

# On the Cultural Guises of Cognitive Dissonance: The Case of Easterners and Westerners

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Cognitive dissonance and effects of self-affirmation on dissonance arousal were examined cross-culturally. In Studies 1 and 2, European Canadians justified their choices more when they made them for themselves, whereas Asian Canadians (Study 1) or Japanese (Study 2) justified their choices more when they made them for a friend. In Study 3, an interdependent self-affirmation reduced dissonance for Asian Canadians but not for European Canadians. In Study 4, when Asian Canadians made choices for a friend, an independent self-affirmation reduced dissonance for bicultural Asian Canadians but not for monocultural Asian Canadians. These studies demonstrate that both Easterners and Westerners can experience dissonance, but culture shapes the situations in which dissonance is aroused and reduced. Implications of these cultural differences for theories of cognitive dissonance and self-affirmation are discussed.

*Keywords:* cognitive dissonance, culture, self-affirmation, self-concepts

Individuals encounter a myriad of choices every day ranging from very simple decisions such as which cereal to eat for breakfast to more difficult ones such as which of two job offers to accept. Sometimes people have to make choices not only for themselves but also for their family members or close friends. For instance, parents often make choices for their children when they are young (e.g., a mother might choose a pair of jeans for her son). In some cultures, some decisions continue to be made by parents even for adult children (e.g., a father might make a choice of

groom for his daughter). As originally proposed by Festinger (1957) and subsequently demonstrated by many others (e.g., Brehm, 1956; Heine & Lehman, 1997; Steele, Spencer, & Lynch, 1993), regardless of the significance of the decisions, people faced with equally attractive alternatives tend to experience cognitive dissonance and justify their decisions.

Does cultural variation exist in the experience of cognitive dissonance and the subsequent tendency to justify or rationalize individual decision making? We argue that this tendency to justify

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or rationalize decisions is a part of human nature. However, we also argue that it emerges in culture-specific ways because we believe that culture shapes how and when such rationalization occurs. We base our argument on the conceptualization of cognitive dissonance as part of a self-image maintenance process (Spencer, Josephs, & Steele, 1993; Steele et al., 1993), and we particularly focus on cross-cultural variations in people's self-concepts (Heine, Lehman, Markus, & Kitayama, 1999; Markus & Kitayama, 1991; Triandis, 1989, 1996).

As delineated in self-affirmation theory (Steele, 1988; see also Spencer et al., 1993, for its extension, the self-image maintenance process), people tend to experience threats to their self-concepts and the concomitant arousal of cognitive dissonance to the extent that they sense the possibility of having made a less-than-optimal choice. However, because different cultures espouse different self-construals or self-views as their cultural ideals (Heine et al., 1999; Markus & Kitayama, 1991; Triandis, 1989, 1996), there should be cross-cultural variability in the processes of cognitive dissonance and self-image maintenance. In particular, we believe that cognitive dissonance is experienced whenever people's important self-concepts are threatened, but dissonance reduction depends on the particular nature of important self-concepts espoused in a given culture. The research presented in this article demonstrates that cross-cultural research helps the field understand relatively basic social psychological processes better, in this case, both cognitive dissonance and self-image maintenance processes.

#### Culturally Ideal Self-Concepts, Cognitive Dissonance, and Self-Affirmation

Cross-cultural variations in the structure of the self among individualistic Western culture and collectivistic East Asian culture have been delineated in recent decades (e.g., Heine et al., 1999; Markus & Kitayama, 1991; Triandis, 1989, 1996). In relation to cognitive dissonance, the characteristics of ideal Western self-concepts most relevant to decision making seem to include the need to be rational and to make choices independently of or free from other entities and contexts. For instance, in choosing between business and medicine careers, decision makers' greatest concerns surface when they consider whether the profession is something they wish to pursue or whether they are choosing a profession to satisfy the desire of their parents. Optimal Western decision making should appear to be rational, unique, and independent, expressing individuals' own preferences and desires. Sensing the possibility of having made an irrational choice or having made a decision influenced by others, for instance, could induce Westerners to feel that their culturally ideal self-concepts are threatened. Such threatened feelings could, in turn, lead them to sense that their self-integrity is damaged and, consequently, to justify their choices as a means of reducing cognitive dissonance.

In contrast, East Asians, who hold an interdependent self-view, tend to attach greater importance to smooth and harmonious interpersonal relationships with their in-group members (e.g., Heine et al., 1999; Markus & Kitayama, 1991; Triandis, 1989, 1996). As a result, they tend to have strong interpersonal concerns such as appropriately fitting in with their in-groups and knowing the preferences of their close others and correctly anticipating those preferences in a timely manner. For instance, when getting coffee, East Asians may be more likely to know how their close friends

take their coffee from previous observations of the friends' behavior. Optimal East Asian decision making should incorporate and reflect the preferences and desires of close in-group members and can be construed as a sign of good membership in that society.

Individuals espousing interdependent self-concepts as their cultural ideal find making a suboptimal decision for themselves much less threatening than making an inconsiderate decision for their in-group members. Such an undesirable decision can have implications for maintaining harmonious relationships and may increase interpersonal concerns. It could also become a source of cognitive dissonance to the extent that the decision threatens the maintenance of a culturally adaptive self-image as an individual sensitive and sensible to the needs of in-group members. Thus, interdependent East Asians are expected to justify their decisions when they fear they might have made interpersonally inconsiderate decisions, which can have various implications for their relationships with in-group members, and not when they have made suboptimal decisions for themselves, which affect only the decision makers alone.

Cross-culturally variable self-concepts also have implications for self-image maintenance. Steele's (1988; see also Spencer et al., 1993) self-affirmation theory suggests that people are motivated to maintain an image of self-integrity. When a negative event threatens their beliefs that they are morally adequate and adaptive, individuals try to restore their positive self-images by affirming some positive, valuable aspects of their self-concepts. For example, when people fail a driving test, they can affirm themselves by recalling that they have very close, warm relationships with a number of friends. When people feel threatened by a nagging feeling that they have made a foolish decision, they can be affirmed by reminding themselves of some personally important values, such as religious beliefs. Although these theories were developed in North America, we believe that the theory and process are cross-culturally viable.

As described above, culturally ideal self-concepts vary across cultures. Thus, effective self-affirmation opportunities should also be culturally configured. Specifically, the characteristics of people's self-concepts that are likely to be self-affirming should depend on people's cultural background. For example, the characteristics of independent Western self-concepts that are likely to contribute to effective self-affirmation tend to reinforce people's beliefs in their individual uniqueness or distinctiveness from other people. In contrast, the self-affirming characteristics of interdependent East Asian self-concepts tend to reinforce a strong sense of connectedness or belongingness with important in-group members. When people's culturally valued sense of self is threatened and people experience cognitive dissonance, an effective self-image maintenance method (other than justifying the decision they have made) is to affirm the self in a culturally adaptive and appropriate way (i.e., affirming the independent self for Westerners and the interdependent self for East Asians).

#### Past Research on Cognitive Dissonance From Cross-Cultural Perspectives

Heine and Lehman (1997) demonstrated in cross-cultural differences in dissonance reduction between North Americans and East Asians. Using a conventional free-choice paradigm, under the guise of conducting market research of music compact discs

(CDs), these researchers examined the relation between cognitive dissonance and self-affirmation among Canadian and Japanese participants and found cross-cultural differences in psychological functioning between these two groups. In particular, Canadians showed the usual justification of their choices of CDs as a means of reducing dissonance. In keeping with the tenets of self-affirmation theory (Steele, 1988; Steele et al., 1993), Canadian participants did not justify their decisions when provided with an opportunity to affirm themselves through positive feedback on a personality test. Their Japanese counterparts, by contrast, did not show a tendency to justify their choices of CDs, and thus, for these participants, the self-affirmation manipulation turned out to be meaningless. Specifically, if Japanese participants did not experience cognitive dissonance in choosing between comparably rated CDs, they should also not have felt any threat to their self-integrity and, thus, had no need to restore their positive self-images by affirming themselves.

On the basis of these findings, Heine and Lehman (1997) argued that their Japanese participants did not rationalize their decisions because East Asians do not experience cognitive dissonance in the conventional free-choice paradigm. Appealing to core differences between the North American independent self-view and the East Asian interdependent self-view, they suggested that cognitive dissonance was a culturally constructed phenomenon specific to North American culture. In other words, making a nonoptimal choice for the self is threatening if one has an independent, but not an interdependent, self-view.

However, Sakai's (1981; Sakai & Andow, 1980) earlier research with an induced compliance paradigm demonstrated contrasting results with East Asian samples. Sakai (1981) asked Japanese high school students to make a counterattitudinal speech on the abolition of coeducation either publicly (i.e., their names, affiliated classes, and grades were included in an audiotaped speech) or anonymously. He found that those who made the speech publicly showed significant attitude change (i.e., higher endorsement of the abolition of coeducation) than those who made the speech anonymously. Sakai attributed this attitude change in the public speech condition to dissonance reduction. Anticipating a counterargument from the audience, the students making a public speech became aware of the inconsistency between their private opinion in support of coeducation and the public speech endorsing its abolition, which led them to experience cognitive dissonance.

Unlike Heine and Lehman's (1997) study, which used a free-choice paradigm, Sakai (1981) found dissonance reduction among Japanese individuals in an induced compliance paradigm. Was the discrepancy in the results of these two lines of research the mere consequence of differences in the research paradigms used? We believe that the inconsistent results are due not to the different paradigms used, but rather to differences in the nature of the self being threatened in those two situations. In Sakai's study, we believe that participants' interpersonal concerns accounted for the attitude change in the public speech condition. As mentioned earlier, in collectivistic cultures emphasizing interdependence among in-group members, people are greatly concerned with promoting smooth, harmonious relationships and avoiding unnecessary interpersonal friction with immediate in-group members. Any incident that draws people's interpersonal concerns might suggest that they are not living up to their cultural ideals and could thus become a source of cognitive dissonance. Although the speech

itself was audiotaped in Sakai's study, the participants in the public speech condition had to personally identify themselves by including, for example, their names and classes. Revealing such personal identification raised concerns about potential disagreement, ridicule, personal attack, or ostracism from the would-be audience, which might include friends or classmates. It is not difficult, therefore, to imagine that such interpersonal concerns led those in the public speech condition to change their attitudes to coincide with their counterattitudinal speeches in anticipation of having to defend themselves against their audience.

In the four studies described below, we investigated situations in which East Asians and North Americans experienced cognitive dissonance, engaged in postdecisional justification, and relied on self-affirmation opportunities to restore threatened self-integrity. These studies advance the understanding of when these two groups' culturally ideal self-concepts are threatened and subject to cognitive dissonance and self-affirmation processes.

### Unconventional Free-Choice Paradigm

Although the free-choice paradigm is known to present threats to Westerners who hold independent self-concepts, we needed to consider a realistic situation in which East Asians, who hold interdependent self-concepts, were likely to experience cognitive dissonance. In the traditional free-choice paradigm, participants evaluate a set of objects on the basis of their own preferences and choose between two equally evaluated alternatives for themselves. In our studies, we called this the "self" condition. To pit against this self condition, we needed a situation in which the experimental task creates interpersonal concerns and has implications for interdependent self-concepts, such as connectedness with close others. For East Asians, knowing the preferences and anticipating the desires of close in-group members are important aspects of interpersonal relationships. Failing to meet these cultural standards might not only hurt the others' feelings and thereby harm close interpersonal relationships, but also make the decision maker feel incompetent. Such a situation could create interpersonal concerns and thereby threaten the self-integrity of and lead to dissonance arousal for East Asians. We therefore created the "friend" condition, in which participants were asked to evaluate a set of objects on the basis of their close friends' preferences and choose between two object alternatives as a gift for their close friends.

Although music records or CDs were popular objects used in the free-choice paradigm in past research (e.g., Heine & Lehman, 1997; Steele et al., 1993) to examine the degree of rationalization or justification of choices people made, we chose Chinese food entrées as our free-choice materials. We reasoned that a food domain would provide a good context to test our hypotheses because a free lunch coupon as a chosen product would be enticing to university students and would make the experimental task realistic. Because of a relatively large population of Asian Canadians at the University of Waterloo and in the surrounding area, European Canadian undergraduates were likely to be relatively familiar with Chinese food, and both Asian Canadian and European Canadian students were thought to consume it relatively frequently, owing to its variety and inexpensiveness and to the large number of local Chinese restaurants. We also noted the importance of knowing and anticipating the food preferences of important in-group members when serving them, a feature of East

Asian culture described by both Markus and Kitayama (1991) and Heine and Lehman (1997).

Thus, for the purposes of our experiments, we created a free-choice paradigm in which participants rank and rate a list of Chinese food entrées based on either their own preferences (the self condition) or their close friends' preferences (the friend condition). The participants were then asked to choose a free lunch gift certificate either for themselves (the self condition) or for their close friends (the friend condition).

### Study 1: Postdecisional Justification Among European Canadians and Asian Canadians

In our first study, using the free-choice paradigm described above, we examined how culturally ideal self-concepts (i.e., independent self-concepts for European Canadians vs. interdependent self-concepts for Asian Canadians) interact with situations in which both cultural groups experience dissonance arousal and rationalize their decisions as a means of dissonance reduction.

For European Canadians in the self condition who made their choices for themselves, we expected to replicate the results obtained by other researchers (e.g., Heine & Lehman, 1997; Steele et al., 1993). Thus, we predicted that European Canadians would justify their decisions when they made choices for themselves because the prospect of making a suboptimal decision for themselves would be threatening to the independent self. We did not make a clear prediction for European Canadians in the friend condition who made their choices for their close friends. On one hand, because previous research (Nel, Helmreich, & Aronson, 1969; Norton, Monin, Cooper, & Hogg, 2003) has shown that Westerners can experience cognitive dissonance arising from interpersonal concerns, European Canadians might justify their choices for their friends. For example, Norton et al. (2003) found that Westerners experience dissonance vicariously, justifying the counterattitudinal behavior of in-group members. On the other hand, because European Canadians have a more independent than interdependent self-concept (Markus & Kitayama, 1991), they may not justify choices for their friends to the same extent as their choices for themselves or as much as Asian Canadians who made their choices for their friends. Therefore, we refrained from making a specific prediction for this group.

We hypothesized that Asian Canadians would justify their decisions more when they made choices for their close friends than when they made choices for themselves because the prospect of making inconsiderate decisions for important in-group members should evoke interpersonal concerns and threaten the interdependent self. When formulating this hypothesis, we considered that the strength of their identification with Asian culture might be a possible moderating factor for Asian Canadians' interdependent behavior. Although our Asian Canadian participants were born in Asia, the environments in which these participants have lived in Canada could be markedly different. Specifically, whereas some Asian Canadians have lived in an environment similar to that of their home country and have been surrounded by people with the same ethnic background and cultural assumptions, others have lived in an environment in which they have been more immersed in North American culture. For these and likely for other reasons, the level of identification of the Asian Canadian participants with their Asian heritage varies greatly.

Therefore, we presumed that to the extent that Asian Canadians identified strongly with Asian culture, they were likely to hold stronger interdependent cultural ideals and thus to show stronger postdecisional justification when they made the choices for their close friends. Alternatively, the more weakly Asian Canadians identified with their Asian background, the more likely they would be acculturated to individualistic North American culture; thus, they would hold interdependent cultural ideals less strongly than those with strong identification with Asian culture. Accordingly, in our research we focused on postdecisional justification among Asian Canadians who indicated they strongly identified with Asian culture.

## Method

### Participants

We surveyed the birth countries of potential participants during a mass testing session and recruited European Canadians who indicated Canada as their birth country and Asian Canadians who indicated one of the East Asian countries (e.g., Hong Kong, China, Vietnam, Taiwan) as their birth country. A total of 126 undergraduate students (73 women and 53 men) at the University of Waterloo participated in the study. They received either a partial course credit or \$5 for their participation. Eight people who did not properly follow the experimenter's instructions for experimental tasks or did not believe the cover story were excluded from the following data analyses.<sup>1</sup> Two Asian Canadians who did not indicate that they identified with their Asian background were also excluded from the data analyses. Of the remaining 116 participants (69 women and 47 men), 64 were European Canadians born in Canada (37 women and 27 men) and 52 were Asian Canadians born in East Asia (32 women and 20 men). In all four studies reported in this article, participants' sex had neither a significant main effect nor an interaction with other independent variables on the dependent variable; thus, it is not discussed further. Among the Asian Canadian participants, the mean length of stay in Canada was 7.5 years ( $SD = 4.6$  years).

### Procedure

*Strength of identification with Asian and Canadian cultures.* During the mass testing session, Asian Canadians were asked (a) with which ethnic group they most identify and (b) how much they identify with that ethnic group on an 11-point scale with anchors ranging from 0 (*not at all*) to 10 (*very much*). The levels of the identification strength with Asian culture among Asian Canadian participants we originally recruited ( $N = 93$ ) varied greatly (the range was 2–10,  $M = 8.41$ ). Using the median point of 9.0 on the 11-point scale, we included in the main analyses only those who indicated that they "most" identified with Asian culture and that they "strongly" identified with Asian culture. The identification strength with Asian culture and the length of stay in Canada significantly correlated,  $r(91) = -.31, p < .01$ . Thus, the longer Asian Canadians stayed in Canada, the less they identified with Asian culture.

In the mass testing session, we also asked potential participants to rate the extent to which they identify with Canadian culture on an 11-point scale with anchors ranging from 0 (*not at all*) to 10 (*very much*). The identification strength with Canadian culture significantly correlated with

<sup>1</sup> Some participants were excluded from analyses in each study because they did not complete the Time 1 ranking and rating task as instructed, they did not write an essay under the self-affirmation manipulation as instructed, or they did not believe the cover story of the Chinese restaurant and gift certificates.

the identification strength with Asian culture,  $r(91) = -.21, p < .05$ , and it correlated significantly with the length of stay in Canada,  $r(91) = .40, p < .001$ . In all studies, the experimenter was blind to participants' strength of identification with Asian and Canadian cultures.

**Materials and free-choice paradigm.** Participants reported to the laboratory individually and were greeted by a female or male experimenter. They were then randomly assigned to either the self or friend condition. They were provided with a cover story stating that a group of researchers were investigating the psychology of decision making in real-life situations, in collaboration with the university administrative office, and that the researchers wanted to evaluate the popularity of a menu in a soon-to-be-opened Chinese restaurant among University of Waterloo students. Furthermore, participants were told that the university administration would use the student feedback to determine whether the restaurant should be included in a student prepaid card system that can be used in restaurants on and around campus. Also, the restaurant would use this feedback to create a special lunch menu that would be attractive to university students.

In the friend condition, participants were further told that "Past research has shown that survey responses are more meaningful and more accurate when respondents picture themselves making decisions for another person. For the purpose of this survey, we would like you to picture a close friend, someone whose food preferences you feel you know fairly well, and respond as you make the decision for your friend." Then, these participants were given a minute to think about their close friends and select one. Once they indicated that they had chosen their friends, the experimenter confirmed that the friend was a close friend and not merely an acquaintance and that they knew the friend's food preferences well. These questions were asked to prevent participants in the friend condition from substituting their own preferences for their friends' preferences. Those in the self condition, on the other hand, were not given these additional explanations and questions. To ensure that participants remembered whose preferences they should use, especially for those in the friend condition, each questionnaire had explicit instructions on whose preferences they should base their ratings and decisions.

All participants were then given a list of Chinese entrées that contained 25 dishes and asked to choose 10 items on the basis of either their own preferences (the self condition) or their close friends' preferences (the friend condition). Once they had chosen the 10 most preferred entrées, they were asked to rank order them on the basis of either their own or their friends' preferences and then rate each item in terms of how much they or their friends would like to order each entrée on a 7-point scale with anchors ranging from 1 (*not at all*) to 7 (*very much*); the Time 1 rating measure. After filling out a demographic questionnaire, the participants were presented with two gift certificates that corresponded to their 5th and 6th ranked entrées. Depending on the condition they were assigned to, they were asked to choose one for themselves or one for their friends that they or their friends could redeem for one free lunch when the restaurant opened the following month. On indicating their choice of a free coupon, participants were asked whether they were certain that they or their friends would really like the choice. Then, those in the self condition were asked to write down their own names beside "Client's Name" on the coupon, whereas those in the friend condition were asked to write down their friends' names beside "Client's Name" and their own names beside "Compliments of." After participants personalized their choices of coupons in this manner, the experimenter left the laboratory, ostensibly to fetch another participant, and left them alone for 10 min. During this period, the chosen coupons were left on the desk in front of the participants. When the experimenter returned to the lab, participants were asked to look at a more detailed version of the same menu of 25 entrées, which contained an elaborated description and the price of each entrée. The 10 items initially chosen by each participant were highlighted. Participants were asked to transcribe these items in the order they appeared in the menu and then to rerate each of the 10 items in terms of how much they or their friends would like it on a 9-point scale with anchors ranging from 1 (*not at all*) to

9 (*extremely*); the Time 2 rating measure. We changed the rating scales slightly between Time 1 and Time 2 to prevent our participants from simply remembering their ratings at Time 1 and using them at Time 2 out of their motivation to be consistent between the two measures.

Because our experimental materials involved food preferences, we avoided scheduling experimental sessions at mealtime. Still, we included a question probing how hungry participants were on a 4-point scale with anchors ranging from 1 (*not at all hungry*) to 4 (*very hungry*).<sup>2</sup> We also included three questions in the friend condition. One question probed what type of relationship participants had with their friends (e.g., romantic partner, best friend, relative). The second question probed how close participants felt toward their friends for whom they chose the gift certificates on a 5-point scale with anchors ranging from 1 (*not at all close*) to 5 (*very close*).<sup>3</sup> The third question probed how participants thought their chosen gift certificates would be delivered to their friends. Participants normally assumed that they themselves would give the gift certificates to their friends in person. After a few questions assessing whether participants were suspicious about the deception, participants were thoroughly debriefed and received an unexpected \$5 in addition to their participation credit or remuneration. We made this additional payment to compensate for the invalid gift certificates.

In summary, the study had a 2 (cultural group: European Canadian vs. Asian Canadian)  $\times$  2 (target of coupon choice: self vs. friend) between-subjects factorial design.

## Results

The dependent variable in Study 1 was the postdecisional justification expressed by the spread of alternatives. The spread of alternatives was calculated from the rating measures of the 5th and 6th ranked entrées at Time 1 and Time 2. First, the 9-point scale of the Time 2 rating was converted to a 7-point scale to match with the Time 1 rating. Then, the sum of an increase in the rating of the

<sup>2</sup> The grand mean across the four studies of how hungry participants felt during the experimental session was  $M = 1.70$  ( $SD = 0.85$ ). The mean difference among the four studies was not significant,  $F(3, 439) = 1.87, p < .14$ . A post hoc analysis indicated that the only significant mean difference was between Study 2 ( $M = 1.81, SD = 0.68$ ) and Study 4 ( $M = 1.59, SD = 0.94$ ). In Study 2, there was a significant main effect for cultural group on the felt hunger,  $F(1, 177) = 4.23, p < .05$ . European Canadians felt hungrier than Japanese. There were no other significant effects in Study 2. In Study 4, there was a significant main effect for the self-affirmation condition on felt hunger,  $t(99) = 2.05, p < .05$ . Participants in the no self-affirmation condition felt hungrier than those in the independent self-affirmation condition. There were no other significant effects in Study 4. In all four studies, the hunger variable did not have any significant main effects or interactions with other independent variables on the main dependent variable. Thus, it is not discussed further.

<sup>3</sup> The grand mean across the four studies of how close participants in the friend condition felt toward their friends was  $M = 4.04$  ( $SD = 0.94$ ). There was a significant mean difference among four studies,  $F(3, 293) = 12.43, p < .001$ . A post hoc analysis indicated that Study 1 ( $M = 3.47, SD = 1.38$ ) was significantly different from Studies 2, 3, and 4 ( $M = 4.33, SD = 0.80, M = 3.95, SD = 0.58, \text{ and } M = 4.20, SD = 0.71, \text{ respectively}$ ), and Study 2 was significantly different from Study 3. Within each study, the means of the felt closeness variable did not differ significantly among different cultural groups or conditions. In Studies 1, 3, and 4, this variable did not have any significant main effects or interactions with other independent variables on the dependent variable. However, there was a significant interaction between the felt closeness variable and cultural groups on the spread of alternatives in Study 2; thus, it is discussed in the Study 2 discussion section in relation to in-group identification.

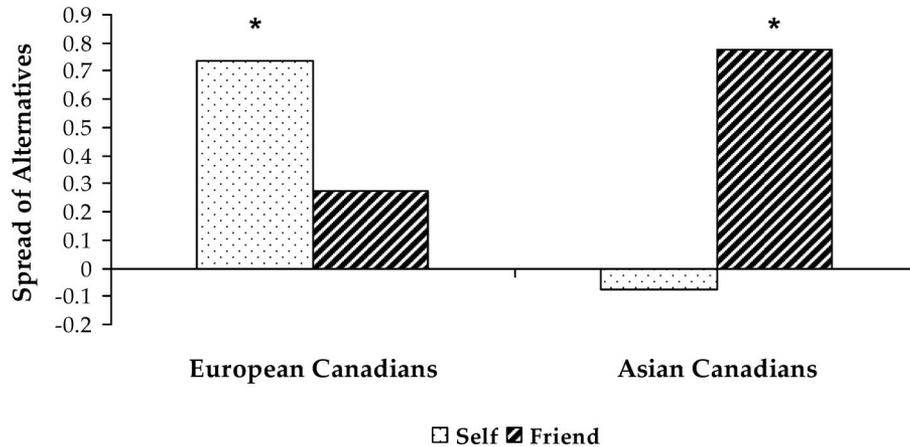


Figure 1. Study 1 postdecisional justification in 2 Cultural Groups  $\times$  2 Choice Targets (dependent variable = mean spread of alternatives). An asterisk indicates that the mean spread of alternatives of the condition is significantly different from zero.

entrée of the chosen coupon and a decrease in the rating of the entrée of the nonchosen coupon between Time 1 and Time 2 measures was calculated. It did not matter whether we analyzed the data by adjusting the Time 2 scale to the Time 1 scale or vice versa or by standardizing both scales. Thus, we used the simplest method in this and subsequent studies.

We conducted a 2 (cultural group: European Canadian vs. Asian Canadian)  $\times$  2 (target of choice: self vs. friend) analysis of variance (ANOVA) to test our prediction for an interaction between the two cultural groups and the target person (i.e., self or friend) for whom participants chose gift certificates. The results indicated that there were no significant main effects for cultural group or for target of coupon choice,  $F(1, 112) = 0.25$ , *ns*, and  $F(1, 112) = 0.38$ , *ns*, respectively. However, as predicted, the two-way interaction was significant,  $F(1, 112) = 4.38$ ,  $p < .05$  (see Figure 1). European Canadians in the self condition tended to show a greater spread of alternatives than Asian Canadians in the self condition,  $F(1, 112) = 3.22$ ,  $p = .07$ . Among Asian Canadians, those in the friend condition tended to show a greater spread of alternatives than those in the self condition,  $F(1, 112) = 3.32$ ,  $p < .07$ . European Canadians in the friend condition showed less spread of alternatives compared with European Canadians in the self condition and Asian Canadians in the friend condition, although not significantly so. Among European Canadians, the difference between the self and friend conditions was  $F(1, 112) = 1.22$ , *ns*. In the friend condition, the difference between European Canadians and Asian Canadians was  $F(1, 112) = 1.33$ , *ns*. In addition, we conducted one-sample *t* tests to examine whether the spread of alternatives was significantly different from zero in each group. In all studies, we used two-tailed tests. As predicted, the means of the spread of alternatives of European Canadians in the self condition ( $M = 0.74$ ,  $SD = 1.62$ ),  $t(31) = 2.57$ , and of strongly identified Asian Canadians in the friend condition ( $M = 0.77$ ,  $SD = 1.53$ ),  $t(27) = 2.68$ , were significantly different from zero ( $ps < .05$ ). Also, as expected, the means of the spread of alternatives of European Canadians in the friend condition ( $M = 0.27$ ,  $SD = 2.13$ ),  $t(31) = 0.73$ , and of strongly identified Asian Canadians in the self condition ( $M = -0.07$ ,  $SD = 1.12$ ),  $t(23) = 0.32$ , were not significantly different from zero (see Figure 1).

Although Asian Canadians who weakly identified with Asian culture (i.e., those who indicated less than 9 on the 11-point scale of Asian cultural identification strength) were not the main focus of the first study, the inclusion of this group was important, as they provided a nice comparison with the strongly identified Asian Canadian group because many variables that might be relevant to the Asian Canadian participants were equivalent in these two groups.<sup>4</sup> Thus, we conducted a regression analysis, including 41 weakly identified Asian Canadians and using the strength of identification with Asian culture as a continuous variable. In particular, we tested the spread of alternatives for an interaction between the target person for whom Asian Canadian participants chose gift coupons (i.e., the self or friend condition) and their identification strength with Asian culture. Reflecting our speculation that the stronger the Asian cultural identification the more interdependent tendency there would be in postdecisional justification, we obtained a significant crossover interaction between the target condition and the identification strength with Asian culture,  $t(89) = 2.74$ ,  $p < .01$  ( $\beta = .35$ ). In the friend condition, the more strongly Asian Canadians identified with Asian culture, the more they justified their choices for their friends; the simple slope was significant,  $\beta = .25$ ,  $t(89) = 2.41$ ,  $p < .05$ . In contrast, in the self condition, the more strongly Asian Canadians identified with Asian culture, the less they showed postdecisional justification for the choices made for themselves; the simple slope was also significant,  $\beta = -.33$ ,  $t(89) = 2.09$ ,  $p < .05$ .

### Discussion

The results of the first study mainly supported our predictions. Replicating previous findings, we found that European Canadians showed significant postdecisional justification when they made

<sup>4</sup> Although the mean number of years residing in Canada was significantly different between weakly identified Asian Canadians and strongly identified Asian Canadians ( $M = 10.9$  years vs. 7.5 years),  $t(91) = 3.39$ ,  $p = .001$ , the mean strength of identification with Canadian culture was not significantly different between the two groups ( $M = 6.32$  vs. 5.62 on an 11-point scale),  $t(91) = 1.45$ , *ns*.

choices for themselves. We also replicated past findings and found that Asian Canadians did not engage in postdecisional justification when they made choices for themselves. As hypothesized, Asian Canadians tended to engage in postdecisional justification when they made choices for their close friends. On the other hand, European Canadians' postdecisional justification of their choices made for their friends was less than that of choices made for themselves and less than Asian Canadians' justification of the choices made for their friends.

As mentioned earlier, the weakly identified Asian Canadian group was a nice comparison group for the strongly identified Asian Canadian group, and the inclusion of this group was particularly important in terms of the current free-choice paradigm that used Chinese food. One might argue that the use of a Chinese menu could prime Asian Canadians with Asian-ness or Asian cultural norms and could encourage them to think that they should be expert in Chinese food. Such a priming effect or encouragement could in turn motivate them to make the right decisions and consequently justify their decisions, particularly in the friend condition. If so, then, all Asian Canadian participants, many of whom were Chinese, should have justified their choices for their friends to demonstrate their expertise in Chinese food, regardless of their identification level with Asian culture. The fact that weakly identified Asian Canadians did not justify their choices for their friends counteracts such concerns about the use of Chinese food in this research.

The variables that might have influenced the results in the friend condition were the types of relationships participants had with their friends and the degree of closeness they felt toward them. Participants categorized their friends in multiple ways, such as a best friend and romantic partner, and there were no striking differences in the friend categorization. Between the two cultural groups, 70% to 78% of participants classified their friends as "friend" or "best friend" and about 28% indicated a "romantic partner." Participants also rated how close they felt toward their friends on a 5-point scale. A *t* test indicated that there was no significant difference between European Canadians ( $M = 4.28$ ,  $SD = 0.58$ ) and Asian Canadians ( $M = 4.21$ ,  $SD = 0.96$ ),  $t(58) = 0.33$ , *ns*. Thus, possible differences in types of friends or felt closeness toward friends can be safely eliminated as alternative explanations for the mean differences of the spread of alternatives in the friend condition between the two cultural groups.

Although the pattern of the means among the four conditions was as predicted and the interaction was significant, the contrasts of the means were not as statistically significant as we expected. Thus, we conducted a second study in Canada and in Japan in an effort to replicate the pattern of postdecisional justification for the choice made for the self and a friend.

### Study 2: Replication of Study 1 Among European Canadians and Japanese

Study 2 was meant to be a conceptual replication of Study 1, with Japanese participants replacing Asian Canadians. We maintained the same hypotheses outlined in Study 1. It was also important to see whether we obtained results consistent with Study 1 among European Canadians in the friend condition.

Thus, our specific hypotheses were that European Canadians would engage in postdecisional justification when they made

choices for themselves but that they might or might not do so when they chose the gift certificates for their friends. We expected that Japanese would justify their choices when they made the choices for their friends but that they would not when they chose the gift certificates for themselves.

## Method

### Participants

A total of 197 students participated in this cross-national study. In Canada, 104 European Canadian students (61 women and 43 men) from the University of Waterloo participated. They received either partial course credit or \$5 for their participation. As in Study 1, we measured participants' strength of identification with Canadian culture on an 11-point scale during the mass testing session. The East Asian group was composed of 93 Japanese students (55 women and 38 men) from Kyoto University, Kyoto, Japan. They were compensated for their participation with a bookstore gift coupon that was worth 500 Japanese yen, which was comparable to the \$5 at the University of Waterloo. Fifteen people who did not properly follow the instructions given by the experimenters were excluded from the data analyses. Also, 1 participant was excluded because his response on the main dependent variable was over 3.5 standard deviations from the mean, and thus regarded as an outlier. Thus, 181 participants (99 European Canadians and 82 Japanese; 109 women and 72 men) were included in the analyses.

### Procedure

Participants were randomly assigned to either the self or friend condition. Two research assistants, one female one male, ran the study at the University of Waterloo, which was conducted in English; Etsuko Hoshino-Browne and a female research assistant ran the study at Kyoto University, which was conducted in Japanese.

The free-choice materials and procedures used were basically the same as those used in Study 1, with a few modifications. The materials used in Japan were translated into Japanese by Etsuko Hoshino-Browne and pre-tested among the members of the research laboratory at Kyoto University. To eliminate any potential social aspects that go along with dining out, the self condition in Study 2 was slightly modified, so that participants chose a coupon for a take-out rather than for eating in a restaurant. This was especially a concern for Japanese participants because it is common for people in Japan to go to a Chinese restaurant with a group of friends or family members and share various dishes. Consequently, it was possible that people might take the other diners' preferences into account in choosing a coupon even when they chose the coupon for themselves. By making the menu and the coupons in the self condition for take-out, this possibility was reduced. The dishes listed on the Japanese version of the menu were also modified according to popular Chinese dishes in Japan.

At the end of the experiment, both Japanese and European Canadian participants were thoroughly debriefed. Only European Canadian participants received an unexpected \$5 in addition to their participation credit or remuneration to replace the invalid gift certificates, because the additional payment was unconventional at Kyoto University.

In summary, the study had a 2 (cultural group: European Canadians vs. Japanese)  $\times$  2 (target of coupon choice: self vs. friend) between-subjects factorial design.

## Results

The dependent variable was the postdecisional justification expressed by the spread of alternatives, and we calculated it in the same manner as in Study 1.

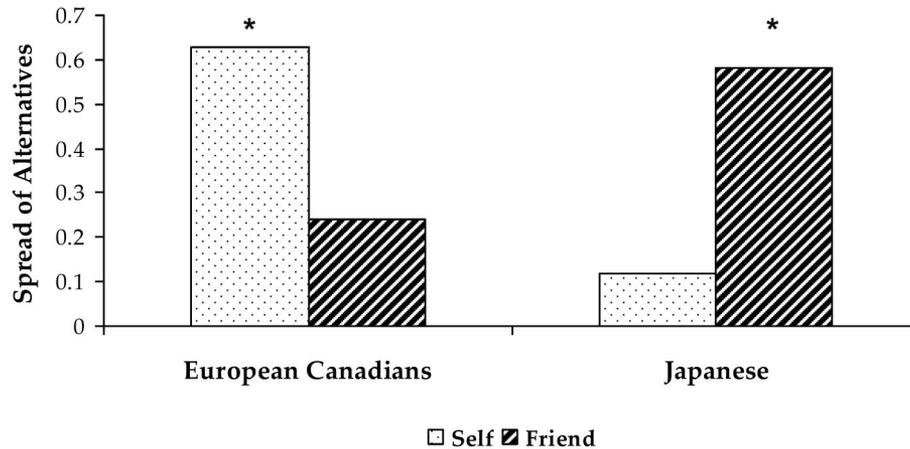


Figure 2. Study 2 postdecisional justification in 2 Cultural Groups  $\times$  2 Choice Targets (dependent variable = mean spread of alternatives). An asterisk indicates that the mean spread of alternatives of the condition is significantly different from zero.

The purpose of Study 2 was to replicate the pattern of the means of postdecisional justification obtained in Study 1; thus, we predicted a significant interaction between the two cultural groups and the target of coupon choice.

We conducted a 2 (cultural group: European Canadians vs. Japanese)  $\times$  2 (target of coupon choice: self vs. friend) ANOVA, which indicated that the predicted interaction was significant,  $F(1, 177) = 4.65$ ,  $p = .03$  (see Figure 2). As expected, European Canadians in the self condition tended to show a greater spread of alternatives than Japanese in the self condition,  $F(1, 177) = 3.60$ ,  $p < .06$ . Also as predicted, Japanese in the friend condition tended to show a greater spread of alternatives than Japanese in the self condition,  $F(1, 177) = 2.57$ ,  $p < .11$ .<sup>5</sup> Thus, the pattern of the means among European Canadians and Japanese was similar to that of Study 1 among European Canadians and Asian Canadians, although the simple contrasts comparing the means according to the prediction were not statistically significant. We also conducted one-sample  $t$  tests to examine whether the spread of alternatives was significantly different from zero in each group. As predicted, the means of the spread of alternatives of European Canadians in the self condition ( $M = 0.63$ ,  $SD = 1.40$ ),  $t(60) = 3.51$ , and of Japanese in the friend condition ( $M = 0.58$ ,  $SD = 1.09$ ),  $t(43) = 3.50$ , were significantly different from zero,  $ps = .001$ . Also, as expected, the means of the spread of alternatives of European Canadians in the friend condition ( $M = 0.24$ ,  $SD = 1.43$ ),  $t(37) = 1.03$ , and of Japanese in the self condition ( $M = 0.12$ ,  $SD = 1.21$ ),  $t(37) = 0.60$ , were not significantly different from zero (see Figure 2).

### Meta-Analyses Across Studies 1 and 2

The pattern of the means of postdecisional justification obtained in Study 2 replicated the results in Study 1, and the interaction between the two cultural groups and the target of decision was significant. However, the simple contrasts of the means were not statistically significant. Therefore, we conducted a series of meta-analyses (see Rosenthal, 1991) across these two studies to test the interaction, simple contrasts of the means, and one-sample  $t$  tests

on the spread of alternatives to ascertain the extent European Canadians and East Asians engaged in postdecisional justification.

The meta-analysis for the interaction between the two cultural groups and the target of coupon choice was significant,  $z = 2.98$ ,  $p < .005$ . Both European Canadians and East Asians showed the most justification of their choices when their culturally important self-concepts were threatened by making choices. That is, European Canadians justified their choices made for themselves, whereas East Asians justified their choices made for their friends.

A series of meta-analyses for simple contrasts indicated that the difference between European Canadians and East Asians in the self condition was significant,  $z = 2.62$ ,  $p < .01$ . Among East Asians, the difference between the self and friend condition was also significant,  $z = 2.43$ ,  $p < .02$ . Among European Canadians, however, the contrast between the self and friend condition was only marginally significant,  $z = 1.80$ ,  $p = .07$ . In the friend condition, the contrast between the two cultural groups was also only marginally significant,  $z = 1.64$ ,  $p = .10$ .

Meta-analyses for the one-sample  $t$  tests indicated that European Canadians' spread of alternatives in the self condition was significantly different from zero,  $z = 4.02$ ,  $p < .001$ , whereas their spread of alternatives in the friend condition was not,  $z = 1.22$ ,  $ns$ . East Asians' spread of alternatives in the self-condition was not different from zero,  $z = 0.64$ ,  $ns$ , whereas their spread of alternatives in the friend condition was significantly different from zero,  $z = 4.07$ ,  $p < .001$ .

### Discussion

The results of the meta-analyses of first two studies present a clearer picture of the nature of the interaction between the two

<sup>5</sup> Among European Canadians, the difference between the self and friend conditions ( $M = 0.63$  vs.  $M = 0.24$ , respectively) was  $F(1, 177) = 2.08$ ,  $p < .15$ . In the friend condition, the difference between European Canadians and Japanese ( $M = 0.24$  vs.  $M = 0.58$ , respectively) was  $F(1, 177) = 1.38$ ,  $ns$ .

cultural groups and the target of decision. The meta-analyses also indicated that the extent to which European Canadians engaged in justification for the choices they made for their friends was not different from zero. The meta-analyses also indicated that their justification in the friend condition was less than their justification in the self condition or Asians' justification in the friend condition, but neither contrast was statistically different. Thus, it is difficult to claim that European Canadians justified the choices they made for their friends or that they did not justify the choices they made for their friends.

As mentioned earlier, there is evidence that North Americans do experience dissonance interpersonally or vicariously when they observe their in-group members engage in attitude-inconsistent behavior (Norton et al., 2003). On the basis of these findings, we speculated earlier the possibilities of North Americans engaging in postdecisional justification of their choices for their friends. On one hand, if European Canadians felt personal responsibility for the choices they made for their friends or if they held strong in-group identification with their friends (i.e., in-group identification at a personal level), they would be likely to justify their choices for their friends. On the other hand, if they held strong in-group identification with their individualistic Canadian culture (i.e., in-group identification at a cultural level), they would espouse more individualistic orientations and thus would be unlikely to justify their choices for their friends.

We examined two proxy variables of European Canadian in-group identification, that is, the strength of felt closeness as a personal level identification and the strength of identification with Canadian culture as a cultural level identification. However, the additional analyses did not shed light on the nonsignificant difference between the self and friend conditions among European Canadians, and we did not find clear, consistent relations between either type of identification and postdecisional justification.<sup>6</sup> The most plausible interpretation at this point seems to be that although they care about their choices made for their close friends to a certain extent, they are more concerned about their personal choices than their interpersonal choices.

### Study 3: Postdecisional Justification and Self-Affirmation Among Asian Canadians

Past cognitive dissonance research has demonstrated that self-affirmation buffers threats and reduces defensiveness in the experience of cognitive dissonance and that it can be used as an alternative means to postdecisional justification to alleviate dissonance arousal and maintain one's self-image (Heine & Lehman, 1997; Steele & Liu, 1983; Steele et al., 1993). In other words, postdecisional justification is not the only route to restoring self-integrity. Thus, in a third study, we investigated the effect of self-affirmation as a means of countering cognitive dissonance in the friend condition among Asian-born Asian Canadians who strongly identified with Asian culture. We examined this particular group because they were the group who engaged in postdecisional justification because of a threat to their interdependent cultural ideals in Study 1, and they are, therefore, the group that should show clear effects of an interdependent self-affirmation.

We used both independent and interdependent self-affirmation manipulations and a no self-affirmation control group. We expected that only the interdependent self-affirmation would be

effective as an alternative to justifying their choices for Asian Canadians because this self-affirmation manipulation would provide them with an opportunity to maintain their cultural ideals even when confronting the feelings of threatened self-integrity tied to the prospect of choosing the wrong gift coupons for important in-group members. Thus, we expected that when choosing coupons for their close friends, Asian Canadians presented with an opportunity to affirm their interdependent selves would not show postdecisional justification, whereas those who did not have such an opportunity would continue to engage in postdecisional justification.

## Method

### Newly Devised Self-Affirmation Manipulations

Given the fact that a particular aspect of the Asian self is threatened in the experience of cognitive dissonance, we wished to create a new self-affirmation manipulation tailored to affirm culturally ideal interdependent self-concepts.

Conventional self-affirmation manipulations typically use a form of value survey. In one common manipulation used by Fein and Spencer (1997), participants select the most personally important value from a list

<sup>6</sup> As a proxy variable for in-group identification at a personal level, we examined the variable that measured how close participants felt toward their friends (i.e., the felt closeness variable) on a 5-point scale with anchors ranging from 1 (*not at all close*) to 5 (*very close*). A *t* test indicated that there was no significant difference between two cultural groups ( $M = 4.45$ ,  $SD = 0.69$  for European Canadians and  $M = 4.23$ ,  $SD = 0.89$  for Japanese),  $t(80) = 1.27$ , *ns*. European Canadians indicated that they based their food preference judgments on and chose as their free lunch coupon recipients their best friends or romantic partners, whereas Japanese indicated that they chose either friends or best friends. Using the felt closeness variable as a continuous variable, we performed separate regression analyses for Studies 1 and 2 to test whether feeling closer toward friends (i.e., stronger personal-level in-group identification) makes justification of the choices made for the friends stronger. In Study 1 there were no significant effects; however, in Study 2 there was a marginally significant main effect for felt closeness,  $t(78) = 1.92$ , ( $\beta = .25$ ),  $p < .06$ , and a significant interaction between felt closeness and cultural groups on the spread of alternatives,  $t(78) = 2.52$ , ( $\beta = -.34$ ),  $p < .02$ . The pattern of the interaction suggests that the closer Japanese participants felt toward their friends, the more they justified their choices for their friends, whereas the closer European Canadians felt toward their friends, the less they justified their choices for their friends. Considering this negative relation between felt closeness and the degree of justification in Study 2 and our finding of no relation between the two variables in Study 1 among European Canadians, the speculation that stronger in-group identification at a personal level leads to more postdecisional justification of the decisions for friends seems unlikely, at least in the current free-choice paradigm. As a proxy variable for in-group identification at a cultural level, we examined strength of identification with Canadian culture, which was measured on an 11-point scale with anchors ranging from 0 (*not at all*) to 10 (*very much*). Using this as a continuous variable, we performed a regression analysis for Studies 1 and 2 separately. There were no significant main effects for the identification variable or significant interactions between the identification variable and the target of coupon choice on the spread of alternatives in both studies,  $t$ 's  $< 1.0$ , *ns*. Thus, the other speculation that stronger in-group identification at a cultural level (i.e., stronger individualistic orientations) leads to less postdecisional justification of the decisions for friends also seems unlikely, at least in our research.

of various values, such as business–economics, social life–relationships, and religion–spirituality, and then explain, in written form, why the value is important to them. Considering the culturally ideal interdependent self-concept for East Asians, we created an interdependent self-affirmation manipulation, noting that East Asians' culturally important self-concepts are their feelings of connectedness and belongingness. To affirm these cultural ideals, we asked participants under an interdependent self-affirmation manipulation to select the most important value for themselves and their families and explain the reasons why they and their families share that particular value. Parallel to this new interdependent self-affirmation manipulation, we revised the conventional self-affirmation manipulation to create an independent self-affirmation manipulation that provides people with a more salient opportunity to affirm their uniqueness and independence. Specifically, under the new independent self-affirmation manipulation, participants explained why their selected values uniquely describe who they are.<sup>7</sup>

### Participants

As in Study 1, we surveyed potential Asian Canadian participants during a mass testing session at the University of Waterloo about their birth countries and recruited only those who indicated an East Asian country as their birth country. The mean length of stay in Canada among the participants was 8.99 years. To measure the strength of these participants' identification with Asian culture, we included the same two questions in the mass testing session as we did in Study 1 (i.e., which ethnic group did they most identify with and how much did they identify with that ethnic group on an 11-point scale with anchors ranging from 0 [*not at all*] to 10 [*very much*]). Although the median point on the scale in Study 1 was 9.0, for this study, we selected Asian-born Asian Canadians who indicated that they identified with Asian culture at 8.0 or above on the 11-point scale in order to obtain more Asian Canadian participants. We also included the same question as in Studies 1 and 2 to measure how much people identify with Canadian culture on an 11-point scale with anchors ranging from 0 (*not at all*) to 10 (*very much*).

A total of 61 undergraduate students (36 women and 25 men) at the University of Waterloo participated in the study. They received partial course credit for their participation. Seven people who did not properly follow the instructions given by the experimenter were excluded from the data analyses. Thus, 54 participants (32 women and 22 men) were included in the analyses.

### Procedure

Participants were randomly assigned to one of three self-affirmation conditions: no self-affirmation, independent self-affirmation, or interdependent self-affirmation. A female experimenter conducted the experimental sessions, and all participants took part in the study individually. We used the same free-choice materials and procedures that we used in Study 1. However, unlike Study 1, we used only the friend condition, in which Asian Canadians chose coupons for a free lunch entrée for their close friends. In both the independent and the interdependent self-affirmation conditions, the self-affirmation manipulation was given after participants finished their Time 1 ranking and rating and completed a demographic questionnaire. Thus, immediately before participants were presented with two coupons for their 5th and 6th ranked entrées to make their choices for their friends, they were given an opportunity to affirm their independent or interdependent selves. The experimenter presented the participants with the self-affirmation manipulation in the form of a questionnaire purportedly unrelated to our study, explaining that she was helping another researcher to collect data. As described earlier, participants in the independent self-affirmation condition were asked to choose one value that was the most personally important to them from a list of six different values and to write a paragraph about how the selected value uniquely describes who they

are. Those in the interdependent self-affirmation condition were asked to select the most important value for both themselves and their family members and to explain in a paragraph why they share those particular values with their family members. Participants in the no self-affirmation condition did not receive these manipulations. At the end of the experiment, participants were thoroughly debriefed and received unexpected \$5 in addition to their participation credit to replace the invalid gift certificates.

### Results

The dependent variable was the postdecisional justification expressed by the spread of alternatives, and we used the same calculation as we did in Studies 1 and 2.

We hypothesized that because the interdependent self-affirmation should help Asian Canadians to buffer or reduce dissonance arousal, these participants would not show much postdecisional justification of the coupons they chose for their close friends. On the other hand, we expected that those who did not have an opportunity to affirm their interdependent self, that is, those in the no self-affirmation condition or in the independent self-affirmation condition, would engage in postdecisional justification.

We conducted a one-way ANOVA, which indicated that the mean differences among the three self-affirmation groups were marginally significant,  $F(2, 51) = 2.69, p < .08$  (see Figure 3). To test our specific hypothesis, however, we conducted a planned contrast to compare the mean of the two conditions for which we expected a significant spread of alternatives (i.e., the no self-affirmation and independent self-affirmation conditions) against the mean of the interdependent self-affirmation condition for which we did not expect such a spread of alternatives. As predicted, we obtained a significant mean difference between these groups,  $F(1, 51) = 4.80, p = .03$ . That is, the mean of the spread of alternatives of the no self-affirmation and independent self-affirmation conditions was significantly different from the mean of

<sup>7</sup> To ascertain the effectiveness of these new self-affirmation manipulations, we conducted a study in which we gave Asian-born Asian Canadians either the independent or the interdependent self-affirmation manipulation and then measured their state self-esteem (cf. McFarland & Ross, 1982) immediately after they completed their essays. As expected, those Asian-born Asian Canadians who presumably held strong interdependent self-concepts, and thus could affirm their interdependent selves through an interdependent self-affirmation opportunity, showed a significantly higher level of state self-esteem than did those who were given an independent self-affirmation opportunity. We also examined the values the Asian Canadians selected and the content of the essays they wrote in either of the two conditions. The most popular value that the participants chose was "social life–relationships" in both conditions. Also, the participants in both conditions provided similar reasons in explaining why the selected value uniquely described who they are (the independent self-affirmation) or why they share the selected value with their family (see Hoshino-Browne, Zanna, Spencer, & Zanna, 2004, for the details). The only major difference between the two self-affirmation conditions was that these reasons were framed in terms of self versus family in the respective conditions. It is interesting that, despite the fact the majority of the Asian Canadian participants selected the same values and listed similar reasons in both conditions, the interdependent self-affirmation made such a positive difference in the participants' state self-esteem.

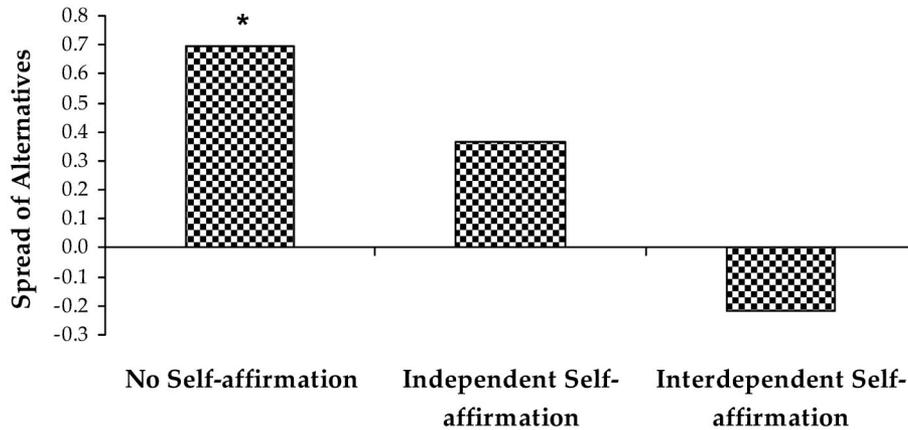


Figure 3. Study 3 postdecisional justification among Asian Canadians in three self-affirmation conditions (dependent variable = mean spread of alternatives). An asterisk indicates that the mean spread of alternatives of the condition is significantly different from zero.

the spread of alternatives of the interdependent self-affirmation condition.

We also conducted a series of follow-up contrast tests to compare differences in the mean spread of alternatives among different pairs of self-affirmation conditions. As expected, the difference between the no-self-affirmation condition and the independent self-affirmation condition was not significant,  $F(1, 51) = 0.66, ns$ . Also, as expected, the difference between the no self-affirmation condition and the interdependent self-affirmation condition was significant,  $F(1, 51) = 5.19, p < .03$ . However, the difference between the independent self-affirmation condition and the interdependent self-affirmation condition was not significant,  $F(1, 51) = 2.18, p < .14$ .<sup>8</sup> We return to this unexpected result in the *Discussion* section. In addition, we conducted one-sample  $t$  tests to examine whether the spread of alternatives was significantly different from zero in each group. As predicted, the means of the spread of alternatives in the no self-affirmation condition ( $M = 0.69, SD = 1.32$ ),  $t(16) = 2.16$ , was significantly different from zero,  $p < .05$ , but those in the independent self-affirmation condition ( $M = 0.36, SD = 1.03$ ),  $t(17) = 1.50$ , and in the interdependent self-affirmation condition ( $M = -0.22, SD = 1.22$ ),  $t(18) = 0.78$ , were not (see Figure 3).

### Discussion

The results of the third study partially supported our predictions. Asian Canadians who did not have a chance to affirm themselves engaged in postdecisional justification when they made choices for their close friends. This result nicely replicated the pattern of results in the friend condition among Asian Canadians in Study 1 and among Japanese participants in Study 2. Moreover, the interdependent self-affirmation was an effective means for Asian Canadians to buffer or reduce their threatened feelings. Through an interdependent self-affirmation opportunity, the Asian Canadian participants seemed to be able to maintain their cultural ideals, even after making choices for their close friends, and to significantly reduce both their levels of dissonance arousal and their concomitant need to justify their choices. By contrast, although Asian Canadians in the independent self-affirmation condition had

an opportunity to affirm themselves, affirming an independent self-concept was not an effective means of neutralizing the threat from the possibility of making nonoptimal decisions for valued in-group members. As a result, they tended to engage in postdecisional justification of the choices that they made for their close friends.

Note, however, that the degree to which those in the independent self-affirmation condition engaged in the justification fell between the mean spread of alternatives obtained in the no self-affirmation and interdependent self-affirmation conditions. Recall that the mean difference between the independent self-affirmation and interdependent self-affirmation conditions was not statistically significant. If the independent self-affirmation opportunity was not helpful at all to Asian Canadians, the degree to which they engaged in postdecisional justification should have been equivalent to the no self-affirmation condition. We speculated as to possible explanations of this somewhat unexpected result.

One possible explanation for the more pronounced effect of the interdependent self-affirmation on postdecisional justification could be that the interdependent self-affirmation is somehow stronger or has better efficacy than the independent self-affirmation, apart from the fact that it affirms Asian Canadians' culturally important interdependent self-concepts. If this is the case, then regardless of the types of important self-concepts people possess, the interdependent self-

<sup>8</sup> In this study we also asked participants whether they ate with the friend to whom they were giving the coupon. On the basis of responses to this question, we excluded 3 people who indicated that they never or rarely ate with the friend. We reasoned that these people might not experience dissonance because they would be less likely to face a threat to their interdependent self-concept if the friend did not like their choice. In this analysis, the results were slightly stronger. The main effect for the self-affirmation manipulation was significant,  $F(2, 48) = 3.06, p = .05$ . The condition means were  $M = 0.82$  in the no self-affirmation condition,  $M = 0.36$  in the independent self-affirmation condition, and  $M = -0.22$  in the interdependent self-affirmation condition. As in the analysis reported in the text, the only significant difference between means was between the no affirmation condition and the interdependent affirmation condition,  $F(1, 48) = 6.03, p < .01$ .

affirmation should always have a stronger effect in reducing psychological discomfort or buffering people from self-threats. Then, examining European Canadian men in the self condition would be ideal to test this possibility. The self condition has been demonstrated in Studies 1 and 2 to threaten the independent self most, and European Canadian men are thought to hold stronger independent self-concepts than their female counterparts (see Cross & Madson, 1997, for a review) or Asian counterparts (e.g., Markus & Kitayama, 1991; Triandis, 1989, 1996). Thus, we conducted a small study by having 37 European Canadian men make choices for themselves after receiving either an independent or an interdependent self-affirmation. The experimental procedure was exactly the same as that used for the self condition in Studies 1 and 2 and the independent and interdependent affirmation conditions were exactly the same as those used in Study 3.

The results demonstrated that an independent self-affirmation eliminated the spread of alternatives ( $M = -0.14$ ), whereas the interdependent self-affirmation did not ( $M = 0.80$ ),  $t(35) = 2.75$ ,  $p < .01$ . This additional study suggests that the interdependent self-affirmation manipulation had greater efficacy than the independent manipulation seen in Study 3 that was not due simply to the fact that the interdependent self-affirmation is a stronger affirmation for all people. In contrast, these results suggest that the strength of the form of self-affirmation depends on the nature of the self-concept that is being affirmed.

A more compelling theoretical account for the pattern of results seen in Study 3 is that the independent self-affirmation was effective for some but not all Asian Canadians. Some of the Asian Canadians who strongly identified with Asian culture also strongly identified with individualistic Canadian culture and thus may have embraced independent self-concepts as well as more culturally inherent interdependent self-concepts. If so, these biculturally identified Asian Canadians may have been able to use the independent self-affirmation to help them buffer or reduce threatened feelings when they experienced dissonance, just as they seemed able to use the interdependent self-affirmation effectively. By contrast, those who strongly identified with Asian culture and not much, if at all, with Canadian culture (i.e., "monocultural" Asian Canadians) may not have embraced independent self-concepts, and therefore, an opportunity to affirm independent self-concepts would be functionally irrelevant to any effort to maintain their interdependent cultural ideals. We examine this hypothesis in Study 4.

#### Study 4: Postdecisional Justification and Independent Self-Affirmation Among Bicultural and Monocultural Asian Canadians

In Study 3, although Asian Canadians who were given a chance to affirm their independent selves tended to show postdecisional justification, the degree to which they engaged in the justification was somewhat attenuated compared with the results obtained in the no self-affirmation condition. We explain this finding by hypothesizing that the independent self-affirmation would be effective for Asian Canadians if they were bicultural and thus embraced both interdependent and independent self-concepts. We also hypothesize that affirming the independent self would not be of much help to those who were monocultural and thus held only interdependent self-concepts.

It is important to note that whether Asian Canadians also identify with Canadian culture is only relevant to the independent self-affirmation. In Study 3 after the interdependent self-affirmation, we found no evidence of dissonance reduction. Given that the participants were all Asian Canadians who held interdependent self-concepts as their cultural ideals, this finding was expected. Therefore, in the fourth study we excluded the interdependent self-affirmation condition and examined the effects of the independent self-affirmation only among Asian Canadians who either identified only with their Asian culture (monoculturals) or identified with both Canadian and Asian cultures (biculturals).

We expected that after making choices for their close friends, Asian Canadians in the no self-affirmation condition would show postdecisional justification, regardless of the strength of identification with Canadian culture. In the independent self-affirmation condition, in contrast, we predicted that bicultural Asian Canadians would show attenuated postdecisional justification because these bicultural people are thought to have integrated Canadian culture and its individualistic cultural ideals in their self-view, and thus, they have independent self-concepts that could be affirmed. We predicted that monocultural Asian Canadians, however, would continue to engage in the justification. We did not expect the independent self-affirmation to affect the monocultural Asian Canadians because we expected that they would not have strong independent self-concepts if they did not identify with individualistic Canadian culture.

### Method

#### Participants

As in Studies 1 and 3, we surveyed the birth countries of potential participants, measured the strength of identification with Asian culture during a mass testing session, and recruited Asian Canadians born in East Asian countries. As in Study 3, we recruited Asian-born Asian Canadians who indicated that they identified strongly with Asian culture (at 8.0 or above on the 11-point scale). As in the previous three studies, to measure the strength of identification with Canadian culture, we also asked potential participants to rate the extent to which they identify with Canadian culture on an 11-point scale with anchors ranging from 0 (*not at all*) to 10 (*very much*). In addition, we asked participants the length of time that they had spent in Canada, reasoning that the longer they had been in Canada the stronger their identification would be. The mean length of stay in Canada among our participants was 9.19 years.

A total of 120 undergraduate students (70 women and 50 men) at the University of Waterloo participated. They received either a partial course credit or \$5 for their participation. Seventeen people who did not follow the instructions given by the experimenter were excluded from the data analyses. Also, 1 participant was excluded because his response on the main dependent variable was over 3.5 standard deviations from the mean, and thus regarded as an outlier, and 1 participant was excluded because although she was born in Asia, she moved to Canada within days of her birth. Thus, 101 participants (60 women and 41 men) were included in the analyses. The identification strength with Canadian culture correlated significantly with the length of stay in Canada,  $r(97) = .54$ ,  $p < .001$  (based on 99 participants, as 2 participants did not indicate the length of stay in Canada in Study 4). Thus, the longer Asian Canadians stayed in Canada, the more strongly they identified with Canadian culture. Given the high correlation of these two variables, we standardized both measures and combined them as an index of identification with Canadian culture.

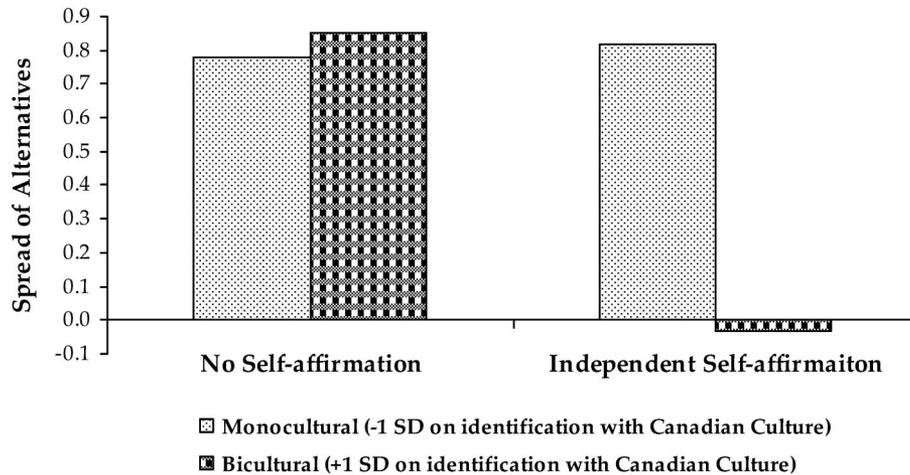


Figure 4. Study 4 postdecisional justification among Asian Canadians as predicted by self-affirmation condition and identification with Canadian culture (dependent variable = predicted mean spread of alternatives).

### Procedure

Participants were randomly assigned to either the no self-affirmation or the independent self-affirmation condition. As in Study 3, a female experimenter conducted individual sessions for the participants. Also as in Study 3, we used only the friend condition in which Asian Canadians chose coupons for a free lunch entrée for their close friends. The materials and procedures were the same as those used in Study 3. In the independent self-affirmation condition, the self-affirmation manipulation was given as a questionnaire under the guise of helping another researcher just before participants were presented with two coupons that corresponded to their 5th and 6th ranked entrées. Participants in the independent self-affirmation condition were asked to choose one value that was the most personally important to them from a list of six different values and write a short paragraph why their selected values uniquely described who they are. Participants in the no self-affirmation condition did not receive this manipulation. As in the previous three studies, participants were thoroughly debriefed and received an unexpected \$5 in addition to their participation credit or remuneration to replace the invalid gift certificates.

### Results

The dependent variable was the postdecisional justification expressed by the spread of alternatives and was calculated according to the same procedure used in the previous three studies.

Because our measure of identification with Canadian culture was a continuous variable, we analyzed the results using multiple regression. We regressed participants' spread of alternatives onto their self-affirmation condition, their identification with Canadian culture, and the interaction of these two variables. This analysis revealed a marginally significant effect for the interaction between self-affirmation condition and identification with Canadian culture,  $\beta = -.25$ ,  $t(95) = 1.70$ ,  $p = .09$ . The predicted means at one standard deviation above and below the mean on identification with Canadian culture by self-affirmation condition are depicted in Figure 4.

The simple slope predicting participants' spread of alternatives from their identification with Canadian culture was significant in the independent self-affirmation condition,  $\beta = -.34$ ,  $t(95) = 2.10$ ,  $p < .05$ , but was not significant in the no self-affirmation

condition,  $\beta = .02$ ,  $ns$ . Thus, the more participants identified with Canadian culture in the independent self-affirmation condition, the less postdecisional justification they engaged in. In contrast, identification with Canadian culture was unrelated to postdecisional justification in the no self-affirmation condition.

In addition, at one standard deviation above the mean in identification with Canadian culture (i.e., among people high in identification with Canadian culture and high in identification with Asian culture, or biculturals) the predicted mean of those in the no self-affirmation condition ( $M_{\text{pred}} = 0.85$ ) was significantly greater than the predicted mean for those in the independent affirmation condition ( $M_{\text{pred}} = -0.03$ ),  $t(95) = 3.33$ ,  $p < .01$ .<sup>9</sup> Thus, among bicultural participants, those in the independent self-affirmation condition were predicted to show less postdecisional justification than those in the no self-affirmation condition.

### Discussion

Replicating the results of the previous three studies, in Study 4 our results demonstrated that Asian Canadians who did not have an opportunity to affirm themselves engaged in postdecisional justification when they made choices for their close friends. The strength of their identification with Canadian culture did not matter in this situation. However, the strength of identification with

<sup>9</sup> We also analyzed the data after excluding 6 people who indicated that they never or rarely ate with the friend to whom they were giving the coupon. In this analysis, the results were somewhat stronger. The interaction between the self-affirmation and identification with Canadian culture was significant,  $\beta = -.32$ ,  $t(89) = -2.14$ ,  $p < .05$ . The simple slope predicting spread of alternatives was significant in the independent self-affirmation condition,  $\beta = -.44$ ,  $t(89) = 2.72$ ,  $p < .01$ , but was not significant in the no self-affirmation condition ( $\beta = .02$ ,  $ns$ ). Finally, at one standard deviation above the mean on identification with Canadian culture, the predicted mean for bicultural Asian Canadians in the no self-affirmation condition ( $M_{\text{pred}} = 0.76$ ) was significantly greater than the predicted mean in the independent self-affirmation condition ( $M_{\text{pred}} = -0.27$ ),  $t(89) = 3.96$ ,  $p < .001$ .

Canadian culture did matter when Asian Canadians could affirm their independent selves. Bicultural Asian Canadians who strongly identified with both Asian and Canadian cultures were able to use the independent self-affirmation opportunity effectively to buffer or reduce threatened feelings and maintain their cultural ideals even after making choices for their close friends. They did not, therefore, need to justify their choices to reduce their dissonance arousal. On the other hand, the independent self-affirmation opportunity was not helpful to monocultural Asian Canadians, who did not strongly identify with individualistic Canadian culture and thus did not embrace independent self-concepts. These participants continued to engage in postdecisional justification of the choices that they made for their close friends.

The bicultural Asian Canadians' results led to a consideration of the notion of "frame switching" (Hong, Morris, Chiu, & Benet-Martinez, 2000, p. 709) or the "alternation" model in the acculturation process (LaFramboise, Coleman, & Gerton, 1993, p. 399). The versatility that bicultural Asian Canadians demonstrated in the use of self-affirmation suggests that they can switch or alternate the psychological frames of reference that originated in two different cultures to act appropriately according to the social environment in which they are situated. They seem to be able to cross with ease the boundary between an interdependent self, which is a more indigenous Asian self-concept, and an independent self, which is a more predominant North American self-concept.<sup>10</sup>

### General Discussion

We began this research by asking whether there is cultural variation in the experience of cognitive dissonance and in the subsequent tendency to justify or rationalize individual decision-making. On the basis of the four studies delineated above, we found the answer was both "yes" and "no." It was "no" in the sense that at least in the two different cultural groups we examined, people regardless of their cultural backgrounds experienced cognitive dissonance after making choices that were important to them and subsequently engaged in efforts to justify their decisions. However, the answer was "yes" in the sense that the situation in which they experienced cognitive dissonance and justified their decisions was different across these cultural groups.

Our research demonstrates that, just like Westerners, East Asians do engage in rationalization of their decisions. Across the four studies conducted, we consistently found that East Asians justified their choices when those choices pertained to their culturally important self-concepts. To ascertain the extent to which they engaged in postdecisional justification, we conducted a meta-analysis across the four studies on the spread of alternatives for the conditions in which Asian Canadians or Japanese made their choices for their close friends without having any self-affirmation opportunities. The meta-analysis indicated that the evidence is not only consistent but extraordinarily strong,  $z = 5.63$ ,  $p < .0001$ . East Asians indeed engaged in dissonance reduction through rationalization of their decisions when their culturally important self-concepts were threatened by the need to make choices for their in-group members.

Our finding that Asian Canadians and Japanese justified their choices for their close friends is consistent with recent findings by Kitayama, Conner Snibbe, Markus, and Suzuki (2004). In a series of cross-cultural studies, Kitayama et al. found that European

Americans showed the usual justification of their choices of CDs across conditions, whereas their Japanese counterparts engaged in justification of their choices when they were reminded of self-relevant others by interpersonal priming. These researchers argued that the saliency of self-relevant others had an effect on the Japanese participants because such social cues evoked "interpersonal worries" about possible criticism or rejection by the self-relevant others, which led to cognitive dissonance. The results of the current studies together with Kitayama et al.'s findings provide strong support for the argument that interpersonal concerns lead East Asians to experience cognitive dissonance and subsequently engage in dissonance reduction.

In Kitayama et al.'s (2004) study, the Japanese participants who did not receive the interpersonal prime did not justify their choices of CDs, presumably because their interpersonal worries were not evoked. This result is also consistent with our finding that Asian Canadians and Japanese who chose the gift certificate for themselves did not justify their choices because they did not have any interpersonal concerns. These particular groups in our research and

<sup>10</sup> Consistent with this reasoning, one might propose that bicultural Asian Canadians, who presumably hold both independent and interdependent self-concepts, justify their choices for themselves more than monocultural Asian Canadians. Considering this possibility, we regressed the spread of alternatives onto the condition that participants were in (self vs. friend), their identification with Asian culture (using the same measure that was reported in Study 1), and their identification with Canadian culture (using the same measure that was reported in Study 4) for all 93 Asian Canadians in Study 1. This analysis revealed a significant three-way interaction between these variables,  $\beta = -.35$ ,  $t(85) = 2.09$ ,  $p < .05$ .

Examination of the predicted means on the basis of this analysis is consistent with our reasoning. In the friend condition both biculturals (i.e., at one standard deviation above the mean on both Asian identification and Canadian identification),  $M_{\text{pred}} = 0.95$ , and monoculturals (i.e., at one standard deviation above the mean on Asian identification and one standard deviation below the mean on Canadian identification),  $M_{\text{pred}} = 0.72$ , were predicted to show a substantial spread of alternatives, and there was no difference between these two predicted means,  $t(85) < 1$ . In the self condition, however, both biculturals,  $M_{\text{pred}} = 0.31$ , and monoculturals,  $M_{\text{pred}} = -0.54$ , showed less dissonance reduction, but importantly, the predicted mean for biculturals was significantly higher than the predicted mean for monoculturals,  $t(85) = 2.59$ ,  $p < .05$ . Thus, biculturals were predicted to show more justification of their choices for themselves than monoculturals, but both of these groups were predicted to show more justification for their friends than for themselves.

In contrast, those who identified with Canadian culture only (i.e., at one standard deviation below the mean on Asian identification and one standard deviation above the mean on Canadian identification) and those who identified with neither culture (i.e., at one standard deviation below the mean on both Asian identification and Canadian identification) were both predicted to show more spread of alternatives in the self condition,  $M_{\text{pred}} = 0.63$  and  $M_{\text{pred}} = 1.60$ , respectively, than in the friend condition,  $M_{\text{pred}} = 0.27$  and  $M_{\text{pred}} = -0.87$ , respectively. The pattern of predicted means for those identified with Canadian culture was very similar to the means obtained for European Canadians, whereas those identified with neither culture were predicted to show an especially large spread of alternatives in the self condition and a reversal of the spread of alternatives in the friend condition. However, these latter findings should probably be interpreted with caution because only 9 of the 93 participants in the study actually fell below the median on identification with both Asian and Canadian cultures.

in Kitayama et al.'s work replicated Heine and Lehman's (1997) result that Japanese did not rationalize their choices of CDs.

Another interesting finding in the Studies 1 and 2 came from European Canadians in the friend condition. The European Canadians seemed to experience some dissonance arousal when they made their choices for their close friends, but the dissonance they experienced was not to the same degree as when they made their choices for themselves, nor as much as that experienced by East Asians who made choices for their friends. In contrast, Nel et al. (1969) and Norton et al. (2003) demonstrated that individualistic North Americans experience dissonance when others are involved in the induced compliance paradigm. Is the current finding among European Canadians in the friend condition specific to a free-choice paradigm or the free-choice materials used? It is possible that the two research paradigms threaten different aspects of an interdependent self and that Westerners' interdependent selves are more sensitive to attitude-behavior consistency involved in induced compliance than they are to making a decision for a friend. Further investigation in relation to these considerations is warranted.

#### *Alternative Explanations for East Asians' Justification in the Friend Condition*

Regarding East Asians' postdecisional justification in the friend condition, there may be at least three alternative explanations as to why people justify their choices for their close friends. One explanation is that participants used their own food preferences, pretending that they were their friends', and thus their choices of the gift certificates and their subsequent postdecisional justification were for themselves rather than for their friends.

To preempt this possibility, we took a number of precautions in the friend condition to ensure that participants did not use their own preferences in place of their friends' preferences. After participants indicated that they had selected a friend, the experimenter confirmed with participants that the friend was a close friend and that they knew the friend's food preferences well. Each questionnaire explicitly stated whose preferences they needed to base their judgment on, and the experimenter underscored it in the instructions. After they chose gift certificates for their friends, they were asked whether they were sure that their friends would like the choices, and then they had to write down their friends' names as well as their own on the gift certificates. They were also asked a probing question at the end of the experimental session regarding how they thought the gift certificates might be delivered to their friends. Thus, we tried painstakingly to ensure that participants in the friend condition considered their friends' preferences and used them for their decisions and ratings.

Another alternative explanation is that the dissonance experienced by East Asians in the friend condition is due to vicarious dissonance. Recall that Norton et al. (2003) found that witnessing in-group members' attitude-inconsistent behavior could lead to an experience of vicarious dissonance. In the friend condition in the current research, if participants had witnessed their friends making decisions and seen the impact of the decisions on the friends, they might have experienced vicarious dissonance. One might even argue that they do not need to witness their friends making decisions to experience vicarious dissonance; they only need to empathize with the situation in which their friends make their deci-

sions. However, the participants in this research neither witnessed their friends making their decisions nor were they asked to imagine themselves in their friends' place. As outlined above, they were instructed to make their own decisions for their friends on the basis of their beliefs about their friends' preferences, not as their friends might actually make decisions. Thus, we believe that the current friend condition would make it difficult for people to role-play as their friends. Consequently, it would be difficult for them to experience dissonance vicariously. Therefore, we believe that the postdecisional justification we obtained in the friend condition was due to psychological discomfort elicited by actually making choices for close friends rather than to vicarious dissonance evoked by imagining their friends being in the decision-making situation.

Still, we note that these precautions could not entirely eliminate a third possibility of the unintended social projection. That is, participants might have inadvertently mistaken their own preferences for their perceptions of their friends' preferences, and therefore, the ratings of preferred items and the justification of the chosen gift certificate were the result of social projection of the participants' own preferences. After participants indicated their beliefs about their friends' preferences, we did not ask them to rate the same items in accordance with their own preferences. If we had included this self-rating measure, we would have been able to distinguish the friend preference rating and the self preference rating and assess the extent to which social projection occurred. However, what really matters in interpersonal dissonance is that people believed that their ratings and decisions were based on their perceptions of their friends' preferences and justified their interpersonal perceptions or beliefs about their friends' preferences regardless of whether it was social projection. With the procedures and precautions described above, we believe that we successfully measured justification of their beliefs or change of their beliefs about their friends' preferences.

#### *Efficacy of Self-Affirmation Among Asian Canadians*

In the third and fourth studies, we found that self-affirmation, as an alternative to postdecision justification, can be an effective means for Asian Canadians to counter threats to their self-concepts. In keeping with past research with Westerners, we found that providing Asian Canadians with an opportunity to affirm themselves reduced their need to engage in dissonance reduction as a strategy to restore threatened self-integrity. Our findings provide a strong test for the utility of self-affirmation processes. Although East Asians' culturally valued self-concepts may be quite different from those of Westerners, affirming the important aspects of the self is equally effective for both cultural groups.

Equally important to note is that our research also demonstrates that this self-affirmation finding depends substantially on both the locus and strength of Asian Canadians' cultural identification. Specifically, we found that providing Asian Canadians who strongly identified with Asian culture with an opportunity to affirm their interdependent self-concepts significantly reduced their need to counter threatened self-integrity by justifying the choices they made for close friends. This finding on the effect of interdependent self-affirmation is consistent with Heine and Lehman's (1997) speculation that Japanese individuals might experience cognitive dissonance if their interdependent self was somehow threatened

and that they might alleviate such threats by affirming their interdependence.

Our findings with respect to the independent self-affirmation manipulation for Asian Canadians were more nuanced. In particular, providing bicultural Asian Canadians who identified strongly with both Asian and Canadian cultures with an independent self-affirmation opportunity reduced their need to counter threatened self-integrity by engaging in postdecisional justification. In contrast, providing monocultural Asian Canadians, who only identified strongly with Asian culture, with the same opportunity did not reduce their tendency to justify their choices. Given that bicultural Asian Canadians embrace both interdependent and independent self-concepts as their cultural ideals, the independent (as well as the interdependent) self-affirmation manipulation served as an effective means for countering threatened self-integrity.

The results of Studies 3 and 4 also nicely address another alternative explanation for the Studies 1 and 2 friend condition findings. One might argue that East Asians engage in postdecisional justification for the choices they made for their close friends because of impression management or their effort to appear that they care about their choices for their friends. If East Asians' justification is due merely to impression management, then self-affirmation is not likely to have any effect on the degree to which East Asians justify their choices made for their friends. Thus, we believe that East Asians justify their choices for their friends not under the pretense of being considerate to their friends but because they experience interpersonal dissonance by making choices for their friends, and they try to resolve the psychological discomfort they experience by rationalizing their choices.

#### *Asian Canadians' Biculturalism and Fluidity of Self-Affirmation*

Two aspects of our findings are particularly noteworthy. First, the strength of East Asians' identification with Asian culture seems to be of crucial importance. Although the Asian Canadian participants in this research were all born in East Asian countries, the degree to which they identified with Asian culture varied greatly. Moreover, this variability in the strength of Asian cultural identification was an important factor in their experience of cognitive dissonance and their subsequent justification of their choices. The results we obtained provide a clear link between the cultural identification and culturally ideal self-concepts people hold. Although East Asians who only weakly identified with Asian culture are ethnically Asian, their cultural ideals seemed to be similar to the independent self-concepts of Westerners, at least in our research. Thus, they experienced cognitive dissonance and reacted to it in the same situation as Westerners did. In contrast, throughout the four studies described above, it is clear that East Asians who strongly identified with Asian culture held interdependent self-concepts as their cultural ideals. They experienced cognitive dissonance when their interdependent self-concepts were threatened, and they engaged in dissonance reduction through either justification of their choices for their close others or interdependent self-affirmation.

Furthermore, equally important evidence for the link between the cultural identification and the culturally ideal self-concepts people hold has emerged from East Asians' identification with individualistic Canadian culture. Bicultural East Asians who

strongly identify with both Asian and Canadian cultures seem to embrace both interdependent and independent self-concepts as their cultural ideals. Unlike monocultural East Asians, who strongly identify only with Asian culture, bicultural East Asians are capable of using the independent self-affirmation as a means of reducing dissonance, when their interdependent self is threatened. They seem to be able to smoothly cross the boundary of two cultures and readily switch between the two cultural mind-sets (Hong et al., 2000).

Note that not only do these findings provide evidence for the relation between cultural identification and cultural ideals, but they also demonstrate the "fluidity of self-affirmation processes" (Steele, 1988, p. 267). Steele and his colleagues (Spencer et al., 1993; Steele, 1988; Steele et al., 1993) argued that individuals have a pool of positive self-concepts within a large self-system, and they can affirm themselves and maintain an overall self-integrity by using some of these positive attributes that are not necessarily under threat. Our findings provide support for this argument.

The first piece of evidence in support of the fluidity of self-affirmation processes is that both monocultural and bicultural East Asians who experience a threat to a particular interdependent self-concept (i.e., a threat to their friendships) can use another interdependent self-concept (i.e., family relationships) to affirm themselves. Namely, when they experience a threat to their relationships with their close friends by the possibility of making an inconsiderate choice or the wrong choice of Chinese food, they can affirm themselves by using an important value that they share with their family.

The second piece of evidence for the fluidity is that bicultural East Asians, whose interdependent self-concepts are threatened by interpersonal concerns that arise from the possibility of making nonoptimal choices for their close others, can affirm themselves using either their independent or their interdependent self-concepts. In fact, they seem to have more resources with which to self-affirm than monocultural East Asians who can affirm themselves only using interdependent self-concepts.

In future research, it would be interesting to demonstrate the versatility of such bicultural East Asians by showing that interdependent self-affirmation is useful when their independent selves are threatened. It is not difficult to imagine that the resourcefulness of biculturally identified individuals could have a number of implications for their mental health and that such resourcefulness can lead to intriguing investigations in the field of health psychology among immigrants.

Another interesting area of future cross-cultural research would be affective reactions in cognitive dissonance. Although both Westerners and East Asians seem to experience psychological discomfort, the constellation of emotions that they experience around their discomfort or dissonance arousal could be quite different, as the situations in which these two cultural groups experience cognitive dissonance have been found to be different in our research. Whereas Westerners might experience more self-related emotions, East Asians might experience more interpersonal emotions. Because very little research on affective reactions has been done within the framework of cognitive dissonance in general, such cross-cultural investigations may prove to be beneficial.

### Conclusions

Our findings point to an important perspective on cross-cultural research. Many psychological and social phenomena that seem to be cross-culturally variable on the surface might have the same underlying mechanisms; many other phenomena that seem to be cross-culturally similar on the surface may have cross-culturally different psychological functions or may arise from culture-specific factors. Thus, when examining cross-cultural aspects of psychology, it is important to consider each phenomenon with its underlying mechanism or mechanisms and carefully examine the role of culture—not just on the surface, but at its deeper level as well.

In this research, we have examined the self-system of East Asians and Westerners from two different angles, that is, self-threat in the cognitive dissonance processes and culturally ideal self-image maintenance in the self-affirmation processes, and demonstrated both cross-cultural similarity and variation. We believe that through cross-cultural research our work contributes to a more thorough understanding of cognitive dissonance. Moreover, we are unaware of other research demonstrating that self-affirmation theory, which was developed in North America, is cross-culturally viable. We believe that our research contributes to advancement in the understanding of self-affirmation theory as well as in the understanding of the East Asian self-system.

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