

THE PLEASURES AND PAINS OF DISTINCT SELF-CONSTRUALS: THE ROLE OF INTERDEPENDENCE IN REGULATORY FOCUS

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Regulatory focus theory distinguishes between self-regulatory processes that focus upon promotion and prevention strategies for goal pursuit. Five studies provide support for the hypothesis that these strategies differ for individuals with distinct self-construals. Specifically, individuals with a dominant *independent* self-construal were predicted to place more emphasis on *promotion* focused information, and those with a dominant *interdependent* self-construal on *prevention* focused information. Support for this hypothesis was obtained for participants who scored high versus low on the Independence-Interdependence scale, participants who were presented with an independent versus interdependent situation, and participants from a western versus eastern culture. The influence of interdependence on regulatory focus was observed in both importance ratings of information and affective responses consistent with promotion or prevention focus.

“My daughter thinks going to school here is just wonderful!” an immigrant mother was overheard saying to another parent while waiting to pick up their children. “In Hong Kong, if my daughter were to score 9 out of 10 in her dictation, her teacher would reprimand her for missing the one word. But here, the teacher compliments her on knowing the nine. The system here is so different -- they focus on what you do well, not on what you don’t.”

The above scenario illustrates a profound difference in *regulatory focus* as seen through the lens of cultural differences. Regulatory focus (Higgins, 1997) refers to the extension of the basic hedonic principle of approach and avoidance to allow for distinct self-regulatory strategies and needs. Specifically, self-regulation towards any specific goal may be focused upon *promotion*, the pursuit of gains and aspiration toward ideals, or alternatively, may be focused upon *prevention*, the avoidance of losses, and the fulfillment of obligations. A burgeoning literature has demonstrated the impact of these distinct motivational patterns upon the cognitive processes (Crowe & Higgins, 1997), emotional responses (Higgins, Shah, & Friedman, 1997), and behavioral strategies (Higgins et al., 1994) involved in self-regulation.

A smaller literature has explored the antecedents of these distinct self-regulatory patterns. Chronic differences in promotion versus prevention focus have been associated with socialization processes that emphasize ideal versus ought selves as well as styles of child-caretaker interaction

(Higgins & Loeb, in press). Additionally, these regulatory patterns can be made temporarily accessible in situations that emphasize gains achieved or losses avoided (Crowe & Higgins, 1997).

The current studies explore an additional possible antecedent of regulatory focus: the relative independence or interdependence of an individual’s currently accessible self-construal. Independent self-construals, common to members of Western cultures such as North America, define the individual in terms of attributes that make him or her separate and unique from others. Interdependent self-construals, on the other hand, common to members of East Asian and Latin American cultures, focus upon the individual in the context of relationships and group memberships, fundamentally embedding the individual within a larger social whole (Markus & Kitayama, 1991; Triandis, 1989). These distinct self views impact a broad range of social and cognitive processes, and have primarily been explored through the method of cross-cultural comparison (see Markus, Kitayama, & Heiman, 1996, for a review). Recent research examining the situational accessibility of a relatively independent versus interdependent self, however, has shown that these two ways of viewing the self appear to co-exist within every individual regardless of culture, and when activated, appear to alter social perception and behavior in ways that are highly consistent with the cultural findings (Aaker & Williams,

1998; Brewer & Gardner, 1996; Gardner, Gabriel & Lee, 1999; Trafimow, Triandis & Goto, 1991).

Importantly, regardless of whether chronically or situationally activated, these alternative ways of construing the self are thought to both reflect and underlay very different psychological goals. Specifically, the primary goal of the independent self is seen as distinguishing oneself from others in a positive manner. The primary goal of the interdependent self, in contrast, is to maintain harmony with others in the social setting (Heine, Lehman, Markus & Kitayama, 1999). It is in the service of these discrete goals that we believe distinct self-regulatory strategies would emerge.

Although any specific goal may be pursued with either a promotion or prevention focus, some goals are more consistent with one or the other self-regulatory pattern. The independent goal of being positively distinct, with its emphasis on achievement and autonomy, may be more consistent with a promotion focus. The individual attempting to positively distinguish him or herself from others may focus on the positive features of the self and potential gains in situations, precisely the pattern found in numerous studies of self-enhancement that have compared members of western cultures with their eastern counterparts (Holmberg, Markus, Herzog, & Franks, 1997). For example, American individuals are likely to praise those who compliment them while derogating those who criticize them, uncritically accept the credibility of positive feedback while critically reviewing negative feedback, and elaborate on positive information about the self while ignoring negative information (Frey & Stahlberg, 1986).

In contrast, in cultures where a dominant interdependent self tends to be encouraged, these positivity biases tend to be attenuated or reversed (Heine & Lehman, 1997; Kitayama, Markus, Matsumoto & Noursakkunkit, 1997). The interdependent goal of harmoniously fitting in with others, with its emphasis on fulfilling various social roles and maintaining connections with others, may be more consistent with prevention focus. The individual attempting to maintain connections with others may focus upon fulfilling obligations and avoiding mistakes and may even focus upon potentially negative aspects of the self and situations in an attempt to avoid future social mishap. Indeed, cross-cultural comparisons reveal that members of Asian cultures appear to be highly attentive to negative information about the self. This sensitivity has been put forth as a learning mechanism used to improve one's actions which may enable the self to be smoothly embedded within a social context and improve interpersonal relations (Heine & Lehman, 1999). That is, based on the identification of what is lacking in the self, steps are taken to improve on these deficits to become a better, more unified part of the relevant social unit (Kitayama et al., 1997), a tendency that appears to grow

over time as nurtured by socialization processes (Falbo, Poston, Triscara, & Zhang, 1997).

Research also suggests that socialization processes that encourage the individual to regulate towards one's own standards or those of others may reflect differences in self-construal. Child-rearing practices in Japan, for example, are said to foster an awareness and concern for the needs and desires of others (Hamaguchi, 1985; Heine et al, 1999). Even in cultures that celebrate independence such as the U.S., social development often includes placing the child in situations where he or she is encouraged to be a "team-player" (Coakley, 1996), and most parents report instilling both the values of achievement and those of cooperation in their children (Homer, 1993). Whenever the individual is focused upon others' standards, whether as a chronic focus (e.g., East Asian cultures) or in certain situations (e.g., when playing on a team), living up to responsibilities comes into the fore, and the ought-self may be more prominent. For example, when the interdependent self is primed, Gardner, Pennington, and Bessenoff (1999) show that individuals regulate to others' standards (both ideal and ought) to a greater degree, and that actual-ought discrepancies become particularly distressing. Given the strong association between the ought-self and prevention focus (Higgins & Tykocinski, 1992), it seems plausible that when individuals view the self as more interdependent, they may be more keenly attuned toward prevention than promotion.

In sum, this stream of research suggests that individuals with a dominant independent self prefer to focus on positive versus negative information regarding themselves, while the converse is true for individuals with a dominant interdependent self. Moreover, the combined results of this research may be easily reinterpreted to reflect a more general promotion or prevention focused strategy of self-regulation. If true, such a mechanism suggests a more fundamental shift in how information may be perceived among those with distinct self views.

In the current research, we examine how self-construal may influence regulatory focus in more general domains. In five studies, we investigate the possibility that individuals with a dominant independent self tend to exhibit a bias toward promotion focus, weighting gain-framed information as more important, whereas those with a dominant interdependent self tend to exhibit a bias toward prevention focus, weighting loss-framed information as more important. To test this bias, we utilize a frame manipulation – framing identical scenarios (a game show in Study 1, a tennis match in Studies 2-5) in ways that either emphasize the potential gains (promotion focus) or the potential losses (prevention focus) within the situation. Higgins and colleagues (Crowe & Higgins, 1997; Higgins et al, 1994) have found that individuals who differ in chronic promotion or prevention focus consistently differ in their responses to these types of frame manipulations, such that those with promotion

concerns are sensitive to potential gains, whereas those with prevention concerns are sensitive to potential losses.

To examine the extent to which one's view of the self can act as a moderator of regulatory focus, we operationalize self-construal in multiple ways. In Study 1, we measure individual differences along the Independence-Interdependence scale (Singelis, 1994) in a North American sample. In Study 2, we examine self-construal through a situational manipulation involving individual and team events. Finally, in Studies 3-5, we examine the interaction of the situational manipulations of event type with the chronic self-construal by comparing the responses of members of North American and East Asian cultures. By presenting convergent evidence across the five studies, we eliminate potential confounding explanations that may be associated with cultural differences alone (Segall, Dasen, Berry, & Poortinga, 1990), thereby providing a clearer picture of the role of self-construal in regulatory focus.

STUDY 1

Overview and Design

In Study 1, we examined the evaluations of scenarios portrayed in a promotion versus prevention frame (Crowe & Higgins, 1997). We measured the chronic differences in self-construal (Singelis, 1994) and predicted an two-way interaction between self-construal and the promotion versus prevention frame manipulation. Individuals with a dominant independent self-construal should be biased towards promotion framing, regarding promotion framed information as more important, whereas individuals with a dominant interdependent view of self should perceive prevention framed information as more important. Thus, a 2 Frame (promotion vs. prevention) X 2 Self-construal (independent vs. interdependent) between-subjects design was used.

Method

Participants.

One-hundred and twenty-eight undergraduate students (mean age = 20.62, 51% female) from a large midwestern university in the United States were recruited for the study.

Procedure.

Participants were asked to imagine that they were playing in a game show; "Imagine you are playing in a game show and so far you have claimed \$1200 in prizes. You have just played the fourth round and lost. Now the game show host presents you with two options." Half of the participants were then exposed to promotion framed information emphasizing potential gains, "If you pick Alternative A, you will keep \$400 worth of the prizes. If you pick Alternative B, there is a 2/3 probability that you will not win any of the \$1200 worth of prizes and a 1/3 probability that you will win all \$1200 worth of prizes."

The remaining half was exposed to prevention framed information emphasizing potential losses, "If you pick Alternative A, you will have to give up \$800 worth of prizes. If you pick Alternative B, there is a 2/3 probability that you will lose all \$1200 worth of prizes, and a 1/3 probability that you will not lose any of the \$1200 worth of prizes." All participants were then asked to rate on 7 point scales the extent to which the scenarios described were important (1 = *very unimportant*, 7 = *very important*) and critical (1 = *not at all* to 7 = *very*) intended to assess sensitivity towards potential gains versus potential losses. They also were asked to rate how bad-good and unfavorable-favorable the scenarios were on 7 point scales (1 = *very bad, unfavorable*, 7 = *very good, favorable*). In addition, they completed a series of ancillary measures that included demographic information and the Singelis (1994) scale

Results and Discussionⁱ

The data were analyzed based on a 2 Frame X 2 Self-construal between-subjects ANOVA. A median split was performed on the Independence-Interdependence scale (Singelis, 1994) such that half of the participants were coded as having a dominant independent self (i.e., high independent/low interdependent self-construal; $M = 5.43$). The remaining half was coded as having a dominant interdependent self (i.e., low independent/high interdependent self-construal; $M = 4.63$; $F(1, 88) = 113.93$, $p < .001$)ⁱⁱ.

The key hypothesis concerned differential perceptions of the importance of the situation as a function of both its frame and the self-construal of the perceiver. Importance and critical items were averaged to create an Importance Index ($r = .80$) that was then analyzed with a 2 Frame X 2 Self-construal ANOVA. Neither main effect was significant; the critical interaction emerged as predicted, $F(1, 86) = 9.73$, $p < .005$. Subsequent contrasts showed that individuals with a dominant independent self perceived promotion framed scenarios ($M = 4.63$) to be more important than prevention framed scenarios ($M = 3.80$), $F(1, 86) = 3.98$, $p < .05$. In contrast, those with a dominant interdependent self perceived prevention focused scenarios ($M = 4.46$) to be more important than promotion focused scenarios ($M = 3.45$), $F(1, 86) = 5.90$, $p < .05$.

To ensure that the importance differences were not driven by variations in perceived favorability (whereby the promotion versus prevention framed scenarios may be perceived differently in terms of valence by the individuals with the distinct self views), we then examined the favorability ratings (where good and favorable items were averaged to create a Favorability Index; $r = .72$). A 2 X 2 ANOVA revealed only a main effect for frame: The scenario presented in the promotion frame was seen as more favorable than that presented the prevention frame ($M_s = 4.58$ vs. 3.74), $F(1, 86) = 11.43$; $p < .001$. These results indicate that independent and interdependent self-views are accompanied

by differences in regulatory focus that shift the perceived weight or importance given to potential gains or losses as a function of these self-views, rather than the potential likelihood or favorability of the outcome. This pattern is consistent with the predictions of the role of regulatory focus in expectancy X value models of decision making (Higgins, 1997). That is, regulatory focus is thought to shift the importance or value of an outcome, without necessarily altering the perceived expectancy, or likelihood of success.

The results of Study 1 appeared promising; as predicted, individuals who differed on the Singelis (1994) self-construal scale also differed in their importance perceptions of promotion versus prevention framed scenarios. In Study 2, we wished to replicate this effect by examining the independent and interdependent self not as an individual difference, but as a malleable construct within the individual in which independence or interdependence is made more accessible by a situational manipulation. If self-construal is indeed driving the differences found in Study 1, a significant interaction between promotion or prevention frame and situationally activated self-construal should occur. Further, we created a new context in which to manipulate promotion and prevention focus, and included measures of self-focused and other-focused thoughts to determine whether a shift in regulatory focus from promotion to prevention is associated with an increase in concern for others.

STUDY 2

Overview and Design

To replicate and extend the results of Study 1, we again examined self-construal as a moderator of regulatory focus, but here self-construal was manipulated. Research conducted by Trafimow et al. (1991), for example, showed a strikingly similar pattern of results when a priming task was used to operationalize self-construal as when country status was used (see also Aaker & Williams, 1998; Gardner & Gabriel, 1999; Gardner, Gabriel, & Lee, 1999; Hong, Morris, Chiu, & Benet-Martínez, 1999 for related manipulations). We therefore manipulated self-construal by presenting participants either with an event that involved an individual working toward an individual goal or one that involved an individual working toward a group goal. In addition, each of these events was presented in a promotion focused or prevention focused frame. Thus, a 2 Frame (promotion vs. prevention) X 2 Event type (individual vs. team) between-subjects design was used.

Method

Participants.

Seventy-two undergraduate students (mean age = 19.45, 47% female) were recruited from a large California university to participate in a study that they were told

concerned an advertising campaign for a new tennis racquet. *Procedure.*

Participants were asked to imagine a specific scenario and answer a set of follow-up questions. Half of the participants were exposed to the individual event, "Someone is playing in a tennis tournament and has made it to the finals. If they win this last match, they will win the championship title as well as a huge trophy." The other half were exposed to the interdependent team event, "Someone's team is playing in a tennis tournament and has made it to the finals. They are representing their team in the finals. If they win this last match, their team will win the championship title as well as a huge trophy."

Promotion or prevention focus was again manipulated by language that emphasized potential gains versus losses, i.e. using the word "win" or "lose". For example, participants in the individual event/prevention focused condition read, "Someone is playing in a tennis tournament and has made it to the finals. If they lose this last match, they will lose the championship title as well as a huge trophy," while participants in the team event/prevention focused condition read, "Someone's team is playing in a tennis tournament and has made it to the finals. They are representing their team in the finals. If they lose this last match, their team will lose the championship title as well as a huge trophy." Participants were then asked to describe the situation from the perspective of the person involved. As in Study 1, participants rated the importance (2 item scale, $r = .85$) and favorability (2 item scale, $r = .95$) of the scenario on 7 point scales. They also completed measures of focus of attention: Participants were asked to indicate, using 7 point scales, the extent to which the scenario made one think of oneself ("please describe the extent to which the situation makes that person think about himself or herself" and "please describe the extent to which someone might think about himself or herself when faced with the situation"; Self Thought Index; $r = .78$), and the extent to which the situation made one think of others ("please describe the extent to which the situation makes the person think about his or her teammates" and "please describe the extent to which the person might think about his or her teammates when faced with the situation"; Others Thought Index, $r = .89$). Demographic information and ratings on the Singelis (1994) scale were also collected

Results and Discussion

The results of a 2 Frame (promotion vs. prevention) X 2 Event type (individual vs. team) ANOVA on the importance variable yielded neither a main effect of event type nor frame, $F_s < 1$. However, as predicted, the Event type X Frame interaction was significant $F(1, 68) = 4.89, p < .05$. Subsequent contrasts showed that participants in the individual event rated the promotion focus scenario ($M = 6.62$) to be more important than the prevention focused scenario ($M = 5.97$), $F(1, 68) = 3.88, p < .05$. Furthermore,

the prevention focused scenario became more important in the team event ($M = 6.69$) relative to the individual event ($M = 5.90$), $F(1, 86) = 4.88$, $p < .05$. However, this increase in importance of the prevention framed scenario did not surpass the importance weighting of promotion framed scenario in the team event condition: Participants rated the prevention framed scenario ($M = 6.69$) just as important as the promotion framed scenario ($M = 6.31$), $F(1, 68) = 1.32$, $p > .20$. See Figure 1.

We next examined favorability ratings. As in Study 1, frame had a significant effect upon perceptions of favorability: The promotion ($M = 6.00$) versus prevention ($M = 4.21$) scenario was seen as more favorable, $F(1, 68) = 40.03$, $p < .001$. In addition, a main effect for event type emerged revealing that the individual event ($M = 5.53$) was seen as more favorable than the team event ($M = 4.65$), $F(1, 68) = 10.44$, $p < .01$. However, the interaction was not significant, $F(1, 68) = 1.03$, $p > .30$. Thus, similar to Study 1, the shift in regulatory focus was seen without a corresponding shift in favorability ratings.

To provide insight into the extent to which these differences in regulatory focus may be associated with shifts in the amount of attention paid to one's own or others' standards, a 2 Frame (promotion vs. prevention) X 2 Event type (individual vs. team) X 2 Thought type (self vs. other) ANOVA, with Thought type as a repeated measure, was performed on the attention data. The ANOVA revealed a main effect for thought type. The person described in the scenario was more likely to be thinking about the self ($M = 6.14$) than about others ($M = 5.60$), $F(1, 68) = 7.93$, $p < .01$, an effect that was qualified by the anticipated interaction with event type, $F(1, 68) = 9.20$, $p < .005$. Participants indicated that while the person described would think about the self to the same extent in both the individual ($M = 6.07$) and team ($M = 6.21$) events, $F < 1$, the person would think about others more in the team event ($M = 6.11$) than in the individual event ($M = 5.08$), $F(1, 68) = 15.65$, $p < .001$. See Figure 2.

These findings provide evidence that the interdependent event manipulation was successful in shifting attention towards others. The fact that attention to the self is high in both independent and interdependent conditions is not particularly surprising. Indeed, Aaker and Williams (1998) found that when American individuals were encouraged to self-reference (e.g., using persuasion appeals that focused on the word "you"), the number of self-focused thoughts was greater than other-focused thoughts. However, when American individuals were encouraged to other reference (e.g., using appeals with the words, "family" or "friends"), the number of other-focused thoughts rose to equal self-focused thoughts. Relatedly, Gardner, Pennington, and Bessenoff (1999) showed that when an interdependent self was primed, others' standards increased in importance to the level of one's own standards. One's own standards, on the

other hand, remained equally important regardless of self-construal. Similarly, rather than encouraging participants to focus on others (e.g., their teammates) to the neglect of the self, the interdependent event in the current study appears to encourage the participant to construe the self in the context of others; concerns for whom thus gain in importance to rival, but not overpower, concerns for the self.

Findings from Study 2 provide convergent evidence that the relative independence or interdependence of the self may influence regulatory focus. Those individuals who were considering an independent event judged the scenario that emphasized potential gains as more important. In contrast, prevention focused scenarios were judged to be more important in an interdependent team event; the instantiation of an interdependent goal thus appeared to make loss avoidance more critical. Finally, the evidence that the interdependent event also increased attention to others' thoughts and concerns implies that these differences may be due, in part, to differential regulation to one's own or others' standards.

The similarity of the pattern of results in Studies 1 and 2 provides support for the notion that self-construal drives the regulatory focus effects, regardless of whether the construal is chronically or situationally accessible. However, while the sensitivity towards a promotion focus is influenced by a temporarily accessible interdependent self, the prevention framed scenario was not perceived to be more important than the promotion framed scenario. Thus, to further examine self-construal, as well as explore the interplay between chronic and situational self-construal differences, we ran a set of studies that compared participants whose chronically accessible self-construal differed due to cultural socialization. We examined importance ratings to promotion and prevention framed individual and team events by members of both North American and East Asian cultures. We expected that promotion framed scenarios would be perceived to be more important than prevention framed scenarios by participants in the North American culture presented with an independent situation, and the reverse pattern would be observed amongst participants in an East Asian culture faced with an interdependent situation.

STUDY 3

Overview and Design

The objective of Study 3 was to further test the robustness of the results by examining the importance perceptions of individuals whose chronically accessible self may be independent or interdependent. In addition, we examine the malleability of the self within the two cultures by presenting our participants with a situation that is either consistent or inconsistent with the chronically accessible self. Therefore, a 2 Culture (North American vs. East Asian) X 2 Frame (promotion vs. prevention) X 2 Event type (individual vs. team) between-subjects design was used. Frame and

event type were manipulated as in Study 2, while culture was operationalized quasi-experimentally through country status. The United States and China were selected because, while they vary on the individualism-collectivism dimension associated with self-construal differences, participants who possess high levels of English comprehension skills could be identified in both countries, thereby minimizing potential problems arising from stimuli translation. To enhance the similarity of the participant profile, participants were recruited from undergraduate programs in major universities in the United States and Hong Kong (cf. Aaker & Maheswaran, 1997).

Method

Participants.

Ninety-eight undergraduate students from a large California university (mean age = 19.8, 41% female) and one hundred and seventeen University of Hong Kong undergraduate students (mean age = 19.3, 56% female) participated in this study.ⁱⁱⁱ

Procedure.

A similar cover story and procedure as in Study 2 was used with one minor change in the stimuli. We increased the personal relevance of the scenario by asking participants to imagine themselves in the situation. Specifically, participants were asked to imagine that they were playing in a tennis tournament and had made it to the finals. For instance, those in an individual event condition read, "You are playing in a tennis tournament...". Participants then answered the importance and favorability questions, the self or other focused thought measures, and demographic information.

Results and Discussion

The results of a 2 Culture X 2 Frame X 2 Event type ANOVA on the Importance Index ($r = .92$) yielded insignificant main effects for culture, $F = 1.55, p > .20$, and frame, $F < 1$. However, the event type main effect was significant, $F(1, 207) = 22.14, p < .001$; the team event ($M = 5.84$) was considered to be more important than the individual event ($M = 4.94$). More importantly, the Event type X Frame interaction was significant, $F = 10.72, p < .001$, replicating the results in Study 2. As displayed in Figure 3, a promotion focused scenario ($M = 5.19$) was rated as more important than a prevention focused scenario ($M = 4.68$), $F(1, 207) = 3.48, p = .05$, for an individual event. For a team event, in contrast, a prevention focused scenario ($M = 6.15$) was considered to be more important than a promotion focused scenario ($M = 5.47$), $F(1, 207) = 6.81, p < .01$.

Finally, a marginal Culture X Event type X Frame interaction was observed, $F(1, 207) = 3.13, p = .07$. An examination of the interaction of event type and frame within each culture revealed the following: Among those

American participants where their chronic and situational self-construal were consistent (i.e., American participants in an individual event), the scenario that was promotion focused ($M = 5.52$) was indeed deemed more important than one that was prevention focused ($M = 4.50$), $F(1, 94) = 4.39, p < .05$. However, when the American participants were exposed to a team event, the prevention focused scenario became marginally more important ($M = 6.45$) than the promotion focused event ($M = 5.55$), $F(1, 94) = 3.21, p = .07$. Replicating our results in Study 2, the relative importance that participants placed on potential losses versus gains shifted when these participants were faced with an interdependent event. Among the Chinese participants in the construal consistent condition (i.e., Chinese participants in a team event), the scenario that was prevention focused ($M = 5.93$) was considered to be more important than one that was promotion focused ($M = 5.40$), $F(1, 113) = 4.51, p < .05$. However, the importance of the prevention focused scenario shifted when these participants were faced with an individual event ($M = 4.85$), $F(1, 113) = 8.19, p < .005$. To Chinese participants in an independent situation, whether the scenario was portrayed with a promotion ($M = 4.89$) or prevention frame ($M = 4.85$) did not make a difference, $F < 1$.

In sum, the data suggest that the effect of the self that is rooted in cultural norms and values on importance weighting may be moderated by situations that make the secondary dimension of the self more accessible. In the case of Chinese participants, the situational activation of the self-construal opposite to that promoted in the culture had the power to eliminate the effect; and in the case of American participants, it reversed the effect.

Next, we ran a 2 Culture X 2 Frame X 2 Event type between-subjects ANOVA on the Favorability Index ($r = .93$). Replicating the findings in Studies 1 and 2, a main effect of frame was found; the promotion focused ($M = 5.25$) versus prevention focused ($M = 4.31$) scenario was seen as more favorable, $F(1, 207) = 29.93, p < .001$. The only other significant effect was a main effect of culture. Americans considered both scenarios to be more favorable ($M = 5.12$) than did their Chinese counterparts ($M = 4.57$), $F(1, 207) = 9.81, p < .005$, an effect that is consistent with research findings showing a pervasive optimistic bias in Western cultures that is attenuated in East Asian cultures (Heine & Lehman, 1995).

The results of Study 2 implied that the shift in the importance of promotion or prevention focused information was associated with shifts in the amount of attention the individual was paying to own or others' standards. To examine whether this effect was replicated across cultures, a 2 Culture X 2 Frame X 2 Event type X 2 Thought type ANOVA, with thought type as a repeated measure, was performed. Similar to the findings of Study 2, a significant main effect of thought type was found; there were more self than other thoughts ($M = 5.00$ vs. 4.70), $F(1, 207) = 6.02, p < .05$. Once again, this main effect was qualified by the interaction with event type, $F = 18.36, p < .001$. Although

self focused thoughts did not differ between the individual ($M = 4.94$) and team event ($M = 5.01$), $F < 1$, participants thought more about others in the team event ($M = 5.20$) than in the individual event condition ($M = 4.13$), $F(1, 207) = 37.18$, $p < .001$. This two-way interaction mirrors the results found in Study 2, suggesting that the independent event manipulation indeed enhances the extent to which attention is paid to the self relative to others. In contrast, the interdependent event manipulation enhances the extent to which the focus of attention includes others.

In addition, the Culture X Thought type interaction was marginally significant, $F(1, 207) = 2.82$, $p = .09$. American participants had more thoughts about the self ($M = 5.17$) than they had thoughts about others ($M = 4.63$), $F(1, 94) = 6.53$, $p = .01$. However, Chinese participants thought about others ($M = 4.75$) to the same extent as they thought about the self ($M = 4.82$), $F < 1$, a pattern that nicely mirrors the event type results.

Finally, the Thought type X Event type X Culture interaction was also significant, $F(1, 207) = 6.03$, $p < .05$. Subsequent analyses showed a significant effect of culture on thoughts about the individual. American participants had more self thoughts ($M = 5.17$) than Chinese participants ($M = 4.82$), $F(1, 207) = 3.20$, $p < .05$, an effect that was robust across both individual and team event conditions, $F < 1$. However, Chinese participants had more thoughts about others ($M = 4.47$) than American participants ($M = 3.78$) only in the individual event condition, $F(1, 207) = 6.64$, $p < .01$. In the team event condition, American participants had more thoughts about others ($M = 5.51$) than their Chinese counterparts ($M = 4.97$), $F(1, 207) = 4.40$, $p < .05$.

These data describing the extent to which the individual is likely to think of the self relative to others suggest that both the culture and event type influence accessible self-construals. In a context that involves only the individual, American participants think about the self more than they would think about others. By contrast, Chinese participants who presumably think about the others in a more chronically embedded fashion, report thinking about others to the same extent as they would about the self in this context. However, in situations in which others are involved, American participants' thoughts about others increase. It is interesting to note that this was not the case with the Chinese participants. It appears that for those with an eastern cultural background, the thoughts of others are activated in tandem with those about the self. This interpretation is consistent with the premise that the self in eastern cultures is fundamentally intertwined with others (e.g., Aaker & Maheswaran, 1997), and thus information and thoughts about others may become activated as a function of self-activation (e.g., Gardner, Gabriel, & Lee, 1999).

Taken in combination, the results suggest that promotion versus prevention focus is indeed influenced by

self-construal that may be chronically accessible or situationally activated. Potential gains were seen as more important in comparison to potential losses for individuals with an independent view of the self, while the converse was true for those with an interdependent view. While these effects were strongest when the chronic self was consistent with the situational self, it is important to note that a shift in the effects occurred when the culturally inconsistent self was made temporarily accessible. These results provide convergent evidence that the relative importance of promotion versus prevention framed information hinges in part on how the self is construed.

So far, we have assumed that the asymmetric importance ratings are a function of different motivations, where independent and interdependent self-construals vary in their foci for achievement: the need to achieve success (for independents) or the need to avoid failure (for interdependents).^{iv} However, more direct support for this explanation would be obtained if independents find the scenario of success foregone (i.e., "not winning") to be more important than a scenario of failure avoidance (i.e., "not losing"), while interdependents find a failure avoidance situation to be more important than one that describes foregone success. By placing the outcomes in terms of negation (i.e. a potential gain lost vs. a potential loss averted) in contrast to the prior studies, the match between self-construal and regulatory focus may be tested more directly. Additionally, as negated information tends to be milder and more indirect than non-negated information (Yeh, 1996), the difference in perceived favorability between the negated negative (e.g., "not lose") versus negated positive information (e.g., "not win") should be muted. Therefore, greater confidence that the results are not associated with shifts in perceived favorability may be gained.

STUDY 4

Overview and Design

The objective of Study 4 was to examine whether an explicit threat of not winning versus a lure of avoiding failure may have a different impact on the independent self versus the interdependent self. If indeed a shift in regulatory focus occurs as a function of self-construal, a threat of not winning should be considered more important than avoiding failure for those with an independent self. Conversely, the notion of not losing should have greater impact than a threat of not winning for those with an interdependent self. These differences should be separate from any differences in the perceived favorability of the information. Using negation thus allows the differential importance effects (hypothesized to result from self-construal consistent regulatory focus) and favorability effects (hypothesized to simply have resulted from a frame that made a loss more salient) to be further untangled. Thus, a 2 Culture (North American vs. East Asian) X 2 Frame (foregone success vs. failure avoidance) X

2 Event type (individual vs. team) between-subjects design was used.

Method

Participants.

A total of 65 undergraduate students from a large California university (mean age = 23.5, 57.8% female) and 83 University of Hong Kong undergraduate students (mean age = 19.9, 60.3% female) participated.

Procedure.

A similar procedure as in Study 3 was used, with one change in the stimuli where the valenced information was negated. For example, instead of reading "...if you win (lose) this last match, you will win (lose) the championship title...", participants in this experiment read "...if you don't win (lose) this last match, you won't win (lose) the championship title...". Thus, the foregone success conditions were comprised of the negation of the positive information ("If you don't win"), while the failure avoidance conditions were comprised of the negation of the negative information ("If you don't lose"). The same set of changes was made for the team event conditions. After the importance and favorability ratings, participants completed thought type measures, demographic information, and the Singelis (1994) scale.

Results and Discussion

To test the hypotheses, a 2 X 2 X 2 between-subjects ANOVA on the Importance Index ($r = .85$) was run. First, a main effect of culture emerged: American participants rated the scenarios as more important ($M = 5.85$) than Chinese participants ($M = 4.93$), $F(1,140) = 24.33$, $p < .001$. Consistent with Study 3, the effect of event type was replicated, with the interdependent event ($M = 5.56$) being considered to be more important than the independent event ($M = 5.12$), $F(1,140) = 3.95$, $p < .05$. Moreover, a significant Culture X Event type interaction, $F(1,140) = 9.91$, $p < .005$, revealed that Chinese participants rated the interdependent event ($M = 5.45$) as more important than the independent event ($M = 4.45$), $F(1, 140) = 17.74$, $p < .001$, an effect that did not occur for the American participants, $F < 1$. Central to our hypotheses, the Event Type X Frame interaction was significant, $F(1,140) = 9.92$, $p < .005$. Participants in the independent event rated the success foregone scenario ($M = 5.40$) as more important than the failure avoidance scenario ($M = 4.79$), $F(1, 140) = 6.27$, $p < .01$. In contrast, participants in the interdependent event rated the failure avoidance scenario ($M = 5.78$) as more important than the success foregone scenario ($M = 5.27$), $F(1, 140) = 3.86$, $p < .05$. A similar pattern occurred with the Culture X Frame interaction, $F(1,140) = 3.92$, $p < .05$. The American participants rated the success foregone scenario as marginally more important ($M = 6.08$) than the failure avoidance scenario ($M = 5.61$), $F(1, 140) = 3.07$, $p = .08$, while the Chinese

participants rated the failure avoidance scenario as more important than the success foregone scenario ($M_s = 5.11$ vs. 4.73), although this difference was only directional, $F(1, 140) = 2.60$, $p = .11$.

Importantly, we expected the differences in perceived favorability to diminish due to presenting the information in negated terms. Indeed, the results of a 2 X 2 X 2 ANOVA yielded no significant effects, suggesting that favorability ratings did not differ in the foregone success relative to the failure avoidance conditions, $F < 1$. Thus, the shifts in the perceived importance of the scenarios were reflective of the moderating role of self-construal upon regulatory focus that is independent of any change in favorability ratings.^v

In sum, the data from Study 4 strongly support the notion that the influence of self-construal on the importance weighting of regulatory framed information stems from the desire to achieve success in the independent self and the desire to avoid failure in the interdependent self. That is, the lure of failure avoidance looms larger than foregone success for interdependent individuals, while the threat of foregoing success looms larger than avoiding failure for independent individuals. These results are consistent with findings reported by Kitayama and Karasawa (1995) showing that subjective well-being and physical health of Japanese individuals are directly related to the extent to which they view themselves as *not* having negative qualities, an effect that does not appear to occur for American individuals (Taylor & Brown, 1988).

The moderation of importance ratings of prevention and promotion framed events appears to be driven by the relative weighting of one's own versus others' standards and is shown to be robust across various operationalizations of self-construal. Whether self-construal is operationalized as a personality variable (Study 1), situational variable (Study 2) or cultural variable (Studies 3 and 4), the effects on importance ratings remain the same. However, regulatory focus may be revealed in ways other than the direct measurement of what types of information participants judge to be important. Indeed, some of the most convincing research examining the distinction between promotion and prevention focus has concerned the affective responses each engenders, showing a strong relationship between regulatory focus and the types and intensities of the emotions experienced in gain and loss situations (e.g., Higgins, Shah & Friedman, 1997). Specifically, because prevention focus is intimately tied to the ability or failure to meet obligations or responsibilities, it leads to greater shifts along the agitation dimension (i.e. relaxed, anxious). In contrast, because promotion focus is associated with the ability or failure to attain goals or ideals, it tends to lead to greater shifts along the dejection dimension (i.e. cheerful, unhappy). For example, Strauman and Higgins (1988) showed a significant relationship between chronic promotion focus and the intensity of dejection related responding, as well as one between chronic prevention focus and the intensity of agitation related responding.

The clear distinction between the type of affect facilitated by a promotion or prevention focus thus provides an additional test of our hypothesis. If interdependence, as we believe, causes an increase in prevention focused self-regulation, then either chronic or situational interdependence should lead to the increased experience of agitation related emotions in comparison to dejection related emotions. In addition, by examining affective responses, we may further test the motivational mechanism presumed to underlie the shift towards prevention focus for those with a dominant interdependent self-construal. That is, if the heightened awareness of prevention is associated with the need to avoid failure, one reason why this effect may be larger for interdependents than independents is a potentially greater disutility for negative outcomes. In other words, a negative outcome involving others may indeed be more disconcerting or threatening, relative to situations where only the individual is involved (e.g., Singelis & Sharkey, 1995). Because those with a more interdependent self-construal are concerned with the impact their behavior has upon others to a greater degree than those with a more independent self-construal (Markus & Kitayama, 1991), interdependents may be driven to avoid a potential loss because of the accompanied levels of increased anxiety. In this light Study 5 was conducted not only to extend the results of Studies 1-4 into the realm of affective responses, but also to garner additional support for the motivational mechanism underlying the pattern of importance results found in each of the previous studies.

STUDY 5

Overview and Design

In Study 5, we further explored the hypothesis that self-construal moderates regulatory focus by examining the affective responses to gains achieved and losses avoided. If interdependence encourages a prevention focus, more anxiety related emotions should be observed in comparison to dejection related emotions. Moreover, these affective responses should be found for both chronic (e.g. country status) and situational (e.g., event type) determinants of interdependence. To this end, we examined individuals who differed in their chronic and situational self-construals, as in Study 3. In addition, we included outcome information and then measured affective responses, described below. Thus, Study 5 was a 2 Culture (North American vs. East Asian) X 2 Frame (promotion vs. prevention) X 2 Event type (individual vs. team) X 2 Outcome (gain vs. loss) between-subjects design, and used Affect type (dejection vs. anxiety) and Affect valence (positive vs. negative) as within-subjects variables.

Method

Participants.

Two hundred and fifteen participants from a large California university (mean age = 21.3, 40% female) and 312 participants from the University of Hong Kong (mean age = 19.5, 41% female) participated.

Procedure.

The cover story and procedures were similar to those used in Study 3 with two important additions: participants were told the outcome of the tennis match and then were asked to fill out an affect scale. Specifically, participants first imagined themselves in scenarios framed in terms of promotion or prevention and individual or team events. On the following page, half of the participants were told that they won the match, and the other half that they lost the match. Next, participants were told to complete a modified PANAS (Watson, Lee, & Tellegen, 1988), an affect scale containing 26 mood items that they were asked to endorse upon 7 point scales (with the endpoints reading 1 = *definitely do not feel this way*, to 7 = *definitely feel this way*).^{vi} Participants then filled out the demographic items.

Results and Discussion

A factor analysis of the affective ratings was performed using principal axis factors and a varimax rotation. Four factors that appeared to represent the positive and negative emotions related to the agitation and dejection dimensions were extracted, accounting for 58.8% of the variance. Items loading on each of the four factors were then combined into four affect indices. The two agitation related indices were labeled Anxiety (worried, uptight, tense, nervous, fearful; $\alpha = .82$) and Relaxation (relaxed, peaceful, calm, comfortable; $\alpha = .76$), while the two dejection related indices were labeled Dejection (disappointed, shameful, guilty; $\alpha = .86$) and Happiness (happy, cheerful, honored, proud; $\alpha = .93$).^{vii} The four affect indices were then entered into a 2 Culture X 2 Frame X 2 Outcome X 2 Affect Type X 2 Affect Valence ANOVA, with affect type and affect valence entered as repeated measures.

We predicted that the affect measures would reveal a bias towards prevention focused as compared to promotion focused affect for interdependent individuals and events. Indeed, the hypothesized Affect type X Culture interaction was significant, $F(1,511) = 52.29, p < .001$. Follow up paired t -tests revealed that American participants expressed more of the happiness/dejection emotions that are associated with promotion focus (M happiness and dejection indices = 3.72) than the relaxation/agitation emotions that are associated with prevention focus (M relaxation and agitation indices = 3.44), $t(214) = 4.50, p < .001$. In contrast, Chinese participants showed the reverse bias in affective experience (M happiness/dejection = 3.73 vs. M relaxation/agitation = 3.99), $t(311) = -5.26, p < .001$ (see Figure 4). This was further qualified by an Affect type X Affect valence X Culture interaction, $F(1,511) = 4.52, p < .05$, revealing that the greater propensity to express promotion versus prevention related emotions by the Americans was carried by

the positive emotions (i.e. difference between M happiness = 4.31 and M relaxation = 3.50), $t(214) = 5.30$, $p < .001$, with the negative emotions not differing significantly. For Chinese participants, however, the propensity to express greater prevention than promotion related emotions was carried by the negative emotions (M dejection = 3.24 vs. M anxiety = 3.76), $t(311) = 5.96$, $p < .001$, with the positive emotions not differing significantly. This latter interaction is consistent with the assertion that independent individuals focus upon positive information that assists in self-enhancement, whereas interdependent individuals focus more upon negative information that assists in self-improvement (Heine & Lehman, 1995; 1999).

Similarly, an Affect type X Event type interaction, $F(1,511) = 4.45$, $p < .05$, showed that the difference between team and individual events was in the magnitude of the endorsement of the prevention focused emotions (relaxation and anxiety) rather than in the promotion focused emotions (happiness and dejection). This was further qualified by the Affect type X Event type X Affect valence interaction, $F(1,511) = 4.23$, $p < .05$, which showed that this difference was driven by the negative prevention focused emotions -- participants in the team event scoring higher on the anxiety scale ($M = 3.79$) than those in the individual event ($M = 3.42$), $t(525) = 3.02$, $p < .001$.

The prior analyses concerning the affective states relating to promotion versus prevention focus were central to our hypothesis. Other significant effects were present as well. An Affect valence main effect, $F(1,511) = 66.71$, $p < .001$, was qualified by an Outcome X Affect valence interaction, $F(1,511) = 656.50$, $p < .001$, as well as by an Event type X Affect valence interaction, $F(1,511) = 13.41$, $p < .001$. The Affect valence X Outcome interaction revealed that, not surprisingly, greater positive emotions were expressed after gains, and greater negativity after losses. The Event type X Affect valence interaction revealed that greater positive emotions were experienced in the individual compared to the team event, and greater negative emotions were experienced in the team compared to the individual event. Finally, a significant Affect valence X Event type X Outcome interaction, $F(1,511) = 20.26$, $p < .001$, revealed that this pattern of greater negativity after team events was more apparent in the loss than in the gain conditions.

Taken in combination, the current results add strong support to the hypothesis that the relative independence or interdependence of the self shifts regulatory focus. Our American participants showed a bias toward promotion focused emotions (particularly happiness) that was mirrored in the bias that Chinese participants showed toward prevention focused emotions (particularly anxiety). Similarly, team events increased prevention focused responding, and this was particularly true for the negative prevention focused emotions. The evidence that a loss in a

team event evoked greater negativity in general as well as more anxiety in particular was consistent with the motivation explanation suggesting that losses involving others are simply more painful. In concert with the findings that our chronic interdependent individuals responded with greater prevention focused negativity regardless of event, this pattern adds to the assertion put forth by many cultural researchers that, in cultures which foster interdependence, any activity may be construed to affect others (Markus, Kitayama & Heiman, 1996). This perception by interdependents that their actions affect others may help explain why failure avoidance, and thus prevention focus, becomes so important.

GENERAL DISCUSSION

We have argued that regulatory focus differs as a function of self-construal patterns that encourage different perspectives on goal pursuit. We hypothesized that individuals with a dominant independent self would be attuned towards promotion focus, seeing potential gains as important and responding to events with relatively greater happiness or dejection, whereas individuals with a dominant interdependent self would be attuned towards prevention focus, seeing potential losses as more important and responding to events with relatively greater relaxation or anxiety. The relationship between self-construal and regulatory focus received robust support across five studies and various operationalizations of self-construal

In Studies 1 and 2, we found that those with a dominant independent self (chronically accessible or situationally activated) perceived promotion focused information as more important than prevention focused information, the opposite held for those with a dominant interdependent self. Data in Studies 3, 4, and 5 replicated and extended these effects by further examining the interaction of the chronically accessible self (relying on individuals in the United States and China) with the temporarily accessible self (induced through the situational variable). The results suggest that when the chronically accessible self is consistent with the situation (e.g., Americans in an independent situation or Chinese in an interdependent situation), the pattern in which promotion focused information carries more weight among independents while prevention focused information carries more weight among interdependents is clear. However, in situations where the chronically inaccessible self is made temporarily accessible, the data suggest that the effect of the chronically accessible self on importance weighting is moderated (in the case of Chinese faced with an independent event) or even reversed (in the case of Americans faced with an interdependent event). These results are consistent with the argument that the extent to which the independent or interdependent self is more dominant varies not only across different people within a particular culture, but varies within an individual depending on which view of the self is made more accessible. Finally, the results of Study 5 provide

further support for the overall framework by showing that differences in regulatory focus due to self-construal were reflected in affective experience in addition to importance ratings. Interdependence of the self resulted in greater prevention focused emotional responses, particularly along the anxiety dimension, and this was apparent both for cultural and event based differences.

The finding that the self influences regulatory focus fits well with a number of recent studies documenting East/West differences in the bases of self-esteem (e.g., Diener & Diener, 1993; Kitayama et al, 1997). For example, research by Kitayama and colleagues (1997) demonstrated that American individuals chose a greater number of success versus failure situations as relevant to their self-esteem; they also judged that their self-esteem would increase more in success situations than it would decrease in failure situations, while the opposite pattern occurred for Japanese individuals. The results of the current research suggest that these differences may be derived from differences in regulatory focus more generally. For example, the finding that Americans believe that success is most impactful upon self-esteem may reflect a general promotion focus of the independent self, while the finding that Japanese individuals believe that failure is more impactful upon self-esteem may reflect the greater prevention focus of the interdependent self.

This interpretation is also consistent with recent findings showing that American and Japanese individuals have different tendencies to define situations as either self-enhancing or self-improving. For example, situational attributions found in the American cultural context tend to be more conducive to self-enhancement while the situational attributions composing the Japanese cultural context are more conducive to self-criticism (Kitayama et al. 1997). As Heine and Lehman (1997; 1999) point out, the tendency towards self-criticism in interdependent cultures is probably due to their greater motivation to avoid failure in the future – a clearly prevention focused motivation.

In addition to helping explain cultural differences in self-enhancement and self-improvement tendencies, the perspective that regulatory focus is moderated by one's self view may also illuminate cultural differences in positivity biases. For example, some of the cultural differences seen in the positivity and negativity of self-descriptors may be reinterpreted within a regulatory focus perspective. Research by Holmberg et al. (1997) demonstrated that up to five times as many positive attributes exist in the self-concepts of American individuals relative to negative ones, an effect that is not found in East Asian cultural contexts. Indeed, Kitayama et al (1997) document a reversed effect amongst Japanese individuals who seemed to focus more on negative versus positive self information. Such reversals of a positivity bias may also be seen in light of self-construal differences in regulatory focus. Because interdependents are

motivated to avoid failure, they may ruminate more on their negative features in an attempt to eradicate them (Heine & Lehman, 1999). This may be particularly true to the extent that possession of a negative trait disrupts social functioning. Some support for this interpretation can be seen in Yeh's (1996) analysis of Japanese self-statements. Yeh (1996) found that even when positive statements about the self are made, they tend to focus on the absence of negative traits (e.g., "I'm not lazy"), rather than the presence of positive traits (e.g., "I am intelligent"). North Americans, in contrast, describe themselves in terms of their positive traits, rather than the absence of negative traits (Holmberg et. al, 1997). From our perspective, it is possible to interpret these findings as further reflections of differences in regulatory focus, where those with a chronically accessible interdependent self are sensitive to the presence or absence of negative features (prevention focus) whereas those with a chronically accessible independent self are sensitive to the presence or absence of positive features (promotion focus).

Likewise, robust cultural differences in optimism/pessimism may also be seen within the broader frame of regulatory focus differences. Heine and Lehman (1995), for example, showed that the belief that positive events are more likely to happen to oneself (relative to one's peers) was significantly reduced for Japanese individuals relative to Canadian individuals. Similarly, Chang (1996) found that across multiple measures, Chinese individuals were more pessimistic than were their American peers. Higgins (1997) proposed that distinct patterns of regulatory focus might be associated with types of optimism and pessimism. Specifically, defensive pessimism has often been associated with anxiety, as well as a vigilance against negative outcomes in the environment, suggesting that this type of pessimism may be driven by a prevention focus. The current findings, illustrating a bias towards prevention focus when the interdependent self is activated, may help to further illuminate the cultural findings that members of Eastern cultures appear to be considerably more pessimistic than members of Western cultures -- so much so that Chang (1996) referred to pessimistic thinking as an integral component of Asian thinking.

Thus, the results of the current studies may offer a parsimonious framework for viewing the pervasive differences in positivity biases, self-enhancement, and pessimism that have been found in comparisons between Asian and North American cultures. However, the relationship between self-construal and regulatory focus proposed here should be only cautiously applied to other cultural comparisons. Triandis and his colleagues (Triandis, 1995; Triandis & Gelfand 1998) propose that cultures differ not only in their levels of individualism and collectivism, but in the extent to which they are vertical (emphasizing hierarchy) and horizontal (emphasizing openness). It is possible that construal induced shifts in regulatory focus may be limited to cultures that are vertical in structure. For example, Triandis and Gelfand (1998) noted that self-serving

biases may be more prevalent in vertical individualist cultures such as the United States because of the importance of distinguishing the self through competition with others. Horizontal individualist cultures such as Norway that stress self-reliance without emphasizing competition may not show these biases to the same extent. Likewise, vertical collectivist cultures such as many Asian nations may be more likely to show prevention focus and self-improvement tendencies because of the emphasis upon living up to the responsibilities that come with social ties. In contrast, these biases may not occur in horizontal collectivist cultures such as Latin America where social ties are stressed without an extreme emphasis upon duty and authority. Indeed, consistent with this hypothesis, comparisons of Asian and Latin American collectivist cultures have shown higher positivity and well-being in the Latin American cultures (Diener & Diener, 1995; Oishi, Diener, Lucas, & Suh, 1999). More research is thus needed to investigate whether the findings presented here may be equally applied to horizontal and vertical differences in individualism and collectivism, as well as how these findings may generalize across other measures of interest (e.g., behavior, response times, interpersonal judgments).

The results of the current studies also provide insight into the self-regulation strategies of individuals within North American culture alone. Past research concerning regulatory focus had consistently shown that the same goal might be viewed through either the lens of promotion or prevention depending upon the dispositions of the individual and/or the framing of the goal. The current research, emphasizing the important role of situational self-construal, offers additional predictive power. When American individuals are placed in situations that make the consequences of their behavior upon others salient (e.g., team events), they shift from a promotion to a prevention focus. Losses to be avoided become more important than gains that might be achieved, and agitation related emotions come to the fore. Thus, the current research not only adds to the knowledge base concerning what types of individuals may be promotion or prevention focused (e.g., members of North American vs. East Asian cultures, American individuals with independent vs. interdependent selves) but also reveals what types of situations may encourage one or the other style of self-regulation. When one's behavior impacts the outcomes of others, it appears that losses loom larger than gains.

Concluding Remarks

Taken together, the five studies presented here indicate that self-construal may be an important moderator of regulatory focus; shifts in a promotion focus and prevention focus appear to occur between those with an independent versus interdependent self view. Moreover, they add to a growing body of work that builds on cross-cultural research, where culture is conceptualized as

a relatively abstract, context-general variable based on which comparisons of attitudes, perceptions or behaviors between people from two or more countries are made (see, for example, Segall, Dasen, Berry, & Poortinga, 1990). Indeed, while support for cross-cultural differences in importance weighting was found in Studies 3-5, this finding is complemented by a set of results showing that cultural tendencies can be replicated within the individual. That is, the cultural-level constructs which appear to guide the effects found in this research can be activated through situational variables (e.g., Study 2-4), as by referencing tasks (e.g., Aaker and Williams 1998) or cognitive priming tasks (e.g., Hong, Morris, Chiu, & Benet-Martínez, 1999). Through this convergence, not only can the causal role of self-construal be demonstrated, but the potential to understand implicit cultural theories may also be enhanced

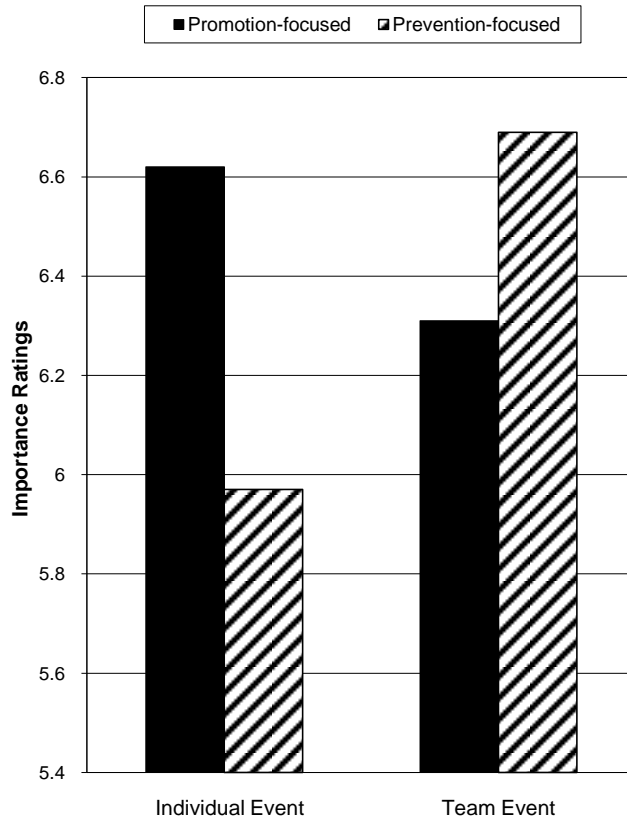
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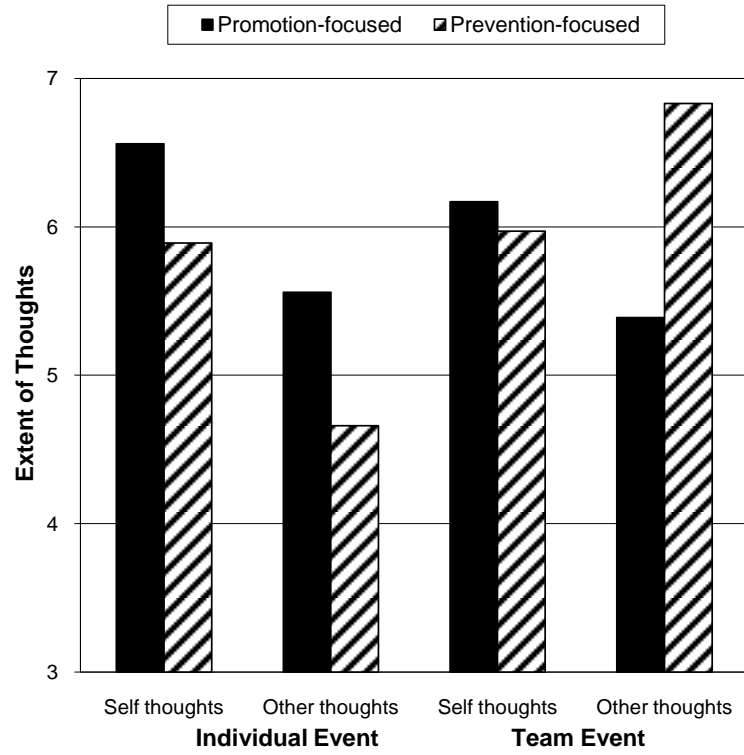
**STUDY 2:
IMPORTANCE RATINGS AS A FUNCTION OF REGULATORY FRAME AND EVENT**

Figure 1



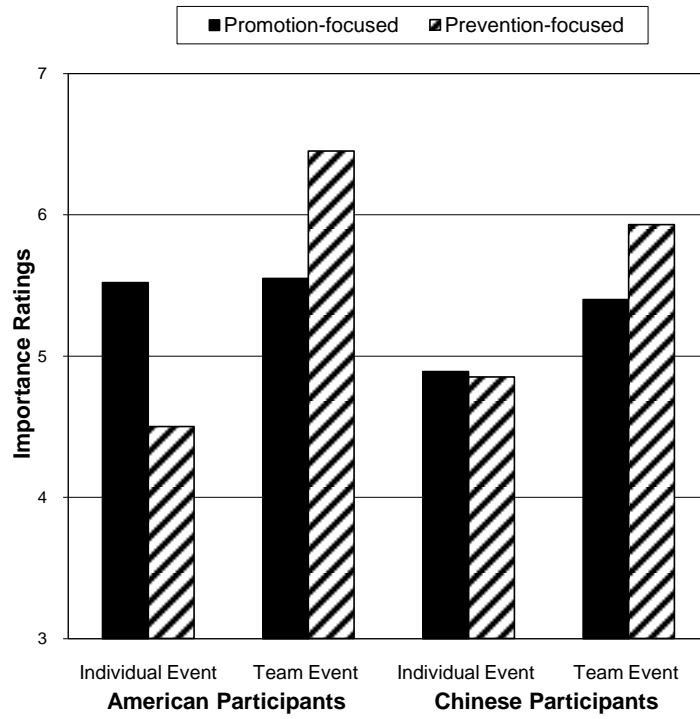
**STUDY 2:
ATTENTION FOCUSED ON THE SELF AND OTHERS
AS A FUNCTION OF REGULATORY FRAME AND EVENT**

Figure 2



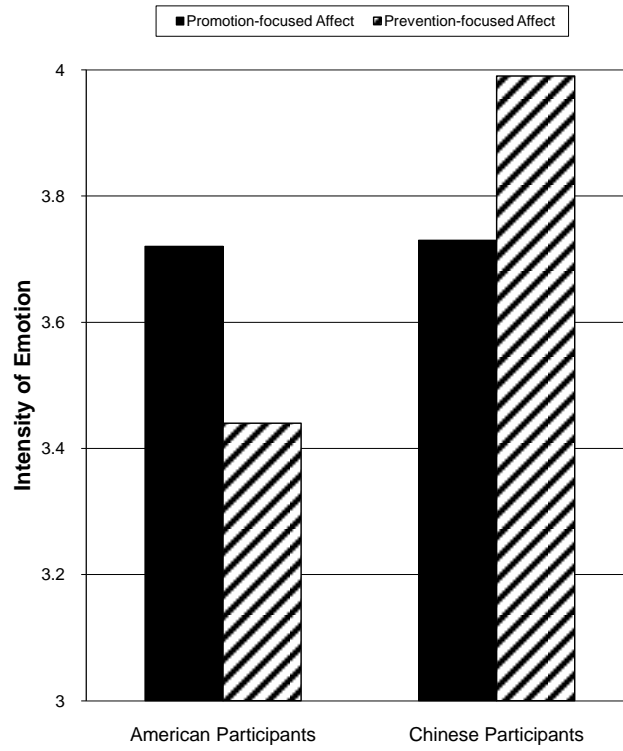
**STUDY 3:
IMPORTANCE RATINGS AS A FUNCTION OF REGULATORY FRAME AND EVENT ACROSS TWO CULTURES**

Figure 3



**STUDY 5:
INTENSITY OF EMOTIONS
AS A FUNCTION OF REGULATORY FRAME ACROSS TWO CULTURES**

Figure 4



ENDNOTES

1. Sex was also entered as a variable in all analyses. There is some evidence that women may be more interdependent than men (e.g., Cross & Madson, 1997). However, recent work has shown that men and women are more often equally interdependent but express it through different domains. Specifically, women have been found to focus more often upon relational aspects of interdependence whereas men have been found to focus more often on collective aspects of interdependence (Gabriel & Gardner, 1999). Most measures of interdependence do not distinguish between these aspects. Consistent with this, the effect of Sex was not significant on the Singelis (1994) independence-interdependence scale, $F < 1$. Because small groups such as the teams that we used in our scenarios may be judged as opportunities to express either common bonds or larger collective identities (Prentice, Miller & Lightdale, 1994), we would not expect large or consistent sex differences. Indeed, while our data in three of the five studies showed importance ratings consistent with the notion that males are more independent and females are more interdependent, we did not observe any sex effects in Study 4, and observed a reversal (e.g., males more interdependent than females) in Study 1. In all cases the sex effects were small in size and only reach significance in Study 3.

ii The median split of the independence-interdependence scale did not result in gender differences between the two groups, $\chi^2(1) = .18, p > .60$. However, the two groups differed in the average age of the participants ($M_s = 20.8$ vs. 20.4), $F(1,88) = 4.19, p < .05$. This difference is due to two participants aged 23 and 27 in the high independence group and one participant aged 19 in the low independence group. When these three outliers are excluded from the analysis, the two groups are no longer different in terms of age ($M_s 20.5$ vs. 20.6), $F(1,85) = 1.92, p > .10$, and all results remained unchanged.

3. In Studies 3-5, we rely on students in Hong Kong who tend to be enculturated into Anglo-American forms of sociality (Hong, Morris, Chiu & Benet-Martinez, 1999). Therefore, the chance of finding predicted differences may be minimized. To ensure that there was enough variance on the self-construal dimensions and to feel more confident that potential confounding variables associated with country status were not driving the results, the scores of the Chinese versus American individuals on the Singelis 31-item scale was assessed in Studies 3 and 4. The results of a series of ANOVAs consistently yielded a significant main effect of culture ($p_s < .01$), where American participants were more independent and less interdependent (average $M = 5.24$) than their East Asian counterparts (average $M = 4.46$), consistent with past findings (e.g., Aaker *in press*).

4. There is at least one other potential explanation for a shift towards prevention focus in interdependent contexts: a decreased confidence of a successful outcome when one is involved in a group context, relative to a context where one is alone. That is, the presumed probability of a negative outcome (e.g., failure) may be higher in an interdependent context relative to an independent context. To examine this possibility, participants in Study 2 were asked to indicate what the outcome of the last match was likely to be ($1 = \text{most likely will lose}$ to $7 = \text{most likely will win}$), a question that followed the focus of attention measures. A $2 \times 2 \times 2$ ANOVA showed that the only significant effect was a main effect of frame, where the likelihood of winning was higher in the promotion frame ($M = 5.51$) relative to the prevention frame ($M = 4.76$), $F(1, 68) = 6.68, p < .05$. The absence of any other significant effect suggests that it is not a matter of potential failure being more imminent, arguing against this interpretation.

5. As in Studies 2 and 3, a $2 \times 2 \times 2 \times 2$ repeated measures ANOVA examining the effects of culture, event type, and frame on the two types of thoughts was conducted. For brevity's sake, they are not reported in full. Importantly, however, the results replicated those found in Study 3 exactly: Thought type, $F(1,140) = 6.24, p < .05$; Culture X Thought type, $F(1,140) = 3.63, p < .05$, and Event type X Thought type, $F(1,140) = 6.88, p < .01$; Thought type X Event type X Culture interaction, $F(1,140) = 4.33, p < .05$. Only one new effect was marginally significant: Thought type X Event type X Frame interaction, $F(1,140) = 2.74, p = .10$.

6. Since the PANAS tends to be weighted more towards the prevention focused emotions (relaxation-agitation), we added six promotion focused emotions (happiness-dejection) to the PANAS (happy, honored, guilty, shameful, disappointed, and proud).

7. A total of 10 items (uneasy, distressed, lively, bothered, pleasant, jittery, contented, active, alert, and energetic) did not load clearly onto any of the factors (i.e. loaded on more than one factor and/or had factor loadings below .4 on any single factor) and thus were not included in the indices.