

Inclusion of additional studies yields different conclusions: Comment on Sedikides, Gaertner, & Vevea (2005), *Journal of Personality and Social Psychology*

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In a *Journal of Personality and Social Psychology* article, Sedikides, Gaertner and Vevea (2005) presented two meta-analyses that included eight papers to investigate the question of whether people from Eastern cultures self-enhance more for traits that they view to be important compared to those that they view as unimportant. The results supported their hypothesis: Self-enhancement appears to be pancultural. However, this conclusion is severely compromised by six relevant papers that are not included in their meta-analyses. Importantly, all of these six studies contradicted their hypothesis. When complete meta-analyses are conducted which include all of the relevant papers, a very different pattern of results emerges. Eastern and Western cultures do not differ from each other in the pattern of their self-enhancement of independent and interdependent traits. Furthermore, whereas Westerners self-enhanced significantly more for traits that they viewed to be especially important, East Asians did not. Contrary to the Sedikides *et al.* (2005) suggestion, the existing evidence suggests substantial cross-cultural variation in self-enhancement, with Westerners being far more self-enhancing than Easterners. Reasons for the conflicting pattern of findings across methods and meta-analyses are discussed.

Key words: culture, self, self-enhancement, self-esteem, meta-analysis.

Introduction

In a number of publications, we have argued that in Western cultures ‘to be a good person’ implies standing out, confirming, expressing, and actualizing positive interpersonal attributes of the self, but in Eastern cultures it means something else (Markus & Kitayama, 1991; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Heine, Lehman, Markus, & Kitayama, 1999; Heine, 2005a). Specifically, ‘to be a good person’ in the latter cultures entails fitting in and actively adjusting to pertinent social contexts and improving the self vis-à-vis high standards shared in the society by identifying one’s shortcomings.

At the centre of this theoretical claim is an important cross-cultural difference in self-enhancement tendencies. In support of our theoretical characterization of Western versus Eastern cultures, a number of papers have argued that East Asians have weaker self-enhancement tendencies than Westerners (Kitayama *et al.*, 1997; Heine *et al.*, 1999). Given its theoretical significance, however, it should not come as any surprise that this particular cross-cultural difference has sparked a considerable amount of controversy,

with some questioning whether the cultural difference can be accepted at face value.

In particular, some theorists have argued that Westerners and Easterners self-enhance to an equal extent as long as they evaluate themselves in domains that matter to them (Brown & Kobayashi, 2002; Sedikides, Gaertner, & Toguchi, 2003; Sedikides, Gaertner, & Vevea, 2005). These theorists would suggest that the existing evidence for cross-cultural differences in self-enhancement is an artifact caused by inadvertent variation in the perceived importance of the domains tested in this literature, with these domains being far more important for Westerners than for Easterners. It is quite timely therefore that several researchers have examined whether East Asians might self-enhance more for traits that they view to be especially important compared with those that they view to be less important. Throughout the current paper, we refer to this question as ‘the Hypothesis’.

Although we do not know of any studies that have investigated whether the traits used in cross-cultural studies differ in their perceived importance for Westerners and East Asians (which would seem to be a critical point to demonstrate in order to accept this alternative account), there have been a number of recent papers that have investigated the Hypothesis (Kitayama *et al.*, 1997; Heine & Lehman, 1999; Heine *et al.*, 1999; Brown & Kobayashi, 2002). In particular, Sedikides *et al.* (2003) argued that the

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self-enhancement motivation was universal because they found evidence that Japanese students self-enhanced more for interdependent traits than independent ones, whereas American students enhanced more for independent than interdependent ones, and that Americans who scored high on a measure of interdependence self-enhanced more for interdependent traits than did those who scored high on a measure of independence.

In a rejoinder to that paper, Heine (2005b) highlighted six previously published papers that also tested the Hypothesis but yielded findings directly counter to the claims of Sedikides *et al.* (2003). These six papers, which used a variety of different methods, also compared the degree to which East Asian and North American participants self-enhanced in independent and interdependent domains, and the degree to which East Asian and North American participants self-enhanced in domains that varied in their importance. Those papers, and relevant page numbers for the analyses, are: Heine *et al.* (2001, pp. 604, 606); Heine and Lehman (1995, pp. 602–3); Heine and Lehman (1999, p. 923); Heine and Renshaw (2002, pp. 581–2); Kitayama *et al.* (1997, pp. 1251–2, 1258); Markus and Kitayama (1991, p. 39).

Sedikides *et al.* (2005) responded to Heine's rejoinder by conducting two meta-analyses of studies that have investigated the Hypothesis. First, they conducted a meta-analysis of studies of self-enhancement that included traits categorized as independent or interdependent. Their reasoning was that, to the extent that self-enhancement is a pan-cultural motivation, people from primarily independent cultural contexts should direct their self-enhancing motivations towards the independent self and people from largely interdependent cultural contexts should self-enhance more for interdependent aspects of the self. In that meta-analysis, the most direct test of the Hypothesis is a calculation of the effect size (g) indicating the extent to which people self-enhance more for independent traits than they do for interdependent traits in the five papers that met their inclusion criteria (see table 3 from Sedikides *et al.*, 2005, p. 542). Consistent with the Hypothesis, Sedikides *et al.* found that Westerners overall showed more self-enhancement for independent traits than interdependent ones (point estimate of $g = 0.23$), whereas East Asians showed more self-enhancement for interdependent traits than independent ones (point estimate of $g = -0.56$).

Second, Sedikides *et al.* conducted a meta-analysis of studies that investigated the relations between degrees of self-enhancement for particular traits and the importance of those traits. If self-enhancement were a universal motivation, it follows that people everywhere would self-enhance in those domains that were of special importance to them. This reasoning suggests that previously identified cross-cultural differences in self-enhancement between Westerners and East Asians (for a review see Heine &

Hamamura in press) exist because those studies did not include traits that were of sufficient importance to East Asians. This second meta-analysis summarized the correlations (r) between self-enhancement and trait importance in the five papers that met their inclusion criteria. Consistent with the Hypothesis, Sedikides *et al.* found that both Westerners and East Asians showed a significant correlation between self-enhancement and importance ($r_s = 0.26$ and 0.22 , respectively), and these correlations did not differ across cultures.

The result of these two meta-analyses thus largely supported the Hypothesis. However, for reasons that are not specified in Sedikides *et al.* (2005), the data from the six papers highlighted by Heine's comment were not included in the two meta-analyses, despite the fact that these analyses were conducted in response to his comment (Sedikides *et al.*, 2005).¹ Given that the two original meta-analyses by Sedikides *et al.* (2005) only included eight papers total, the omission of those six papers could greatly impact the conclusions that could be drawn. We summarize here how the two meta-analyses conducted by Sedikides *et al.* (2005) appear when all of the relevant studies that investigate the Hypothesis are included.

Investigation 1

Methods

The first investigation conducted by Sedikides *et al.* (2005) investigated whether Westerners tended to self-enhance more in independent domains and whether East Asians tended to self-enhance more in interdependent domains. The results of their investigation suggested that this was the case. We searched PsycINFO with the identical inclusion criteria used by Sedikides *et al.* (2005). That is, we searched PsycINFO from 1872 to November 2005² using 'culture' and 'self' as joint search terms. Studies were selected that: (i) sampled members of Western or Eastern cultures; (ii) included a measure of one's perception of self relative to others; and (iii) the studies explicitly assessed self-other comparisons on attributes associated with individualism and collectivism. That search revealed the same five papers identified by Sedikides *et al.* (2005; we use the effect sizes that they calculated), as well as one additional paper (Heine & Lehman, 1995). We have also included another study that meets the selection criteria (Markus & Kitayama, 1991), and is well known as the first study to investigate the Hypothesis, although it is puzzlingly not listed in PsycINFO. Last, one additional paper emerged that was not published at the time that Sedikides *et al.* (2005) conducted their meta-analysis (Ross, Heine, Wilson, & Sugimori, 2005). We summarize the procedure for calculating the effect sizes from each individual study in the

Appendix. The effect sizes (g s) reflect the number of standard deviations that people self-enhanced more for independent traits than for interdependent ones.

As in the analyses by Sedikides *et al.* (2005), effect sizes here were weighted and aggregated by a random effect model (which was done, in our case, with the software program Comprehensive Meta-Analysis; Borenstein & Rothstein, 1999). With a random effect model, each study in the meta-analysis is treated as a random observation of a population of studies. Hence, a random effect model allows one to generalize the findings of the meta-analysis not just to those studies that are included in the meta-analysis but to any studies that are drawn from the same population of studies (Rosenthal, 1995). These analyses also weight the observations by a function of their sample sizes.

Aggregated effect sizes were followed up by a test for moderator variables. This analysis was carried out by categorizing effect sizes and then comparing their effect sizes. The analysis was conducted by computing heterogeneity statistics (Qb) which have a chi-squared distribution with $p - 1$ degrees of freedom, where p is the number of groups being compared (Hedges & Becker, 1986). This analysis indicates the extent to which categories differ from one another, a procedure analogous to that of a t -test or ANOVA.

Results

The results of Investigation 1 are summarized in the left side of Table 1. On the bottom of the table are four rows that summarize the point estimates of the effect sizes for random effect analyses. In the first row are effects based on the studies included by Sedikides *et al.* (2005). In the second row are effects based on all of the studies that have investigated the Hypothesis. In the third row are effects based on all of the cross-cultural studies of the Hypothesis (i.e. the same papers as the second row but leaving out Sedikides *et al.*, 2003; Study 2, which only included American participants who were classified as 'Easterners' on the basis of a trait measure of interdependence). We exclude the study that identified cultural membership by people's responses to a trait measure of interdependence, as cultural membership is clearly not something that is determined by a personality measure. Such a definition of culture is at odds with virtually any of the dozens of definitions of culture that have been proposed by anthropologists (e.g. Kroeber & Kluckhohn, 1952/1963). Furthermore, in this particular case, identifying cultural membership by how much one identifies with interdependence is tautological with the self-enhancement dependent measure which evaluates how much one possesses interdependent traits and engages in interdependent behaviours (Heine, 2005b). Indeed, this tautology is evident in the unusually large size of the effects from this one study (g s = 1.76 and 1.33 for East Asians and Westerners, respectively). Last, the fourth

row includes all of the cross-cultural studies plus the study by Ross *et al.* (2005) that had not been published at the time of the Sedikides *et al.* meta-analysis. We submit that the fourth row is the most accurate test of the Hypothesis as it includes all of the cross-cultural studies.

The Hypothesis predicts that Easterners would self-enhance more on interdependent traits than independent ones (i.e. negative values of g) and that Westerners would self-enhance more on independent traits than interdependent ones (i.e. positive values of g). The first row of the bottom of the table (the analysis conducted by Sedikides *et al.*, 2005) reveals some support for the Hypothesis in that East Asians self-enhanced significantly more for interdependent than independent traits ($p < 0.01$), whereas Westerners showed a non-significant tendency to self-enhance more for independent than interdependent traits ($p > 0.30$), and this cultural difference was significant ($Qb = 7.10$, $p < 0.01$). That is, people from the two cultural groups self-enhanced to different degrees depending on the domains of the traits under study. In contrast, the fourth row of the bottom of the table (the analysis which contains all of the cross-cultural studies) reveals that people from both cultures self-enhance non-significantly more for interdependent than independent traits (both $ps > 0.20$). Furthermore, a test of heterogeneity reveals that the point estimates of the effects do not differ across cultures, $Qb = 0.53$, *ns*. In sum, once all cross-cultural studies available in the literature are admitted into the meta-analysis, the domain of the traits does not affect the degree of self-enhancement for either culture and thus the Hypothesis is not supported. East Asians do not self-enhance significantly more for interdependent traits than independent ones (although the trend is in the right direction), and Westerners do not self-enhance significantly more for independent traits than interdependent ones (and the trend is in the opposite direction).

Investigation 2

Methods

The second investigation by Sedikides *et al.* (2005) tested the Hypothesis by examining whether people tend to self-enhance more for traits or domains that they view to be especially important. We conducted the same investigation by searching PsycINFO with the search terms 'culture' and 'self-enhancement' or 'self-enhancing biases; 'the terms most germane to the hypothesis'. We included those papers that contrasted people from Western and Eastern cultures and included a measure or manipulation of the importance of the domains under study. This search revealed the same five papers identified by Sedikides *et al.* (2005; we again use the effect sizes they calculated) plus four additional

Table 1 Summary of effects from Investigations 1 and 2

Investigation 1			Investigation 2				
Study	Method	East Asian effect (<i>g</i>) (<i>N</i> in parentheses)	Western effect (<i>g</i>) (<i>N</i> in parentheses)	Study	Method	East Asian effect (<i>r</i>) (<i>N</i> in parentheses)	Western effect (<i>r</i>) (<i>N</i> in parentheses)
Studies included in meta-analysis by Sedikides <i>et al.</i> (2005)							
Heine and Lehman (1997; Study 1)	FUE	-0.24 (82)	-0.48 (75)	Brown and Kobayashi (2002; Study 1)	BAE	0.27 (23)	0.30 (35)
Hornsey and Jetten (2005; Study 1)	BAE		0.96 (42)	Brown and Kobayashi (2002; Study 2)	BAE	0.11 (0.37)	
Hornsey and Jetten (2005; Study 2)	BAE	-0.68 (14)	0.36 (16)	Brown and Kobayashi (2002; Study 3)	BAE	0.14 (78)	
Kurman (2001; Study 1)	BAE	-0.18 (143)	0.03 (129)	Heine and Lehman (1997; Study 1)	FUE	0.41 (82)	0.39 (75)
Kurman (2001; Study 2)	BAE	-0.59 (115)	0.17 (144)	Heine and Lehman (1999)	BAE	0.04 (161)	0.06 (90)
Norasakkunkit and Kalick (2002)	FUE	-0.38 (150)	-0.86 (135)	Kobayashi and Brown (2003)	BAE	0.24 (54)	0.20 (59)
Sedikides <i>et al.</i> (2003; Study 1)	BAE	-0.62 (40)	0.70 (40)	Sedikides <i>et al.</i> (2003; Study 2)	BAE	0.36 (48)	0.35 (48)
Sedikides <i>et al.</i> (2003; Study 2)	BAE	-1.76 (48)	1.33 (48)				
Studies not included in meta-analysis by Sedikides <i>et al.</i> (2005)							
Heine and Lehman (1995; Study 2)	RL	0.33 (101)	-0.47 (98)	Heine <i>et al.</i> (2001; Study 1)	S/F	-0.27 (76)	0.19 (58)
Heine and Lehman (1995; Study 2)	AL	0.86 (100)	0.41 (96)	Heine <i>et al.</i> (2001; Study 2)	S/F	-0.21 (84)	0.21 (64)
Markus and Kitayama (1991)	FUE	-0.37 (89)	-0.43 (89)	Heine and Lehman (1999)	SD	-0.04 (161)	0.10 (90)

Study published after the publication of Sedikides <i>et al.</i> (2005)		Heine and Renshaw (2002)	SP	0.07 (58)
Ross <i>et al.</i> (2005; Study 1)	PSS	-0.29 (110)	SS	0.21 (102)
		-0.15 (91)	SS	0.14 (124)
			SS	
Average effect from studies included by Sedikides <i>et al.</i> (2005)		East Asian sample Means & (SE) -0.56 (0.16)		Western sample Means & (SE) 0.26 (0.07)
Average effect from all studies above		0.23 (0.25)		
Average effect from cross-cultural studies only		0.11 (0.19)		
Average effect from all cross-cultural studies, including studies published after the meta-analysis was conducted by Sedikides <i>et al.</i> (2005)		-0.32 (0.20)		0.19 (0.04)
		-0.17 (0.18)		0.18 (0.04)
		-0.18 (0.16)		

AL, absolute likelihood estimates; BAE, better-than-average effect; FUE, false uniqueness effect; PSS, proportion or self-statements that were positive or negative; RL, relative likelihood estimates; SD, self-discrepancies; SE, standard error of the point estimates; S/F, manipulations of success and failure; SP, self-peer bias; SS, situation sampling.

papers that were not in their meta-analysis: Heine *et al.* (2001), Heine and Lehman (1999), Heine and Renshaw (2002), Kitayama *et al.* (1997). The relevant effects (r s) indicate the correlation between self-enhancement and the importance of the traits. Positive values are in support of the Hypothesis, whereas negative values contradict it.

Results

The effects for Investigation 2 are presented in the right side of Table 1. The Hypothesis predicts that both East-erners and Westerners would have a positive correlation between self-enhancement and importance. The bottom three rows of the table summarize the point estimates of the effect sizes for random effect analyses. The first row of the bottom of the table reveals the analysis conducted by Sedikides *et al.* (2005). The second row indicates the analysis for all of the studies that have investigated the Hypothesis. The third row indicates the analysis for all of the cross-cultural studies (i.e. all of the studies except the study by Sedikides *et al.*, 2003 which only investigated American participants who differed on a trait measure of independence/interdependence). We maintain that the third row is the most accurate test of the Hypothesis as it includes all of the cross-cultural studies that have been conducted.

The Hypothesis predicts that both East Asians and Westerners would show a positive correlation between self-enhancement and domain importance, and that there would be no cultural difference in the magnitude of those correlations. The first row of the bottom of the table which only included the five papers identified by Sedikides *et al.* (2005) is consistent with the Hypothesis as both East Asians and Westerners showed a significant positive correlation (both p s < 0.001), indicating support for the Hypothesis, and these two correlations were not significantly different, $Qb = 0.15$, ns . In contrast, the third row of the bottom of Table 1, which contains the analysis of all cross-cultural studies, reveals that East Asians do not show a correlation between self-enhancement and trait importance, whereas Westerners do ($p < 0.001$). Furthermore, the magnitude of the Western correlation is significantly larger than that of the East Asian correlation, $Qb = 6.14$, $p < 0.05$. In sum, an analysis of all cross-cultural studies is inconsistent with the Hypothesis. Westerners do self-enhance more in especially important traits, but East Asians do not.

The studies in Investigation 2 used a variety of different methods. The most commonly used method was the 'better-than-average effect', in which participants rate themselves compared to the 'average' other, or to 'most others'. Looking at the magnitude of the correlations for each of the studies, there appears to be a pattern regarding which methods tend to yield more positive correlations

between self-enhancement and importance. Studies which used the better-than-average effect ($k = 10$) revealed marginally more pronounced positive correlations between trait importance and self-enhancement than the other studies ($k = 14$), $Qb = 3.05$, $p < 0.09$. The better-than-average effect studies revealed an average correlation between self-enhancement and importance of $r = 0.20$, which is significant, $Z = 2.87$, $p < 0.001$. In contrast, all of the other studies revealed an average correlation of $r = 0.05$, which is not significant, $Z < 1$. Apparently, the method that one chooses influences the likelihood that one will detect a positive correlation between these two variables. We shall argue below that this is likely to be due to a methodological artifact.

Discussion

The question of whether people are motivated to self-enhance in domains that are especially important to them is a key question for understanding cultural differences in self-enhancement. It is necessary to consider because it is possible that cross-cultural studies on self-enhancement may have systematically underestimated the extent of East Asian self-enhancement by only including traits or domains that were important to Westerners, but were not important to East Asians.

The two investigations presented here provide strong evidence to challenge this alternative account. An examination of all of the relevant published studies that have investigated self-enhancing motivations across culture by domain (independent *vs* interdependent) and by importance, is not in support of the Hypothesis (i.e. the bottom row of Table 1). In Investigation 1, the domain of the traits (independent *vs* interdependent) had no consistent impact on self-enhancement for either East Asians or Westerners. Likewise, in Investigation 2, although Westerners exhibited a significant correlation between self-enhancement and domain importance, there was no such correlation for East Asians. In sum, when all of the relevant studies are considered, the two investigations do not support the Hypothesis. Sedikides *et al.*'s two investigations yielded a very different conclusion because a number of relevant studies were not included in their analyses.

The correlation between self-enhancement and importance can be seen as an additional measure of self-enhancement (Sedikides *et al.*, 2003), as it is indicating that people view themselves especially positively in the domains that matter the most to them. That the Western correlation is significant provides further evidence that self-enhancing motivations are pronounced among people in Western cultures. The lack of a correlation for East Asians is additional evidence that self-enhancing motivations are more elusive in that cultural group.

Contrasting the better-than-average effect with other methods

We note that meta-analyses are often more informative in the pattern of results that they yield across methods. Although in meta-analyses that include only a small number of studies, particularly in the present case where there are occasionally only one or two studies per method, any observed patterns must be interpreted cautiously. With this caveat in mind, we note that one striking pattern emerges here. In Investigation 2, the better-than-average effect was the method that most consistently revealed a significant correlation between self-enhancement and importance. Overall, the other studies did not reveal a significant correlation between self-enhancement and importance. Because the second investigation conducted by Sedikides *et al.* (2005) only included studies of the better-than-average effect, plus the one unpublished analysis of the false uniqueness effect by Heine and Lehman (1997), their analysis only included studies that showed strong positive correlations between self-enhancement and importance.

Why might the better-than-average effect yield a more positive correlation between self-enhancement and importance? We have argued elsewhere (Heine, 2005b; Hamamura, Heine, & Takemoto, 2006; Heine & Hamamura in press) that this method uniquely inflates estimates of this correlation due to a methodological artifact, known as the 'everyone is better-than-average-effect' (EBTA; Klar & Giladi, 1997). Specifically, people have a tendency to evaluate any specific person as better-than-average, which inflates estimates of self-enhancement when people are asked to compare themselves with the average other. Prior research suggests that the better-than-average effect does not exclusively measure self-enhancing motivations per se but, in addition, reveals an independent cognitive bias that emerges when people process singular versus distributional information (cf. Kahneman & Tversky, 1973). Klar and Giladi (Klar & Giladi, 1997, 1999; Giladi & Klar, 2002) have suggested that when making a comparative judgment between a singular target (e.g. the self, a friend, a stranger) and a distributional target (e.g. most other students in my university, most of my friends, the average person), people fail to adequately consider the qualities of the group, and the comparison comes to only reflect their absolute evaluations of the singular target. Thus, if people are comparing a fictitious target (e.g. 'Miwa') with most other members of a positively evaluated group (e.g. university students), participants have a mildly favourable attitude towards Miwa as a member of this positive group, and they express this favourability by concluding that Miwa is 'better than average'. Viewing a random other as better than average is a finding parallel to what is seen in the better-than-average effect design, yet it could not be driven by self-enhancing

motivations as it has nothing to do with the self. Importantly, our argument is not that Western self-enhancement in the better-than-average effect is solely due to the EBTA effect – we argue that the EBTA effect inflates the magnitude of apparent self-enhancement. To the extent that Westerners contrast themselves to specific others, a comparison which circumvents the EBTA effect, they may still evaluate themselves especially positively because of self-enhancing motivations (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Chang & Asakawa, 2003; Hamamura *et al.*, 2006); however, the magnitude of those effects are less than what they are when they contrast themselves to an unspecified 'average' other. In the case of East Asians, their self-enhancing motivations are weak enough that they do not evaluate themselves more positively than a specific other (Chang & Asakawa, 2003; Hamamura *et al.*, 2006).

If people are especially prone to view specific others as better than average because of the EBTA effect, it follows that they may rate specific others as better than average especially for those traits that are most important. Favourable evaluations of people are most afforded by traits that are especially valued. For example, if a person evaluated a target extremely positively on strongly valued traits, such as warm, intelligent, or trustworthy, they would likely have an overall positive view of that target. In contrast, extremely positive evaluations on less valued traits such as punctual, impulsive, or cautious, would not necessarily translate into an overall positive view of the target. Positive evaluations of people and objects are most afforded by traits that are especially valued, and this suggests an alternative explanation to the correlations between self-enhancement and importance that have been found in studies of the better-than-average effect. This is a relation analogous with that identified in expectancy-value theory (Fishbein, 1963). In support of this, Hamamura *et al.* (2006) found that the positive correlation among East Asians between importance and self-enhancement in a better-than-average effect design was no longer significant once the EBTA effect was controlled for. In sum, we suggest that the better-than-average effect artificially inflates estimates of the correlations between self-enhancement and importance for people of both cultures. If this artifact was controlled for, we predict that the average correlations in Investigation 2 would be even lower (or more negative) for people of both cultures.

Contrasting the inclusion criteria of the present paper and those of Sedikides *et al.* (2005)

The selection criteria of Sedikides *et al.* (2005) resulted in the inclusion of only studies that used the better-than-average effect and the false uniqueness effect (with the exception of the missing study by Markus & Kitayama, 1991). Their analyses did not include studies of absolute

and relative-likelihood estimates of unrealistic optimism, self-discrepancies, self-peer evaluations, situation sampling, or studies that manipulated success and failure. We are unclear as to the rationale of Sedikides *et al.* for excluding these studies, as the only mention of these studies in their 2005 paper is in a footnote on page 540 which reads 'These criteria identify a subset of studies that are relevant to our framing of the research question. There are other studies on this general topic that are not included, such as Heine and Lehman (1995), Heine *et al.* (2001), and Kitayama *et al.* (1997).' We suggest that, in general, broader inclusion criteria in meta-analyses allow for researchers to draw more confident and meaningful conclusions. In this case, broader criteria not only yielded very different overall effects than a narrower set of criteria, but they also highlighted how the effects appear to be greatly influenced by the particular method that is used.

Which set of inclusion criteria is most appropriate for answering the question of whether East Asians self-enhance in domains that are of special importance to them? If the question that the meta-analyses were to address was 'Are the better-than-average effect and the false-uniqueness effect pancultural?', we would agree that the inclusion criteria used by Sedikides *et al.* (2005) were the most appropriate. However, the question that was addressed in both Sedikides *et al.* (2003) and Sedikides *et al.* (2005) was 'Is self-enhancement pancultural?' Indeed, the conclusion that they draw from their meta-analyses in their abstract is that the 'self-enhancement motivation is universal' (p. 539). We submit that to address the question of whether self-enhancement is universal a meta-analysis must include all relevant studies that have investigated self-enhancement. We originally conducted our various studies that investigated the Hypothesis with several different methods precisely to obtain the most convergent evidence with respect to testing it. We suggest that convergent evidence across methods will always be more compelling than evidence from a limited set of methods.

In sum, the Hypothesis is supported by the two investigations only when some relevant studies are not included in the analysis. When all the relevant cross-cultural studies are examined, there is not support for the notion of pancultural self-enhancement. Rather, the results demonstrate that East Asians do not self-enhance more for domains that they view to be especially important.

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End notes

1. Sedikides *et al.* (2005) included a set of unpublished analyses on data from the better-than-average effect from Heine and Lehman (1999). They did not include, however, the published analyses on self-discrepancies. Those analyses are also included here.
2. One difference between the present meta-analysis and the one by Sedikides *et al.* (2005) is that their analysis included studies up until September 2004 whereas ours included studies up until November 2005.

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References with an asterisk indicate studies included in the meta-analysis.

Appendix

Procedures for calculating effect sizes from the individual studies

The effect sizes from all studies included in meta-analyses by Sedikides *et al.* (2005) were based on their calculations.

Heine and Lehman (1995). Relative likelihood measure of unrealistic optimism.

Magnitude of the optimism bias on a 7-point Likert scale was compared between independent and interdependent traits divided by the pooled standard deviation of those two variables.

Heine and Lehman (1995). Absolute likelihood measure of unrealistic optimism.

The optimism bias was calculated by the difference between percentage estimates for self and others. This bias was compared between independent and interdependent traits divided by the pooled standard deviation of the four variables (i.e. independent self-estimates, interdependent self-estimates, independent other estimates, interdependent other estimates).

Markus and Kitayama (1991). False uniqueness effect.

Percentage estimates of others superior to oneself were compared between independent and interdependent domains. The standard deviations and *Ns* are no longer available for this study. The standard deviations for these analyses are based on those found from Heine and Lehman (1997; Study 1), which used the same design. The sample sizes are the average of the *Ns* used from all of the other studies in Investigation 1.

Heine *et al.* (2001) (Studies 1 and 2). Manipulations of success and failure.

Compared the importance ratings for task following success or failure feedback divided by the pooled standard deviation of those two variables to calculate *d*. *d* was then converted to an *r*.

Heine and Lehman (1999). Actual-ideal self-discrepancies.

Magnitude of self-discrepancies were correlated with rated importance of the trait within participants.

Heine and Renshaw (2002). Self-peer biases.

For each trait, a bias was calculated by the difference score between self-evaluations and evaluations by peers. The magnitudes of these biases were correlated within-participants with the average rated importance of the traits conducted by an independent sample.

Kitayama *et al.* (1997) (Studies 1 and 2). Situation sampling.

Magnitude of self-esteem increases and decreases were compared between situations generated within one's own culture and situations generated within the comparison

culture, divided by the pooled standard deviation of these four variables (i.e. self-esteem increasing situations in own culture, self-esteem decreasing situations in own culture, self-esteem increasing situations in other culture, self-esteem decreasing situations in other culture) to calculate d . d was then converted to an r .

Ross *et al.* (2005) (Study 1).

The weighted average of positive and negative statements about the self were calculated ((positive – negative)/(positive + negative)) and compared between independent and interdependent domains.

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