

THE CULTURAL PSYCHOLOGY OF CONTROL

Illusions of Personal Versus Collective Control in the United States and Japan

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This study focused on the cultural psychology of control in the United States and Japan. The authors tested a hypothesis that Japanese would tend to overestimate their ability to control their outcomes collectively compared to personally, whereas Americans would show the reverse tendency. As expected, Japanese participants in the group condition, relative to those in the individual condition, were more optimistic about obtaining a favorable outcome. American men, on the other hand, were more optimistic in the individual condition. Interestingly, similar to the Japanese participants, American women showed a reverse but nonsignificant tendency to be more optimistic in the group condition. These results indicate that the psychology of control is both gendered and cultured.

Keywords: illusion of control; control orientation; cross-cultural; cultural psychology

People tend to hold an exaggerated sense of control or mastery. This illusion of control is well-documented and prevalent in North America, where the belief in personal control over chance events has been consistently demonstrated (Langer, 1983; see Crocker, 1981; Presson & Benassi, 1996 for reviews). East Asians, on the other hand, have been found to be less confident of their personal ability to control the environment. Research has shown, for example, that Japanese students tend to perceive less contingency between their action and a positive event than do Americans (Bond & Tornatzky, 1973; Mahler, 1974) and tend to be less confident about their personal ability to control situations as compared with Canadians (Heine & Lehman, 1995). In addition, the relationship between perceived personal control and task performance has been found among Americans but not among Asians (Ji, Peng, & Nisbett, 2000). Indeed, consistent with these laboratory studies, the World Value Surveys showed that Asians (including Chinese, Japanese, and Koreans) report lower levels of perceived personal control than do non-Asians (Sastry & Ross, 1998).

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The reduced sense of perceived personal control among East Asians, however, does not necessarily mean that they do not hold an exaggerated sense of control at all. The studies cited previously were all concerned with *personal control*, a form of control in which an actor attempts to control a situation by personal effort and that is considered to be the typical conception of control in North American culture (Skinner, 1996). Those studies, therefore, did not address the possibility that East Asians have an exaggerated sense of perceived *collective control*, a phenomenon that is assumed to play an important role in East Asian cultural milieu (Yamaguchi, 2001). As compared to personal control, in collective control, one perceives effectiveness in controlling the environment as a group or collective. For example, individuals may feel confident when they attempt to fix their car with their friends, although they are not able to repair a car by themselves.

There is a reason to expect that people in collectivist cultures develop an illusory sense of collective control instead of personal control. In collectivistic cultures, the unit of social behavior is often a group rather than individuals, as compared to individualistic cultures (Triandis, 1995). In those societies, groups are actually more autonomous and efficacious than individuals and perceived as such (Earley, 1993). For example, Earley (1993) found that Chinese managers who were working with in-group members estimated that they would perform at higher levels as compared to Chinese managers working alone or with out-group members, and in fact performance was much higher among Chinese working with in-groups members. By contrast, Americans had higher expectations for success and ultimately performed better when working alone, as compared to working with either in-group or out-group members. Along similar lines, other research shows that Chinese in Hong Kong more readily attribute the cause of various events to group properties rather than personal properties, whereas Americans showed the reverse tendencies (Menon, Morris, Chiu, & Hong, 1999). Likewise, Gelfand, Spurlock, Sneizek, and Shao (2000) found that Chinese were more confident in predicting the behavior of individuals when they had social information about them (i.e., the groups they belonged to) as compared to individuating information (i.e., attitudes, beliefs, personality characteristics), whereas Americans were more confident in predicting the behavior of others when they had individuating rather than social information. This suggests that culture influences lay theories about the factors that predict future events.

In summary, these results suggest that East Asians, relative to North Americans, tend to experience more cases in which their collective action, rather than their personal action, is followed by a desired outcome. In such cultural milieus, it is possible that people would perceive a connection between their collective action and a desired outcome, because this is what is veridical with their everyday experience. By contrast, North Americans would tend to experience that they personally control events in their daily experience. As Thompson, Armstrong, and Thomas (1998) persuasively argued in their extensive review, individuals tend to easily perceive connection between their actions and a predicted outcome. Because one's predicted outcome tends to be a desired one, East Asians would expect that their collective action is associated with a desired outcome, whereas North Americans would expect that their personal action is associated with a desired outcome. We expected, therefore, that an illusory sense of collective control would be prevalent in Japan, as an illusory sense of personal control has been found to be prevalent in North America.

It should be noted here that we reserve our prediction about gender effects especially in the United States. Previous research has found that although American women tend to endorse the independent self as much as American men, they also endorse a relational self to a much greater extent than do men (Kashima et al., 1995, see also Cross & Madson, 1997; Maccoby, 1990; Surrey, 1991). The relational self is distinct from the collective self discussed previously in that it focuses on the emotional relatedness that individuals have with other individuals, as compared to the extent to which one's identity is merged with a collective or group (Kashima et al., 1995). However, although the relational and collective self are distinct, they may produce some similarities in the psychology of control. Because of their stronger sense of emotional relatedness, American women may experience an elevated sense of control when working with others. American men, by contrast, are high on the independent self yet low on collective and relational selves and hence, do not experience much sense of relatedness with individuals or groups. Thus, they are expected to be particularly prone to relying on personal control.

Although not tested cross-culturally, there is some evidence for this supposition within the United States. For example, Ji et al. (2000) found that a sense of personal control has been found to be more important for American men than women. They found that an induced sense of control facilitated American men's performance on a field dependence test and Rod and Frame Test (RFT), whereas it did not significantly affect American women's performance. Langer (1983) also showed that female participants' estimates of success were lower than their counterparts' when the participants were asked to think about their personal success (Experiment 2). This result suggests that American women have a lesser sense of personal control than do American men. Thus, in this study, we explored the interaction of gender and culture in predicting control beliefs and, in particular, tested the notion that American men, as compared to American women and Japanese men and women would be particularly focused on personal control.

OVERVIEW AND PREDICTION OF THE CURRENT STUDY

In this study, college students in the United States and Japan were told that they would be assigned to a negative experience condition depending on the result of a lottery, which they drew alone for 4 times (individual condition) or each member of a four-person group drew it once (group condition). Specifically, participants were told that depending on the sum of their lottery tickets, they may (or may not) be assigned to the negative experience. In the group condition, they were interdependent with three other group members in the sense that each member was to draw one lottery ticket and the result of the four lottery tickets was determinant of whether they would be assigned to the negative experience. In the individual condition, they were not interdependent with others, but rather the result of their own four lottery tickets was determinant of whether they would be assigned to the negative experience. The dependent variable in the experiment was the participants' estimation of likelihood (which took place after they drew lottery tickets) that the outcome of the lottery drawings is desirable. The more one feels confident that one can control the outcome of the lottery drawings, the more probable one would estimate that a desirable outcome will result. We predicted, therefore, that Japanese participants would estimate that they are more likely to be assigned to the condition without negative experience when they are in a group than alone, although the reverse would be the case, especially with American male participants.

METHOD

PARTICIPANTS

In the United States, 85 undergraduate students (39 men and 46 women) enrolled in introductory psychology courses in Illinois and New York participated in the experiment. In terms of ethnicity, there were 46 Caucasians, 17 Asians, 6 African Americans, 11 Hispanics, and 5 unknowns in the U.S. sample. All the U.S. participants, except 3 (1 man and 2 women) who were paid \$10, were volunteers. In Japan, 74 undergraduate students (26 men and 48 men) enrolled in introductory psychology courses in universities in Tokyo participated in the experiment voluntarily. The participants were randomly assigned to one of two experimental conditions (individual vs. group).

PROCEDURE

Participants arrived at the laboratory individually. They were told that the experiment was concerned with "the effect of an unpleasant experience on subsequent task performance." For this ostensive purpose, the participants were to be assigned to one of two fictitious conditions: "unpleasant" and "control" conditions. The difference between the two fictitious conditions was that the participants in the unpleasant condition had to have an unpleasant experience, which would be induced by taking a bitter drink before they solved puzzles. By contrast, participants in the control condition would be asked to solve puzzles, but would not have to take a bitter drink. After this explanation about the two conditions, they were asked to smell the bitter drink in a cup, which most people in a pilot study had reported their reluctance to drink.

The participants were informed then that the assignment to the two fictitious conditions would be based on the result of lottery drawings. At this stage, two actual conditions of this study, individual and group conditions, were introduced.

Group condition. Participants in this condition were told that they were a member of four-person group, with the other three members being instructed in the other rooms. The 4 participants were to be assigned to one of the two fictitious conditions as a group, depending on the sum of the numbers written on four lottery tickets. Specifically, it was explained that each member of the four-person group would be asked to draw one lottery ticket. In actuality, there were no fellow group members in the group condition and thus the participants in this condition did not meet with their group members.

Individual condition. They were told, as in the group condition, that the assignment to the two fictitious groups would depend on the sum of the numbers written on four lottery tickets. Participants were told that they would be asked to draw a lottery ticket 4 times.

As to the nature of the lottery, it was explained that (a) there was one digit number written on each lottery ticket; (b) if the sum of four numbers that they draw individually (individual condition) or as a group (group condition) exceeded 15, they would be assigned to the "control" condition, in which they were not asked to take the bitter drink; and (c) the chance of being assigned to the control condition was slightly higher than 0.5. The exact possibility of being assigned to one or the other condition was left ambiguous to leave the room for the participants' subjective estimate.

In all, the participants in the two conditions underwent the same procedure, except for the instruction in the group condition that the participant was a member of a four-person group. In both conditions, the participants were led to believe that the sum of the number written on the four lottery tickets determines their assignment. Because chance alone is responsible for the result of the lottery regardless of who draws it, there was no normative ground for the participants to expect that either the individual or group condition would be more likely to bring about a desirable outcome, which in this study is the assignment to the control group.

Measures. After having drawn one (in the group condition) or four (in the individual condition) lottery tickets but before opening the lottery ticket, the participants in both conditions were asked to complete a questionnaire, which contained questions about their estimate of being assigned to the unpleasant experience. Then, the participants were given a full debriefing and released without being asked to take the "bitter" drink. During the debriefing session, no participants mentioned suspicion that they had experienced during the experimental session.

The main dependent variable was the estimate of being assigned to the negative experience, which was asked in two different ways: their estimate of being assigned to the negative experience in percentage and their confidence in not being assigned to the negative experience on a 7-point, Likert-type scale from 1 (*very confident*) to 7 (*not confident at all*). The two measures yield a lower score when the participants are more confident about their ability to control the outcome of the lottery drawings. For ease of exposition, we will present the reversed scores, so that a higher score indicates more confidence in controlling the outcome of the lottery drawings.

RESULTS

PRELIMINARY ANALYSES

The main dependent variable was the participants' outcome estimate, which was measured in two ways: percentage and a 7-point, Likert-type scale. As can be seen in Table 1, American men were more likely to think that they could exert control and they do not have to have the bitter drink in the individual condition as compared to the group condition, whereas Japanese men, women, and American women believed that they could exert control and they do not have to have the bitter drink in the group condition as compared to the individual condition. For statistical analyses, a single composite measure representing the outcome estimate was produced because the two measures of the outcome estimate were positively correlated ($r = .71, p < .001$, in the United States and $r = .53, p < .001$ in Japan). Specifically, the two estimate scores were standardized within each culture and then they were summed up to yield a single measure of estimate, so that a larger composite score indicates a higher estimated probability of being assigned to the control condition without the negative experience and thus more sense of control over the result of the lottery. This composite outcome estimate score was used throughout the subsequent statistical analyses. The mean composite outcome estimate is shown in Figure 1.

TABLE 1
Mean Outcome Estimate (in percentage^a and Likert-type scale score^b) and Standard Deviations for Japanese and Americans by Condition and Gender

Condition	Japan				United States			
	Men		Women		Men		Women	
	M	SD	M	SD	M	SD	M	SD
Outcome estimate (in percentage)								
Individual	45.14 (14)	16.22	45.23 (22)	16.51	59.56 (18)	19.67	44.00 (25)	19.58
Group	63.17 (12)	19.05	48.65 (26)	21.29	49.90 (21)	21.30	50.62 (21)	19.84
Outcome estimate (in Likert-type scale score)								
Individual	3.07	1.14	3.77	1.19	4.67	1.24	3.64	0.95
Group	4.50	1.45	4.00	1.14	3.71	1.75	3.81	1.75

NOTE: *ns* are in parenthesis.

a. A higher percentage indicates higher estimated probability to be assigned to the control condition without the negative experience.

b. A higher score indicates more confidence in being assigned to the control condition without the negative experience.

OUTCOME ESTIMATE

The composite outcome estimate score was subjected to a Culture (United States vs. Japan) \times Condition (individual vs. group) \times Gender (men vs. women) analysis of variance.¹ The results indicated that the interaction effect between culture and condition, as well as the three-way interaction among culture, condition, and gender was significant, $F(1, 151) = 7.11, \eta^2 = .045, p < .01.$, and $F(1, 151) = 8.09, \eta^2 = .051, p < .01,$ respectively. No main effects nor the other interaction effects were significant, $F(1, 151) < 2.00,$ except for a marginally significant main effect of gender, $F(1, 151) = 3.05, p = .0826.$ The significant interaction effects involving culture justifies separate analyses of two samples from the United States and Japan. By analyzing the two cultural samples separately, we can also avoid potential problems related to culture-specific response sets (Pareek & Rao, 1980).

U.S. sample. We predicted that U.S. male participants in the individual condition would estimate that they are more likely to be assigned to the control condition without the negative experience than those in the group condition, whereas U.S. female participants would feel otherwise. As can be seen in Figure 1, this prediction was supported. The result of a planned comparison indicated that American men were more likely to estimate that they would be assigned to the condition without the negative experience in the individual as compared to the group condition, $F(1, 81) = 4.03, \eta^2 = .047, p < .05.$ By contrast, American women showed the opposite tendency, which was not significant,² $F(1, 81) < 1.$

Japanese sample. We predicted that Japanese participants in the group condition would estimate that they are more likely to be assigned to the control condition without the negative experience than those in the individual condition. As can be seen in Figure 1, this prediction

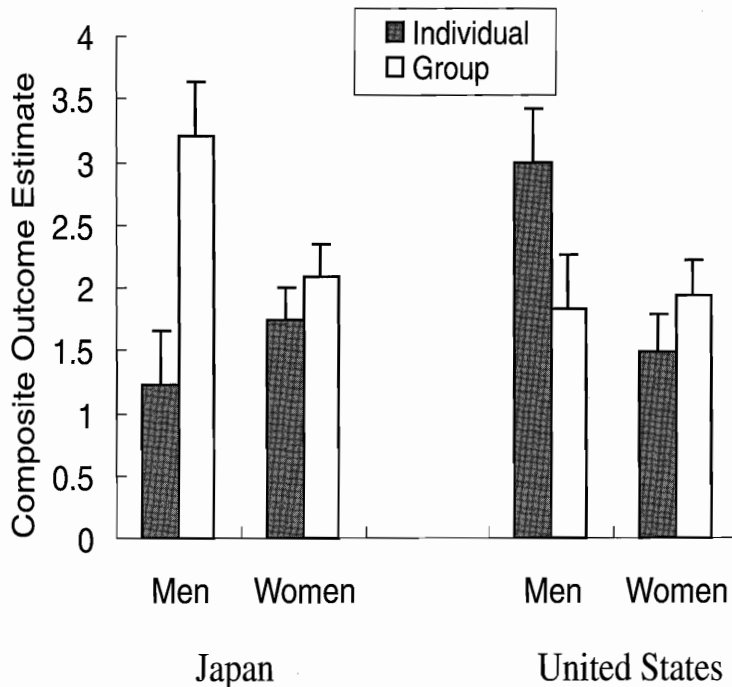


Figure 1: Mean Composite Outcome Estimate by Condition and Sex

NOTE: Higher bars indicate higher estimated probability of being assigned to the condition without the negative experience. Vertical lines depict standard errors of the means.

was also supported, $F(1, 70) = 8.13$, $\eta^2 = .104$, $p < .01$. A significant interaction effect between condition and gender, $F(1, 70) = 4.03$, $p < .05$, indicates that the effect of control was qualified by gender. Indeed, a post hoc analysis by Scheffe's procedure revealed a significant effect of condition for men ($p < .05$) but not for women. No other comparisons were significant.

ADDITIONAL ANALYSIS

We conducted a follow-up analysis on the gender differences in both cultures. The participants were told that the chance of being assigned to the control condition without the negative experience was "slightly higher than 0.5." Thus, normatively, the participants should have estimated that their chance of being assigned to the condition without the negative experience was "slightly" higher than 50%. A closer look at the upper half of Table 1 indicates that Japanese men in the group condition and American men in the individual condition estimated that they have a higher than 50% chance of being assigned to the condition without the negative experience, $t(11) = 2.39$, $p < .05$ and $t(17) = 2.06$, $p = .055$, with 95% confidence interval being 50.53-75.81, 49.49-69.63, respectively. American women and Japanese women did not show any reliable deviation from the normative level. This result suggests that women in both the United States and Japan are less susceptible to a biased sense of

control, as the marginally significant effect of gender on the composite outcome estimate score indicates.

DISCUSSION

Japanese men were more optimistic about their collective ability in controlling a chance event, relative to their personal ability, whereas American men were more optimistic about their personal ability, relative to collective ability, in the same situation. Thus, Japanese men's estimate of outcome was biased in favor of collective control, whereas the American men's perception is reversely biased in favor of personal control. On the other hand, American and Japanese women did not display the bias in favor of personal or collective control. Recall, in the present study, the chance of being assigned to the negative experience was objectively the same in both conditions. The participants were led to believe that they would be assigned to a negative experience depending on the result of lottery drawings.

Previous research has demonstrated that choice induces people to hold an illusion of control, especially when they have foreknowledge of what they hope to obtain (Wortman, 1975). Because the participants were given a choice and also foreknowledge that greater numbers are more desirable than lower numbers in the lottery drawings, the present finding indicates that with a choice and foreknowledge, American men and Japanese men were induced to hold an illusion of personal control or collective control, respectively, consistent with prevailing practices and meanings in each culture.

Men in both the United States and Japan overestimated their ability to control the environment in one way or the other. Such optimistic bias in perception of control has been shown to be prevalent at least in the United States (Thompson et al., 1998). Thompson et al. (1998) argued that individuals tend to associate their action and their predicted outcome. This study, however, is unique in showing that Japanese and U.S. men hold biased control perception in a way that is congruent with their respective cultural values. Japanese men tend to predict a desirable outcome in a collective situation, whereas American men tend to predict it in a personal situation.

As to the mediating mechanism through which such cultural differences in control perception emerge, findings in previous studies would suggest some interesting possible insights. In the United States, where autonomy and independence are valued, men in particular must have internalized a sense of personal control, in which they exert personal control over the environment. In such cultural milieu, they may well tend to predict that a desirable outcome will follow their personal action. Actually, Iyengar and Lepper (1999) have found that Anglo American children performed better after personal choice than did their Asian American counterparts, suggesting that Anglo American children predict desirable outcome after personal control attempts more than their Asian American counterparts. Thus, American men, who are supposed to have internalized American values of autonomy and independence much more than women (Gilligan, 1982), may well perceive their personal controllability to a greater extent than it actually is. On the other hand, personal agency is not well-regarded and thus tends to be hidden in Japan because it often disrupts interpersonal harmony (Yamaguchi, 2001). Instead of the self, groups would be a preferred agency through which Japanese men exercise control over the environment in Japan. If so, Japanese men would feel more confident about their ability to control the situation collectively than otherwise.

A central feature of masculinity is an emphasis on achievement (Helgeson, 1994). When one is motivated to accomplish achievement, the difference in preferred agency (self in the United States and group in Japan) would become significant. In the United States men are expected and encouraged to achieve personally, whereas for Japanese men collective achievement is more desirable. Thus, American men would develop confidence in their personal ability rather than collective ability to control the environment, whereas the reverse would be the case with Japanese men.

Unlike men, women's sense of control in both United States and Japan did not differ significantly across conditions. The absence of the effect of an experimental manipulation is susceptible to various interpretations, which need to be examined in future research. One possibility is that the effect of manipulation was overridden by common femaleness characterized by less emphasis on achievement coupled with their orientation to interpersonal relatedness. As we stated in the introduction, Kashima et al. (1995) have found that U.S. women as well as Japanese women tended to regard themselves as emotionally related to others. Furthermore, in a cross-cultural study comparing Japanese and American control orientations, social practices recalled by women were generally higher on relatedness than those by men, whereas social practices recalled by men were generally higher on efficacy than those by women (Morling, Kitayama, & Miyamoto, 2002). Sanchez-Burks (2002) also reported that U.S. women are more attentive to relational cues than are American men, perhaps because women experience higher anxiety than do men (Feingold, 1994). Consistent with this line of reasoning, both Japanese and U.S. women have been found to be less responsive, as compared with men, to the manipulation of presence or absence of group members in social loafing experiments (Kugihara, 1999, for Japanese result; Karau & Williams, 1993, for a review). Thus, women both in the United States and Japan may have been less interested in controlling their situation personally or collectively, regardless of their cultural context. As a result, a sense of control would be less important for the female participants, as compared with the male participants. With this reduced motivation to control the situation both in the alone and group situations, the female participants might have not shown an illusion of control in the present study.

Admittedly, the above line of interpretation remains speculative because of the lack of direct evidence. It is possible that American men are unique for reasons other than the kind of values to which they subscribe. For example, American men might be uniquely subjected to keen personal competition, which may entail a strong sense of personal efficacy, regardless of the values that they subscribe to.

The remained possibilities for alternative interpretations notwithstanding, the present findings have some important theoretical implications. First, and most important, this study underscores the need for expanding our conceptual framework beyond personal control, a prototypical control in the West (Skinner, 1996), to understand cultural differences in control perceptions (Yamaguchi, 2001). Although collective control has not attracted much empirical attention in the previous literature as personal control, it needs to be considered as a kind of control attempt in which individuals intend to influence their environment (Bandura, 2002; Earley, 1993). In this respect, Weisz, Rothbaum, and Blackburn (1984) proposed a seminal distinction between two kinds of control attempt, *primary control* and *secondary control*. In primary control, the target of control is existing external realities in one's physical and social environment. Individuals attempt to "enhance their rewards by influencing existing realities (e.g., other people, circumstances, symptoms, or behavior problems)" (Weisz et al., 1984, p. 955). On the other hand, in secondary control, the target of control is oneself. Individuals attempt to adapt to the existing realities without changing them. They

claimed that Japanese value primary control less than secondary control, which in turn plays an important role in Japanese everyday life. The present finding indicates that the story is not so simple as Weisz et al. suggested. Japanese men may choose collective control rather than personal control, both of which can be primary control. Thus, Japanese men would be used to collective control and thus predict a desirable outcome after collective rather than personal control attempts. This would lead Japanese men to hold an illusion of collective control.

Second, an illusory sense of collective control may be adaptive in collectivist societies, as an illusion of personal control has been claimed to be adaptive in North America (Fiske & Taylor, 1991; Taylor & Brown, 1988, 1994). North Americans have been known to hold biased or illusory self-perceptions to enhance their self-evaluation (see Greenwald, 1980; Taylor & Brown, 1988 for reviews). Individuals tend to evaluate themselves as better than others (Alicke, Klotz, Bretenbecher, Yurak, & Vredenburg, 1995), express unrealistic optimism about their future (Weinstein, 1980), and hold illusory beliefs in their ability to control situations (for reviews, see Crocker, 1981; Thompson et al., 1998). Although East Asians exhibit fewer positive illusions about their personal controllability, it may well be substituted by an illusory sense of collective control. As people's confidence in their ability to control the situations facilitates their psychological well-being in the West, East Asians' confidence in their collective ability to control the situations would serve to facilitate their psychological well-being. Thus, laypeople in East Asia, especially men, may well hold an illusory sense of collective control instead of personal control. In this respect, Iyengar and Lepper (1999) have provided suggestive evidence: Asian American children were motivated better and performed better when their classmates had made choices for them than when they were given a personal choice. In the socialization process, Asians may well have learned that they can bring about success when they work collectively than alone.

LIMITATIONS

The major limitation of this study is the lack of direct evidence on the mediating mechanism. Our interpretations need to be tested in future studies, with values on personal and collective control being assessed directly. Another limitation of the present study is that the manipulation in the group condition was just nominal: The participants were not given an opportunity to interact with other participants in the group condition. In the real world settings, people can cooperate with in-group members to improve the outcome of their group activities. Although the minimal manipulation did produce effects that we expected for men, the conservative test of our hypothesis may not be realistic for relation-oriented women, as discussed in a foregoing section. Women might have perceived the stressful event involved in the present study differently if they had been in a natural group, in which they can cope with the stressful situation after establishing a close relationship with in-group members. This possibility needs to be examined in a future study. The valence and extremity of the outcome was also limited in this study: That is, we used only a negative outcome, "having to drink a bitter drink," which was not something that was extreme. Future research should examine the external validity of the present finding using a variety of outcomes.

CONCLUSION

It is maintained recently that cognition is affected by the social system in which one is being raised (Nisbett, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001). This study provides

further evidence that individuals' cognitive biases are affected by culture. Future research should focus on the relationship between culture and cognition in general and control perceptions in particular as well as the mediating process suggested in this study. In addition, gender difference in control perceptions would merit more empirical attention in future research.

NOTES

1. Because the two component scores were standardized within each culture, the main effect of culture cannot be tested in this procedure. Separate analyses on each of the two component scores yielded no main effect of culture, $F(1, 151) < 1$. The two variables that comprised the composite outcome estimate score yielded the same pattern of results as the composite score.

2. We conducted the same planned comparison separately for Caucasian men and women, which yielded the same pattern of results, $F(1, 42) = 6.74, p < .05$ for men, and $F(1, 42) < 1$ for women.

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