in Study 1 might be due to the use of explicit measures. Therefore, in Study 2, we used a measure designed to assess individuals' self-enhancing tendency more implicitly by asking participants to estimate the percentage of the population of the same age and gender as themselves that is better than they are with respect to ten different aspects (e.g., intelligent, considerate; Markus & Kitayama, 1991; Heine & Lehman, 1997). It should be noted that this “percentage-estimate” measure is

different from the “better-than-average” measure (i.e., rating the self in comparison to an ‘average’ other), which was recently suggested as artificially inflating the magnitude of self-enhancement (Heine, Kitayama, & Hamamura, 2007). We speculated that individuals’ self-enhancing tendency captured by the “percentage estimate” measure might contribute to cultural differences in agency appraisals and emotions.

## Method

### Participants

One hundred twenty-five Caucasian American undergraduates at the University of Michigan (59 females, 66 males) and 183 Japanese undergraduates at Kanazawa University (124 females, 59 males) participated in the study for partial class credit (Americans) or a 500-yen book coupon (Japanese). The mean age of the American participants was 18.67 ( $SD = .93$ ), and that of Japanese participants was 19.45 ( $SD = 1.58$ ). Although the age difference between these two groups was significant,  $t(298.79) = 5.39, p < .001, d = .60$ , we found no correlation between age and other variables examined in this study. Thus age was omitted from the analyses.

### Procedure

The procedure was mostly the same as in Study 1. The main difference was that instead of thinking about their own experiences, participants in Study 2 read vignettes and imagined themselves in the situations described. As in Study 1, there were four types of situation: Personal success, personal failure, social success, and social failure. For the each situation, there were two types of vignettes – free-appraisal vignettes and induced-appraisal vignettes (see Appendix). The free-appraisal vignettes did not include any information about the cause of the incident, but the induced-appraisal vignettes

included additional information about one of the three types of causal agency (self, other person, or situation). Thus, there were a total of 16 different vignettes, and each questionnaire included two of them, counterbalanced for personal/social and success/failure, as well as causal agency. Participants were assigned to either the free-appraisal or the induced-appraisal vignettes.

After reading each vignette, participants rated agency appraisals and emotions as in Study 1. They were then asked to estimate the percentage of the population of the same age and gender as themselves that was better than they were for each of 10 traits – intelligent, considerate, hard-working, interesting, dependable, confident, loyal, attractive, cooperative, and independent. The questionnaires were created in English first, translated into Japanese, and back-translated into English to make sure that English and Japanese versions had the same contents.

## Results and Discussion

### Correlations between Appraisal and Emotion Types

Correlations between agency appraisals and corresponding types of emotions were very similar to the ones we found in Study 1. In the success vignettes, the correlation for agency appraisals (self, other, situation) and their corresponding types of emotions were all significant,  $r = .51, p < .001$ ;  $r = .36, p < .001$ ;  $r = .29, p < .001$ , respectively. Likewise, all the correlations in the failure vignettes were significant,  $r = .68, p < .001$ ;  $r = .33, p < .001$ ;  $r = .51, p < .001$ , respectively.

### Free-Appraisal Vignettes

Agency appraisals. A mixed-design Culture x Gender x Appraisal (self, other person, situation) ANOVA was computed for each type of situation (i.e., personal success,

personal failure, social success, social failure). The means, standard deviations, ANOVA results, and effect sizes are shown in Table 2.4. The overall attribution patterns were very similar to those we observed in Study 1, and often stronger. For example, Americans attributed personal success to themselves more than did Japanese,  $t(32) = 3.11, p < .01, d = 1.07$ , whereas Japanese attributed success to the situation more than did Americans,  $t(32) = 3.11, p < .01, d = 1.07$ . In fact, the present study found that Japanese situation-agency appraisal in the personal success vignette was even greater than their self-agency appraisal,  $t(19) = 3.85, p = .001$ . Also, Americans attributed personal failure to others significantly more than did Japanese,  $t(32) = 2.42, p < .05, d = .80$ .

As in Study 1, there was no significant Culture x Appraisal interaction in the social success vignette. However, when the two cultures were analyzed separately, there were no significant differences in Americans' appraisals of agency to self, others, or the situation, but the Japanese attributed their social success to situational factors significantly more than to themselves or other people,  $t(19) = 3.32, p < .01$ ;  $t(19) = 2.64, p < .05$ , respectively. Americans attributed social failure to other people more than did Japanese,  $t(32) = 2.72, p < .05, d = .81$ , whereas Japanese attributed social failure to themselves more than did Americans,  $t(32) = 2.32, p < .05, d = .98$ . In short, Americans' self-enhancing and Japanese' self-effacing attribution tendencies were demonstrated even more clearly in Study 2 than in Study 1.

Agency-related emotions. The results of the mixed-design ANOVAs (Culture x Gender x Emotion) are shown in Table 2.5. Again, the findings were very similar to what we saw in Study 1. For example, in comparison to the Japanese, Americans reported significantly stronger self-agency emotions for the personal success vignette,  $t(32) =$

2.30,  $p < .05$ ,  $d = .84$ , and stronger other-agency emotions for the personal failure vignette,  $t(32) = 2.61$ ,  $p < .05$ ,  $d = .92$ . For these personal success and failure vignettes, Americans' other-agency emotions were quite high, given the level of their attribution to others, replicating what we observed in Study 1. As found in Study 1, this cultural difference in other-agency emotions was primarily due to friendly feeling in the personal success vignette (Japan,  $M = .27$ ,  $SD = 2.85$ ; US,  $M = 5.79$ ,  $SD = 1.97$ ),  $t(32) = 3.74$ ,  $p = .001$ ,  $d = 1.26$ . Further analysis found that American's friendly feeling in the personal success vignette was significantly correlated with their self-agency appraisal ( $r = .83$ ,  $p < .001$ ) but not with their other-agency appraisal ( $r = .30$ ,  $ns$ ). Among Japanese, friendly feeling was significantly correlated with their other-agency appraisal ( $r = .49$ ,  $p < .05$ ) but not with their self-agency appraisal ( $r = .09$ ,  $ns$ ). Thus, while Japanese feel friendly towards others when personal success was attributed to others, Americans feel friendly when they attribute it to themselves. However, no such cultural differences were found in the feeling of unfriendliness in the personal failure vignettes.

When imagining themselves in social successes, Americans reported the three types of emotions equally strongly, reflecting their equal attribution to the three possible agents. Also reflecting their agency appraisals, Japanese situation-agency emotions were significantly stronger than their self-agency emotions,  $t(19) = 6.13$ ,  $p < .001$ , or their other-agency emotions,  $t(19) = 3.15$ ,  $p < .01$ . Again, Japanese self-agency emotions were much weaker than we might expect from their attribution of success to themselves. When imagining social failures, Japanese reported stronger self-agency emotions than Americans,  $t(32) = 4.11$ ,  $p < .001$ ,  $d = 1.40$ , corresponding to their agency appraisals.

Overall, these emotion patterns reflect the culturally typical agency appraisals, and replicate the findings of Study 1.

Self-enhancement measure. The mean percentage of the ten trait items was computed for each participant. The score could vary from 0 to 100, smaller numbers indicating greater self-enhancement. Consistent with past literature, Americans' self-enhancement ( $M = 21.63$ ,  $SD = 11.40$ ) was significantly greater than that of Japanese ( $M = 55.54$ ,  $SD = 11.33$ ),  $t(66) = 12.11$ ,  $p < .001$ ,  $d = 2.98$ .

More important, we found significant correlations between self-enhancement and agency appraisals (personal and social vignettes were collapsed in this analysis). The higher participants' self-enhancement (i.e., lower percentage score), the more they attributed success to themselves ( $r = -.24$ ,  $p < .05$ ) and failure to others ( $r = -.40$ ,  $p = .001$ ). In contrast, the lower participants' self-enhancement, the more they attributed success to the situation ( $r = .43$ ,  $p < .001$ ) and failure to themselves ( $r = .32$ ,  $p < .01$ ). Similar correlations were also found between self-enhancement and emotions. The higher the self-enhancement, the stronger the self-agency emotions in the success vignettes ( $r = -.36$ ,  $p < .01$ ) and the stronger the other-agency emotions in the failure vignettes ( $r = -.37$ ,  $p < .01$ ). In contrast, the lower the self-enhancement, the stronger the situation-agency emotions in the success vignettes ( $r = .38$ ,  $p = .001$ ) and the stronger the self-agency emotions in the failure vignettes ( $r = .26$ ,  $p < .05$ ).

Most important, when we controlled for self-enhancement by entering it as a covariate in Culture x Appraisal ANOVAs, the interaction terms were markedly reduced in the success vignettes,  $F(2,130) = 3.67$ ,  $p < .05$ ,  $\eta_p^2 = .05$  (in comparison to  $F(2,132) = 12.13$ ,  $p < .001$ ,  $\eta_p^2 = .16$  without the covariate), and became non-significant in the failure

vignettes,  $F(2,130) = .25, ns., \eta_p^2 = .00$  ( $F(2,132) = 6.40, p < .01, \eta_p^2 = .09$  without covariate). Similar findings were obtained in Culture x Emotion ANOVAs. When the self-enhancement score was controlled for, the Culture x Emotion interaction became non-significant in the success conditions,  $F(2,130) = .90, ns., \eta_p^2 = .01$  ( $F(2,132) = 17.52, p < .001, \eta_p^2 = .21$  without the covariate), and noticeably reduced in the failure conditions,  $F(2,130) = .331, p < .05, \eta_p^2 = .05$  (in comparison to  $F(2,132) = 7.87, p < .001, \eta_p^2 = .11$  without the covariate). These findings indicate that cultural differences in agency appraisal and the corresponding emotion were largely due to individuals' self-enhancement tendencies.

#### Induced Appraisal Vignettes

Agency appraisals. A mixed-design ANOVA (Culture x Gender x Appraisal) was computed for each of the 12 vignettes (i.e., personal/social, success/failure, self/other/situation causality information). The means and standard deviations are shown in Table 2.6, and the ANOVA results are shown in Table 2.7. In ten of the twelve vignettes Culture x Attribution interaction did not reach significance, indicating that given the same causal information, Japanese and American participants made the same agency appraisals. The two exceptions were the vignettes describing personal successes caused by oneself and by other people. Even when personal success was described as being caused by the self, Japanese continued to attribute it to the situation significantly more than did Americans,  $t(39) = 3.28, p < .01, d = .83$ . Also even when personal success was described as being caused by someone else, Americans continued to attribute it to themselves significantly more than did Japanese,  $t(35) = 3.28, p < .01, d = 1.19$ . However, in comparison to the free-appraisal vignette, the Culture x Appraisal

interactions in these self-agency and other-agency induced appraisal vignettes were significantly smaller,  $F(2,134) = 5.89, p < .01, \eta_p^2 = .08$ ;  $F(2,126) = 3.11, p < .05, \eta_p^2 = .05$ , respectively. Thus, although some cultural differences still remained in the two personal success vignettes, the induced-attribution vignettes were mostly successful in eliminating cultural differences in appraisal.

Agency-related emotions. A mixed-design ANOVA (Culture x Gender x Emotion) was computed for each type of personal/social, success/failure vignette. The means and standard deviations are shown in Table 2.8, and the ANOVA results are shown in Table 2.9. In ten out of 12 vignettes, the Culture x Emotion interactions did not reach significance. Again, cultural differences remained in two of the personal success vignettes. In the other-agent appraisal induced vignette, Americans' other-agency emotions were significantly weaker than those of the Japanese,  $t(35) = 3.86, p < .001, d = 1.36$ , and in the situation-agency appraisal induced vignette, Americans' situation-agency emotions were significantly weaker than those of the Japanese,  $t(40) = 2.26, p < .05, d = .69$ . Although significant, the Culture x Attribution interactions for these other-agency and situation-agency induced appraisal vignettes were significantly smaller than that of the free-appraisal vignette,  $F(2,132) = 4.82, p = .01, \eta_p^2 = .07$ ;  $F(2,136) = 3.50, p < .05, \eta_p^2 = .05$ , respectively, suggesting that cultural differences in emotions greatly diminished or disappeared when appraisals were the same.

### **General Discussion**

The major contribution of the present research is that it demonstrated the universality and cultural specificity of appraisal theories of emotion. Particularly, the current findings are consistent with the universal contingency hypothesis, which predicts

that equivalent emotions in different cultures are characterized by similar appraisal patterns, and the dimensions that define appraisal patterns are culturally general (Ellsworth, 1994; Mesquita & Ellsworth, 2001). Indeed, our studies found that the emotions experienced by both Japanese and Americans in success and failure situations were distinguished by the dimension of agency. That is, in both cultures, appraisals of agency (self, other people, or situation) were significantly correlated with type of emotion (which we distinguished as self-, other-, or situation-agency emotions). In further support of the hypothesis, Japanese and Americans reported experiencing similar emotion when they were induced to make the same appraisal.

The present research also demonstrated culturally specific patterns of appraisal and emotion. Drawing on appraisal theories of emotion and past research on cultural differences in self-serving attributions, we hypothesized that Japanese and Americans would appraise the same situations differently on the dimension of causal agency and, as a consequence, experience different emotions. Consistent with the past literature, significant cultural differences in agency appraisals for successes and failures were observed: In comparison to the Japanese, Americans credited themselves for successes and blamed failures on external factors (other people and the situation), whereas Japanese attributed success to the situation and blamed themselves for failure. More important, the current research provided evidence that Americans and Japanese experience different emotions as a result of these different appraisals. That is, Americans experienced self-agency emotions such as pride when they succeeded but other-agency and situation-agency emotions such as anger and bad luck when they failed. By contrast, Japanese felt lucky when they succeeded but felt ashamed when they failed.

Earlier, we argued that cultural differences in appraisals and the corresponding emotions stem from cultural differences in the motivation to maintain a positive view of the self. Accordingly, we found that the degree to which individuals view themselves positively was strongly correlated with self-serving agency appraisals and the corresponding emotions, and that the cultural differences in appraisal and emotion virtually disappeared once we statistically controlled for the self-enhancement.

While most of the findings matched our expectations, some were quite unexpected. For example, we found some discrepancies between appraisals and emotions. Americans felt fairly strong other-agency emotions, particularly friendly feeling, in the personal conditions, even though they did not attribute the outcome to other people. This tendency persisted in the personal success vignette condition of Study 2 even when we induced participants to make self and situational attributions. Study 2 also found that Japanese felt friendly when they attributed personal success to others as we expected, but Americans felt friendly when they attributed the success to themselves, but not to others. Thus, personal achievement may enhance Americans' relationships with others, but receiving help from others may enhance Japanese relationships with others.

Another discrepancy between agency appraisal and emotion was that Japanese reported relatively little self-agency emotion when they attributed social success to themselves (Study 1 and free-attribution vignette in Study 2). The correlation between the self-attribution and self-caused emotion in the social success condition of Study 1 was significant for Americans ( $r = .38, p < .05$ ) but not for Japanese ( $r = .21, ns$ ). This correlation in Study 2 was significant for both Japanese and Americans, but it was weaker for Japanese ( $r = .34, p = .001$ ) than for Americans ( $r = .55, p < .001$ ). It may be

that Japanese are reluctant to feel good about themselves, particularly to feel proud or superior in social situations, because such personally focused positive feelings may disrupt their harmonious relationships with others (Uchida, Narasakkunkit, & Kitayama, 2004). Thus, while feeling good about oneself may enhance Americans' relationships with others, it may impair Japanese relationships with others. These speculations should be further investigated in future studies.

One of the limitations of the present studies is that they rely on self-report. It is possible that the Japanese' humble self-presentation was simply a matter of impression management, thus, did not reflect their true feelings. This concern is not unique to our research, but is general in cross-cultural research on self-serving biases. However, some studies provide evidence that Japanese are not feigning modesty (Heine, Lehman, Markus, & Kitayama, 1999). For example, Japanese are just as self-critical when they fill out questionnaires in complete anonymity (Kitayama, 1999). Also, Japanese evaluate other people's self-esteem as negatively as their own (Kitayama et al., 1997), suggesting that Japanese critical evaluation is not limited to themselves but is a general cultural perception. Therefore, it is reasonable to believe that Japanese participants in our studies were also reporting their genuine responses.

Another limitation is that the findings in the present research were based on retrospective and hypothetical situations, which may be quite different from how people perceive situations and experience emotions at the moment of actually experiencing success or failure. In fact, discrepancies between on-line and retrospective or hypothetical emotion reports have been found in past research (see Robinson & Clore, 2002 for a review). For example, men reported more intense male-stereotypic emotions (e.g., pride,

anger), and women reported more intense female-stereotypical emotions (e.g., guilt, sympathy) in retrospective and hypothetical conditions, but these gender differences were not observed when people described their actual current emotions (Robinson, Johnston, & Shields, 1998). Similarly, Asian Americans and Japanese showed fewer positive emotions than did European Americans in retrospective reports, but the cultural difference in reports on ongoing experience were found to be small (Scollon, Diener, Lucas, Oishi, & Biswas-Diener, 2001).

Robinson and Clore (2002) argue that such discrepancies occur because in retrospective or hypothetical conditions, individuals' general beliefs about emotion (e.g., cultural beliefs, social norms, and stereotypes) play a significant role in filling in the details of their emotional experience. In this respect, it is important to understand cognitive appraisal not as a one-time event but rather as a process that evolves over time. Thus, in our future research we intend to examine online and retrospective reports of the same event to find out how cultural beliefs about attribution and emotion come into play in the evolving process of cognitive appraisal and corresponding emotions over a longer time span.

Table 2.1  
Correlation between agency appraisal and emotion in Study 1

Success								
Appraisal	Self Agency Emotion				Other Agency Emotion			Situation Agency Emotion
Agency	Proud	Confident	Satisfied	Superior	Friendly	Obligated	Grateful	Lucky
Self	.51*** (.45; .56)	.44*** (.51; .35)	.42*** (.37; .47)	.49*** (.53; .48)	.05 (-.21;.27)	-.10 (.18; -.36)	.13 (.11;.05)	.03 (.11; -.05)
		.58*** (.56; .60)				.10 (.04;.15)		.03 (.11; -.05)
Other	-.20* (-.32; -.14)	-.10 (-.28; .04)	-.12 (-.08; -.13)	-.24** (-.25; -.22)	.22* (.28; .14)	.22* (.24; .24)	.24** (.18; .14)	.02 (-.05; .10)
		-.21* (-.29; -.15)				.27** (.30; .25)		.02 (-.05; .10)
Situation	-.09 (.10; -.14)	-.14 (.09; -.29)	-.11 (.12; -.25)	-.04 (.09; -.16)	-.14 (-.19; .03)	.16 (.09; .14)	-.11 (.04; -.16)	.13 <sup>+</sup> (.18; .12)
		-.11 (.11; -.26)				-.04 (-.02; .01)		.13 <sup>+</sup> (.18; .12)
Failure								
Agency	Angry at self	Regretful	Ashamed	Self-critical	Unfriendly	Resentful	Angry	Unlucky
Self	.54*** (.42; .61)	.48*** (.38; .55)	.41*** (.31; .50)	.40*** (.32; .46)	-.21* (-.28;.02)	-.20* (-.37;.13)	-.32** (-.37;.03)	-.13 (-.09; -.08)
		.54*** (.38; .62)				-.29*** (-.40; .09)		-.13 (-.09; -.08)
Other	-.49*** (-.25; -.66)	-.37*** (-.13; -.49)	-.41*** (-.36; -.46)	-.36*** (-.16; -.51)	.27** (.38; .13)	.27** (.30; .22)	.27** (.29; .24)	.09 (.18; -.05)
		-.48*** (-.29; -.60)				.31*** (.33; .23)		.09 (.18; -.05)
Situation	-.10 (-.15; -.04)	-.23** (-.21; -.20)	.04 (.10; .01)	-.08 (-.09; -.06)	.16 (.26; -.01)	-.07 (-.01; -.20)	.15 (.06; .20)	.35*** (.28; .40)
		-.10 (-.10; -.08)				-.09 (.12; -.04)		.35*** (.28; .40)

Note. <sup>+</sup>  $p < .10$ , \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . Personal and social situations are collapsed.

The correlation coefficients for Japanese are indicated on the left, and those for Americans are indicated on the right in ( ).

Table 2.2  
Agency appraisal means and ANOVA results in Study 1

Agency	Personal Success		Personal Failure <sup>1</sup>		Social Success		Social Failure	
	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>
Self	5.93 <sup>a</sup> (2.00)	6.74 <sup>a</sup> (1.64)	6.86 <sup>a</sup> (1.76)	5.48 <sup>a</sup> (1.48)	3.50 <sup>a</sup> (2.44)	4.06 <sup>a</sup> (2.65)	4.93 <sup>a</sup> (2.15)	3.32 <sup>b</sup> (2.07)
Other	2.77 <sup>b</sup> (2.49)	3.03 <sup>b</sup> (2.82)	1.54 <sup>c</sup> (2.30)	2.42 <sup>c</sup> (1.94)	4.29 <sup>a</sup> (2.27)	4.85 <sup>a</sup> (2.37)	4.23 <sup>a</sup> (2.22)	5.68 <sup>a</sup> (1.77)
Situation	5.20 <sup>a</sup> (2.01)	2.56 <sup>b</sup> (2.51)	2.86 <sup>b</sup> (2.16)	3.67 <sup>b</sup> (2.13)	4.71 <sup>a</sup> (2.48)	4.70 <sup>a</sup> (2.98)	3.70 <sup>a</sup> (2.74)	4.00 <sup>b</sup> (2.61)
ANOVA	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$
Culture	3.05 (1,60)	.05	.28 (1,57)	.01	.66 (1,57)	.01	.00 (1,60)	.00
Appraisal	31.15*** (2,120)	.34	55.58** (2,114)	.49	3.69* (2,114)	.06	3.70* (2,120)	.06
C x A	8.82*** (2,120)	.13	4.75** (2,114)	.08	.81 (2,114)	.01	6.24** (2,120)	.09

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ . Within each column, means with different scripts (a, b, c,) are significantly different at  $p < .05$ .

<sup>1</sup> Gender main effect,  $F(1,57) = 5.82^*$ ,  $\eta_p^2 = .09$ ; Culture x Gender,  $F(1,57) = 5.01^*$ ,  $\eta_p^2 = .08$ ; and Gender x Appraisal,  $F(1,57) = 4.44^*$ ,  $\eta_p^2 = .07$ , were significant in the personal failure condition.

Table 2.3  
Emotion means and ANOVA results in Study 1

Emotion type	Personal Success		Personal Failure		Social Success		Social Failure	
	Japan <i>M (SD)</i>	US <i>M (SD)</i>						
Self-agency	6.38 <sup>a</sup> (1.29)	6.33 <sup>a</sup> (1.22)	6.19 <sup>a</sup> (1.44)	6.18 <sup>a</sup> (1.31)	3.00 <sup>b</sup> (1.60)	3.93 <sup>a</sup> (1.45)	4.16 <sup>a</sup> (2.07)	2.58 <sup>c</sup> (1.83)
Other-agency	3.30 <sup>c</sup> (2.25)	4.50 <sup>b</sup> (1.02)	2.61 <sup>c</sup> (2.49)	5.28 <sup>b</sup> (1.36)	4.69 <sup>a</sup> (1.85)	4.39 <sup>a</sup> (1.53)	4.43 <sup>a</sup> (1.99)	5.03 <sup>a</sup> (1.63)
Situation-agency	5.30 <sup>b</sup> (2.45)	4.73 <sup>b</sup> (2.28)	3.54 <sup>b</sup> (2.69)	4.24 <sup>c</sup> (2.51)	4.36 <sup>a</sup> (2.63)	3.65 <sup>b</sup> (2.73)	2.90 <sup>b</sup> (2.38)	3.74 <sup>b</sup> (2.73)
ANOVA	<i>F (df)</i>	$\eta_p^2$						
Culture	.07 (1,59)	.00	7.40** (1,57)	.12	.04 (1,55)	.00	.20 (1,60)	.00
Emotion	38.42*** (2,118)	.39	27.84*** (2,114)	.33	6.95*** (2,110)	.11	11.11*** (2,120)	.16
C x E	5.34** (2,118)	.08	8.77*** (2,114)	.13	3.19* (2,110)	.06	8.27*** (2,120)	.12

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ . Within each column, means with different scripts (a, b, c,) are significantly different at  $p < .05$ .

In success situations, self-agency emotions are proud, confident, satisfied, and superior; other-agency emotions are friendly, obligated, and grateful; and situation-agency emotion is lucky. In failure situations, self-agency emotions are angry at self, regretful, ashamed, and self-critical; other-agency emotions are unfriendly, resentful, and angry; and situation-agency emotion is unlucky.

No significant main effects or interactions for gender were found.

Table 2.4  
Agency appraisal means and ANOVA results for the free-appraisal vignettes in Study 2

Agency	Personal Success <sup>1</sup>		Personal Failure <sup>2</sup>		Social Success		Social Failure <sup>3</sup>	
	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>
Self	4.25 <sup>b</sup> (1.62)	6.14 <sup>a</sup> (1.92)	6.50 <sup>a</sup> (1.28)	6.14 <sup>a</sup> (1.17)	3.80 <sup>b</sup> (1.20)	4.29 <sup>a</sup> (1.77)	5.20 <sup>a</sup> (1.88)	3.64 <sup>b</sup> (1.98)
Other	3.45 <sup>b</sup> (2.37)	2.36 <sup>b</sup> (2.02)	1.55 <sup>c</sup> (1.23)	3.00 <sup>b</sup> (2.25)	4.45 <sup>b</sup> (1.32)	4.21 <sup>a</sup> (2.36)	3.25 <sup>b</sup> (1.86)	4.79 <sup>a</sup> (1.19)
Situation	6.40 <sup>a</sup> (1.47)	2.43 <sup>b</sup> (1.91)	3.65 <sup>b</sup> (1.76)	3.79 <sup>b</sup> (1.85)	5.55 <sup>a</sup> (1.73)	5.14 <sup>a</sup> (2.10)	4.00 <sup>b</sup> (2.43)	4.86 <sup>a</sup> (1.23)
ANOVA	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$
Culture	9.49** (1,30)	.24	.35 (1,30)	.01	.01 (1,30)	.00	.72 (1,30)	.02
Appraisal	8.95*** (2,60)	.23	64.22*** (2,60)	.68	5.77** (2,60)	.16	.50 (2,60)	.02
C x A	19.39*** (2,60)	.39	3.15* (2,60)	.09	.79 (2,60)	.03	7.48*** (2,60)	.20

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ . Within each column, means with different scripts (a, b, c,) are significantly different at  $p < .05$ .

<sup>1</sup> Culture x Gender x Appraisal was significant in the personal success free-appraisal vignette,  $F(2,60) = 3.32^*$ ,  $\eta_p^2 = .10$ .

<sup>2</sup> Gender main effect,  $F(1,30) = 4.58^*$ ,  $\eta_p^2 = .13$ , and Culture x Gender x Appraisal,  $F(2,60) = 3.59^*$ ,  $\eta_p^2 = .11$ , were significant in the personal failure free-appraisal vignette.

<sup>3</sup> Culture x Gender x Appraisal was significant in the social failure free-attribution vignette,  $F(2,60) = 3.49^*$ ,  $\eta_p^2 = .10$ .

Table 2.5  
Emotion means and ANOVA results for the free-appraisal vignettes in Study 2

Emotion type	Personal Success <sup>1</sup>		Personal Failure		Social Success		Social Failure <sup>2</sup>	
	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>	Japan <i>M (SD)</i>	US <i>M (SD)</i>
Self-agency	4.89 <sup>b</sup> (2.21)	6.39 <sup>a</sup> (1.25)	6.05 <sup>a</sup> (1.59)	5.84 <sup>a</sup> (1.28)	2.66 <sup>c</sup> (1.65)	4.43 <sup>a</sup> (1.04)	4.89 <sup>a</sup> (1.02)	3.27 <sup>b</sup> (1.27)
Other-agency	3.27 <sup>c</sup> (2.11)	4.02 <sup>b</sup> (1.25)	2.58 <sup>b</sup> (1.58)	5.05 <sup>b</sup> (1.47)	4.20 <sup>b</sup> (1.70)	5.07 <sup>a</sup> (1.04)	3.83 <sup>b</sup> (1.60)	4.21 <sup>a</sup> (1.52)
Situation-agency	6.45 <sup>a</sup> (1.82)	5.14 <sup>b</sup> (2.25)	3.70 <sup>b</sup> (2.34)	3.93 <sup>c</sup> (2.09)	5.30 <sup>a</sup> (1.81)	3.93 <sup>a</sup> (2.62)	4.80 <sup>a</sup> (2.38)	4.93 <sup>a</sup> (1.69)
ANOVA	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$	<i>F (df)</i>	$\eta_p^2$
Culture	.34 (1,30)	.01	2.14 (1,30)	.07	.55 (1,30)	.02	.67 (1,30)	.01
Emotion	10.39*** (2,60)	.39	17.38*** (2,60)	.37	8.33*** (2,60)	.22	4.64* (2,60)	.13
C x E	8.23*** (2,60)	.22	5.77** (2,60)	.16	12.83*** (2,60)	.30	6.82** (2,60)	.19

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ . Within each column, means with different scripts (a, b, c,) are significantly different at  $p < .05$ .

In success situations, self-agency emotions are proud, confident, satisfied, and superior; other-agency emotions are friendly, obligated, and grateful; and situation-agency emotion is lucky. In failure situations, self-agency emotions are angry at self, regretful, ashamed, and self-critical; other-agency emotions are unfriendly, resentful, and angry; and situation-agency emotion is unlucky.

<sup>1</sup> Gender main effect was significant in the personal success free-attribution vignette,  $F(2,60) = 4.34^*$ ,  $\eta_p^2 = .13$ .

<sup>2</sup> Culture x Gender x Emotion was significant in the social failure free-attribution vignette,  $F(2,60) = 5.95^{**}$ ,  $\eta_p^2 = .17$ .

Table 2.6  
Agency appraisal means for the induced-appraisal vignettes in Study 2

Vignette type	Agency appraisal	Personal Success		Personal Failure		Social Success		Social Failure	
		Japan <i>M (SD)</i>	US <i>M (SD)</i>						
Self-agency induced	Self	6.39 (1.31)	6.61 (.92)	7.23 (.92)	6.89 (1.08)	4.62 (2.45)	4.93 (2.27)	5.67 (1.27)	5.59 (1.50)
	Other	2.91 (1.86)	2.72 (1.84)	.68 (.84)	1.00 (1.08)	4.19 (2.15)	4.29 (1.27)	3.38 (1.58)	3.53 (2.00)
	Situation	4.57 (2.09)	2.67 (1.46)	2.77 (2.05)	1.72 (1.64)	5.03 (1.97)	4.71 (1.82)	3.17 (1.88)	3.06 (1.98)
Other-agency induced	Self	4.54 (1.86)	6.46 (1.33)	4.83 (1.81)	4.43 (2.10)	3.83 (1.50)	3.58 (1.74)	3.65 (1.75)	2.76 (1.68)
	Other	5.79 (1.38)	4.53 (1.61)	4.83 (2.12)	4.50 (1.79)	5.43 (2.11)	5.05 (1.96)	5.26 (1.60)	5.47 (1.77)
	Situation	4.83 (1.79)	3.23 (2.24)	3.96 (2.03)	3.50 (1.51)	5.39 (2.10)	4.47 (2.41)	3.48 (2.04)	3.76 (2.11)
Situation-agency induced	Self	5.04 (1.63)	5.33 (1.28)	5.92 (1.67)	5.89 (1.09)	3.34 (2.14)	3.53 (1.51)	4.96 (1.00)	3.67 (2.19)
	Other	3.92 (2.10)	2.67 (2.17)	2.58 (1.44)	3.50 (2.39)	3.78 (1.76)	3.06 (1.83)	3.71 (1.33)	3.00 (1.76)
	Situation	5.71 (1.83)	4.56 (1.92)	5.23 (2.30)	4.44 (1.46)	6.13 (1.49)	5.87 (1.13)	5.00 (2.04)	3.79 (2.20)

Table 2.7  
Agency appraisal ANOVA results for the induced-appraisal vignettes in Study 2

Vignette type	ANOVA	Personal Success <sup>a</sup>		Personal Failure <sup>b</sup>		Social Success <sup>c</sup>		Social Failure	
		<i>F</i> ( <i>df</i> )	$\eta_p^2$	<i>F</i> ( <i>df</i> )	$\eta_p^2$	<i>F</i> ( <i>df</i> )	$\eta_p^2$	<i>F</i> ( <i>df</i> )	$\eta_p^2$
Self-agency induced	Culture	3.00 (1,37)	.09	4.34* (1,36)	.11	.03 (1,36)	.00	.00 (1,37)	.00
	Attribution	65.62*** (2,74)	.64	185.74*** (2,72)	.84	.99 (2,72)	.03	19.54*** (2,74)	.35
	C x A	6.29** (2,74)	.12	2.30 (2,72)	.06	.13 (2,72)	.00	.04 (2,74)	.00
Other-agency induced	Culture	.67 (1,33)	.02	.62 (1,34)	.02	1.59 (1,38)	.04	.07 (1,36)	.00
	Attribution	3.67* (2,66)	.10	2.46 (2,68)	.07	7.36*** (2,76)	.16	11.30*** (2,72)	.24
	C x A	11.05*** (2,66)	.25	.00 (2,68)	.00	.37 (2,76)	.01	.98 (2,72)	.03
Situation-agency induced	Culture	3.92 (1,38)	.09	.00 (1,38)	.00	.86 (1,34)	.03	.00 (1,35)	.00
	Attribution	14.15*** (2,76)	.27	18.50*** (2,76)	.33	32.60*** (2,68)	.49	2.89 (2,70)	.08
	C x A	1.91 (2,76)	.05	1.64 (2,76)	.04	1.79 (2,68)	.05	2.74 (2,70)	.07

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$

<sup>a</sup> Gender x Appraisal was significant in the personal success self-agency induced vignette,  $F(2,74) = 3.32^{**}$ ,  $\eta_p^2 = .12$ .

<sup>b</sup> Culture x Gender was significant in the personal failure self-agency induced vignette,  $F(2,36) = 6.04^*$ ,  $\eta_p^2 = .14$ .

<sup>c</sup> Gender x Appraisal was significant in the social success situation-agency induced vignette,  $F(2,68) = 4.77^*$ ,  $\eta_p^2 = .12$ .

Table 2.8  
Emotion means for the induced-appraisal vignettes in Study 2

Vignette type	Emotion	Personal Success		Personal Failure		Social Success		Social Failure	
		Japan <i>M (SD)</i>	US <i>M (SD)</i>						
Self-agency induced	Self-agency	6.27 (.92)	6.39 (1.03)	6.72 (1.58)	7.01 (.68)	4.18 (1.91)	4.68 (1.15)	5.68 (1.35)	4.96 (1.89)
	Other-agency	3.26 (1.45)	4.41 (1.47)	3.85 (2.14)	5.26 (1.19)	4.71 (1.91)	4.60 (.76)	4.26 (1.45)	4.49 (1.69)
	Situation-agency	5.09 (2.07)	4.94 (2.10)	3.09 (2.29)	3.78 (2.34)	4.77 (2.55)	4.14 (1.41)	3.79 (2.15)	3.59 (2.35)
Other-agency induced	Self-agency	5.84 (1.51)	6.42 (.68)	5.43 (1.62)	5.20 (1.42)	3.49 (1.50)	3.95 (1.33)	3.23 (1.61)	2.79 (1.91)
	Other-agency	6.58 (1.39)	4.82 (1.20)	5.53 (1.71)	5.45 (1.27)	5.74 (1.42)	5.16 (.91)	5.59 (1.72)	5.08 (1.19)
	Situation-agency	5.58 (1.50)	5.08 (1.80)	4.92 (2.08)	4.71 (2.37)	5.87 (1.82)	5.11 (2.13)	4.65 (2.52)	4.59 (2.24)
Situation-agency induced	Self-agency	6.20 (1.19)	6.06 (1.44)	5.80 (1.89)	6.13 (1.12)	3.45 (1.55)	3.87 (.91)	4.01 (1.53)	3.30 (1.91)
	Other-agency	3.44 (1.72)	4.13 (1.46)	4.63 (1.92)	5.06 (1.21)	4.88 (1.46)	4.71 (.95)	3.73 (2.02)	4.78 (1.80)
	Situation-agency	6.88 (1.12)	5.94 (1.55)	5.23 (2.32)	4.75 (1.57)	5.91 (1.59)	5.13 (1.85)	5.17 (2.48)	5.73 (1.53)

*Note.* In success situations, self-agency emotions are proud, confident, satisfied, and superior; other-agency emotions are friendly, obligated, and grateful; and situation-agency emotion is lucky. In failure situations, self-agency emotions are angry at self, regretful, ashamed, and self-critical; other-agency emotions are unfriendly, resentful, and angry; and situation-agency emotion is unlucky.

Table 2.9  
Emotion ANOVA results for the induced-appraisal vignettes in Study 2

Vignette type	ANOVA	Personal Success		Personal Failure		Social Success <sup>a</sup>		Social Failure	
		<i>F</i> ( <i>df</i> )	$\eta_p^2$	<i>F</i> ( <i>df</i> )	$\eta_p^2$	<i>F</i> ( <i>df</i> )	$\eta_p^2$	<i>F</i> ( <i>df</i> )	$\eta_p^2$
Self-agency induced	Culture	.49 (1,37)	.01	2.23 (1,36)	.07	.00 (1,36)	.00	.44 (1,37)	.01
	Emotion	38.11*** (2,74)	.51	38.64*** (2,72)	.52	.43 (2,72)	.01	8.36*** (2,74)	.18
	C x E	2.78 (2,74)	.07	.64 (2,72)	.02	1.39 (2,72)	.04	.72 (2,74)	.02
Other-agency induced	Culture	1.41 (1,33)	.04	.62 (1,34)	.01	.45 (1,38)	.01	.38 (1,36)	.01
	Emotion	.72 (2,66)	.02	1.53 (2,68)	.04	26.65*** (2,76)	.41	17.59*** (2,72)	.33
	C x E	4.71* (2,66)	.13	.05 (2,68)	.00	2.86 (2,76)	.07	.17 (2,72)	.01
Situation-agency induced	Culture	.09 (1,38)	.00	.07 (1,38)	.00	1.21 (1,34)	.03	.00 (1,35)	.00
	Emotion	44.99*** (2,76)	.55	3.71** (2,76)	.09	16.84*** (2,68)	.33	10.97*** (2,70)	.24
	C x E	3.45* (2,76)	.08	.42 (2,76)	.01	1.22 (2,68)	.04	2.08 (2,70)	.06

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$

In success situations, self-agency emotions are proud, confident, satisfied, and superior; other-agency emotions are friendly, obligated, and grateful; and situation-agency emotion is lucky. In failure situations, self-agency emotions are angry at self, regretful, ashamed, and self-critical; other-agency emotions are unfriendly, resentful, and angry; and situation-agency emotion is unlucky.

<sup>a</sup>Culture x Gender was significant in the social success self-agency induced vignette,  $F(1,36) = 7.21^*$ ,  $\eta_p^2 = .17$ .

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## Appendix: Vignettes in Study 2

### [Personal Success]

In the past, I had always struggled with this particular subject (e.g., Math, Chemistry, English, or History). Whenever I took tests, I did not do very well. Last semester, I had to take a course in this particular subject to fulfill the requirements. As usual, I did not expect to do well. However, I did very well on the papers, quizzes, and exams in the course. Overall, I got 98 out of 100, and I ended up receiving an A for the course.

Self-agency appraisal induced: This happened as a result of me actually understanding the content of the course very well. Because I was not confident in this subject, I worked very hard, always attended lectures, asked questions, and did the homework, all of which actually paid off. In fact, I wrote good papers and gave a good presentation. I guess I am much better at this subject than I previously thought.

Other-agency appraisal induced: This happened because I got a lot of help from other people. The professor's lecture was clear and easy to understand, and the GSI paid close attention to my performance, tried to understand my ideas, and gave me a lot of advice throughout the semester. Also, a friend of mine who took the course before helped me go over some of the materials before exams.

Situation-agency appraisal induced: This happened because the course was not so difficult. Many of the other students in a class had never taken courses above

intermediate level, so I had an advantage over them. Also, my work load was not so heavy that semester, so I could spend more time on studying for the course. Also, many exam questions were from the parts I happened to have studied.

[Personal Failure]

In the past, I had been very good at this particular subject (e.g., Math, Chemistry, English, or History). Whenever I took tests, I did pretty well. Last semester, I had to take a course in this particular subject to fulfill the requirements. I expected to do well as usual. However, I did very poorly on the papers, quizzes, and exams in the course. Overall, I got 75 out of 100, and I ended up receiving a C for the course.

Self-agency appraisal induced: This happened as a result of me not understanding the content of the course very well. Because I was overconfident in this subject, I did not work very hard, often skipped lectures, did not ask questions, and did not do the homework seriously, all of which actually contributed to my bad grade. In fact, I wrote sloppy papers, and my presentation wasn't good either. I guess I am not as good at this subject as I previously thought.

Other-agency appraisal induced: This happened because the course was poorly taught. The professor's lecture was disorganized and hard to understand. Throughout the semester, the GSI did not care much about my performance, did not try to understand my ideas, and the comments I received did not make much sense and, as a result, not helpful

at all. Also, a friend of mine who took the course before told me to focus on certain parts, which turned out to be not important at all.

Situation Attribution induced: This happened because the course was particularly difficult. Many of the other students in a class had taken advanced level courses before, so I was at a disadvantage compared to them. Also, my work load was extremely heavy that semester, so I could not spend enough time on studying for the course. Also, there were no questions on the exam from the sections I had studied most.

[Social Success\*]

I had vaguely known this person but never really talked to him/her before. I thought he/she was very different from me in terms of personality and interests. I had also heard not very nice things about him/her. Last semester, I took the same class as he/she and was assigned to give a presentation together with him/her. I wished my partner was someone else. However, it turned out that we really got along well, successfully collaborated, and became good friends.

Self-agency appraisal induced: This happened because of my effort to build a good relationship with him/her. Despite my initial impression of him/her, I put out a lot of effort to be open-minded and talked to him/her in a nice friendly way. I listened to his/her ideas about our project and respected those ideas. I also brought up many topics that were not related to our project so we could talk about many different things to get to know each other.

Other-agency appraisal induced: This happened because he/she turned out to be much nicer and more easy-going than I thought. Contrary to my initial impression of him/her, he/she talked to me in a nice friendly way. He/she listened to my ideas about our project carefully and respected my ideas. He/she also brought up many topics that were not related to our project so we could talk about many different things to get to know each other.

Situation-agency appraisal induced: This happened by chance. We happened to be in the same class and happened to be assigned to work together. This naturally gave us an opportunity to spend more time together. We started talking about many different things that were not related to the project so we got to know each other well. We also found out that we are both from same state, from towns that are only 20 miles away from each other.

[Social Failure\*]

I had vaguely known this person but never really talked to him/her before. I thought he/she and I might have a lot in common in terms of personality and interests. I had also heard good things about him/her. Last semester, I took the same class as he/she and was assigned to give a presentation together with him/her. I was glad that my partner was him/her. However, it turned out that we did not get along well at all, could not develop any kind of friendship, and could not collaborate efficiently on our project.

Self-agency appraisal induced: This happened because I did not make enough of an effort to develop a good relationship with him/her. Because I assumed that we were similar and compatible, I might have been insensitive to his/her feelings and spoken to him/her too bluntly. I did not listen to his/her ideas about our project carefully enough, and I was always critical. Also, I did not try to broaden the scope of our conversation to get to know him/her better.

Other-agency appraisal induced: This happened because he/she turned out to be not at all nice or easy-going. Contrary to my initial impression of him/her, he/she talked to me in a cold and distant way. Not only did he/she not care about my ideas about the project but he/she was always critical. Also, he/she talked only about the project and did not try to broaden the scope of our conversation or try to get to know me better.

Situation-agency appraisal induced: This happened by chance. We were happened to work together on the project, but the project was boring. This naturally made us take unpleasant attitudes toward each other. We just wanted to get it done as fast as possible, so we did not spend much time together. Also, we often got annoyed that our opinions often disagreed. As a result, we did not broaden the perspective of our conversation to get to know each other better.

\*Gender specific words such as he or she were matched with the gender of participants.

## Chapter 4

### **Cultural Narratives of Independence and Interdependence: An Analysis of Children's Stories in the United States and Japan**

In the recent cultural psychological literature, the cultures of the United States and Japan are commonly characterized as independent (or individualistic) and interdependent (or collectivistic), respectively (Markus & Kitayama, 1991; Triandis, 1995). It has been argued that European American cultures are organized in terms of the view of the self as independent. Available practices and routines of daily life tend to be individualistic. In contrast, East Asian cultures are organized in terms of the view of the self as interdependent. Numerous practices in East Asian cultures tend to be rather collectivistic. As may be expected, Euro-Americans show a number of psychological responses that are in line with the independent view of the self. In contrast, Japanese show psychological responses that are in line with the interdependent view of the self (see e.g., Kitayama, Duffy, & Uchida, 2007, for a review). For example, whereas Euro-Americans tend to attend to a focal object rather than its context, Japanese tend to be more holistic in attention (e.g., Kitayama, Duffy, Kawamura, & Larsen, 2003; Masuda & Nisbett, 2001). Moreover, Euro-Americans tend to experience personal, rather than social, happiness, but Asians tend to experience social, rather than personal, happiness (Kitayama, Mesquita, & Karasawa, 2006). Also consistent is evidence that Euro-Americans are far more likely than Asians to prefer uniqueness to conventionality (Kim & Sherman., 2007).

One important issue that is often left unexplored in the cultural psychology literature concerns specific mechanisms by which the cultural shaping of psychological responses might take place. It would seem likely, however, that moral messages of both independence and interdependence are conveyed and inculcated into new members of the culture through stories specifically prepared for them, namely, children's stories. Consistent with this proposal, many scholars have pointed out that children's stories often convey strong moral messages (e.g., Vandenplas-Holper, 1990). For example, the story of the tortoise and the hare teaches children that continuous effort and hardworking is much more important than inherent ability.

So far, a number of researchers have content-analyzed cultural artifacts such as advertisements in popular magazines for adults (Kim & Markus, 1999), persuasive messages (Han & Shavitt, 1994), and newspaper articles (Morris & Peng, 1994). Recently, Morling and Lamoreaux (2008) identified over 50 such studies that examined various types of cultural products from different cultures and conducted a meta-analysis to find out the extent to which independence and interdependence are emphasized in those cultural products. As predicted, their analysis revealed that cultural products from the West (mostly the U.S.) were significantly more independently oriented than those from East Asia (including Japan, Korea, and China) whereas cultural products from East Asia were significantly more interdependently oriented than those from the West. However, as shown by the list of studies Morling and Lamoreaux used in their analysis, very few studies have focused on children's stories (except Tsai, Louie, Chen, & Uchida, 2007 for recent studies looking at pictures in children's stories for facial expressions).

This omission is glaring because children's stories are likely to play an important role in cultural transmission.

The Morling and Lamoreaux meta-analysis (2008) also found that the effect sizes they obtained from the studies on cultural products were significantly larger than the rather small effect sizes Oyserman, et al. (2002) obtained in their meta-analysis of self-report studies for independence-interdependence orientations, suggesting that such cultural orientations were more clearly observed in cultural products than in people's minds. While the possible reasons for such a difference were further discussed by Morling and Lamoreaux (2008), one thing is clear – we cannot draw any conclusions based on the studies investigating either cultural environments or people's psyches only. Particularly from the perspective that culture and psyche make each other up (Shweder, 1989), it is crucial to investigate both sides of a coin – that is, investigating the extent to which cultural products emphasize different ideas, and the extent to which these ideas are distributed and shared by the people within a given cultural context.

The purpose of the present work was therefore three-fold. We wanted to determine whether children's stories in the United States would in fact emphasize independence and interdependence whereas children's stories in Japan emphasize interdependence. Study 1 sought evidence for this predicted cultural variation in the contents of children's stories in the United States and Japan. If found, such evidence would be consistent with the present proposal. However, this evidence would hardly be sufficient to fully sustain the proposal. It is also important to show that these kinds of story are, in fact, used in educating children. Study 2, therefore, tested the degree to which elementary schoolteachers would adopt different story contents as their education

materials. Furthermore, the content coding of children's stories leaves open an important question of how widely story contents are distributed and shared by lay people in the respective cultural contexts. Study 3 was conducted to address this issue.

It has been proposed that cultures vary in the degree to which the self is conceptualized as independent from others or as interdependent with others (Kitayama et al., 2007; Markus & Kitayama, 1991). Although there are numerous values that are putatively universal across cultures (Schwartz, 1992; 1999), these values can be classified in terms of the degree to which they are congruous with independent-vs.-interdependent views of the self. Values that are grounded in the independent model of the self include self-enhancement, self-promotion, individual rights, freedom, uniqueness and creativity, and the pursuit of personal happiness, whereas those that are based on the interdependent view of the self include self-effacement, respect, altruism, collective duty, conservatism and national security, and conventionality and conformity (Triandis, 1995). The present research was designed to investigate the relative emphasis given to these types of values in children's stories sampled from textbooks used in United States and Japan. We anticipated that independent or individualistic values would be highlighted more in American stories than in Japanese stories. In contrast, interdependent or collectivistic values were expected to be highlighted more in Japanese stories than in American stories.

There are a few previous studies that compared children's stories sampled in Euro-American vs. Asian cultural contexts that are relevant to the present analysis. In all these studies, the authors use their own coding schemes to content-analyze the stories. One problem for the present purposes is that each coding scheme is highly idiosyncratic and, even more problematic, none is designed with the distinction between independence

and interdependence in mind. Nevertheless, there are sporadic pieces of evidence that are consistent with the present analysis.

In one of the earliest studies, Zimet (1972) reported that American stories had especially low scores in putatively interdependent value categories such as traditionalism, conformity and compromise relative to other countries including Japan. Two additional studies make claims that are consistent with the current hypothesis. Lanham (1979) examined textbooks of ethics in Japan and the United States and observed that the American educational system strives for self-confidence while the Japanese educational system strives for self-discipline and perseverance. In a similar vein, Wang (1993) compared Taiwanese and American textbooks and observed that “society-centered or interpersonal qualities and behaviors” (e.g., appreciation of others, serving others, traditional Chinese virtues, honesty, and modesty) are much more frequently emphasized in Taiwanese textbooks, but “self-centered or personal qualities and behaviors” (e.g., personal feelings, individual accomplishments, independence, courage, determination, talent, confidence, imagination/creation, and humor) were more frequently highlighted in American textbooks. Unfortunately, in neither of the studies was any statistical analysis performed so it is not clear how reliable the findings might be (thus, these studies were not included in Morling & Lamoreaux, 2008). Although consistent with the present hypothesis, the evidence is far from conclusive. In Study 1, we therefore randomly sampled children’s stories from different cultural contexts and systematically content-coded them in terms of values related to both independence and interdependence.

### **Study 1: Cultural Values in Japanese and American Textbook Stories**

#### Method

Materials. Seventy-one Japanese stories were randomly sampled from first through sixth grade language arts (*kokugo*) textbooks used in Japanese public and private schools, which were approved by the Japanese Ministry of Science and Education. The three textbooks used in this study were the ones used in Kanagawa prefecture, published by three different companies: Tokyo-Syoseki, Mitsumura-Tosyo, and Gakkou-Tosyo. In the United States, seventy-two stories were randomly sampled from both language arts and reading textbooks. The three American textbooks used in this study were *Harcourt Language*, *Houghton Mifflin English*, and *Signatures*. These textbooks were recommended to school districts nationally as conforming to the educational program of the state of Texas. Due to the large number of school districts and their size, Texas dominates the United States textbook market and sets educational trends in the country (Athans, 1998). Moreover, these textbooks were ranked at the top for the best selling textbooks in the United States (“Harcourt Tops,” 1999). In both countries, we identified fiction only and then randomly sampled eight stories from each grade level (an exception in Japanese sixth-grade books, which contained only seven fiction pieces).

Coding. Guided by the theoretical and empirical work on individualistic and collectivistic orientations (e.g., Markus & Kitayama, 1991; Triandis, 1995), we selected 50 pertinent values from Schwartz’s Value Survey (1992) and Kilby’s Omnibus Values Questionnaire (1993). Each story was rated for the 50 values on a scale of zero to three (0 = not present, 1 = a little, 2 = moderate, 3 = strong). In some cases in which the values were present but used in a negative connotation, the values were rated using negative scores (-1 = A little negative, -2 = moderately negative, -3 = strongly negative). To observe general tendencies in the types of values embedded in the sample stories, these

50 values were grouped into nine larger categories (Table 3.1) -- five categories consisted of independent values (i.e., self-definition, stimulation, hedonism, achievement, and power), and four categories consisted of interdependent values (i.e., conformity, tradition, benevolence, and group harmony). All the sample stories were coded by a bilingual. Another bilingual who was blind to the hypothesis coded sixteen randomly selected stories (eight from each country). Cronbach's alpha computed for the each of 50 discrete values was greater than .7, except in one case (the sense of humor) where the alpha was less than .7 (.63). This item was thus dropped.

### Results and Discussion

Although the fiction stories identified in the present work were diverse and each was unique in a variety of different ways, it was also easy to recognize overarching thematic homogeneity within in each country. It was quite common in American stories to find a protagonist who bravely confronts a difficulty and achieves a goal by his or her strong will or unique ideas. In particular, a protagonist is often put in a situation where he /she has no help from others, and thus must overcome the difficulty alone. By successfully achieving his/her goal, a protagonist discovers his/her own unique ability or gains confidence and great satisfaction.

A common plot of Japanese stories was quite different. Quite a few Japanese stories involve an initially lonely protagonist who became a friend with someone who understands his/her feelings very well, shows great concern for him/her, and helps or supports him/her without being asked (sometimes by self-sacrifice). Sometimes they were separated from each other for some reason (e.g., death), but the appreciation of such a great friendship and warm feelings of togetherness remain deeply in the protagonist's

heart. In short, American stories teach children to be a strong, distinctive individual who is capable of achieving what he or she really wants. In contrast, Japanese stories teach children to be a kind, considerate, and altruistic member of the group and to recognize the importance of friendships.

These general observations were clearly borne out in our more systematic value coding. Table 3.1 shows the mean value scores computed across all the stories in each country. We had five overarching value domains that pertained to independence -- self-direction, stimulation, hedonism, achievement, and power. The value scores subsumed each domain were averaged and compared between two cultures. In four domains, the overall means were significantly greater for American stories than for the Japanese stories; self-direction ( $M_s = 1.14$  vs.  $.40$ ),  $t(127.99) = 8.11$ ,  $p < .001$ ,  $d = 1.38$ ; stimulation ( $M_s = 1.28$  vs.  $.80$ ),  $t(122.42) = 3.73$ ,  $p < .001$ ,  $d = .61$ ; achievement ( $M_s = 1.26$  vs.  $.39$ ),  $t(132.39) = 8.35$ ,  $p < .001$ ,  $d = 1.40$ ; and power ( $M_s = .56$  vs.  $.06$ ),  $t(114.10) = 7.14$ ,  $p < .001$ ,  $d = 1.20$ . Only the domain of hedonism did not reach the significance ( $M_s = 1.13$  vs.  $.92$ ),  $t(141) = 1.53$ , *ns*. We also had four overarching value domains that pertained to interdependence -- conformity, tradition, benevolence, and group harmony. In all of these domains, the overall means were significantly greater for Japanese stories than for the American stories; conformity ( $M_s = .65$  vs.  $.30$ ),  $t(105.07) = 4.43$ ,  $p < .001$ ,  $d = .74$ ; tradition ( $M_s = .62$  vs.  $.10$ ),  $t(102.36) = 6.24$ ,  $p < .001$ ,  $d = 1.05$ ; benevolence ( $M_s = 1.18$  vs.  $.39$ ),  $t(114.63) = 8.26$ ,  $p < .001$ ,  $d = 1.38$ ; and group harmony ( $M_s = 1.10$  vs.  $.36$ ),  $t(109.87) = 8.61$ ,  $p < .001$ ,  $d = 1.44$ .

When we examined these cultural differences more closely for the 49 discrete values, significant cultural differences were found for 41 of the 50 values, all in the

predicted direction (see Table 3.1). The largest cultural difference was found for sympathy (Japan>US), followed by success (US>Japan), acceptance of one's portion in life (Japan>US), and self-respect (US>Japan). American stories particularly emphasized ambition, varied life, being influential, choosing own goals, and enjoyment whereas Japanese stories particularly emphasized sympathy, friendship and affection, helpfulness, pleasure in making others happy, and sense of belonging.

Overall, Study 1 provided a striking confirmation of our prediction. American stories had significantly higher ratings for most of the independent values than did Japanese stories whereas Japanese stories had significantly higher ratings for most of the interdependent values than did American stories. As indicated by the large effect sizes, the observed cultural differences were robust.

### **Study 2: Teachers' Preference towards Independent and Interdependent Stories**

Although Study 1 provided clear evidence that American stories highlight independent themes such as self-direction and achievement whereas Japanese stories highlight interdependent themes such as conformity and group harmony, an important question is whether the stories that are culturally appropriate are in fact be adopted in elementary education. This question is important because the stories children read depend very much on the adults who select stories for children. Furthermore, past research suggests that teachers' personal beliefs and ideologies affect their classroom practices and decision-making (see Fang, 1996 for a review) and sometimes outweigh the pedagogical ideologies of the official curriculum (Shkedi & Nisan, 2006). Therefore, Study 2 was conducted to investigate schoolteachers' preference for stories with different value emphases. We predicted that American teachers would prefer stories with

independent themes whereas Japanese teachers would prefer stories with interdependent themes.

### Method

Participants. We contacted elementary schoolteachers who were employed full-time at public elementary schools through personal networks and emails. The questionnaire was then mailed to 39 Japanese and 36 American teachers who agreed to participate. Twenty seven Japanese (25 females and 2 males; all Japanese born in Japan) and 27 American teachers (24 females and 3 males; 22 Caucasian, 3 African American, 1 Arabic American, and 1 Asian American) returned the questionnaire. Japanese respondents resided in 8 different prefectures in Japan, and American teachers resided in 10 different states over the continental US. No cultural differences were found in the mean age,  $t(52) = .32, ns$  (Japan,  $M = 41.69, SD = 9.02$ ; US,  $M = 42.69, SD = 12.91$ ) nor in the length of teaching experience,  $t(52) = .71, ns$  (Japan,  $M = 16.77$  years,  $SD = 9.95$ ; US,  $M = 14.69$  years,  $SD = 11.29$ ).

Sample stories. Six American and six Japanese stories were selected from the 3<sup>rd</sup> and 4<sup>th</sup> graders' stories we used in Study 1. Three stories were the ones that had the highest independent value scores in comparison to the interdependent value scores, and the other three were the ones with the highest interdependent value scores in comparison to the independent value scores. The average independent and interdependent value scores of three independent American stories were 37.33 and 6.67, and those of the three interdependent American stories were 15.33 and 26.33, respectively. The average independent and interdependent value scores of three independent Japanese stories were 20.00 and 5.33, and those of the three interdependent Japanese stories were 3.67 and

33.67, respectively. Black and white copies of these stories were enclosed in the mailed survey package. Japanese and American respondents read the stories of their own countries, thus the respondents' ratings were compared within each culture.

Survey questionnaire. In a mail survey, respondents were first asked to read all six stories in a random order. They were then asked to rate each story on a scale of 1 (not very suitable) to 5 (very suitable) based on their judgment of how suitable the story would be for teaching language arts or reading for 3<sup>rd</sup> and 4<sup>th</sup> graders. They were also asked to choose the story they considered to be the best and to briefly describe their reasons for choosing it. Respondents then provided their demographic information including age, gender, ethnicity, and teaching experience.

### Results and Discussion

Teachers' story preference. For each respondent mean preference scores were computed for the independent stories and the interdependent stories separately. Overall, Japanese showed a significantly higher preferences for the interdependent stories than for the independent stories ( $M_s = 3.73$  vs.  $3.36$ ),  $t(26) = 2.13$ ,  $p < .05$ . Furthermore, 18 out of 27 respondents ranked an interdependent story as the best story although this was marginally significant,  $\chi^2 = 3.00$ ,  $p < .10$ . In contrast, American teachers showed no preference for either type of stories. Overall, the mean preference score for the independent stories was no different from the one for the interdependent stories ( $M_s = 3.74$  vs.  $3.75$ ),  $t < 1$ . Moreover, 13 respondents nominated an independent story as the best, with the remaining 14 nominating an interdependent story as the best.

Respondents' selection criteria. We content-analyzed reasons respondents listed in choosing their best stories. Seventeen categories were created (see Table 3.2), and one

bilingual coded each respondent's list of reasons for each of 17 categories as either present or absent. Another bilingual coded the lists created by of 24 respondents (12 Japanese and 12 Americans). The percent agreement between the two coders was quite high (92%).

The number of Japanese respondents' reasons ( $M = 3.00$ ,  $SD = 1.54$ ) did not differ from that of American respondents ( $M = 3.15$ ,  $SD = 1.79$ ),  $t(52) = .33$ , *ns*. As shown in Table 3.2, Japanese and American teachers shared some common reasons such as good/important values, provoking children's interests, and appropriate difficulty level, but they also listed very different reasons as well. While Japanese respondents' reasons focused on the feelings or general atmosphere stories convey (e.g., good descriptions of feelings and situations, heart-warming, fun, and exciting plots), American respondents typically focused on the elements that concerned children's language improvement (e.g., vocabulary, reading comprehension, and writing skills).

It is possible that American teachers focus on the benefit of language improvement because they have greater responsibility in selecting the teaching materials than do Japanese teachers. In fact, American textbooks contain much more material than can possibly be taught within an academic year, whereas Japanese textbooks contain just enough materials to be covered. Possibly for this reason, American respondents did not evaluate the stories based on the values or themes of the stories as much as Japanese teachers did, which might have resulted in American respondents' equal preference towards independent and interdependent stories.

Another possibility is that because of multicultural emphasis on American schools, American teachers are trained to be culturally sensitive, thus, consider both

independent and interdependent values to be important. Indeed, Schwartz (1999) found in his “smallest space analysis” of the value survey that in comparison to American and Japanese student samples, American and Japanese teacher samples were located much more closely on the bipolar axis of mastery (representing independence) and harmony (representing interdependence). Thus, in comparison to lay people, teachers may be less biased towards particular cultural values, and this may be especially true for American teachers who must be sensitive to their students’ various cultural backgrounds.

### **Study 3: Cross-cultural Comparison of Spontaneously Created Stories**

If children’s stories play a major role in transmitting cultural values to new members of a given society, the pertinent cultural values should be quite widely shared and actively reproduced by lay adult members who grew up with the stories of their culture. Thus, the purpose of Study 3 was to investigate how widely story contents are shared by lay people in the respective cultural contexts. To do this, we gave American and Japanese participants the first few sentences of a children’s story and asked them to complete it, predicting that their stories would unfold in a similar manner within each culture but differently across cultures.

The present study is not the first to examine cultural differences in spontaneously created stories. Domino and Hannah (1987) factor analyzed narrative stories Chinese and American children created from the same story beginnings. They identified dimensions that were common across cultures but differ in the extent to which they were emphasized in Chinese and American children’s stories. For example, stories created by Chinese children showed greater social orientation and greater concern with

authority than those created by their American counterparts (see also Wang & Leichtman, 2000 for similar findings).

While the findings from the study by Domino and Hannah (1987) suggest that cultural differences in narratives emerge at an early age, the distinction between independence and interdependence was not clearly made. Also, their analyses do not tell us what the stories created by those children were actually like and what their protagonists actually thought, felt, or did. In the present study, therefore, we tried to capture the general picture of stories in a more tangible manner by identifying the behaviors or incidents that commonly appeared in the stories written by Japanese and Americans.

### Method

Participants. Fifty-eight undergraduate students (26 males, 32 females) at Kanazawa University in Japan and 50 undergraduate students (27 males, 23 females) at the University of Michigan participated in the study. Japanese participants were recruited from a voluntary subject pool (i.e., students voluntarily signed up to participate in psychological studies), and they received a book coupon upon completion of the study. American participants were recruited from introductory psychology classes, and they voluntarily participated in the study at the end of the class. They received no compensation. The ethnic composition for American participants was 35 Caucasian, six African American, six Asian American, and three mixed ethnicity, all born and raised in the United States. The mean age of the participants was 18.52 ( $SD = .86$ ) for Japanese and 18.76 ( $SD = 1.29$ ) for Americans,  $t(106) = 1.17, ns$ .

Procedure. The study was conducted in groups of 10 to 25 people. Participants were first provided an informed consent explaining that the study was to examine people's general thought tendencies through children's stories they generate. They were then given a story beginning and told to continue and complete the story in 15 minutes. Participants were randomly assigned to one of three story beginnings. These story beginnings were originally written in English, translated into Japanese, and back translated into English to make sure that both versions were equivalent in their contents. The characters' names were replaced with Japanese names in Japanese versions. Also, because people's expectation for boys' and girls' behaviors might differ, a half of the story beginnings had male names but the rest had female names. Following are the English versions with male names.

[Bus trip story] Ron went to a school trip with his classmates. Because everyone has been looking forward to this bus trip very much, they got very excited when the driver announced, "we are arriving soon." But, actually, Ron has been gradually feeling sick on the bus.

[Piano story] Ben has been practicing piano since he was little, so he is very good at it. One day, his homeroom teacher announced at the class, "There will be a chorus competition among classrooms, and we need one person who can accompany us on the piano. Would any of you like to do it?"

[Softball story] Thomas is a member of softball team in his town. But because he is not very good at fielding, he rarely gets a chance to play in a game. One day, Jack, who is the best fielder in the team, forgot his glove at a game with neighboring town. Thomas thought that he might get a chance to play in the game.

After participants completed the story, they answered demographic questions including gender, age, ethnicity, and the places they were born and raised.

Content analysis coding scheme. In order to capture a general picture of what the stories were like, incidents or behaviors that appeared in more than two stories were

identified and used as coding items. Then, items were categorized as independence, interdependence or neutral (see Table 3.3). Each story was coded by one bilingual for the presence or absence of those features. Another bilingual, who was fluent in both Japanese and English and blind to the purpose of the study or item categories (i.e., independence, interdependence, neutral), coded 18 stories (i.e., three stories in each story topic from two cultures). The percent agreement between the two coders was very high (97%).

In the bus trip stories, 14 features that appeared in more than two stories were identified and used as coding items. Among these, four were categorized as independence, eight were categorized as interdependence, and the remaining two were categorized as neutral (see Table 3.3). Analyzing the causality of sickness was included in the independence because it was considered as the effort to increase the knowledge about one's condition. Also, telling others about feeling sick was categorized as independent because it is considered as an assertive action to express one's need. Tolerating sickness and pretending to be ok were included in the interdependence because they involved the concern for others.

In the piano stories, 18 features that appeared in more than two stories were identified, of which seven were categorized as independence, eight were categorized as interdependence, and three were categorized as neutral (see Table 3.3). Negative feeling towards others and negative feeling from others were included in the neutral category because although these features involve other people, they are not exactly "ideal" interdependent values.

In the softball stories, 17 common features were identified, of which five were categorized as independence, seven were categorized as interdependence, and the

remaining five were categorized as neutral (see Table 3.3). Worrying about failure was included in the interdependence because it was strongly related to the concern for consequential team loss rather than for the damage to self-esteem.

### Results and Discussion

The number of the items that appeared in stories was significantly larger for the stories created by Japanese participants ( $M = 5.41$ ,  $SD = .1.90$ ) than those created by American participants ( $M = 3.60$ ,  $SD = 1.63$ ),  $t(106) = 5.28$ ,  $p < .001$ , indicating that Japanese stories shared many more common features than did American stories, and that each of American story had many more unique and distinct features that were not shared among other stories than did Japanese stories. This resulted in having more interdependent items than independent items for all three types of stories. The frequency for each item was tested by chi-squares between the cultures (Table 3.3).

Bus trip stories. Overall, the stories created by Japanese participants emphasized sympathy and concern for others. For example, Japanese protagonists tolerated sickness because they did not want to spoil others' enjoyment. But their friends recognized their sickness and comforted them in various ways. In contrast, American stories emphasized one's control of the situation. Quite a few protagonists of the American stories tried to improve the situation by asking others for help, doing something to feel better, or analyzing the causality of the sickness. These observations are supported by the coding analyses we conducted.

Among the four independent items, only analyzing the causality found a significant cultural difference. This item appeared more often in the American stories than in the Japanese stories. The cultural differences were more prominent in the

interdependent items. Six out of eight items appeared significantly more often in the Japanese stories than in the American stories. In many more Japanese stories than in American stories, protagonists received care from others, and in turn, showed great appreciation for those who worried or helped them. It should also be noted that among 16 Japanese stories in which protagonists were worried or helped by others, 15 of these “others” were peers (10 stories) or both peers and a teacher (5 stories). In contrast, only one American story had a peer who worried about or helped the protagonists, which was significantly less than the Japanese counterparts,  $\chi^2(1) = 6.94, p < .01$ . The rest of two American stories had a teacher (1 story) and a doctor (1 story) who worried and helped the protagonists. Thus, peers played much more salient roles in Japanese stories than in American stories.

Japanese protagonists not only received care from others but also paid greater attention towards others. Japanese protagonists were greatly concerned about others (e.g., not wanting to spoil others’ fun or being afraid of receiving negative reactions from others) and thus tolerated sickness and hid their sickness from others more frequently than American protagonists.

Piano stories. Japanese and American participants also generated very different piano stories. In the stories Americans created, protagonists’ brilliant performance brought the first prize to the class. Even though the event was a chorus competition among classrooms, the stories Americans created were often about a very talented “solo pianist.” In contrast, in the stories Japanese created, protagonists were often nominated by their peers, and after hard group practice, all class members shared the feeling of togetherness and accomplishment.

As briefly described above, American piano stories emphasized individuals' talent and personal success whereas Japanese piano stories emphasized collaboration and group achievement. These cultural differences were also apparent in the coding analysis. Three independence items appeared significantly more often in the stories Americans created than those Japanese created. For example, protagonists in American stories were eager to show off their talents and nominated themselves for the position. When the class won the first prize, the success was attributed to the pianist (i.e., individual success as a pianist). In fact, in two American stories, protagonists received a special, individual award just for their piano performance.

In contrast, six interdependent items appeared more frequently in the Japanese stories than in American stories. The protagonists in the Japanese stories hesitated to nominate themselves, but obtained the position by peers' nomination and approval much more often than those in the American stories. Also, they practiced with classmates (i.e., group practice) and experienced the feeling of togetherness and shared pleasure much more often than American protagonists.

Softball stories. Remarkable cultural differences were also observed in the softball stories. The stories created by Japanese participants emphasized group benefits. They also highlighted self-sacrifice. Moreover, Japanese stories emphasized hard work after a failure experience. These features were almost absent in the stories created by American participants.

While none of the independent items showed any significant cultural differences, five interdependent items found significant US-Japan differences. In many more Japanese stories than in American stories, protagonists lent their gloves to the teammate who

forgot his/her glove in order for the team to win (i.e., thinking about group benefit).

When the Japanese protagonists had a chance to play in the game, they were worried about failure, which would result in the team loss.

Another noticeable cultural difference was observed in the items of increased or decreased motivation. Japanese stories were more likely than American stories to feature highly motivated protagonists. Interestingly, the increase in motivation occurred not only when Japanese protagonists played and performed well in the game (3 stories), but also when their performance was not satisfactory (2 stories) and when they did not get a chance to play in the game at all (6 stories). In contrast, incidents in which motivation decreased appeared only in the American stories, and this occurred when protagonists were told to lend their glove to the teammate. This made the protagonists so angry that they stormed off crying or quit softball all together, shifting their interests to something else. Although these two items were not categorized as independent or interdependent, the findings are consistent with past cross-cultural research on motivation: North Americans persist on the task after success but not after failure whereas Asians persist on the task to the same degree or even more after failure than success (Heine, Kitayama, Lehman, et al., 1999; Oishi & Diener, 2003).

To summarize, the stories created by Japanese on each of the three themes (i.e., baseball, piano, and softball) clearly emphasized interdependent themes such as sympathy, friendship, group success, and sense of belonging. Also, in these stories, other people, particularly peers, played very important roles. In contrast, the stories created by Americans on the same themes highlighted many independent themes such as personal achievement, control over situations, and self-confidence. Moreover, they did not involve

others as often. The culturally distinct themes observed here are analogous to the themes we found in Japanese and American textbook stories in Study 1.

### **General Discussion**

The present research hypothesized that children's stories play an important role in inculcating independent and interdependent values into new cultural members of American and Japanese cultural contexts respectively. This hypothesis was largely supported by the findings from the present studies. First, Study 1 found that American stories for children highlighted the themes of independence significantly more than did Japanese stories whereas Japanese stories emphasized the themes of interdependence significantly more than did American stories. Second, Study 2 showed that elementary schoolteachers, at least in Japan, prefer the stories with culturally pertinent themes as their education materials. Moreover, Study 3 demonstrated that independent and interdependent story themes are also strongly emphasized in the stories spontaneously created by American and Japanese college students, respectively. Altogether, these findings suggest that children's stories are rich in culturally pertinent themes, which are sometimes selectively delivered by educators, and deeply insinuated into lay people's minds.

The current research also implies that internalization and reproduction of cultural meanings are often implicit. First, cultural values are transmitted to the younger generation implicitly. That is, children's stories usually do not tell explicitly what values are important, but such messages are transmitted to their readers through various examples for what individuals should consider and how they should act in certain situations. Thus, even though children are not aware that they are exposed to culturally

pertinent values, they adopt those values through the exposure to numerous examples. Indeed, Hoffman (1983) suggests that children internalize initially external values more effectively when they are introduced with low saliency because children forget their sources and experience them as their own.

Second, people may be quite unaware of their own cultural values, thus, often fail to report them in an explicit manner. In fact, past studies that used self-report measures to compare people's cultural orientations found surprisingly weak differences across cultures (Oyserman, Coon, & Kemmelmeier, 2002). However, we found evidence that individuals hold strong cultural values that were manifested in the stories people spontaneously generated. Thus, without one's awareness or intention, implicitly internalized values exert their power in regulating their natural course of thoughts and behaviors.

Third, cultural values can be reproduced without individuals' intention. It has recently been suggested that cultural differences may exist only among cultural elites (e.g., writers, journalists, copywriters) who produce a variety of cultural artifacts (Morling and Lamoreaux, 2008), and such cultural artifacts are professionally tailored in a way to appeal to their audience and, at the same time, shape and bolster people's cultural orientation. However, our study suggests that robust cultural orientations toward independence or interdependence are not unique to stories written by professional writers but also evident in stories lay people spontaneously create without any intention to disseminate their cultural values. Thus, cultural reproduction is not dependent solely upon the work of cultural elites. Culture is constantly reproduced by lay people's everyday discourses.

Although we believe the present studies to be quite successful in demonstrating the important role children's stories play in representing and reproducing cultures of independence and interdependence, we also recognize some limitations in our studies. First of all, Study 1 examined the stories sampled from language arts textbooks because they are read by a wide population. However, we are aware that children also read story books outside their schools, which might even exceed in number the stories read in school. Thus, we should not assume that textbook stories are representation of those children are exposed to, and in future research, we should also examine other stories commonly read, such as those with the highest checking-out rate in libraries or best selling books. Similarly, we are also aware that other adults, such as parents, must play an important role in selecting books for children. Thus, future research should also investigate what types of stories parents prefer and what criteria they use when choosing stories for their children.

We must also note that the method of Study 2 was weak. We asked our respondents to read only six stories, thus one or two "good stories" could have significantly affected the results. Our data on teachers' reasons for their selection suggest that besides the independent or interdependent values, there were other elements that made some stories more (or less) attractive than the rest. In fact, our respondents' ratings varied to quite a large extent among the three independent or interdependent stories. A future study should therefore include a larger number of stories or use the same stories that are carefully translated into both languages. By having Americans and Japanese teachers read the same set of stories, we should be able to compare the differences in teachers' preference cross-culturally in more accurate manner.

Lastly, we proposed that children's stories play important role in shaping children's values. The present research allows us to make inference about the connection between children's stories and people's cultural orientation; however, it does not clearly demonstrate the causal link between them. Empirically testing such a link will be extremely difficult as it may take many stories over many years for such an effect to take place. However, it may be still possible to test short-term effects of stories by using a priming method. For example, after reading several stories with independence or interdependence emphases, people's cultural orientations may shift in the corresponding directions.

While priming methods may be useful in demonstrating the causal link between cultural environment and people's mind, they would not answer the more important question: why independence is valued and reproduced in American cultural contexts and why interdependence is valued and reproduced in Japanese cultural contexts. In order to answer this question, we need to explore the historical origins of independence and interdependence. For example, population density, wealth, pathogen prevalence, social mobility, mode of subsistence (e.g., herding vs. agricultural), and history of voluntary settlement in the frontier are suggested to be strongly connected to the cultural orientation of independence and interdependence (Triandis, 1995; Fincher, Thornhill, Murray, and Schaller, 2008; Berry, 1967, 1979; Uskul, Kitayama, & Nisbett, in press; Oishi, Lun, & Sherman, 2008; Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006). Exploring factors is an important direction to pursue because it not only takes cultural psychological investigations beyond cultural comparisons but also helps up understand the functional

roles independence and interdependence play from the perspective of culture as an evolving social system.

Table 3.1  
Value rating scores and statistical results for Japanese and American textbook stories

	<b>Japan</b>		<b>US</b>		<i>t</i> ( <i>df</i> )	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<b>Independent Values</b>						
<b>Self-direction</b>						
Freedom	.63	.90	1.13	1.21	2.76** (131.05)	.47
Creativity	.48	.86	1.19	1.26	3.97*** (125.31)	.66
Self-reliance	.30	.74	1.15	1.25	4.98*** (115.91)	.83
Choosing own goals	.37	.85	1.46	1.20	6.30*** (128.07)	1.05
Curiosity	.79	1.12	1.21	1.30	2.07* (138.53)	.35
Self-respect	.21	.56	1.31	1.24	6.82*** (98.94)	1.14
Self-development	.41	.89	1.25	1.21	4.75*** (130.42)	.79
Control	.06	.33	.40	.93	2.98** (89.19)	.49
<b>Stimulation</b>						
Exciting life	.65	.94	1.00	1.29	1.87 (130.08)	.31
Varied life	.94	.75	1.57	1.03	4.14*** (130.00)	.70
<b>Hedonism</b>						
Pleasure	.76	.92	.85	1.15	.50 (135.29)	.09
Enjoyment	1.08	.10	1.42	1.17	1.83 (138.02)	.41
<b>Achievement</b>						
Ambition	.42	1.05	1.71	1.31	6.49*** (135.62)	1.09
Being influential	.70	.84	1.50	1.14	4.77*** (130.27)	.80
Competence	.42	.87	1.42	1.18	5.72*** (130.60)	.96
Success	.15	.67	1.38	1.27	7.19*** (107.78)	1.21
Intellectual ability	.46	1.09	.89	1.23	2.18* (139.55)	.37

Courage and bravery	.48	.95	1.31	1.23	4.50*** (133.65)	.76
Competition	.08	.63	.64	1.09	3.73*** (113.53)	.63
<b>Power</b>						
Social Power	.11	.87	.65	1.15	4.49*** (132.10)	.53
Wealth	.07	.80	.39	.88	2.27* (140.02)	.38
Leadership	.18	.62	.31	.78	1.04 (134.61)	.18
Public image	.10	.51	.75	1.14	4.43*** (98.98)	.74
Social recognition	.10	.38	.94	1.27	.42*** (84.11)	.90
Aggressiveness	.01	.67	.31	.83	2.31* (135.18)	.40
<b>Interdependent Values</b>						
<b>Conformity</b>						
Obedience	.65	.93	.24	.68	3.02** (128.50)	.50
Self-discipline	.41	.89	.31	.80	.73 (141.00)	.12
Politeness	.54	.94	.26	.61	2.05* (119.36)	.35
Respectfulness	.94	1.18	.65	.89	1.66 (130.12)	.28
Self-sacrifice	.70	1.09	.13	.50	4.08*** (98.21)	.67
Adjustment	.63	1.12	.21	.58	2.84** (104.46)	.57
<b>Tradition</b>						
Respect for tradition	.32	.81	.22	.59	.86 (141.00)	.14
Religiousness	.13	.51	.10	.38	.40 (141.00)	.07
Accepting one's portion in life	1.27	1.35	.08	.55	6.84*** (92.32)	1.15
Modesty	.90	1.16	.15	.66	4.73*** (111.08)	.79
Moderation	.48	.97	-.04	.35	4.26*** (88.09)	.71

<b>Benevolence</b>						
Helpfulness	1.58	1.27	.82	1.12	3.78*** (138.17)	.63
Responsibleness	.80	1.12	.29	.78	3.17** (124.79)	.53
Forgiveness	.56	1.02	.15	.52	3.01** (103.69)	.51
Honesty	.49	1.01	.15	.52	2.52* (104.40)	.42
Loyalty	1.25	1.35	.38	.85	4.66*** (117.44)	.77
Sympathy	2.03	1.24	.51	.84	8.53*** (122.70)	1.43
Pleasure in making others happy	1.51	1.28	.42	.84	6.04*** (120.50)	1.01
<b>Group Harmony</b>						
Community/ group support	1.04	1.22	.19	.60	5.25*** (101.17)	.88
Collaboration	.85	1.25	.42	.75	2.49* (113.96)	.42
Sense of belonging	1.35	1.31	.39	.78	5.33*** (113.70)	.89
Harmonious relationship	.59	1.04	.07	.31	4.07*** (81.97)	.68
Sharing	.97	1.22	.18	.57	4.97*** (98.45)	.83
Friendship and affection	1.83	1.23	.89	.96	5.11*** (132.13)	.85

Note. \* $p < .05$ , \*\*  $p < .01$ , \*\*\* $p < .001$ .

Table 3.2  
Japanese and American teachers' reasons for selecting the best story

Categories of Reasons		Frequency		
		Japan (N=27)	US (N=27)	$\chi^2(df=1)$
1.	Good/important value, message, lesson, moral, role model	8	10	.33
2.	Good description of situations	7	0	8.04**
3.	Good description of feelings	8	0	9.39**
4.	Good language (e.g., beautiful, clear)	5	1	3.00
5.	Good vocabulary	1	7	5.28*
6.	Good for improving reading comprehension skill	0	5	5.51*
7.	Appropriate length	4	0	4.32*
8.	Appropriate difficulty	7	9	.36
9.	Provokes children's interest, engaging, attractive characters	10	10	.00
10.	Children can relate to the protagonist or situations	6	7	.10
11.	Unconventional/unexpected plot	4	2	.75
12.	Leads to good discussion	0	8	9.39**
13.	Heart-warming/happy atmosphere of the story	4	0	4.32*
14.	Funny/exciting plot	10	3	4.96*
15.	Good pictures	1	2	.35
16.	Promotes creative writing	0	5	5.51*
17.	Good story structure/development	3	7	1.96

Note. \* $p < .05$ , \*\*  $p < .01$

Table 3.3  
Frequencies of independent and interdependent features in the stories created by Japanese and Americans

Topic of Stories	Japan	US	$\chi^2$ ( $df=1$ )
	Frequency	Frequency	
<b>Distinct Features of Stories</b>			
<b>Bus Trip Stories</b>			
	N=20	N=16	
Independence			
Trying to make oneself feel better	3	3	.09
Telling others about feeling sick	4	4	.13
Having fun	13	8	.82
Analyzing the causality of sickness	1	5	4.41*
Interdependence			
Being recognized his/her sickness by others	12	1	11.13***
Being worried or helped by others	16	3	13.38***
Tolerating sickness	16	7	5.06*
Concern for others (not to spoil others' fun, not to give trouble to others, avoid being disliked)	9	1	6.65**
Pretending to be ok, hide sickness from others	9	1	6.65**
Feeling lonely, isolated, envy others	6	3	.60
Appreciation for others	11	0	12.68***
Feeling guilty	2	2	.06
Neutral			
Throwing up	2	6	3.89*
Feeling better	15	6	5.14*
<b>Piano Stories</b>			
	N=19	N=18	
Independence			
Nominating self to be accompanist	10	17	8.19**
Rivalry/competition for getting the accompanist position	3	3	.01
Practicing alone	7	8	.22
Worrying about not playing well	4	8	2.31

Eager to show off his/her talent to others	0	5	6.10*
Individual success as a pianist	6	12	4.56*
Having confidence to succeed	3	7	2.50
Interdependence			
Group practice	6	1	4.08*
Hesitating to raise hand, see others before nominating oneself	14	1	17.80***
Being nominated by peer(s)	8	1	6.71**
Peers' approval for becoming accompanist/support/encouragement/comfort	13	2	12.59***
Teacher's approval for becoming accompanist/support/encouragement/comfort	4	4	.01
Appreciated by others	5	1	2.93 <sup>+</sup>
Feeling of togetherness, shared pleasure	7	0	8.18**
Class Success	6	6	.01
Neutral			
Negative feeling towards others/frustration	4	0	4.25*
Negative feeling from others	3	2	.17
Quit the position, not coming to school	2	1	.31
<hr/>			
<b>Softball Story</b>	N=19	N=16	
Independence			
Excited with getting the chance to play	1	4	2.76 <sup>+</sup>
Successful play by the protagonist	8	6	.08
Gaining confidence after playing well	3	1	.78
Negative feeling or behavior for unfair treatment	3	4	.46
Appealing to be in the game, try show he/her is a good player	2	4	1.28
Interdependence			
Lending a glove with one's own will	9	1	7.20**
Friendship/team spirit/feeling of togetherness	7	1	4.61*
Thinking about group benefit	7	1	4.61*

Hesitate about taking advantage of others or situation	4	0	3.80 <sup>+</sup>
Worrying about failure/not playing well (and as a the team would lose)	7	1	4.61*
Receiving encouragement/support/comfort from others	5	2	1.04
Given chance to play in the game by others	8	7	.01
Neutral			
Failure or bad play by the protagonist	6	2	1.80
Increased motivation, practice harder	11	1	10.28***
Decreased motivation, quit softball, leave game	0	4	5.36*
Bing praised by others	4	5	.47
Being told to lend a glove	5	7	1.17

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*Note.* <sup>+</sup> $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

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## **Chapter 5**

### **Conclusion**

Growing up in a given cultural context, people learn and internalize culturally shared meanings – the process called enculturation. To successfully “enculturated” individuals, these meanings are ordinary and often unrecognizable. Not surprisingly, people can often recognize characteristics of foreign cultures but not their own. Yet these deeply internalized meaning systems regulate individuals’ perceptions, thought processes, motivations, emotions, and behaviors (e.g., Bruner, 1990; Fiske, Kitayama, Markus, & Nisbett, 1998; Kitayama, Duffy, Uchida, 2007; Markus & Kitayama, 1991). The three chapters presented in this dissertation aimed to address the culturally sanctioned meanings that are ubiquitously available in the cultural environment, deeply insinuated into individuals’ psychological systems, and consequential for individuals’ cognitive and affective reactions in various situations.

Chapter 2 specifically focused on cognitive dissonance, which was once assumed to be a universal psychological phenomenon. However, the present research hypothesized that cognitive dissonance would take culturally divergent forms – personal or interpersonal. The personal form of dissonance occurs among Americans when a choice is made in private, and the interpersonal form of dissonance occurs among Asians when a choice is made in public. In support of the hypothesis, the studies found that

Asian Americans and Japanese justified their choice more when they made a choice in front of a poster that unobtrusively induced an impression of public scrutiny, whereas European (and African) Americans justified their choice more when they made a choice without the poster.

While both types of dissonance occur when the self is threatened by the choice, they take culturally divergent forms because, according to our analysis, the nature of the self that is threatened differs across cultures. That is, an independent self is threatened by a personal choice because such a choice reflects one's internal attributes. In contrast, an interpersonal self is threatened by a public choice because it should reflect the person's good standing in his or her harmonious relationships.

Culturally different implications of the presence of others also play an important role in these dissonance processes. The presence of "eyes of others" probably made Asian Americans and Japanese aware of the social standards and expectations they should meet, thus, motivated them to justify their choice, whereas the same stimuli made Americans perceive their choice to be influenced, thus not as a true reflection of the self. Indeed, Experiment 3 found that European Americans ceased to justify their choice when it was made in front of influential "eyes of others." Although participants were totally unaware of such cognitive processes, a mere face-like stimulus was enough to automatically activate their cultural schemas and induce (or eliminate) the dissonance processes. In this respect, the unconscious is quite smart and functional (Bargh & Morsella, in press) as it can process individuals' perception and cognition particularly in a cultural adoptive way.

In Chapter 3, the research turned its focus onto emotional consequences of the culturally divergent forms of cognitive appraisal. Although past research has accumulated

plenty of evidence for the pervasive self-serving biases among Americans and their absence or even opposite tendencies among Asians (Heine, Lehman, Markus, & Kitayama, 1999 for a review), the present research is, to my knowledge, the first to apply the cognitive appraisal theories in cross-cultural contexts and to investigate cultural differences in emotion that result from culturally different appraisal of the situation.

In support of our hypothesis that people in different cultures experience different types of emotion as a result of different agency appraisal, the present studies found that Americans reported stronger self-agency emotions (e.g., proud) in success situations and other- or situation- agency emotions (e.g., angry, unlucky) in failure situations. In contrast, Japanese reported stronger situation-agency emotion (lucky) in success situations and self-agency emotions (e.g., ashamed) in failure situations. To further support the hypothesis, the cultural difference in emotion became non-significant or was significantly reduced once Americans and Japanese were induced to make the same agency appraisal.

What produces such culturally divergent appraisal and emotion tendencies is another question, and the studies suggest that culturally prevalent concepts of the self and others again play important roles. That is, individuals (mostly Americans) who view themselves as better than others, tend to take a credit for successes but blame others for failures whereas individuals (mostly Japanese) who view themselves as no better than or even inferior to others tend to attribute successes to others but blame themselves for failures.

It is important to note that individuals in both cultures may actualize the ideal cultural self by engaging in such attributions and experiencing the corresponding

emotions. It is quite obvious that Americans can enhance the positive internal attributes through self-serving attribution and emotion. However, it may be difficult to understand how Japanese can enhance their interdependent self through self-criticizing attribution and emotion. It is suggested that, by recognizing their inadequacy, Japanese can strive to meet social standards and expectations, and such effort may be considered to be a social commitment and indication of the ideal interdependent self (Heine, Lehman, Markus, & Kitayama, 1999).

While Chapters 2 and 3 focused on cognitive and emotional reactions in particular situations, Chapter 4 more broadly examined culturally sanctioned values. Study 1 demonstrated that American children's stories highlighted themes of independence such as self-direction and achievement. In contrast, their Japanese counterparts highlighted themes of interdependence such as conformity and group harmony. Study 2 showed that Japanese elementary school teachers were more likely to adopt stories with interdependent themes than those with independent themes as their teaching materials although no such differential preference was evident among American teachers. Furthermore, Study 3 found analogous cultural differences in the themes of stories freely composed by American and Japanese college students. For example, the stories created by Americans were mostly about personal achievement, and others were minimally involved in their stories. In a stark contrast, the stories created Japanese emphasized friendship, sympathy, and sense of belonging, and others played very important roles in their stories.

Over all, these findings imply that cultural environment is abundant in materials with culturally sanctioned meanings, and those meanings are deeply internalized by

individuals who reproduce culture. It is therefore concluded that children's stories are both a product and a producer of culturally divergent forms of the self.

While each chapter mentioned its specific limitations and future directions, it is also important to mention some general challenges and directions for future research in this chapter. One of the challenges that are shared by many cultural psychologists is that it is extremely difficult to scientifically demonstrate that cultural environment is indeed shaping people's mind. Practically, it is impossible to randomly assign our participants to grow up in either one culture or the other. Yet, some cultural psychologists cleverly came up with the ways to make such a causal inference. For example, we can follow individuals who move from one cultural contexts to another and observe any changes in their psychological tendencies (Heine & Lehman, 2004).

Yet another, more commonly used technique is the use of cultural priming. That is, participants are exposed to stimuli that activate different cultural schemes such as different pronouns (i.e., "I" or "me" vs. "we" or "us"; Brewer & Gardner, 1996; Gardner, Gabriel, & Lee, 1999), cultural icons (e.g., the Statue of Liberty vs. Chinese dragon; Hong, Morris, Chiu, & Benet-Martínez, 2000), or pictures of city scenes in different cultures (Miyamoto, Nisbett, & Masuda, 2006). Although this raises another question that how malleable culturally adopted cognitive styles are, past studies with priming methods reported significant changes in participants' cognitive styles. Thus, similar methods can temporarily induce certain psychological tendencies among individuals, such as personal dissonance vs. interpersonal dissonance. Also, children's stories with different value emphasis can be used to prime individuals' cultural orientation, which may result in temporal changes in their psychological tendencies as well.

Another future direction that I would like to pursue is to investigate how children, during their developmental processes, come to learn and internalize cultural meaning systems. Obviously, children cannot learn from textbook stories before they learn their language. Also, peer influence may become a more important source after they enroll in preschools or elementary schools while parent-child interaction starts from the day a baby is born. Thus, to better understand the emergence of culturally specific cognitive tendencies, it is important to investigate their relation to age-specific cultural environments, such as cultural products or daily activities for a particular age group. Also, it is important to consider other developmental processes that co-occur, such as language acquisition, emergence of self-concept, theory of mind, executive function, and neuropsychological development. Moreover, finding out some universal, innate psychological patterns among a young age group and their ramifications for culturally specific tendencies in older age group may also be another way to make inferences about the effect of cultural environment on people's psychological tendencies.

While priming methods and examination of developmental processes are important in finding out how culturally specific psychological tendencies are acquired on an individual level, they would not answer the very important question – how independence became so pervasive in North America and how interdependence became so pervasive in East Asia?

This investigation involves exploration of the historical origins, and, as briefly mentioned in Chapter 4, the evidence is still limited but gradually accumulating. For example, a herding culture is found to be high in independence in comparison to farming and fishing cultures (Uskul, Kitayama, & Nisbett, in press). Societies of high social

mobility (i.e., frequent moving) are found to be more independent than those of low social mobility (Oishi, Lun, & Sherman, 2008). Also, societies with high pathogen prevalence in their histories are more interdependent than those with low pathogen prevalence (Fincher, Thornhill, Murray, and Schaller, 2008). Moreover, societies that went through the history of voluntary settlement, such as the United States and Hokkaido in Japan, are high in independence in comparison to societies without such history, such as Germany and Mainland Japan (Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006; Kitayama, Park, Sevincer, Karasawa, & Uskul, 2008).

Viewing culture as an evolving social system, cultures must have adopted what has been functional at a given time of their long histories. Independent psychological mind must have provided survival advantages in some societies whereas interdependent psychological mind must have served better in other societies. Investigating such psychological advantages in historical, geographical, and eco-biological contexts would break through the reciprocal loop of culture and mind and greatly expand the empirical horizon of the current cultural psychology research.

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