

## Cultural Variations on Optimistic and Pessimistic Bias for Self Versus a Sibling: Is There Evidence for Self-Enhancement in the West and for Self-Criticism in the East When the Referent Group Is Specified?

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A culturally relevant framework was used to examine variations on optimistic and pessimistic bias in Westerners and Easterners. Study 1 showed that 136 European Americans compared with 159 Japanese were more likely to predict typical positive events to occur to self than to a sibling. The opposite pattern emerged in the prediction of typical negative events. Study 2 replicated these findings on the basis of predictions for atypical events in 175 European Americans and 130 Japanese. Across both studies, within-groups analyses indicated that European Americans held an optimistic bias in the prediction of positive and negative events, whereas Japanese held a pessimistic bias for negative events. These findings are taken to offer support for presumed cultural differences in self-enhancement and self-criticism between Westerners and Easterners, respectively.

Western thinkers have long argued that human beings are not merely what they are (actuality), but are more importantly what they are not yet but can be (potentiality). As cognitive beings (Descartes, 1641/1986), whether defined by Heidegger's (1927/1962) notion of *dasein* ["being-there"], by Sartre's (1943/1956) notion of *l'être-pour-soi* ["being-for-itself"], or by Rogers's (1961) notion of "becoming," we find meaning in considering future possibilities (Heidegger, 1927/1962), including possibilities that good things will happen [*bonum futurum*] and possibilities that bad things will happen [*malum futurum*], or in more lay terms, optimism and pessimism. It is therefore not surprising that across more than half a century, researchers have been interested in studying the constructs of optimism and pessimism (e.g., Dember, Martin, Hummer, Howe, & Melton, 1989; Jasper, 1929; Peterson

& Seligman, 1984; Sanford, 1946; Scheier & Carver, 1985; Teahan, 1958). Yet, because most studies examining these constructs have been based on Westerners, and because recent findings obtained for Westerners have not always generalized to Easterners (e.g., Heine, Lehman, Markus, & Kitayama, 1999; Morris & Peng, 1994), there has been some question as to whether findings associated with the study of optimism and pessimism in Westerners generalize to Easterners (Chang, 2001). Specifically, some researchers have argued that it is important to distinguish between those cultural contexts that are predominantly individualistic and those that are predominantly collectivistic (Markus & Kitayama, 1991; Triandis, 1995).

### Individualism as a Context for Self-Enhancement in the West and Collectivism as a Context for Self-Criticism in the East

Typically, Western cultures or the cultures of Europe and North America (the United States and Canada) are considered to be individualistic given their emphasis on attending to the needs of the self over others (Greenwald, 1980; Weisz, Rothbaum, & Blackburn, 1984). Thus, for most Westerners, it is the attainment of personal happiness rather than group happiness that is highly regarded and sought after, as codified and expressed in historical works ranging from Aristotle's *Nicomachean Ethics* to the United States' *Declaration of Independence*. Therefore, it is not too surprising that in Western cultures, maybe especially in the United States (Brandt, 1970), conditions associated with a lack of self-interest—such as *anhedonia*, an inability to experience personal pleasures, and *dependency*, a condition defined by a tendency to

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subordinate one's needs to those of others—are seen typically as signs of psychological dysfunction or mental illness (American Psychiatric Association, 1994). As noted by Markus and Kitayama (1991), the self that emerges from Western cultures is one that perceives itself as independent of others, including family members (e.g., parents, siblings), friends, and coworkers. In turn, the emergence of an independent self arising out of individualistic cultures is believed to affect and be affected by a motivational process that is directed toward self-enhancement (Heine & Lehman, 1995; Heine et al., 1999; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). According to Kitayama et al. (1997), *self-enhancement* is defined as a general sensitivity to positive self-relevant information. And indeed, within individualistic cultures that are believed to support and encourage the development of independent notions of the self, researchers have found robust support for self-enhancement as indicated by individuals holding overly positive views of the self, exaggerated perceptions of personal control, and an optimistic bias (Taylor & Brown, 1988). Thus, there appears to be some merit to the notion that self-enhancement is fostered in Western cultures.

Eastern cultures, or cultures found in many Asian countries, have been considered collectivist, given their focus on fostering a view of the self as fundamentally interrelated with significant others (Doi, 1971/1973; Markus & Kitayama, 1991). Hence, attending to significant others, harmonious interdependence with them, and fitting in not only are valued, but also are often strongly expected among members living within these cultures. Thus, for example, in contrast to many Western psychological approaches, which focus largely on treating and strengthening internal attributes of an independent self (Prilleltensky, 1989; Sarason, 1981), a key objective of some indigenous Japanese therapies is to help clients overcome and transcend a focus on the immediate and independent self (e.g., Morita, 1928/1998). One finds that the self fostered in Eastern cultures, as in Japan, is interdependent with significant others, such that important others “participate actively and continuously in the definition of the interdependent self” (Markus & Kitayama, 1991, p. 227). According to Kitayama et al. (1997), what is found in collectivist cultures, as in Japan, is a tendency to foster *self-criticism*, which they have broadly defined as a general sensitivity to negative self-relevant information. For Japanese, self-criticism is believed to represent a constructive process that allows them to obtain information vital to maintaining and supporting the group.

### Cognitive Biases as Expressions of Self-Enhancement and Self-Criticism: Do Westerners Really Expect the Best, and Do Easterners Really Expect the Worst?

Building on Weinstein's (1980) earlier work on *optimistic bias*—the tendency to expect that negative events are more likely to occur to others than to oneself, and conversely, that positive events are more likely to occur to oneself than to others—Heine and Lehman (1995) showed, on the basis of their between-cultures analyses, that Japanese compared with Canadians were consistently more pessimistic in their predictions for positive and negative life events (Study 1) and again more pessimistic for negative independent and interdependent life events (Study 2).<sup>1</sup> Thus, Canadians appeared to be motivated by self-enhancement, whereas Japanese appeared to

be motivated by self-criticism. Results from their within-groups analyses were taken to be consistent with these between-cultures findings. Thus, Heine and Lehman concluded that the optimistic bias may not exist in Japanese, and that “[t]he self-effacing manner of viewing their futures as about average, or sometimes even worse than average, appears more characteristic of Japanese” (Heine & Lehman, 1995, p. 604).

Yet, Chang, Asakawa, and Sanna (2001) have recently raised a number of concerns regarding potential limitations in the conceptual and methodological approach used in Heine and Lehman's (1995) studies and those used in other studies of optimistic bias. Of most importance, Chang et al. (2001) argued that studies investigating optimistic bias have been typically based on comparing the likelihood that negative events would occur for self versus others (e.g., Burger & Palmer, 1992; Hoorens, 1995; Weinstein, 1982, 1984). However, comparative predictions for positive events have rarely been examined in past research. Accordingly, Chang et al. (2001, Figure 1, p. 478) proposed a general framework for determining the presence of an optimistic or a pessimistic bias as a function of both event valence (positive vs. negative) and likelihood of event occurrence for self versus others.

To expand on Heine and Lehman's (1995) important work, Chang et al. (2001) conducted two studies looking at optimistic and pessimistic bias between European Americans and Japanese using this general framework. It is noteworthy that results from both studies examining between-cultures differences on optimistic and pessimistic bias indicated that European Americans compared with Japanese were more likely to expect that positive events would occur to self than to others, whereas Japanese compared with European Americans were more likely to expect that negative events would occur to self than to others. Thus, these findings appeared to be consistent with Heine and Lehman's contention that Westerners hold an optimistic bias and Easterners hold a pessimistic bias. However, when within-groups differences on optimistic and pessimistic bias were examined, Chang et al. (2001) found that European Americans did not exhibit an optimistic bias in predicting the occurrence of positive events for self versus others (cf. Taylor & Brown, 1988), but did exhibit an optimistic bias in predicting the occurrence of negative events for self versus others. In contrast, Japanese were found to exhibit a pessimistic bias in predicting the occurrence of positive events for self versus others, and to exhibit an optimistic bias in predicting the occurrence of negative events for self versus others. Thus, Chang et al.'s (2001) findings failed to strongly support the expected mapping of self-enhancement to the West and of self-criticism to the East.

<sup>1</sup> It is important to note that in keeping with Weinstein's (1980) original conceptualization, we exclusively focus in the present investigation on, as in Chang et al. (2001), optimistic and pessimistic bias based on relative-likelihood estimates, and not based on absolute-likelihood estimates. Although relative-likelihood estimates and absolute-likelihood estimates are related, they, however, provide different information (Heine & Lehman, 1995).

### Toward a Culturally Relevant Framework for Investigating Optimistic and Pessimistic Bias in Easterners and Westerners: Overcoming Limitations of Comparing Self Versus Similar Others

Studies on optimistic and pessimistic bias have been based on asking participants to estimate the likelihood that a number of possible life events would occur to self versus others (e.g., Davidson & Prkachin, 1997; Hoorens, 1995; Weinstein, 1982). Typically, "others" is described in these studies to refer to individuals similar to the participant (e.g., other students or adults of a similar age and background). However, in studying optimistic and pessimistic bias, asking participants to make comparisons for self versus a reference group whose specific identity and relation to the self is left to be determined by the participants may be problematic for a number of reasons.

First, when examining within-groups variations, there is no way to be sure that participants are making comparative predictions against the same or similar referent group (e.g., Heine, Lehman, Peng, & Greenholtz, 2002). For example, when given the task of making comparative predictions, some Japanese may interpret "others" as referring to significant individuals within their interdependent self-system (e.g., siblings, friends), whereas some may interpret "others" as nonsignificant individuals in reference to their self-system (e.g., students or coworkers with whom they have no personal relationship). As pointed out by Markus and Kitayama (1991), "interdependent selves do not attend to the needs, desires, and goals of *all* others" (p. 229). Accordingly, comparative predictions made by Japanese based on identifying "others" as composed of in-group members may be very different from those based on identifying "others" as composed of out-group members. Alternatively, it is possible that some European Americans may interpret "others" as referring to individuals unrelated to the independent self-system (e.g., siblings, friends), whereas some may interpret "others" in more abstract terms (e.g., "everyday man" or "everyday woman"). Second, because of these potential within-groups differences, it is impossible to determine if any past between-groups differences found between European Americans and Japanese in predictions of events made for self versus others were themselves due to cultural differences in the referent groups considered. Third, in studying cultural differences on optimistic and pessimistic bias between Easterners and Westerners, it would seem useful to have participants make comparative predictions relative to a conceptually meaningful reference group. According to Markus and Kitayama (1991, Figure 1, p. 226), siblings represent an important in-group that is part of the interdependent self-system of many Japanese. Reinforcing this view is the often found trend for many unmarried Japanese adult siblings to continue to co-reside with their parents (Kojima, 1989; Long, 1987). Thus, within the developmental context of most Japanese families, there is often high motivation for siblings to mutually promote and maintain a sense of interpersonal harmony with each other well into adulthood (Yuzawa, 1994). In contrast, as suggested earlier, siblings are presumed to represent a referent group that is for the most part independent of the self-system of most Westerners. Consistent with this view, themes involving rivalry and conflict have been commonly identified in studies of young siblings in the West (e.g., Raffaelli, 1992), even in studies of adult siblings who

typically live apart from each other (Searcy & Eisenberg, 1992; Stocker, Lanthier, & Furman, 1997).

Accordingly, we believe that asking Japanese and European Americans to make comparative predictions for self versus a sibling regarding the likelihood of experiencing positive and negative events (see Figure 1) represents a more powerful or culturally relevant framework for examining optimistic and pessimistic bias in Easterners and Westerners, than those used in previous studies. Within this culturally relevant framework, and based on previous research and theory that have emphasized cultural differences between Easterners and Westerners (e.g., Heine et al., 1999; Markus & Kitayama, 1991; Triandis, 1995), one should expect to find reliable evidence for pessimistic bias among Japanese in predicting both positive and negative events (e.g., Japanese should predict that negative events are more likely to occur to self than to a sibling) and for optimistic bias among European Americans in predicting both positive and negative events (e.g., European Americans should predict that negative events are more likely to occur to a sibling than to self).

#### Overview of the Present Studies

In an effort to build on previous research examining cultural variations on optimistic and pessimistic bias, we conducted two studies using the culturally relevant framework presented earlier. In Study 1, we sought to examine cultural variations on optimistic and pessimistic bias for typical positive and negative life events between European American and Japanese college students. Unlike past studies, however, this study asked participants to make predictions regarding the likelihood of event occurrence for self versus a sibling (rather than, for self vs. others). In Study 2, we attempted to determine if our findings from Study 1 would generalize to the prediction of atypical life events and to control for potential covariates that may account for our cultural differences findings.

#### Study 1

To follow up on Chang et al.'s (2001) studies, we examined for the presence of optimistic and pessimistic bias in European Americans and Japanese when asked to make predictions regarding the

|  | Positive Events  | Negative Events  |
|--|------------------|------------------|
| More Likely to Occur to Self than to a Sibling | Optimistic Bias  | Pessimistic Bias |
| More Likely to Occur to a Sibling than to Self | Pessimistic Bias | Optimistic Bias  |

Figure 1. Optimistic and pessimistic bias as a function of event valence and likelihood of event occurrence for self versus a sibling.

likelihood of event occurrence for self versus a sibling. We tested three key hypotheses. First, within groups, we tested the hypothesis that European Americans would show an optimistic bias for typical positive and negative events given the prevailing cultural norm of self-enhancement in the West (e.g., Taylor & Brown, 1988; Weinstein, 1980). This is to say, we expected European Americans would report that positive life events are more likely to occur to self than to a sibling, and that negative events are more likely to occur to a sibling than to self. For Japanese, we expected that they would show a pessimistic bias for both typical positive and typical negative events given the prevailing cultural norm associated with self-criticism in the East (e.g., Kitayama et al., 1997). Thus, we predicted Japanese would report that positive events are more likely to occur to a sibling than to self, and that negative events are more likely to occur to self than to a sibling. Second, we tested the hypothesis that any within-groups differences found would reflect a significant difference between European Americans and Japanese in their prediction of typical positive and negative life events given presumed cultural differences in self-enhancement and self-criticism, respectively. In general, European Americans were expected to show a greater optimistic bias in their prediction of both positive and negative life events compared with Japanese. Lastly, and related to the previous hypothesis, we were interested in showing that cultural differences findings are not simply due to cultural variations in appraised event desirability and pleasantness for typical positive and negative events (Ellsworth, 1994; Mesquita & Frijda, 1992).

### Method

#### Participants

Participants were 140 (42 men and 98 women) European American college students attending the University of Michigan and 160 (77 men and 83 women) Japanese college students attending Shikoku Gakuin University, a public university in Kagawa-ken, Japan. Initially, the American sample was composed of 201 college students. However, to reduce potential confounding effects due to different cultural influences associated with different ethnic groups, the responses provided by 18 African American, 3 Latin American, 19 Asian American, and 14 "other" participants were omitted from this study. In addition, to control for any experiential differences associated with having versus not having a sibling, which may possibly influence the comparative prediction process for self versus a sibling, the responses provided by 7 European American and 18 Japanese participants who indicated that they did not have any siblings were omitted from this study. The mean age of an identified sibling closest in age for European American participants was 19.47 years. The mean age of an identified sibling closest in age for Japanese participants was 19.16 years. All participants were enrolled in a psychology course in their respective universities and received extra credit for participating. Participants in each group were very similar in age (European Americans:  $M = 19.48$  years,  $SD = 1.02$ ; Japanese:  $M = 19.62$  years,  $SD = 1.13$ ).

#### Measures

**Optimistic and pessimistic bias.** To assess for optimistic and pessimistic bias, we asked participants to indicate the likelihood of experiencing a series of positive and negative life events common to most college students. We used the same set of items used in Chang et al.'s (2001) studies. Drawing from the 48-item version of the Life Events Questionnaire (LEQ; Shrauger, Mariano, & Walter, 1998), we used 15 typical positive events (e.g., "meet someone new with whom you expect to be close friends for

years") to constitute our Life Events Questionnaire–Positive Events (LEQ-PE) and 15 typical negative events (e.g., "fail a test") to constitute our Life Events Questionnaire–Negative Events (LEQ-NE). As in Chang et al.'s (2001) studies, we asked participants to predict the likelihood that these events would occur over the next 2 months. By using this standard and explicit time frame, we prevented our findings from being potentially confounded by any cultural differences in time perspectives held by European American and Japanese students.

Acceptable internal consistencies were found for the LEQ-PE ( $\alpha = .60$  and  $.59$ , for European American and Japanese samples, respectively) and for the LEQ-NE ( $\alpha = .64$  and  $.58$ , for European American and Japanese samples, respectively). Of importance, we modified instructions from those used in Chang et al.'s (2001) studies and asked participants "in comparing yourself to a sibling like you" to indicate if an event was "More likely to happen to *my sibling* than to me," "Equally likely to happen to *me and my sibling*," or "More likely to happen to *me* than to my sibling" over the next 2 months. These responses were coded 1, 2, and 3, respectively. However, before providing responses to the different event items, each participant was asked if he or she had a sibling and, if so, to then identify a sibling closest in age to him or her in making their comparative predictions. Because variability in the age of the identified sibling was expected, we further asked that the participants imagine the identified sibling to be "the same age as you" and to have "the same background as you (e.g., attending college)" in making their comparative predictions.

As in Chang et al.'s (2001) studies, we asked participants to rate the extent to which each typical life-event item was desirable, ranging from 1 (*very undesirable*) to 4 (*very desirable*). Separate desirability scores were computed for typical positive events ( $\alpha = .77$  and  $.70$ , for European American and Japanese samples, respectively) and for typical negative events ( $\alpha = .74$  and  $.72$ , for European American and Japanese samples, respectively). Higher desirability scores indicate greater desirability associated with experiencing positive or negative events. In addition, participants were asked to rate each typical life-event item for degree of pleasantness, ranging from 1 (*very unpleasant*) to 5 (*very pleasant*). Separate pleasantness scores were computed for positive events ( $\alpha = .81$  and  $.71$ , for European American and Japanese samples, respectively) and for negative events ( $\alpha = .76$  and  $.74$ , for European American and Japanese samples, respectively). Higher pleasantness scores indicate greater feelings of pleasantness associated with experiencing positive or negative life events.

**Translations.** Measures were in both English and Japanese, and participants completed them in their native language. The English version was translated into Japanese and then independently back-translated into English to ensure accuracy and consistency with the original English items.

#### Procedure

Participants were told that the present study involved an examination of college students' prediction for the occurrence of various life events. All study measures were administered to all participants in either small ( $n < 50$ ) or large ( $n > 100$ ) groups. Of the 140 European American students who participated, 4 participants returned incomplete surveys. Similarly, of the 160 Japanese students who participated, 1 participant returned an incomplete survey. Hence, the final European American sample was composed of 136 participants, and the final Japanese sample was composed of 159 participants. Participants were not made aware of the purpose of the study until after they had completed all measures. To protect the participants' anonymity, only participant numbers were placed on the instruments.

### Results and Discussion

To determine if there were any significant gender differences, we first conducted a series of independent *t* tests examining for

gender differences on LEQ-PE, LEQ-NE, desirability, and pleasantness scores in both the European American and Japanese samples. Results of these analyses indicated only one significant gender difference. Specifically, for European Americans, women ( $M = 54.76$ ,  $SD = 3.13$ ) reported greater desirability appraisal for positive events than men ( $M = 53.22$ ,  $SD = 4.26$ ),  $t(134) = 2.85$ ,  $p < .05$ . Given that this was the only significant gender difference result found, and we were primarily interested in studying the role of culture on optimistic and pessimistic bias, we collapsed data for gender in all of our subsequent data analyses.

### *Relations Between Optimistic and Pessimistic Bias*

Zero-order correlations were computed between predictions for typical positive and negative life events among European Americans and Japanese. Results of these computations indicated no significant association between positive and negative life events for European Americans ( $r = .09$ , *ns*) and for Japanese ( $r = -.05$ , *ns*). Thus, these findings provide further evidence for the independence of optimistic and pessimistic bias (Chang et al., 2001).

### *Within-Groups Differences on Optimistic and Pessimistic Bias*

To evaluate within-groups differences on optimistic and pessimistic bias in European Americans and in Japanese, we conducted a series of one-sample *t* tests (two-tailed). To determine whether means for predicting typical positive and negative events for self versus a sibling were significantly different from zero (indicative of no bias), ratings were recoded so that responses indicating a greater likelihood that an event would occur to a sibling than to self received the value of  $-1$ , an equal likelihood that an event would occur to self and a sibling received a value of zero, and responses indicating a greater likelihood that an event would occur to self than to a sibling received a value of 1. Hence, means significantly greater than zero for positive events indicated the presence of an optimistic bias, whereas means significantly less than zero indicated the presence of a pessimistic bias. For negative events, means significantly greater than zero indicated the presence of a pessimistic bias, whereas means significantly less than zero indicated the presence of an optimistic bias. Means equal to

zero indicated no bias (i.e., likelihood of experiencing positive or negative events is seen as about average or equal to that of a sibling).

Results of conducting these analyses for typical positive and negative life events for European Americans and Japanese are presented in Table 1. As the table shows, for European Americans, the mean for positive events was found to be significantly greater than zero,  $t(135) = 7.61$ ,  $p < .001$ . Alternatively, the mean for negative events was found to be significantly less than zero for this group,  $t(135) = -4.19$ ,  $p < .001$ . Thus, these findings indicate an optimistic bias for positive and negative events among European Americans (Taylor & Brown, 1988). For Japanese, the mean for positive events was not found to be significantly different from zero,  $t(158) = 0.32$ , *ns*, and thus, there was no evidence of a pessimistic bias for these events. In contrast, the mean for negative events was found to be significantly greater than zero for this group,  $t(158) = 7.94$ ,  $p < .001$ , reflecting a pessimistic bias for these events. Hence, we found some evidence of optimistic and pessimistic bias (or no bias) as a function of event valence for Japanese and European Americans (see Figure 2).

For some, the finding of no bias for Japanese in predictions made for positive events may raise a serious challenge to the mapping of self-criticism to the East. Yet, it is worth noting that this finding is actually quite in keeping with findings from other studies indicating that Japanese may not strongly engage in self-criticism in all situations. For example, Heine et al. (1999) found that Canadians reported self-esteem scores (based on using the Rosenberg Self-Esteem Scale) that were on average 10 points higher than those reported by Japanese. Of importance, self-esteem scores reported by Japanese were more normally distributed and closer to the arithmetic mean for the scale than those reported by Canadians. Thus, Japanese appear to hold a modest or average stance when appraising positive self-referent information. This is not to imply that there are no motives at work here. It may be that in appraising positive self-referent information, an active balance between self-enhancement and self-criticism motives is achieved among Japanese (Chang et al., 2001; cf. Kitayama et al., 1997). Alternatively, a greater emphasis on self-criticism over self-enhancement may represent an optimal confluence of motives when Japanese consider negative self-referent information.

Table 1  
*Cultural Differences in Optimistic and Pessimistic Bias for Study 1*

| Event type              | Bias ( <i>M</i> ) |        | Between-cultures analyses  |
|-------------------------|-------------------|--------|--|
|                         | United States     | Japan  |  |
| Typical positive events | 2.04**            | 0.11   | $F(1, 293) = 17.72$ , $p < .001$<br>$F(1, 292) = 16.61$ , $p < .001^a$<br>$F(1, 291) = 14.70$ , $p < .001^b$ |
| Typical negative events | -1.49**           | 2.65** | $F(1, 293) = 71.94$ , $p < .001$<br>$F(1, 292) = 70.34$ , $p < .001^a$<br>$F(1, 291) = 66.43$ , $p < .001^b$ |

<sup>a</sup> Results of conducting an analysis of variance (ANOVA) with corresponding event desirability scores introduced as a covariate. <sup>b</sup> Results of conducting an ANOVA with corresponding event desirability and pleasantness scores introduced as covariates.

\*\*  $p < .001$ .

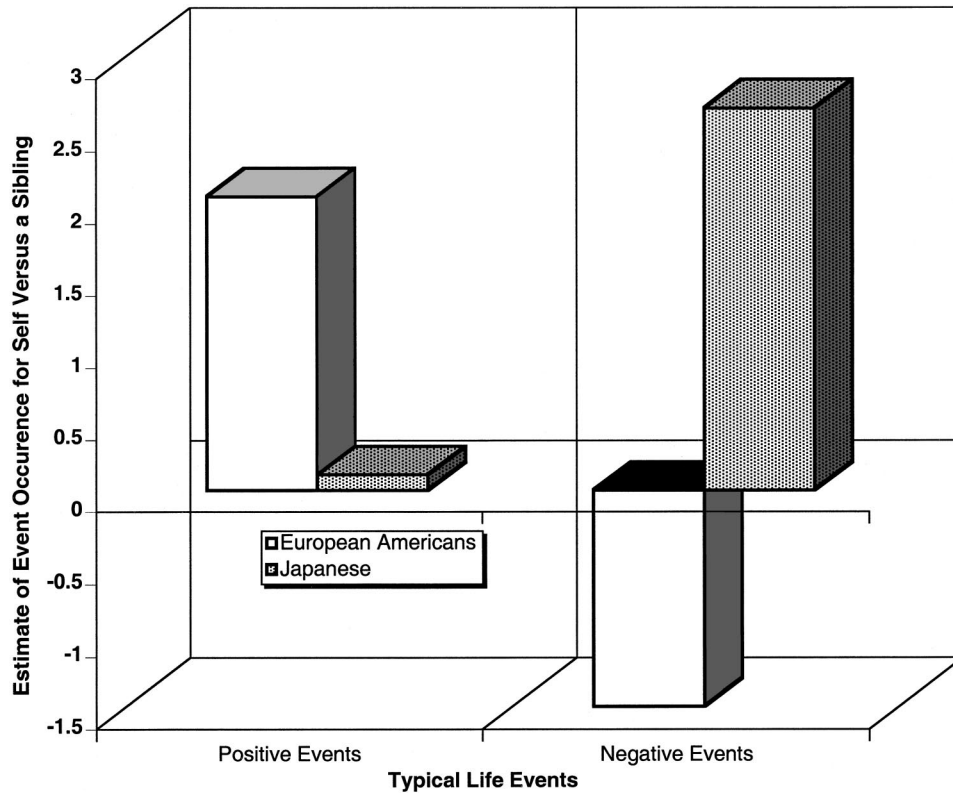


Figure 2. Mean levels in estimating the occurrence of typical positive and negative life events for self versus a sibling between participants from the United States ( $n = 136$ ) and Japan ( $n = 159$ ). Lower scores indicate a greater estimate that events would occur to a sibling than to self. Higher scores indicate a greater estimate that events would occur to self than to a sibling. Mean of zero indicates estimate that events would occur equally to self and a sibling.

### Between-Cultures Differences on Optimistic and Pessimistic Bias

To examine whether the obtained within-groups differences findings were significantly different between European Americans and Japanese across typical positive and negative life events, we next conducted a set of between-cultures analyses similar to the procedure used by Heine and Lehman (1995) and by Chang et al. (2001). As Table 1 shows, for positive events, the mean for European Americans was again found to be significantly greater than the mean found for Japanese,  $F(1, 293) = 17.72, p < .001$ . Hence, on the basis of these results, it would appear that European Americans compared with Japanese were more likely to indicate that positive events would occur to self than to a sibling. However, this may not be an appropriate interpretation given that results from the within-groups analyses for Japanese indicated their mean on positive events was not significantly different from zero. For negative events, the mean for European Americans was found to be significantly lower than the mean found for Japanese,  $F(1, 293) = 71.94, p < .001$ . Hence, European Americans compared with Japanese were more likely to indicate that negative events would occur to a sibling than to self. Alternatively, Japanese

compared with European Americans were more likely to indicate that negative events would occur to self than to a sibling.

It is important to note that a significant difference was not found on desirability appraisals for positive events between European Americans ( $M = 52.35, SD = 4.13$ ) and Japanese ( $M = 51.64, SD = 5.15$ ),  $t(293) = 1.29, ns$ . Likewise, desirability appraisals for negative events were also not found to be significantly different between European Americans ( $M = 21.09, SD = 4.21$ ) and Japanese ( $M = 21.28, SD = 4.88$ ),  $t(293) = -0.35, ns$ . In addition, no significant difference was found on pleasantness appraisals for negative events between European Americans ( $M = 23.13, SD = 5.10$ ) and Japanese ( $M = 24.35, SD = 6.13$ ),  $t(293) = -1.83, ns$ . Of interest, as obtained in Chang et al.'s (2001, Study 2) findings, we found a significant difference between European Americans and Japanese on pleasantness appraisals for positive events ( $M = 64.84, SD = 6.35$  vs.  $M = 62.02, SD = 8.29$ , respectively),  $t(293) = 3.23, p < .01$ . As in Chang et al. (2001, Study 2), we conducted our between-cultures analyses controlling for event desirability and event pleasantness as potential covariates. Of importance, as shown in Table 1, the inclusion of desirability appraisals and pleasantness appraisals failed to account for the cultural differ-

ences findings between European Americans and Japanese on optimistic and pessimistic bias.

## Study 2

Because the findings obtained in Study 1 were wholly consistent with the mapping of self-enhancement to the West and to some extent consistent with the mapping of self-criticism to the East, and therefore, different from the findings obtained in Chang et al.'s (2001) studies, we felt that it was critical to try and replicate our findings in another sample of European Americans and Japanese. In doing so, we added three important conceptual and methodological refinements to Study 1. First, we asked participants to make comparative predictions for self versus a sibling for atypical positive and negative life events. As noted in Chang et al. (2001), most of the studies conducted on optimistic and pessimistic bias have been on asking college students to make comparative predictions for events that are largely atypical or distal to their everyday experiences (e.g., "You will live past the age of 80"). Insofar as the process of making comparative predictions is believed to involve or engage self-enhancement and self-criticism motives for Westerners and Easterners (Heine & Lehman, 1995; Weinstein & Lachendro, 1982), respectively, changing the typicality of the events predicted in the present study should not result in findings that are substantively different from those obtained in Study 1.

Second, because Chang et al. (2001) have argued that the process of making predictions for atypical events may be influenced by heuristic processes (Schwarz, 1998; Tversky & Kahneman, 1973, 1974), we looked at the role of such processes in accounting for potential differences found between European Americans and Japanese. According to Schwarz (1998), judgments made under uncertain conditions are influenced by two distinguishable heuristic processes, namely, accessible content and accessibility experiences. *Accessible content* refers to what comes to mind, whereas *accessibility experiences* refer to the subjective experiences of ease or difficulty associated with the recall process. Therefore, cultural differences on accessible content (e.g., the extent to which atypical events are imaginable), on accessibility experiences (e.g., the extent to which atypical events are subjectively experienced as easy to imagine), or on both, may account for cultural differences on optimistic and pessimistic bias on the basis of predictions made for atypical events. Assessing for accessible content and accessibility experiences provided us an important opportunity to test whether cultural differences on optimistic and pessimistic bias associated with the prediction of atypical positive and negative life events found between European Americans and Japanese covaried as a function of these two heuristic processes.

Third, because depressed mood can negatively bias the way individuals interpret their future (Beck, 1976), several studies have shown that depressed mood can influence predictions made for positive and negative events (e.g., Alloy & Ahrens, 1987; Pyszczynski, Holt, & Greenberg, 1987), and because Easterners typically experience greater depressed mood than Westerners (Chang, 1996, 2002a), we felt that it was important to look at depressed mood or dysphoria as an additional potential covariate in the prediction of atypical positive and negative events this study.

## Method

### Participants

Participants were 181 (58 men and 123 women) European American college students attending the University of Michigan and 133 (63 men and 70 women) Japanese college students attending Shikoku Gakuin University. The initial American sample was composed of 250 college students. As before, to reduce potential confounding effects due to different cultural influences associated with different ethnic groups, the responses provided by 21 African American, 4 Latin American, 16 Asian American, and 15 "other" participants were omitted from this study. Likewise, to control for any experiential differences due to having versus not having a sibling, the responses provided by 13 European American and 11 Japanese participants who indicated that they did not have any siblings were omitted from this study. The mean age of an identified sibling closest in age for European American participants was 19.21 years. The mean age of an identified sibling closest in age for Japanese participants was 19.41 years. All participants were enrolled in a psychology course at their respective universities and received extra credit for participating. Participants in each group were very similar in age (European Americans:  $M = 19.21$  years,  $SD = 1.01$ ; Japanese:  $M = 19.67$  years,  $SD = 1.73$ ).

### Measures

*Optimistic and pessimistic bias.* To assess for optimistic and pessimistic bias, a total of 20 atypical positive and negative life events were adapted from life-event items used by previous researchers investigating optimistic and pessimistic bias (Regan, Snyder, & Kassin, 1995; Weinstein, 1980, 1982, 1984). These items were identified because they were clearly positive or negative, each item applied equally to Japanese and European Americans, and because each item applied equally to men and women. The 20 items were randomly ordered to form our Atypical Life Events Questionnaire or ALEQ (items on the ALEQ may be obtained from Edward C. Chang). Ten atypical positive events (e.g., "Write a best-selling book") constituted our Atypical Life Events Questionnaire-Positive Events (ALEQ-PE) and ten atypical negative events (e.g., "Get fired from your job") constituted our Atypical Life Events Questionnaire-Negative Events (ALEQ-NE).

We used instructions similar to those in Study 1 and asked participants "in comparing yourself to a sibling like you" to indicate if an event was "More likely to happen to *my sibling* than to me," "Equally likely to happen to *me and my sibling*," or "More likely to happen to *me* than to my sibling." As before, these responses were coded 1, 2, and 3, respectively. However, unlike in Study 1, where participants were asked to make comparative predictions based on a relatively short time horizon ("over the next 2 months"), participants in this study were asked to make predictions based on a longer time horizon ("by the time you become 50 years of age") given the atypical nature of the present life events. Despite the wide range of life events surveyed, internal consistencies for the ALEQ-PE scale in the present samples were generally good ( $\alpha = .59$  and  $.63$ , for European American and Japanese samples, respectively). The same was true for the ALEQ-NE scale in the present samples ( $\alpha = .57$  and  $.58$ , for European American and Japanese samples, respectively).

To control for variations on accessible content associated with these atypical life events, we asked participants to rate the extent to which each of the 20 life-event items was imaginable, ranging from 1 (*not imaginable*) to 5 (*very imaginable*). Separate accessible content scores were computed for positive life events ( $\alpha = .69$  and  $.77$ , for European American and Japanese samples, respectively) and for negative life events ( $\alpha = .76$  and  $.76$ , for European American and Japanese samples, respectively). Greater accessible content scores indicate greater ability to imagine the occurrence of atypical positive or negative life events.

In addition, to control for variations on accessibility experiences associated with these atypical life events, participants were also asked to rate

the extent to which each of the 20 life-event items was easy to imagine occurring, ranging from 1 (*not easy to imagine*) to 5 (*very easy to imagine*). Separate accessibility experiences scores were computed for positive life events ( $\alpha = .76$  and  $.80$ , for European American and Japanese samples, respectively) and for negative life events ( $\alpha = .74$  and  $.81$ , for European American and Japanese samples, respectively). Greater accessibility experiences scores indicate greater subjective ease associated with the process of imagining the occurrence of atypical positive or negative life events.

**Dysphoria.** To assess for dysphoria, we used the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). The BDI is a widely used 21-item self-report measure of depressive symptomatology. Respondents are asked to rate the extent to which they have experienced “*in the past week, including today,*” specific depressive symptoms across a 4-point scale (e.g., ranging from 0 = *I do not feel sad* to 3 = *I am so sad or unhappy that I can't stand it*). When used in a nonclinical sample, scores on the BDI are typically taken to measure for dysphoria (or at most, subthreshold levels of depression). Internal consistencies for the BDI in the present samples were very good ( $\alpha = .90$  and  $.88$ , for European American and Japanese samples, respectively).

**Translations.** As before, instruments were translated and then independently back-translated for accuracy and consistency with English measures.

### Procedure

Similar to Study 1, participants were told that the present study involved an examination of college students' prediction for the occurrence of various life events. All study measures were administered to all participants in either small ( $n < 50$ ) or large groups ( $n > 100$ ). Of the 181 European American students who participated, 6 participants returned incomplete surveys. Similarly, of the 133 Japanese students who participated, 3 participants returned incomplete surveys. Hence, the final European American sample was composed of 175 participants, and the final Japanese sample was composed of 130 participants. Participants were not made aware of the purpose of the study until after they had completed all measures. To protect the participants' anonymity, only participant numbers were placed on the instruments.

### Results and Discussion

As in Study 1, we first conducted a series of independent  $t$  tests examining for gender differences on ALEQ-PE, ALEQ-NE, BDI, accessible content, and accessibility experiences scores in both the European American and Japanese samples. Results of these analyses for European Americans indicated a significant gender difference on two variables only. Specifically, European American men compared with women reported less dysphoria ( $M = 4.46$ ,  $SD = 4.06$  vs.  $M = 7.96$ ,  $SD = 7.56$ , respectively),  $t(173) = -3.24$ ,  $p < .01$ , and reported less ease in imagining the occurrence of atypical positive events ( $M = 32.36$ ,  $SD = 6.03$  vs.  $M = 35.05$ ,  $SD = 6.01$ , respectively),  $t(173) = -2.76$ ,  $p < .01$ . Results for Japanese indicated no significant gender difference on any of the variables examined. As in Study 1, because our primary focus was on cultural differences, we continued to collapse data for gender in all of our subsequent data analyses.

### Relations Between Dysphoria and Optimistic and Pessimistic Bias

Zero-order correlations between dysphoria and predictions for atypical positive and negative life events among European Americans and Japanese were computed. Results of these computations for European Americans and Japanese indicated that dysphoria

was not significantly associated with predictions for positive events ( $r = .04$  and  $-.16$ , *ns*, respectively) and negative events ( $r = .14$  and  $.06$ , *ns*, respectively). As in Study 1, predictions for positive and negative events were found to be independent of each other for European Americans ( $r = .03$ , *ns*). In contrast, a significant negative association ( $r = -.20$ ,  $p < .05$ ) was found between predictions for positive and negative events made by Japanese. However, it is important to note that the magnitude of this association was small.

### Within-Groups Differences on Optimistic and Pessimistic Bias

As before, to evaluate within-groups differences on optimistic and pessimistic bias in European Americans and in Japanese, we conducted a series of one-sample  $t$  tests (two-tailed). To determine if means for predicting atypical positive and negative events for self versus a sibling were significantly different from zero, ratings were recoded in the same manners as in Study 1.

Results of conducting these analyses for atypical positive and negative life events for European Americans and Japanese are presented in Table 2. As the table shows, for European Americans, the mean for positive events was found to be significantly greater than zero,  $t(174) = 5.92$ ,  $p < .001$ . Alternatively, the mean for negative events was found to be significantly less than zero for this group,  $t(174) = -3.28$ ,  $p < .001$ . Thus, similar to what was found in Study 1, European Americans expressed an optimistic bias in predicting positive and negative events. For Japanese, the mean for positive events was not found to be significantly different from zero,  $t(129) = -0.89$ , *ns*, and thus, there was no evidence of a pessimistic bias for positive events. In contrast, the mean for negative events was found to be significantly greater than zero for this group,  $t(129) = 4.92$ ,  $p < .001$ , reflecting a pessimistic bias for these events. Thus, essentially replicating the results obtained in Study 1, these within-groups findings indicate the presence of an optimistic bias for European Americans in predicting positive and negative events, and a pessimistic bias for Japanese in predicting negative events and no bias for this group in predicting positive events (see Figure 3).

### Between-Cultures Differences on Optimistic and Pessimistic Bias

To examine whether the obtained within-groups difference findings were significantly different between European Americans and Japanese across atypical positive and negative life events, we again conducted a set of between-cultures analyses. As Table 2 shows, for positive events, the mean for European Americans was found to be significantly greater than the mean found for Japanese,  $F(1, 303) = 19.59$ ,  $p < .001$ . Hence, according to these results, it would again appear that European Americans compared with Japanese were more likely to indicate that positive events would occur to self than to a sibling. However, as discussed earlier, this may not be an appropriate interpretation given the present results from the within-groups analyses. For negative events, the mean for European Americans was found to be significantly lower than the mean found for Japanese,  $F(1, 303) = 33.60$ ,  $p < .001$ . Thus, as found in Study 1, European Americans compared with Japanese were more likely to indicate that negative events would occur to a



Table 2  
Cultural Differences in Optimistic and Pessimistic Bias for Study 2

| Event type               | Bias (M)      |        | Between-cultures analyses  |
|--------------------------|---------------|--------|--|
|                          | United States | Japan  |  |
| Atypical positive events | 1.39**        | -0.26  | $F(1, 303) = 19.59, p < .001$<br>$F(1, 302) = 11.58, p < .001^a$<br>$F(1, 301) = 10.58, p < .01^b$<br>$F(1, 300) = 9.61, p < .01^c$    |
| Atypical negative events | -0.69*        | 1.16** | $F(1, 303) = 33.60, p < .001$<br>$F(1, 302) = 31.96, p < .001^a$<br>$F(1, 301) = 30.48, p < .001^b$<br>$F(1, 300) = 27.88, p < .001^c$ |

<sup>a</sup> Results of conducting an analysis of variance (ANOVA) with corresponding event scores on accessible content introduced as a covariate. <sup>b</sup> Results of conducting an ANOVA with corresponding event scores on accessible content and accessibility experiences introduced as covariates. <sup>c</sup> Results of conducting an ANOVA with corresponding event scores on accessible content, accessibility experiences, and Beck Depression Inventory scores introduced as covariates.

\*  $p < .01$ . \*\*  $p < .001$ .

sibling than to self, whereas Japanese compared with European Americans were more likely to indicate that negative events would occur to self than to a sibling.

As expected, a significant cultural difference was found on BDI scores. Specifically, Japanese ( $M = 10.32, SD = 8.17$ ) were significantly more dysphoric than European Americans ( $M = 6.84, SD = 6.83$ ),  $t(303) = 4.05, p < .001$ . Also, it is important to note that a significant difference was also found between Japanese and

European Americans on accessible content for positive events ( $M = 27.03, SD = 6.30$  vs.  $M = 35.22, SD = 5.25$ , respectively),  $t(303) = -12.36, p < .001$ , but not for negative events ( $M = 24.96, SD = 6.52$  vs.  $M = 23.82, SD = 6.05$ , respectively),  $t(303) = 1.58, ns$ . Thus, Japanese compared with European Americans found it harder to imagine atypical positive events, but not atypical negative events. In addition, a significant difference was found between Japanese and European Americans on accessibility

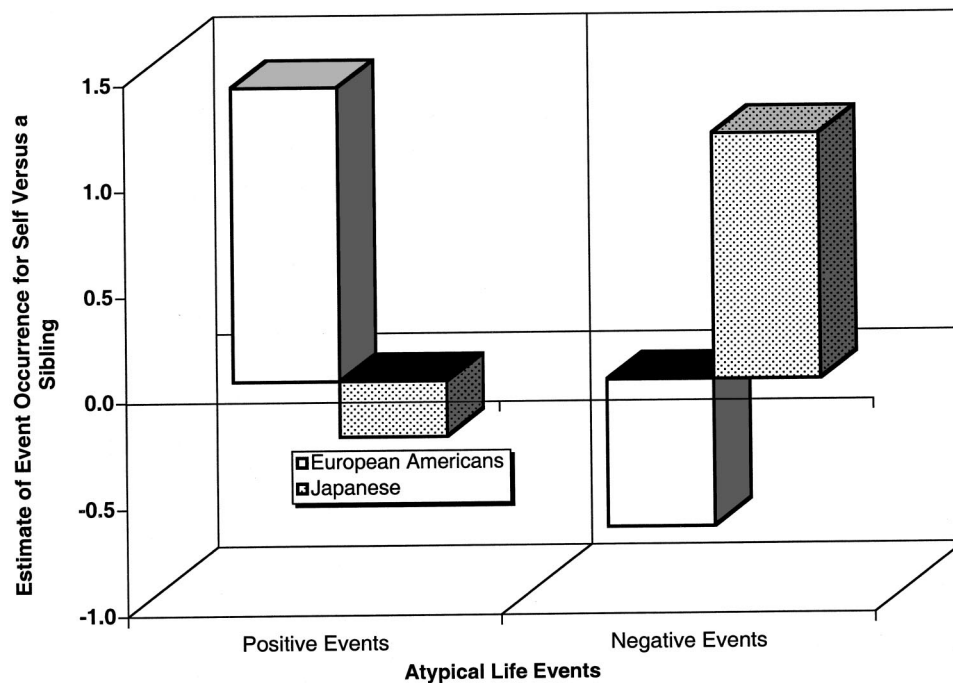


Figure 3. Mean levels in estimating the occurrence of atypical positive and negative life events for self versus a sibling between participants from the United States ( $n = 175$ ) and Japan ( $n = 130$ ). Lower scores indicate a greater estimate that events would occur to a sibling than to self. Higher scores indicate a greater estimate that events would occur to self than to a sibling. Mean of zero indicates estimate that events would occur equally to self and a sibling.

experiences for positive events ( $M = 27.01$ ,  $SD = 6.84$  vs.  $M = 34.19$ ,  $SD = 6.13$ , respectively),  $t(303) = -9.63$ ,  $p < .001$ , and for negative events ( $M = 25.31$ ,  $SD = 7.28$  vs.  $M = 22.06$ ,  $SD = 5.42$ , respectively),  $t(303) = 4.46$ ,  $p < .001$ . Hence, these results for accessibility experiences indicate that European Americans found the subjective experience of imagining atypical positive events to be easier than did Japanese, whereas Japanese found the process of imagining atypical negative events to be easier than did European Americans.

The finding of no difference between European Americans and Japanese on accessible content associated with the prediction of negative events, compared with a significant difference finding on accessibility experiences associated with the prediction of these same events, provide added support for the view that these heuristic processes can be conceptually and methodologically distinguished from each other (Schwarz, 1998). Moreover, the cultural differences findings obtained on accessible content and accessibility experiences suggest that Japanese may be more primed for anticipating potential negative events than potential positive events compared with European Americans, whereas European Americans may be more primed for anticipating potential positive events than potential negative events compared with Japanese. For example, Kitayama et al.'s (1997) contention that most Japanese tend to deemphasize positive attributes and emphasize negative attributes as a function of self-criticism is wholly consistent with our findings indicating that Japanese, compared with European Americans, had greater difficulty imagining atypical positive events, experienced greater subjective difficulty in imagining the occurrence of atypical positive events, and experienced greater subjective ease in imagining the occurrence of atypical negative events. In fact, although the result for accessible content related to predicting atypical negative events was not found to be significantly different between the two cultural groups, it is worth noting, however, that the higher scores obtained by Japanese than by European Americans on this heuristic measure indicate a pattern that is consistent with the notion of self-criticism in Japanese. Alternatively, the findings for European Americans, compared with Japanese, on accessible content and accessibility experiences indicate a pattern that is generally consistent with the self-enhancement motive (e.g., a tendency to find positive events very imaginable or subjectively easy to imagine).

As we had done previously in Study 1, we conducted our between-cultures analyses controlling for potential covariates. In this case, we controlled for accessible content, accessibility experiences, and dysphoria. Of importance, as shown in Table 2, although significant cultural differences were found on accessible content, accessibility experiences, and on dysphoria, the inclusion of these variables failed to sufficiently account for the cultural differences findings obtained between European Americans and Japanese on optimistic and pessimistic bias.

### General Discussion

In two studies, we used a culturally relevant framework to examine differences between European American and Japanese college students on optimistic and pessimistic bias associated with the prediction of typical (Study 1) and atypical (Study 2) positive and negative life events for self versus a sibling. Consequentially, results across both studies showed that European Americans held

an optimistic bias across both positive and negative life events and that Japanese held a pessimistic bias for negative life events. Of importance, although Japanese were not found to hold a strong pessimistic bias for positive life events, they were not found to hold an optimistic bias for these events (cf. Chang et al., 2001). In addition, across both studies, significant differences emerged between the two cultural groups in their predictions for positive and negative events indicative of greater self-enhancement in the West than in the East, or greater self-criticism in the East than in the West. Overall, the present findings suggest that our culturally relevant framework was useful for identifying presumed cultural differences in self-enhancement and self-criticism between Westerners and Easterners, respectively.

The expected finding of an optimistic bias for European Americans independent of event valence and of event typicality indicates that the self-enhancement motive is quite robust among Westerners. This finding is quite consistent with recent findings obtained in a study of college students from the United States who were asked to make comparative predictions for self versus different referent groups. Specifically, Regan et al. (1995, Study 2) asked participants to make comparative predictions for self versus a friend, an acquaintance, and versus a stranger regarding the likelihood of experiencing various positive and negative life events. Results from their study indicated that participants consistently predicted that positive events were more likely to occur to self than to other referent groups, and negative events were more likely to occur to other referent groups than to self. Hence, as found in the present investigation, Regan et al. found an optimistic bias in the prediction of both positive and negative events consistent with the notion that friends, acquaintances, and strangers, all represent referent groups that are outside the independent self-system of most Westerners.

Does this mean that self-enhancement motives always define the motivational stance of Westerners? Recent findings suggest not. First, one should recall that Chang et al. (2001) failed to find evidence of an optimistic bias among European Americans in their comparative prediction of typical positive events for self versus others. Second, recent studies have shown that self-enhancement biases may not emerge when Westerners are induced to take on a framework that emphasizes interdependence. For example, in a pair of experiments conducted on college students in the United States, Sedikides, Campbell, Reeder, and Elliot (1998) found that Westerners expressed the expected self-serving bias (a tendency for individuals to take responsibility for successful outcomes, and to blame the situation or other individuals for unsuccessful outcomes) when asked to work with a randomly identified student on an interpersonal brainstorming task presumed to assess for the creativity of dyads. However, the self-serving bias did not emerge when participants were asked to work on the task with another student whom they developed a close relationship with. Thus, the Western self-system appears to be expandable under certain conditions to incorporate individuals or groups outside the boundaries of the independent self (e.g., Aron, Aron, Tudor, & Nelson, 1991; Gardner, Gabriel, & Hochschild, 2002). Accordingly, the dominance of individualism in the West need not preclude for Westerners the operation of motivational processes that are typically associated with an interdependent self-construal (Triandis, 1995; Vandello & Cohen, 1999).

Alternatively, the presence of an interdependent self among Easterners, need not preclude for this cultural group the operation of motivational processes that are typically associated with an independent self-construal (Doi, 1985/1986). Again, findings from recent studies indicate that there may be some merit to this view. First, one should recall that in comparative predictions of typical negative events made for self versus others, Chang et al. (2001) found that Japanese held an optimistic bias. Specifically, Japanese predicted that typical negative events were more likely to occur to others than to self. Second, in a recent study of Japanese and American college students, Sedikides, Gaertner, and Toguchi (2003; Study 1) found evidence of self-enhancement in both cultural groups. Specifically, these investigators found that when Japanese were asked to consider themselves as part of a group working to solve various business problems, Japanese rated collectivist behaviors (e.g., "Follow the rules according to which your group operates") and traits (e.g., "Cooperative") to be more representative of them than for the typical group member. In contrast, under the same simulated group situation, they found that Americans rated individualist behaviors (e.g., "Argue for your position and against your group") and traits (e.g., "Unique") to be more representative of them than for the typical group member. Thus, it appears that self-enhancement motives can be found in both Westerners and Easterners.

*Are Easterners Primed for Imagining Negative Experiences, and Are Westerners Primed for Imagining Positive Experiences?*

In conducting Study 2, it was critical for us to examine cultural differences on accessible content and on accessibility experiences as potential covariates that may account for our between-cultures differences findings associated with the prediction of atypical life events. Thus, it is worth noting that when variations in accessible content and accessibility experiences were entered as covariates in our between-cultures analyses, these heuristic processes failed to sufficiently account for our cultural differences findings. Of interest, we found a general pattern suggesting that the process of imagining atypical positive events was found to be easier and experienced as subjectively easier for European Americans compared to Japanese. In contrast, we found a general pattern suggesting that the process of imagining atypical negative events was easier and experienced as subjectively easier for Japanese compared with European Americans. Accordingly, these findings indicate that Westerners may be more strongly primed for imagining the occurrence of positive events than Easterners, whereas Easterners may be more strongly primed for imagining the occurrence of negative events than Westerners.

For Easterners, the ability to vividly and to quickly imagine potential negative experiences may provide this cultural group with opportunities to take constructive actions that may circumvent the actual occurrence of such experiences, similar to the notion of defensive pessimism. According to Norem and her colleagues (Norem, 2001; Norem & Cantor, 1986; Norem & Illingworth, 1993), *defensive pessimism* represents a cognitive strategy in which some individuals use their expectation of negative experiences to generate or harness motivation necessary to engage in constructive behaviors (e.g., problem solving) to attain desired goals. Although we are unaware of any published studies

that have directly examined defensive pessimism in Easterners, there is some indirect support for the view that a defensive pessimism process may be at work for this cultural group. In a study conducted on Asian American and European American college students, Chang (1996) found that although Asian Americans reported greater pessimism than European Americans, greater pessimism for Asian Americans, however, was associated with greater problem solving.<sup>2</sup> In contrast, for European Americans, greater pessimism was found to be associated with less problem solving. Therefore, for most Easterners, a heightened ability to consider negative experiences may serve to promote engagement in actions that lead them to successfully maintain interpersonal harmony with others (Kitayama et al., 1997). In contrast, for most Westerners, a heightened sensitivity to think about negative experiences may lead to mental dysfunction such as depression and anxiety (Beck, 1976).

*Further Evidence for Distinguishing Between Optimistic and Pessimistic Bias as a Function of Event Valence*

Similar to findings obtained in the present investigation of cognitive biases, findings from studies examining the broader constructs of dispositional optimism and pessimism, defined as generalized positive and negative outcome expectancies, respectively (Scheier & Carver, 1985), have shown that these constructs are distinguishable from each other (e.g., Chang, D'Zurilla, & Maydeu-Olivares, 1994; Marshall, Wortman, Kusulas, Hervig, & Vickers, 1992; Rääkkönen, Matthews, Flory, Owens, & Gump, 1999). Hence, optimism is not simply the absence of pessimism, and pessimism is not simply the absence of optimism. In that regard, the present findings provide further support for Chang et al.'s (2001) contention that an indication of an optimistic bias

<sup>2</sup> Because culture-related variations on optimistic and pessimistic bias might be expected to emerge between Asian American and European American ethnic groups (Chang, 2002b), we conducted a series of post hoc analyses on the data provided by the Asian American participants that were omitted from the present investigation. Results of conducting a set of one-sample *t* tests for Asian Americans from Study 1 indicated that their mean for typical positive events was significantly greater than zero (optimistic bias),  $t(18) = 2.81, p < .05$ , whereas their mean for typical negative events was not significantly different from zero (no bias),  $t(18) = 0.39, ns$ . Results of conducting a set of between-groups analyses between Asian Americans and European Americans from Study 1 failed to indicate a significant ethnic difference on positive events,  $F(1, 154) = 0.62, ns$ , and on negative events,  $F(1, 154) = 1.77, ns$ . Furthermore, results of conducting one-sample *t* tests for Asian Americans from Study 2 indicated that their mean for atypical positive events was significantly less than zero (pessimistic bias),  $t(15) = -2.93, p < .05$ , whereas their mean for atypical negative events was not significantly different from zero (no bias),  $t(15) = 0.12, ns$ . Results of conducting a set of between-groups analyses between Asian Americans and European Americans from Study 2 indicated that the mean for positive events was lower for Asian Americans compared with European Americans,  $F(1, 189) = 20.17, p < .001$ , but failed to indicate a significant ethnic difference on negative events,  $F(1, 189) = 1.09, ns$ . Although these inconsistent results appear to be at some odds with our main cross-cultural findings, it would be unwise, however, to draw any strong conclusions on the basis of these results, given the small number of Asian American participants identified from Study 1 ( $n = 19$ ) and Study 2 ( $n = 16$ ). Clearly, the examination of ethnic variations on optimistic and pessimistic bias warrants attention in future research.

associated with the prediction of positive events does not necessarily and sufficiently offer any insights into the presence of an optimistic bias, pessimistic bias, or no bias associated with the prediction of negative events. For example, the possibility that some individuals may express a pessimistic bias in predicting negative events, but no pessimistic bias in predicting positive events, was exactly what was found across both of the present studies for Japanese. Therefore, we believe that it is worth emphasizing the point that it is difficult, if not conceptually impossible, to draw any meaningful conclusions regarding the presence or absence of an optimistic and pessimistic bias unless one has considered event valence as a factor.

### Concluding Thought

In conclusion, our use of a culturally relevant framework to investigate optimistic and pessimistic bias between Easterners and Westerners resulted in findings that were, for the most part, consistent with the mapping of self-enhancement onto the West and self-criticism onto the East. Given recent criticisms of cross-cultural studies between Westerners and Easterners (e.g., Oyserman, Coon, & Kemmelmeier, 2002; Takano & Osaka, 1999; cf. Heine et al., 2002), insofar that self-enhancement and self-criticism processes are believed to strongly arise from within individualistic and collectivist cultures, respectively, the present findings may be taken to provide some indirect support for the common view of individualism in the West (the United States) and of collectivism in the East (Japan).

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