

# Cultural differences in emotion regulation during self-reflection on negative personal experiences

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Reflecting on negative personal experiences has implications for mood that may vary as a function of specific domains (e.g., achievement vs. interpersonal) and cultural orientation (e.g., interdependence vs. independence). This study investigated cultural differences in the social-cognitive and affective processes undertaken as Easterners and Westerners reflected on negative interpersonal and performance experiences. One hundred Asian Americans and 92 European-American college students were randomly assigned to one of three conditions: interpersonal rejection, achievement failure, or a control condition. Results revealed that Asian Americans experienced greater distress than European Americans after self-reflecting over a failed interpersonal experience, suggesting cultural sensitivity in the relational domain. Consistent with theoretical predictions, analysis of the social cognitive and affective processes that participants engaged in during self-reflection provided some evidence that self-enhancement may buffer distress for European Americans, while emotion suppression may be adaptive for Asian Americans.

*Keywords:* Negative self-reflection; Culture; Mood.

Reflecting on negative experiences can help individuals make sense of their emotions and actions during times of distress in order to achieve understanding of problems and the self (Pennebaker & Graybeal, 2001). On the other hand, reflecting on negative emotional experiences can lead to rumination and vulnerability to depression (Nolen-Hoeksema, Morrow, & Fredrickson, 1993). Despite a growing literature on processes that distinguish adaptive from maladaptive self-reflection (e.g., Kross & Ayduk, 2011), cultural variation in the effects of self-

reflection is not well understood. Cultural psychology has posited fundamental differences between Easterners and Westerners in the construction of the self (see Markus & Kitayama, 2010, for a review). East-Asian cultures foster a view of the self as interdependent and defined by relationships, where behaviour is dictated by context, so that the self is malleable rather than fixed. On the other hand, North Americans tend to view the self as an independent entity defined by internal fixed attributes that remain consistent across contexts (Markus & Kitayama,

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1991). Under the entity view, self-enhancement to maintain positive self-regard becomes a priority (Heine & Hamamura, 2007). In contrast, a self-criticism is consistent with a self-improving orientation held by individuals who believe that the self can change with effort and circumstance.

These cultural differences raise the question of whether contemplating one's negative personal experiences has the same or different implications for mood among Easterners and Westerners. Motivated by recent findings that it is possible for people to reflect on negative experiences either adaptively or maladaptively (e.g., Grossmann & Kross, 2010; Kross, Ayduk, & Mischel, 2005), we examined the effects of negative self-reflection on mood among Asian-American and European-American young adults, and their spontaneous engagement in social-cognitive and affective processes during self-reflection.

### Cultural variation in the mood sequelae of reflecting on negative personal experiences

Heine (2005) asserts that the East-Asian view of the self as malleable and improvable encourages individuals to orient attention toward failure experiences. For example, Easterners require more evidence to believe in positive appraisal feedback, while Westerners require more proof to accept negative feedback as credible (Heine, Takata, & Lehman, 2000). Although some aspects of self-enhancement appear evenly distributed across cultures (e.g., viewing the self as better than average), a meta-analysis revealed that 88 of 91 studies found that Westerners are more likely than East Asians to self-enhance, with mostly large effect sizes (Heine & Hamamura, 2007). In contrast, East Asians report engaging in self-criticism more frequently than European Americans (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). Thus, it may be more normative for East Asians to reflect on negative self-relevant experiences. Asian Americans score higher on measures of trait rumination than European Americans, yet rumination is not as strongly predictive of dysphoria among Asian

Americans (Chang, Tsai, & Sanna, 2010). Likewise, Russians, another interdependent cultural group, report brooding more frequently but to less detriment than European Americans (Grossmann & Kross, 2010).

In contrast, research suggests a modal Western tendency toward self-enhancement in reaction to failure events that can serve to preserve positive self-regard. These processes can include engaging in downward social comparisons, making situational (not dispositional) attributions for negative personal outcomes, and other strategies that preclude negative self-evaluation (Sedikides, Gaertner, & Toguchi, 2003). For example, Westerners view the task as less important when they are told they have failed than when they are told they performed well. Conversely, Japanese value tasks more when they are told they failed than when told they succeeded (Heine et al., 2001). Likewise, Easterners tend to persist on tasks they fail, whereas Westerners tend to persist on tasks where they show mastery (Heine, 2005). Thus, one might posit that interdependent individuals may experience less distress when focused on discrete failure experiences in *achievement* domains. Attention to poor performance may be constructive and consistent with mastery goals with few emotional costs (Heine & Hamamura, 2007).

However, the mood effects of reflecting on negative experiences may be domain specific, with Easterners' resilience operative in performance failures that activate incremental theories of ability (Dweck, 1999). It is unclear whether we could expect this pattern of cultural differences in the mood sequelae of reflecting on negative interpersonal experiences (e.g., rejection or conflict). Interdependent self-construal may be a vulnerability factor that elevates distress associated with *interpersonal* stress (Okazaki, 1997). Interdependent values may attune individuals to goals of fitting in and maintaining relationships (Lau, Fung, Wang, & Kang, 2008). Thus, reflecting on negative interpersonal experiences may arouse more negative affect among East Asians with an interdependent self-view compared to Westerners oriented toward independence. The present study

examined domain-specific differences in the mood effects of negative self-reflection across cultural groups.

### **The role of social-cognitive and affective processes in predicting mood outcomes**

Beyond cultural differences in mood effects of negative self-reflection, there may be cultural variation in the social-cognitive and affective processes undertaken as Easterners and Westerners reflect on negative interpersonal and performance experiences. In the present study, we examined four processes that may take place during self-reflection: insight-finding, self-enhancement, self-distancing, and emotionality. Based on the theory and extant literature, we posited cultural variability in the outcomes of three of the four processes.

First, insight-finding involves making sense of distressing situations to achieve greater understanding, clarity, and closure. Insight finding is thought of as an adaptive outcome of processing emotionally valenced material and is harnessed in expressive writing interventions that tend to improve psychological and health outcomes following adversity (Frattaroli, 2006). Gaining understanding of a distressing event may reduce its negative impact by promoting habituation, prompting efforts to manage demands associated with the event, or increasing a sense of mastery. Insight-finding and accompanying gains in self-efficacy are expected to have uniformly beneficial effects on mood irrespective of culture (Lu & Stanton, 2010).

Second, individuals may engage in self-enhancement when reflecting on negative experiences to preserve self-regard. The work of Heine et al. suggests that European Americans may be more likely to self-enhance than Asian Americans, as this may be a culturally normative process in mitigating adversity for European Americans but not among East Asians. When European Americans experience failure or rejection it may be an important juncture to instate efforts to maintain a view of themselves as competent and worthy (Heine, 2003). Given that self-enhancement is

well-practised among European Americans, it may also be relatively emotionally adaptive as compared to Asian Americans. Yet, it is also possible that such effects may be domain specific. Sedikides and Gregg (2008) have argued that Easterners may be motivated to engage in self-enhancement in the face of negative interpersonal encounters, since such threats to “face” have higher stakes in interdependent contexts.

Third, during self-reflection individuals may vary in the extent to which they re-experience the emotions and feelings initially aroused by the negative experience. In independent contexts, expression of emotional states is valued as a productive assertion of the self, whereas the suppression of emotions is often associated with negative affectivity and physiological arousal. Yet, suppression of potentially disruptive ego-focused emotions such as anger, sadness, and pride is considered crucial to the maintenance of harmony in interdependent contexts (Markus & Kitayama, 1991). Asian Americans demonstrate proficiency in the down-regulation of affective states compared to European Americans (Murata, Moser, & Kitayama, 2012). Whereas emotion suppression is associated with well-being and prosociality among Asian Americans, emotional expressivity and reactivity tends to be a reliable predictor of positive outcomes for Westerners (Butler, Lee, & Gross, 2007; Gross & John, 2003). As such, we anticipated that emotionality during negative self-reflection would have positive implications for post-reflection affect among European Americans but negative effects for Asian Americans. Fourth, reflecting on a negative experience from a distanced perspective as a dispassionate observer appears to reduce emotional distress (Ayduk & Kross, 2010). Consistent with interdependence, adopting an other-perspective when thinking about interactions permits sensitivity to cues about the social context which should govern behaviour. This perspective is well practised among East Asians (Cohen, Hoshino-Browne, & Leung, 2007) compared to more independent European Americans, who have a tendency to self-immense. Interdependent Russians have been noted to reflect on negative interpersonal experiences with

less detriment than European Americans because of their tendency to self-reflect in a self-distanced manner (Grossmann & Kross, 2010). We posited that self-distancing during negative self-reflection would have greater emotional benefits for Asian Americans compared to European Americans.

### Overview of current research

The purpose of the present study was twofold: (1) to examine cultural differences in domain-specific reflection on negative experiences (interpersonal vs. achievement); and (2) to examine cultural differences in the effects of spontaneous social-cognitive and affective processes undertaken during self-reflection. We hypothesised domain-specific patterns of cultural differences in post-reflection distress. First, we posited that reflecting on performance failures would be culturally syntonic with a self-improving orientation and thus would result in lower post-reflection distress for Asian Americans compared to European Americans. In contrast, Asian Americans may not be spared the emotional distress of reflecting on negative interpersonal events considering the centrality of relational harmony values among interdependent cultural groups. Second, we hypothesised cultural variability in the effects of self-enhancement, emotionality, and self-distancing on post-reflection distress. For each process, we posited that the cultural group for whom the social cognitive process is normative, well-practised and consonant with internalised values, would receive greater protection against distress.

## METHOD

### Participants

Participants were 100 (25% male) Asian-American and 92 (17% male) European-American undergraduate students who participated in exchange for psychology course credit. Ages ranged from 18 to 51 years ( $M=20.82$ ,  $SD=4.31$ ). Criteria for participation in the study included: (1) spoken and written proficiency in English; and (2) self-

identification as Caucasian/European American or Asian/Asian American. Among the Asian Americans, 50 were US-born and 50 were foreign-born, 63 self-identified as Chinese, 7 as Japanese, 17 as Korean, and 13 as Vietnamese. Observations of common heritage cultural roots in Confucian traditions that shape expectations about social and interpersonal relations (i.e., Slote & DeVos, 1998) informed our decision to aggregate East Asian and Southeast Asians (i.e., Vietnamese). Individuals of South Asian, Pacific Islander, and foreign-born European Americans were excluded in the present analysis.

Self-reported independent and interdependent self-construals (i.e., measured with the Self-Construal Scale; Singelis, 1994) and self-enhancement tendencies (i.e., measured with the False Uniqueness Scale used in Norasakkunkit & Kalick, 2002) were measured to validate our decision to aggregate East Asians with Southeast Asians and US- and foreign-born Asian Americans. As expected, US-born Asians and foreign-born Asians did not differ in levels of independence, interdependence, or self-enhancement. Asian Americans were more interdependent,  $t(193)=2.60$ ,  $p<.05$ , less independent,  $t(193)=-1.97$ ,  $p=.05$ , and less self-enhancing,  $t(193)=4.32$ ,  $p<.01$ , than European Americans.

### Procedure

The study was approved by the institutional review board, and all participants provided written informed consent prior to enrolment. All participants were recruited from the Psychology Subject pool of a large West Coast public university. After providing informed consent, participants were randomly assigned to one of three conditions (stratified by ethnicity): interpersonal rejection (IR), achievement failure (AF), and the control group. Experimenters were unaware of the participant's assigned condition. Participants were given a brief demographics questionnaire and the state affect measure immediately before the self-reflection task. Participants were told to focus on the instructions provided to them on a sheet of paper. At that point, the experimenter

left the participant alone in the room to self-reflect privately for eight minutes. At the end of the eight minutes, the experimenter re-entered the room and immediately administered the state affect measure and the post-reflection questionnaire.

### Experimental conditions

Participants assigned to the IR condition were instructed to think of a recent time when they felt rejected by someone who meant a lot to them. They were asked to think about how this person may have treated them as though they did not value them. Participants assigned to the AF condition were instructed to think of a recent time when they felt they failed at something that meant a lot to them. This event should have been unexpected and could have happened in school, at work, or in another important pursuit. Participants assigned to the control condition were instructed to think of a recent time when they had walked through a building. They were instructed to think about all the details of this location and to visualise what they saw and heard. The intention of this condition was to distract the participants from self-related thoughts, and to focus their attention on neutral stimuli.

### Manipulation check

In the post-reflection questionnaire, participants were instructed to write down a description of the negative event they reflected on during the manipulation. Two independent raters blind to the subjects' experimental condition assigned a content code (interpersonal vs. achievement) to each participant's written content. Inter-rater reliability of the coder's manipulation check was acceptable with 91.1% agreement and a kappa of .79. Moreover, participant's description of the negative event they reflected on was also coded for the type of interpersonal rejection (e.g., romantic conflict, break-up, family conflict, friendship conflict) and achievement failures (e.g., poor course grade, poor test result, unsatisfactory performance). Chi-square analysis suggested no

group differences in the types of events recalled,  $\chi^2(10) = 7.448, p = .68$ . The coding revealed that 20 participants in the IR condition, four participants in the AF condition, and two participants in the control condition had been reflecting on content outside their assigned condition. There were no group differences in compliance to instructions. Data from participants who did not comply with instructions were excluded from the primary regression analyses presented. It can also be noted, however, that the pattern of findings was consistent when these subjects were retained in the analyses.

### Measures

*State affect.* State affect was assessed prior to the self-reflection task and again immediately after the self-reflection task using a questionnaire developed for response-style studies (Morrow & Nolen-Hoeksema, 1990; Wisco & Nolen-Hoeksema, 2009). It contains several distractor items (e.g., "wild", "dreamy"), positive mood items (e.g., "happy", "content"), and negative mood items (e.g., "sad", "angry"). Participants were asked to rate each mood item on how much that item characterised them at that moment on a 9-point Likert scale. These scales were used instead of more face valid measures of depressed mood and worry, which may have alerted participants to the study hypotheses. This questionnaire has also been found to be reliable in repeated administration in the same experiment, and negative affect ratings are highly associated with the negative subscale of the Positive and Negative Affect Scale (PANAS-X, Watson, Clark, & Tellegen, 1988; Morrow & Nolen-Hoeksema, 1990).

Two composite state affect ratings (i.e., baseline state affect & post-reflection distress) were created by summing the three mood ratings of interest, "happy-not happy", "not sad-sad", and "not depressed-depressed". Correlational analyses show that these three items are highly correlated ( $r_s = .66$  to  $.83$ ), while other items such as "not angry-angry" are only moderately correlated ( $r_s = .44$  to  $.61$ ). This 3-item composite has

been used extensively in studies of rumination (e.g., Lyubomirsky & Nolen-Hoeksema, 1993, 1995; Rusting & Nolen-Hoeksema, 1998; Wisco & Nolen-Hoeksema, 2009). The baseline mood rating prior to the self-reflection task was used as a covariate in all analyses (baseline affect:  $\alpha = .82$  for Asian Americans;  $\alpha = .83$  for European Americans; post-reflection distress:  $\alpha = .89$  for Asian Americans;  $\alpha = .87$  for European Americans).

*Social-cognitive and affective processes.* A measure was adapted based on scales used in previous self-reflection studies to assess four processes a participant may have engaged in during self-reflection. Following the eight-minute self-reflection, participants were asked to rate the extent to which they engaged in 13 types of responses using a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Scales assessed self-enhancement, insight-finding, and emotionality. See Table 1 for the self-reflection process items and descriptive statistics from exploratory factor analysis.

An exploratory factor analysis with varimax rotation was conducted on the 12 items from the social-cognitive and affective processes measure. The magnitude of factor loading revealed three subscales. One factor contained six items related to insight-finding (eigenvalue = 3.85) and accounted for 32.16% of the variance. The second factor contained four items related to self-enhancement (eigenvalue = 2.30) and accounted for 19.14% of the variance. The third factor contained two items related to emotionality (eigenvalue = 1.66) and accounted for 13.84% of the variance. Factor loadings ranged from .61 to .92. Finally, insight-finding, self-enhancement, and emotionality were found to be reliable scales, with alphas of .85, .83, and .79 for Asian Americans, and .78, .74, and .71 for European Americans, respectively.

Self-distancing was measured with a single item developed by Ayduk and Kross (2010). Participants were asked, "To what extent did you feel like you were an immersed participant in the experience (i.e., saw the event replay

**Table 1.** Descriptive statistics of the self-reflection process items

Number	Self-reflection processes item	Factor	M (SD)	Loading
1	I re-experience the emotions I originally felt during the event when I think about it now	E	4.93 (1.53)	0.90
2	As I think about the event now, my emotions and physical reactions to the event are still pretty intense	E	4.47 (1.63)	0.92
3	As I thought about my experience during the study, I had a realisation that caused me to think differently about the experience	I	3.05 (1.66)	0.79
4	As I thought about my experience during the study, I had a realisation that made me experience a sense of closure	I	2.79 (1.52)	0.83
5	Thinking about my experience during the experiment led me to have a clearer and more coherent understanding of this experience	I	3.24 (1.68)	0.87
6	As I thought about my experience, I felt like I was mostly to blame for what happened [reverse coded]	S	3.80 (2.15)	0.73
7	Thinking about this event, I felt like I acted in the best way I could	S	4.11 (1.79)	0.87
8	As I thought about my experience during the study, I felt disappointed in the way I behaved [reverse coded]	S	3.54 (1.97)	0.75
9	Thinking about my experience today led me to learn something new about myself	I	3.05 (1.67)	0.71
10	As I thought about my experience during the study, I felt like I was seeing a different side of things for the first time	I	2.76 (1.57)	0.72
11	After giving this event some thought today, I came up with different ways I might approach this situation the next time	I	3.85 (1.90)	0.63
12	Thinking about this event, I felt like I managed myself as well as could be expected in the situation	S	4.38 (1.78)	0.79

Note: E = Emotionality; I = Insight-finding; S = Self-enhancement.

through your own eyes as if you were right there) versus a distanced observer of what happened (i.e., watched the event unfold as an observer) as you thought about and analysed your emotions about the experience you recalled?” The item was answered using a 7-point Likert scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

*Covariate.* Because memories of events that are perceived as being more resolved elicit lower emotionality and distress in general, we asked participants to indicate the extent to which the event was resolved on a 7-point Likert scale ranging from 1 (*Unresolved, active source of distress*) to 7 (*Resolved*).

## RESULTS

### Effects of negative self-reflection on post-reflection distress

Hierarchical regression analyses were conducted to examine the effects of ethnicity and condition on post-reflection distress (see Figure 1). The set of covariates, baseline affect, age, gender, and event resolution were entered in Step 1. In Step 2, ethnicity and condition (i.e., dummy-codes for IR and AF with the control condition as the referent group) were entered. In Step 3, two interactions (i.e., IR × ethnicity and AF × ethnicity) were entered. As shown in Table 2, there were main

effects for both IR ( $B = 5.08, p < .001$ ) and AF conditions ( $B = 5.04, p < .001$ ), suggesting that individuals in these conditions experienced greater post-reflection distress than individuals in the control group. In Step 3, there was a significant interaction of ethnicity × IR ( $B = 2.82, p < .05$ ), indicating that Asian Americans were more distressed in the IR condition than European Americans.

### Self-reflection processes

Table 3 presents the intercorrelations, means, and standard deviations for the three self-reflection processes by condition and ethnicity. There were no significant mean differences in engagement in these processes between the groups. Some group differences were noted in the intercorrelations between self-reflection processes in the IR condition. Insight-finding was negatively correlated with self-enhancement ( $r = -.43, p < .05$ ) but positively correlated with emotionality ( $r = .32, p < .05$ ) for Asian Americans but not for European Americans. Self-distancing was negatively correlated with emotionality in both conditions for European Americans but not for Asian Americans.

To examine whether there were cultural differences in the associations between self-reflection processes and post-reflection distress, we conducted a series of regression analyses separately for the IR and AF conditions. For each of

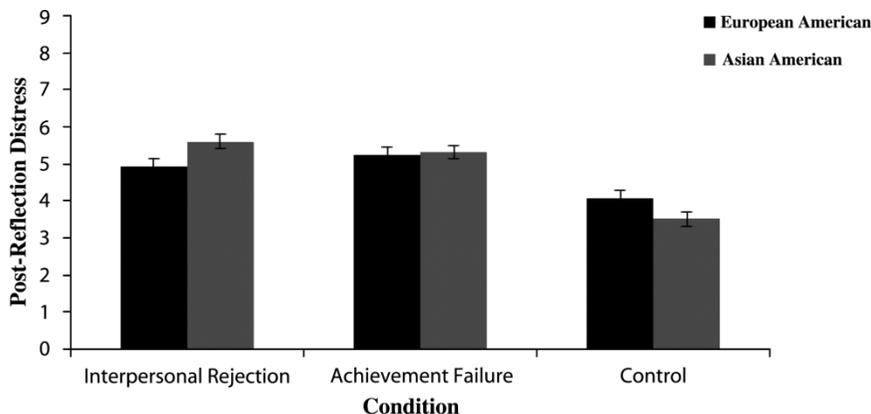


Figure 1. Interaction of Ethnicity × Condition on post-reflection distress controlling for age, gender, baseline mood and event resolution.

these regression equations, age, baseline state affect, and the event resolution were included as covariates. In the second step of the regression, ethnicity and self-reflection process variables were entered. In the final step, the interactions between ethnicity  $\times$  self-reflection process variables were entered.

In the IR condition (see Figure 2), regression analyses revealed no significant interactions of self-enhancement  $\times$  ethnicity, emotionality  $\times$  ethnicity, or self-distancing  $\times$  ethnicity in predicting post-reflection distress. However, there was a significant interaction of insight-finding  $\times$  ethnicity,  $F(1, 58) = 6.41$ ,  $p = .01$ ,  $\Delta R^2 = .06$ ,  $\eta_p^2 = .09$ , on post-reflection distress. Simple slopes plotted in Figure 2 revealed that insight-finding was positively associated with post-reflection distress for Asian Americans ( $B = 0.19$ ,  $p = .01$ ), but not for European Americans ( $B = -0.15$ ,  $p = .20$ ). Self-enhancement and self-distancing did not predict post-reflection distress for either group.

In the AF condition, regression analyses revealed a significant interaction of emotionality  $\times$  ethnicity,  $F(1, 60) = 4.14$ ,  $p = .047$ ,  $\Delta R^2 = .03$ ,  $\eta_p^2 = .06$ , self-distancing  $\times$  ethnicity,  $F(1, 59) = 7.04$ ,  $p = .01$ ,  $\Delta R^2 = .04$ ,  $\eta_p^2 = .10$ , and a marginally significant interaction of self-enhancement  $\times$  ethnicity,  $F(1, 48) = 2.83$ ,  $p = .09$ ,  $\Delta R^2 = .02$ ,  $\eta_p^2 = .05$ , but no significant interaction bet-

ween insight-finding  $\times$  ethnicity in predicting post-reflection distress. Simple slopes plotted in Figure 2 show that higher emotionality during reflection was marginally associated with less post-reflection distress for European Americans ( $B = -0.46$ ,  $p = .08$ ), but not for Asian Americans ( $B = 0.23$ ,  $p = .32$ ). Self-enhancement was associated with less post-reflection distress for European Americans ( $B = -0.42$ ,  $p = .04$ ), but not for Asian Americans ( $B = -0.01$ ,  $p = .96$ ). Adopting a self-distanced perspective was marginally associated with less distress for Asian Americans ( $B = -0.57$ ,  $p = .08$ ) but was significantly associated with greater distress for European Americans ( $B = 0.60$ ,  $p = .05$ ).

## DISCUSSION

Our findings revealed cultural differences in the effects and processes of self-reflection over negative experiences. Supporting a cultural sensitisation model, Asian Americans experienced a larger increase in distress compared to European Americans when reflecting on a negative interpersonal experience. Focusing on an occasion of social rejection may be even more threatening for cultural groups that prioritise the maintenance of harmonious relationships. Yet, our finding is inconsistent with Grossmann and Kross (2010),

**Table 2.** Hierarchical regression analyses of ethnicity and condition in predicting post-reflection distress

Outcome	<i>B</i>	<i>SD</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>df</i>	<i>F</i>
<i>Post-reflection distress</i>						
Step 1			.43	—	4, 131	25.73**
Pre-test distress	0.68	0.06				
Age	0.01	0.07				
Gender	0.60**	0.72				
Event resolution	0.94**	0.32				
Step 2			.55	.10**	3, 128	9.46**
Ethnicity	0.43	0.51				
Interpersonal rejection (IR)	5.08**	0.70				
<i>Achievement failure (AF)</i>	5.04**	0.69				
Step 3			.57	.03*	2, 126	3.99*
Ethnicity $\times$ IR	2.82*	1.31				
Ethnicity $\times$ AF	1.16	1.29				

Note: \* $p < .05$ ; \*\* $p < .01$ .

**Table 3.** Descriptive statistics of cognitive processes by ethnicity and condition

	Asian American (n = 35)		European American (n = 32)	
	M (SD)	M (SD)	t	p
<i>Interpersonal rejection condition</i>				
Insight-finding	3.32 (1.34)	2.90 (0.97)	1.53	.13
Self-enhancement	4.52 (1.09)	4.74 (0.78)	-0.56	.58
Emotionality	4.51 (1.63)	4.47 (1.44)	0.27	.79
Self-distancing	3.42 (1.77)	3.36 (1.78)	0.19	.85
<i>Correlations</i>	<i>IF</i>	<i>SE</i>	<i>E</i>	<i>SD</i>
<i>Insight-finding (IF)</i>	—	-.12	.11	-.01
<i>Self-enhancement (SE)</i>	-.43*	—	.27	-.21
<i>Emotionality (E)</i>	.32*	.10	—	-.48**
<i>Self-distancing (SD)</i>	-.09	.01	-.25	—
<i>Achievement failure condition</i>				
	Asian American (n = 35)		European American (n = 34)	
	M (SD)	M (SD)	t	p
Insight-finding	3.11 (1.31)	3.07 (1.33)	0.19	.85
Self-enhancement	3.62 (1.09)	3.54 (1.04)	0.40	.69
Emotionality	4.83 (1.32)	4.94 (1.19)	-0.42	.67
Self-distancing	3.41 (1.71)	3.88 (1.90)	-0.99	.33
<i>Correlations</i>	<i>IF</i>	<i>SE</i>	<i>E</i>	<i>SD</i>
<i>Insight-finding (IF)</i>	—	-.10	-.04	-.09
<i>Self-enhancement (SE)</i>	-.14	—	.11	-.10
<i>Emotionality (E)</i>	.13	-.08	—	-.60**
<i>Self-distancing (SD)</i>	-.21	.03	-.04	—

Note: \*p < .05; \*\*p < .01.

who showed that Russians experienced less distress than European Americans after reflecting on an anger-related interpersonal scenario. Rejection may be ultimately more upsetting for individuals oriented toward harmony and interdependence, whereas anger-fuelled conflicts may be more salient when individual goals are thwarted in independent contexts (Markus & Kitayama, 1991).

Our findings did not support our prediction that Asian Americans would experience less distress than European Americans when thinking about an achievement failure. The extant literature speaks to East–West differences in behavioural persistence following task performance failures in the lab (Heine et al., 2001). But these motivational processes may not mitigate the affective distress inherent in focusing on real-life setbacks in achievement. Indeed, Asian American students are noted to be focused on

academic achievement, making negative outcomes in this domain distressing, perhaps even owing to a self-improving orientation. In fact, we found that Asian Americans who experienced greater insight into their failed achievements tended to have greater post-reflection distress.

The implications of these differences in immediate distress associated with experimentally induced negative self reflection are not well understood. Focusing on negative self-relevant experiences reliably induces negative affect (Mor & Winquist, 2002). However, it is unclear how long- or short-lived the post-reflection distress lasts, and whether the intensity of this arousal has implications for subsequent emotion regulation and well-being. In fact, expressing one’s thoughts and feelings about life’s adversities through writing has long-term physical and psychological benefits (Frattaroli, 2006). In reality, immediate

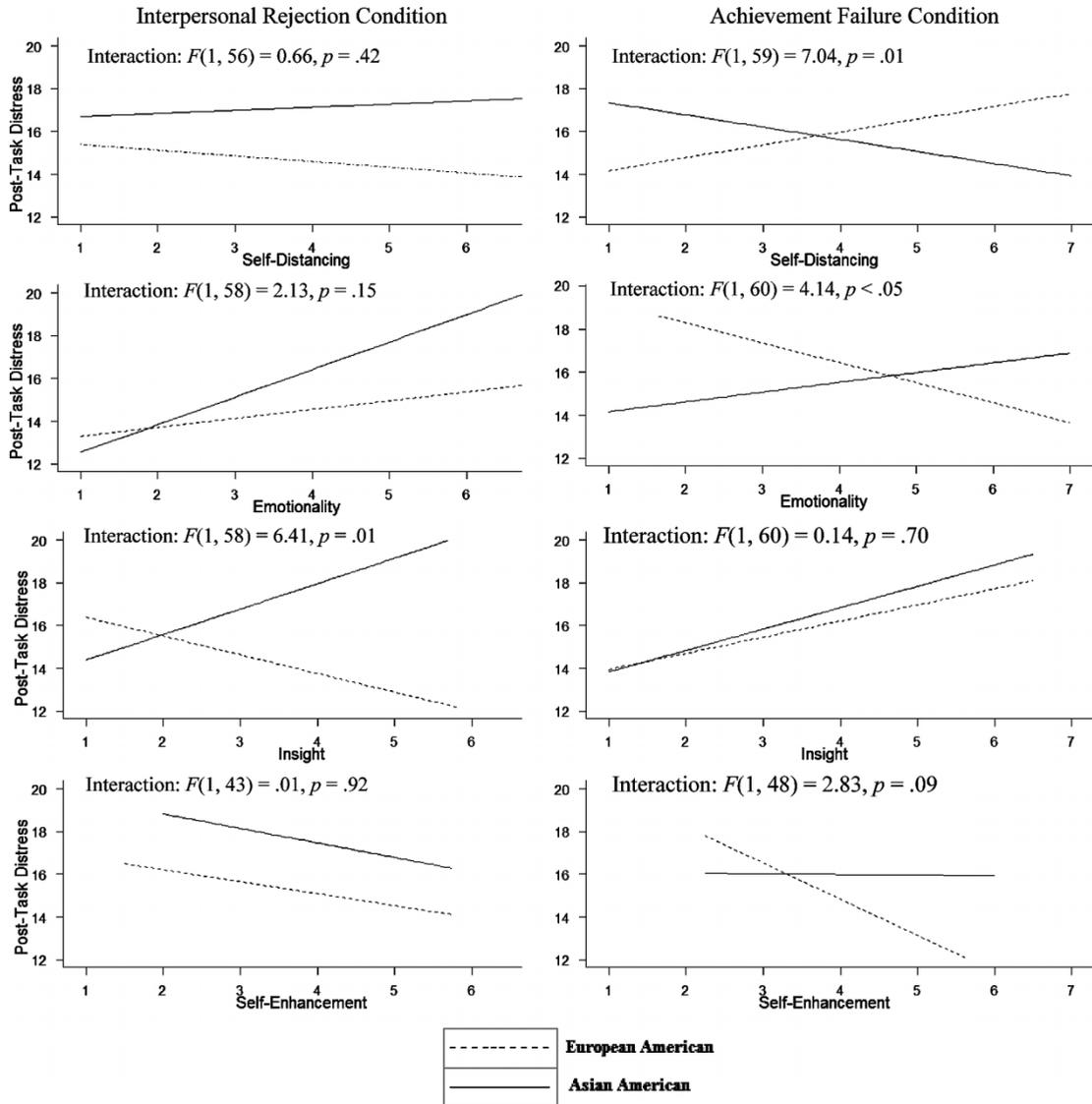


Figure 2. Interaction of Ethnicity  $\times$  Self-reflection Processes controlling for age, gender, baseline mood and event resolution.

emotionality may not be detrimental, but rather required for long-term gains (Smyth, 1998). Indeed, we found that Asian Americans who obtained greater insight into their negative interpersonal experiences were more likely to re-experience the emotions they originally felt. More research is needed to examine the longer term outcomes of cultural differences in these reflection processes.

Beyond examining cultural differences in experimental effects, we investigated social-cognitive and affective processes that may explain patterns of distress reactions across the cultural groups. When asked to reflect on a negative personal experience, Asian Americans were no less likely to engage in self-enhancement or emotional re-experiencing, and they were no more likely to engaged in self-distanced reflection

compared to European Americans. Our findings did not affirm the findings of Sedikides, Gaertner, and Vevea (2005) that East Asians self-enhance in interdependent domains. It may be possible that the self-enhancement/self-criticism process involved in self-reflection may differ from other types of self-enhancement (e.g., an observed effect of failure feedback). Yet, we did find some preliminary evidence that the associations between the self-reflection processes and post-reflection distress varied by group.

First, across both conditions, there was an unexpected interaction between ethnicity and insight-finding in predicting post-reflection distress. Insight-finding predicted greater distress for Asian Americans but not for European Americans. We had conceived of insight-finding as a process similar to cognitive reappraisal, which is thought to be adaptive in self-reflection, leading to problem-solving and reduced negative affect. However, Asian Americans who obtained greater insight into their negative interpersonal experience may have found new ways to lay the blame on themselves. Indeed, we found a negative association between insight-finding and self-enhancement for Asian Americans but not for European Americans. Asian Americans who were more self-critical found they gained more insight into their experience.

Consistent with our hypotheses, self-enhancement was associated with less distress for European Americans but not for Asian Americans. However, this finding was limited to the achievement condition. European Americans who spontaneously self-enhanced during negative self-reflection may have attributed their failed performance to situational factors or discounted their responsibility for the negative outcome, thus buffering against dysphoria. We did not see such a buffering effect for Asian Americans. Self-enhancement may serve a culturally syn-tonic emotion-regulation function for European Americans.

Also consistent with predictions, emotionality during self-reflection was associated with more post-reflection distress for Asian Americans but less for European Americans in the achievement

condition. The experience or expression of emotions may be cathartic and relieving for European Americans, whereas suppression or restraint of emotions may be adaptive for Asian Americans. This supports the claim that the adaptive significance of emotion suppression is culturally bound (Gross & John, 2003), and is consistent with previous findings showing that emotion suppression in laboratory affect-induction tasks is associated with lower arousal and mood effects for Asian Americans but not European Americans (Butler et al., 2007).

We extended Grossmann and Kross's (2010) work on buffering effect of self-distanced reflection on mood. When reflecting on an achievement failure, Asian Americans who spontaneously self-distanced reported less post-reflection distress, whereas European Americans reported less post-reflection distress when they self-immersed. Yet, the cultural moderation did not hold in the interpersonal condition. Cohen et al. (2007) showed that Asian Americans were more likely than European Americans to adopt an "outsider" perspective on the self in interpersonal situations because it promotes the maintenance of social harmony and protects against egocentrism. We may not have observed protective effects of self-distancing in our interpersonal condition because of the nature of the prompt used. Grossmann and Kross's study elicited thoughts about anger-related interpersonal experiences, whereas we asked participants to contemplate rejection, exclusion, or loss-related experiences. This prompt may have differed in the severity of distress elicited, and the type of strategy needed for adaptive emotion regulation. The recollection of rejection may prompt a hyper focus on the self, negating the potential adaptive qualities of taking a more dispassionate, "outsider" perspective. More research is needed on the boundary conditions under which culturally variable social cognitive processes operate to mitigate or enhance the effects of negative self-reflection.

Although the results reveal some compelling data on cultural variability in responses to reflection on negative personal experiences, this study has several limitations. First, the present

study was conducted with college students at a single university and may not generalise to the larger Asian-American and European-American community. Indeed, it would be useful to expand on present findings by exploring samples with a history of depression, as some findings suggest the mechanisms to which negative self-reflection affect the mood are different for this population (Chang, 2004). Second, we relied on participants' self-report to assess psychological distress. Because cultural norms can shape reports of distress (Okazaki, 1997), objective biomarkers (e.g., heart rate and salivary cortisol) should be used in future research to evaluate the distress generated through negative self-reflection. Third, a greater understanding of the content of the self-reflection would afford more nuanced questions about the interactions between thought content and social cognitive processes during reflection. For example, the severity of stressor recalled may affect the adaptive quality of the emotion regulation processes adopted. Fourth, we did not examine individual differences in the frequency of experiencing the types of events under study or the difficulty the participants had in remembering distressing experiences. Because Asian Americans may prefer conflict avoidance, they may have more difficulty recalling and reflecting on interpersonally distressing situations. Lastly, our reliance on ethnic group contrasts represents a proxy for cultural differences. Future research should directly assess values and other salient cultural dimensions, such as trait self-enhancement, to provide more direct evidence of the culturally based theories posed.

Despite these limitations, our findings increase understanding of cultural differences in the effects of negative self-reflection on mood. We found that spontaneous social-cognitive and affective processes engaged by participants during self-reflection can shed light on the mechanisms through which self-reflection over negative experiences contributes to mood. Future investigations are needed to examine the causal role of the social-cognitive and emotional processes and long-term outcomes of negative self-reflection.

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