

Motivated Response Styles: The Role of Cultural Values, Regulatory Focus, and Self-Consciousness in Socially Desirable Responding

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Three studies investigated the relations between cultural values and socially desirable responding, the processes that underlie them, and factors that influence the strength of the relations. Results indicated that individualism was associated with self-deceptive enhancement but not impression management, whereas collectivism was associated with impression management but not self-deceptive enhancement. Regulatory focus was found to mediate these relations. A promotion focus mediated the relation between individualism and self-deceptive enhancement, whereas a prevention focus mediated the relation between collectivism and impression management. This mediation pattern held regardless of whether individualism and collectivism were determined at the group level (Study 1) or measured at the individual level (Studies 2–3), whether socially desirable responding was operationalized as a scale measure (Studies 1–3) or as reactions to behavioral scenarios (Study 2), and across different measures of regulatory focus. This general mediation pattern was found to be moderated by type of self-consciousness (Study 3): The promotion focus mediation was stronger for participants low (vs. high) in private self-consciousness, and the prevention focus mediation was stronger for participants high (vs. low) in public self-consciousness.

Keywords: culture, socially desirable responding, regulatory focus, public self-consciousness, private self-consciousness

Consider the following information obtained through cross-cultural surveys. In a survey of over 21,000 people across 38 countries, Americans ranked themselves first in their understanding of nutritional information, yet only 38% of respondents in the United States had heard of the glycemic index (compared with 80% in Korea) and only 58% of them knew the distinction between saturated and nonsaturated fat (compared with 65% in Brazil, Chile, and Mexico; ACNielsen, 2005b). In a recent telephone survey, more than 3,000 Chinese respondents in Beijing, Shanghai, and Guangzhou were asked about their attitudes and usage in relation to over-the-counter drugs and health supplement products. Eighty-six percent of the respondents claimed that doctors' opin-

ions were their major consideration when making decisions about over-the-counter drug purchases. However, only two thirds of the respondents claimed to have bought health supplement products in the past year and only a quarter thought taking health supplements was good for them (ACNielsen, 2005a), even though the use of health supplements is an integral part of Chinese medicine (Leung, Xue, & Cheng, 2004).

The discrepancy between what people say and what they actually do in the above examples suggests that the respondents may have engaged in socially desirable responding, which is the tendency of people to portray themselves in a more favorable light on survey questionnaires than their thoughts or actions may actually warrant (Paulhus, 1984). The issue of response styles and possible response biases in general, and socially desirable responding in particular, is an important one for researchers because it potentially affects the validity of survey data (Mick, 1996; Paulhus, 1991). This is particularly true given the central role played by surveys in research (Fisher, 1993).

Moreover, as the opening examples suggest, and to which numerous studies also attest, these tendencies span cultures. However, although the two examples just provided are both consistent with socially desirable responding, a close examination suggests that there are subtle but important differences in the two types of responses. American respondents appear to be distorting their responses to appear more skillful, competent, or attractive, a type of socially desirable responding that is termed *self-deceptive en-*

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hancement (Paulhus, 2002). In contrast, Chinese respondents appear to be distorting their responses to appear more normatively appropriate, a type of socially desirable responding referred to as *impression management* (Paulhus, 2002). Thus, although in these examples there are no cultural differences in whether people engage in socially desirable responding, there may be differences in the type of socially desirable responding.

This distinction between the two types of socially desirable responding is important not only because the response styles are different, but also because they imply that there may be distinct cultural reasons and motivations for engaging in socially desirable responding. However, although research has examined culture-related differences in people's goals and motivations (e.g., Heine, 2005) and their tendencies to pursue distinct response styles (e.g., Smith, 2004a), the system of relations between cultural values, goals, and socially desirable responding is not well understood. In fact, although factors that influence responses on surveys have received considerable attention, little research has addressed the underlying processes. To fill this knowledge gap, we report three studies that examine how the cultural values of individualism and collectivism are related to self-deceptive enhancement and impression management, the motivational processes that underlie these relations, and the factors that impact the strength of the relations.

Cultural Values and Socially Desirable Responding

Previous research has identified two distinct forms of socially desirable responding: self-deceptive enhancement and impression management (Paulhus, 1984). Self-deceptive enhancement is the tendency to describe oneself in an inflated yet honestly held manner and to see oneself in a positive, overconfident light, and is motivated by the desire to see oneself as competent and self-reliant (Paulhus & John, 1998). In contrast, impression management refers to an attempt by respondents to distort their self-reported actions in a positive manner to maintain a favorable image, and is closely related to faking and dissimulation (Mick, 1996).

The distinction between these two types of socially desirable responding is important for understanding the link between individualism–collectivism and socially desirable responding. To elaborate, individualism and collectivism are the two most widely researched cultural values in psychological research (Shavitt, Lalwani, Zhang, & Torelli, 2006; Triandis, 1995). Individualism places an emphasis on the person relative to the group, has a strong focus on the self, and stresses independence and achievement in the service of self-glory. In contrast, collectivism places an emphasis on the group relative to the individual; stresses conformity, in-group harmony, and self-control; encourages achievement for group-glory; and places high value on maintaining one's face (Triandis, 1995).

According to Triandis (1989), people selectively appropriate symbolic ideas about the self from their cultural environment to further valued goals. Triandis distinguished three major kinds of self: the private self (knowledge about a person's traits, states, or behaviors), the public self (knowledge about the generalized other's view of the self), and the collective self (knowledge about some collective's view of the self). Every person possesses these three kinds of self, although people in different cultural groups sample these three kinds of self with different probabilities. In individualist cultures (e.g., American culture), the private self is

most likely to be sampled, and there are heavy emphases on positive self-image and personal distinctiveness. In collectivist cultures (e.g., Chinese culture), the collective self is most likely to be sampled, and there is a heavy emphasis on social acceptance. According to this theory, the psychological effects of individualism and collectivism can be studied at both the group and individual level. An individualist country is likely to have institutions and a social ecology that supports the private self, whereas a collectivist country is likely to have institutions and a social ecology that supports the collective self. Thus, people living in an individualist country are, on average, more likely to express their private self, whereas people living in a collectivist country are, on average, more likely to express the collective self. Despite this, Triandis contended that culture is not a homogenizing device, and people in a country may internalize the dominant cultural values to different degrees. Thus, within every cultural group, some people are more collectivist and less individualist than others. The presence of within-group variability allows researchers to examine the psychological effects of individualism and collectivism as individual-difference variables within a culture.

Because individualism is strongly linked to expression of the private self that privileges positive distinctiveness of the self (Heine et al., 2001; Markus & Kitayama, 1991) and stresses independence and achievement in the service of self-glory (Triandis, 1995), individualists tend to emphasize the positive features of the self and downplay the negative features in self-presentation (Heine, 2005; Heine, Lehman, Markus, & Kitayama, 1999; Taylor & Brown, 1988; but see Colvin, Block, & Funder, 1995). Consequently, individualists are motivated to display self-enhancing behaviors. Indeed, many egocentric biases in self-appraisals found in individualist cultures resemble self-deceptive enhancement. Such biases include the self-enhancement bias (viewing the self as being above average on personal attributes; Heine et al., 1999; Heine, Takata, & Lehman, 2000), unrealistic optimism (perceiving the self as more invulnerable than others; Chang, Asakawa, & Sanna 2001; Heine & Lehman, 1995), egocentric perceptual bias (rating the self more favorably than rating others; Heine & Lehman, 1997), and the self-serving attribution bias (biased evaluation of the justifiability of one's personal choice; Mezulis, Abramson, Hyde, & Hankin, 2004; but see Sedikides, Gaertner, & Toguchi, 2003).

The individualistic focus toward the self and away from others, and on self-enhancement and self-expression, has different implications for impression management. To the extent that individualism emphasizes being one's self but not a concern for what others think, we might expect that individualism would have little or no relation to impression management. Impression management tends to be associated with the maintenance of face, conformity, deference, and enhancement of social relations (Cupach & Metts, 1994; Johnson & van de Vijver, 2002), concepts that tend to be of relatively little importance to individualists. Indeed, some research has found that individual-level individualism shows little or no relation to impression management (Lalwani, Shavitt, & Johnson, 2006). Taken together, these findings suggest that individualism may be associated with self-deceptive enhancement but unrelated to impression management.

In contrast, collectivism places an emphasis on the group relative to the individual and stresses interdependence, belongingness, pursuing common goals with others, and maintaining harmonious

relationships (Markus & Kitayama, 1991; Triandis, 1995). Thus, collectivists are likely to try to "fit in" their groups by presenting themselves favorably and hence engage in impression management. Further, impression management is associated with maintaining face, avoiding social disapproval, and improving social relations, all of which are trademarks of collectivism (Triandis, 1995). Indeed, Crowne and Marlowe (1964, p. 27) suggested that impression management is driven by the need of participants to respond in "culturally sanctioned and approved" ways to obtain social approval, a defining characteristic of collectivism but not individualism. Accordingly, on the basis of data from 12 countries, Bernardi (2006) found that country-level collectivism was strongly correlated with the impression management portion of Paulhus's (1991) Deception Scale.

However, unlike individualists, collectivists seem to place little or no value on self-enhancement and, in fact, are sometimes more self-critical than individualists. Whereas self-criticism and self-improvement work toward improving social relations and increasing belongingness, self-enhancement contributes little, if anything, to these goals. Consequently, collectivism should have little or no relation with self-enhancement, and some research supports this proposition. For example, Heine et al. (1999) provided evidence that North American respondents (who are known to hold predominantly individualistic values) consistently show strong evidence of self-enhancing tendencies, whereas East Asian respondents (who are known to hold predominantly collectivistic values) tend to show little or no such evidence (for reviews, see Heine, 2005; Heine & Hamamura, 2007). Taken together, these findings suggest that collectivism should be related to impression management but not self-enhancement.

In sum, theory and previous research suggests that individualism and collectivism both may be associated with socially desirable responding but with different types. Individualism may be associated with self-deceptive enhancement but not impression management, whereas collectivism may be associated with impression management but not self-deceptive enhancement. Beyond this general set of hypotheses, however, there are still important unanswered questions regarding the processes that may underlie these links. Hence, another objective of this research is to investigate possible mediating and moderating variables. One possibility, which follows directly from theory of individualism and collectivism (Triandis, 1989), is that regulatory focus underlies these effects and that people's self-consciousness (public or private) influences the strength of these relations.

Cultural Values and Regulatory Focus

Regulatory focus theory is a theory of self-regulation that proposes two distinct foci: a promotion focus that is primarily concerned with maximizing positive outcomes and a prevention focus that is primarily concerned with minimizing negative outcomes (Higgins, 1997). People who are promotion focused eagerly pursue gains or successes. Focusing on accomplishments, achievements, and the pursuit of ideals, they are oriented toward fulfilling their hopes and aspirations, and they scrutinize their social world for information that bears on the pursuit of success (Lockwood, Jordan, & Kunda, 2002). In contrast, people with a prevention focus strive to avoid negative outcomes. Driven by the need to feel secure and to meet their obligations, these individuals are primarily

concerned with preventing failures or losses, and their information processing and interpersonal tactics are geared toward avoiding undesirable outcomes (Higgins, Roney, Crowe, & Hymes, 1994).

Because individualists are concerned with achievement and distinguishing themselves from others in a positive way, they are likely to focus on maximizing potential gains in various situations. In contrast, collectivists have primary goals of fitting in, maintaining group harmony, and being a good group member. Consequently, they are likely to focus more on avoiding situations that may jeopardize the attainment of these goals. Accordingly, individualists perceive success-foregone events (e.g., not winning) to be more important than failure-avoidance events (e.g., not losing; Lee, Aaker, & Gardner, 2000), strive more to maximize potential gains than to minimize potential losses (Hamilton & Biehal, 2005), and find success feedback to be more motivating than failure feedback (Heine et al., 2001). In contrast, collectivists pursue more avoidance goals than do individualists (Elliot, Chirkov, Kim, & Sheldon, 2001), perceive failure-avoidance events to be more important than success-foregone events (Lee et al., 2000), and strive more to minimize potential losses than to maximize potential gains (Hamilton & Biehal, 2005; but see Hsee & Weber, 1999, for an exception). Accordingly, Lee et al. (2000) found that individualists tend to be more promotion focused than collectivists, whereas collectivists tend to be more prevention focused than individualists. These general sets of findings hold regardless of whether individualism and collectivism are measured at the group or individual level (Lee et al., 2000).

Cultural Values, Regulatory Focus, and Socially Desirable Responding

In the present investigation, we explore the possible interrelations among cultural values, regulatory focus, and socially desirable responding. We contend that individualism and collectivism predict both regulatory focus and socially desirable responding because cultural values, regulatory focus, and socially desirable responding are all part of the same motivational framework. In particular, we propose that promotion- and prevention-focused goals are differentially related to the two types of socially desirable responding: self-deceptive enhancement and impression management. Moreover, regulatory focus mediates the relation between cultural orientation and socially desirable responding, such that a promotion focus mediates the relation between individualism and self-deceptive enhancement and a prevention focus mediates the relation between collectivism and impression management.

This mediation hypothesis assumes that regulatory focus predicts socially desirable responding. Although no known research has empirically examined this predictive relation, there are theoretical reasons for expecting it (Heine, 2005). Regulatory focus sets up a motivational framework for socially desirable responding. Because promotion-focused individuals are more likely to attend to information that boosts self-image than to information that threatens self-image, they may be more likely to process and retain self-enhancing cognitions (Heine, 2005). Moreover, self-deceptive exaggeration of positive skills and abilities among promotion-focused individuals makes desired achievements seem more attainable (Paulhus & John, 1998; Taylor & Brown, 1988). Thus, self-deceptive enhancement should fulfill the goals of a promotion-focused self-regulation. In contrast, when people are

oriented toward avoiding undesired outcomes (prevention focus), they tend to focus on appeasing the major stakeholders in their environment and claiming conformance to the norms and expectations set up by these stakeholders. Engaging in impression management should help them achieve these goals. Moreover, maintaining one's respected place within a group (maintaining face) is strictly a function of what others think of you. Consequently, face is more easily lost than gained (Heine, 2005) and thus prevention-focused individuals should strive to save face by actively managing others' impressions of them.

Thus, we expect that level of individualism will be positively associated with self-deceptive enhancement primarily through the mediation of promotion-focused self-regulation. As individualism increases, so should the motivation to enhance gains, which, in turn, should be accompanied by a greater focus on positive aspects of the self, thereby increasing self-deceptive enhancement. In contrast, we expect that level of collectivism will be positively associated with impression management primarily through the mediation of prevention-focused self-regulation. As collectivism increases, so should motivation to reduce losses, which in turn should be accompanied by a greater focus on maintaining one's group status through impression management.

The Role of Private and Public Self-Consciousness

To further explicate the mediating role of regulatory focus in the relation between culture and socially desirable responding, we were interested in exploring possible boundary conditions of this pattern of effects. Specifically, we wanted to determine whether the relations just proposed are stronger for some people than for others.

Self-consciousness is an individual-difference variable that should moderate the cultural values-regulatory focus-socially desirable responding connections. Research has identified two orthogonal dimensions of self-consciousness: public and private (Fenigstein, Scheier, & Buss, 1975). Those who are high (vs. low) in private self-consciousness are more likely to attend to their own inner thoughts and feelings. Their focus is on cognitions that deal primarily with the self, they tend to reflect about themselves, and they are attentive to the workings of their mind. In contrast, those who are high (vs. low) in public self-consciousness are especially attuned to other people's perspectives. They view themselves as social objects and are sensitive to others' reactions to their behavior. They regulate their conduct by taking into account the desires and expectations of others and are interested in getting along by going along (Carver & Scheier, 1998).

People who are high (vs. low) in private self-consciousness, because of their attentiveness to their inner self, may be more realistic about their capabilities and skills and hence may be less likely to engage in self-deceptive enhancement, a response style in which people hold exaggerated, unrealistic, and glorified notions of their skills and abilities. In support of this idea, Buss (1980) found that privately self-conscious people have deep insights into their own personalities and are often able to provide complete and true accounts of these insights. Thus, we predict that the mediating relation between individualism, promotion focus, and self-deceptive enhancement proposed earlier should be weaker for people who are high (vs. low) in private self-consciousness.

In contrast, people high in public self-consciousness see themselves as social objects and are sensitive to the reactions of others in social situations (Fenigstein et al., 1975). They not only take the role of others to imagine their reactions but also actively mold their behavior to appeal to others (Carver & Scheier, 1998; Miller & Cox, 1982). Because people who are high (vs. low) in public self-consciousness are more concerned about others' impressions of them, and are also more affected by possible rejection from others (Fenigstein, 1987), they may be highly motivated to engage in impression management, even among collectivists, who already tend toward impression management. If so, then the mediating relation between collectivism, prevention focus, and impression management should be stronger for people who are high (vs. low) in public self-consciousness. Thus, public self-consciousness should moderate the mediating relation between collectivism, prevention focus, and impression management.

Overview of Studies

We test the following hypotheses in three studies. First, we expect individualism to be positively associated with self-deceptive enhancement but not impression management and collectivism to be positively associated with impression management but not self-deceptive enhancement. We also expect that a promotion focus will mediate the relation between individualism and self-deceptive enhancement and that a prevention focus will mediate the relation between collectivism and impression management. All three studies tested this set of hypotheses. In addition, Study 3 tested two moderated mediation hypotheses: (a) The individualism-promotion focus-self-deceptive enhancement relation will be stronger for people low (vs. high) in private self-consciousness, and (b) the collectivism-prevention focus-impression management relation will be stronger for people high (vs. low) in public self-consciousness.

Across the three studies, we used different measures of the major variables (individualism, collectivism, regulatory focus, and socially desirable responding) to maximize generalizability. In Study 1, we compared the socially desirable responding and regulatory focus of Hong Kong Chinese and European Americans (who are known to differ greatly in their levels of chronic individualism and collectivism; Singelis, Bond, Sharkey, & Lai, 1999) and examined whether cultural variations in socially desirable responding were mediated by regulatory focus. In Studies 2 and 3, we measured participants' chronic individualism and collectivism in a U.S. sample.

Study 1

Method

Participants and procedure. Sixty-five Chinese undergraduate students from a public university in Hong Kong and 65 European American undergraduate students from a large Midwestern public university participated in exchange for partial course credit. After providing informed consent, participants were asked to complete a booklet of scales that contained measures that assessed the strength of promotion and prevention focus and socially desirable responding. Participants also responded to several demographic questions before being debriefed and dismissed.

Measures. Promotion and prevention focus were assessed using the Regulatory Focus Questionnaire developed by Higgins et al. (2001). The instrument is composed of 10 items, 5 each for promotion and prevention focus. Examples of items include, "I feel like I have made progress toward being successful in my life" (promotion focus) and "Not being careful enough has gotten me into trouble at times" (prevention focus). The items were measured on a 5-point scale, with higher scores indicating higher promotion or prevention focus, respectively. U.S. participants were administered the standard scale, and Hong Kong participants were administered the Chinese version of the Regulatory Focus Questionnaire developed and back translated by Ip, Chen, and Chiu (2006). The promotion ($\alpha = .71$) and prevention ($\alpha = .82$) items were averaged separately to form indices of promotion and prevention focus. Following the standard back-translation procedure, Ip and Chiu (2001) constructed the Chinese version of the Regulatory Focus Questionnaire and found evidence for the scale's reliability and validity in a sample of Hong Kong Chinese university students. Promotion and prevention focus showed little correlation ($r = -.13, p > .12$).

Socially desirable responding was assessed using the 40-item Paulhus Deception Scale (Paulhus, 1991). Half of the items measure self-deceptive enhancement (e.g., "Many people think that I am exceptional") and half measure impression management (e.g., "I have never dropped litter on the street"), each on 7-point Likert-type scales (1 = *strongly disagree*, 7 = *strongly agree*). Hong Kong participants completed the Chinese version of the scale developed by Yang, Peng, and Zhang (1997), who translated and back translated the scale and had bilingual linguists check the translation equivalence of the items. The scale has been successfully used by a number of researchers using Chinese respondents, both in Hong Kong (e.g., Bernardi, 2006; Burton, Farh, & Hegarty, 2000) and elsewhere (e.g., Lalwani et al., 2006; Meston, Heiman, Trapnell & Carlin, 1999). In addition, Yik, Bond, and Paulhus (1998; also see Paulhus & John, 1998) found that personality variables associated with self-deceptive enhancement and impression management loaded on two distinct factors in a Chinese sample from Hong Kong. The items in the current study were averaged separately to form indices of self-deceptive enhancement (U.S. participants, $\alpha = .64$; Hong Kong participants, $\alpha = .59$) and impression management (U.S. participants, $\alpha = .80$; Hong Kong participants, $\alpha = .83$). Self-deceptive enhancement and impression management were only moderately correlated ($r = .18, p < .05$).

Results and Discussion

Comparability of the samples. The Hong Kong sample was significantly older (Hong Kong $M = 21.64$ years vs. United States $M = 20.70$ years), $t(128) = 4.07, p < .001$, and had a significantly higher percentage of women (Hong Kong = 64% vs. United States = 43%), $\chi^2(1, N = 130) = 5.23, p < .05$, than the U.S. sample. Following Heine and Lehman (1995; Heine et al., 2001), we tested whether these two demographic variables were related to the dependent variables. Correlation analyses indicated that neither age nor gender were related to self-deceptive enhancement or impression management in either the Hong Kong (age-self-deceptive enhancement $r = .18, p > .15$; age-impression management $r = -.10, p > .41$; gender-self-deceptive enhancement $r = -.15, p > .21$; gender-impression management $r = .14, p >$

.26) or the U.S. (age-self-deceptive enhancement $r = .03, p > .78$; age-impression management $r = .16, p > .20$; gender-self-deceptive enhancement $r = -.09, p > .44$; gender-impression management $r = .13, p > .31$) samples, suggesting that these demographic variables did not confound the relations (also see Heine & Lehman, 1997; Heine, Lehman, Peng, & Greenholtz, 2002). Hence, the impact of age and gender was not considered further.

Group differences in socially desirable responding. We tested our predictions using general linear models and used one-tailed tests for directional predictions. To test the hypothesis that Hong Kong and American participants would differ on the two types of socially desirable responding, we conducted a 2 (cultural group: U.S., Hong Kong; between-subjects) \times 2 (socially desirable responding: self-deceptive enhancement, impression management; within-subjects) general linear model. The predicted Cultural Group \times Socially Desirable Responding interaction was significant, $F(1, 129) = 33.11, p < .001, r = .45$. U.S. participants scored higher on self-deceptive enhancement ($M = 4.32$) than did Hong Kong participants ($M = 3.66$), $t(129) = 7.00, p < .001, r = .52$, whereas Hong Kong participants scored higher on impression management ($M = 3.85$) than did U.S. participants ($M = 3.66$), $t(125) = 1.29, p < .10, r = .11$, although the latter difference only approached conventional levels of significance (see the top panel of Figure 1).

Group differences in regulatory focus. A 2 (cultural group: U.S., Hong Kong; between-subjects) \times 2 (regulatory focus: promotion, prevention; within-subjects) analysis of variance was conducted to test the hypotheses that U.S. participants would score higher on promotion focus than would Hong Kong participants, who, in turn, would score higher on prevention focus than would

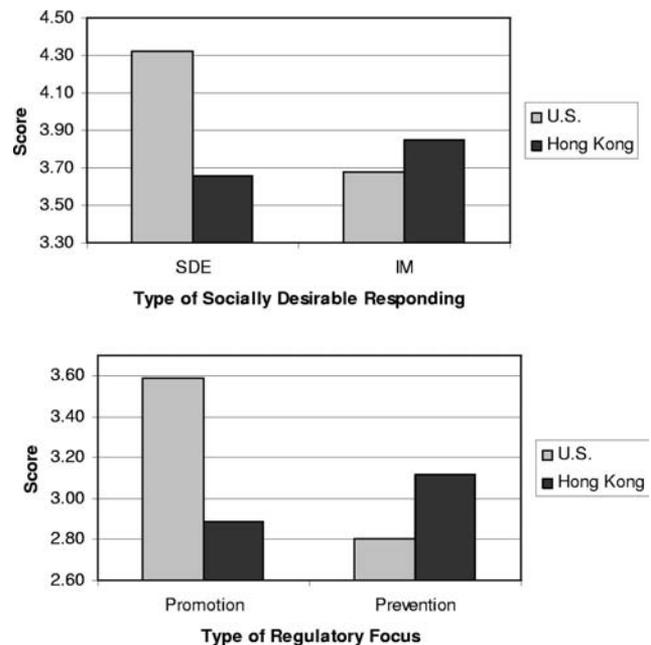


Figure 1. Country differences in socially desirable responding (top panel) and regulatory focus (bottom panel) in Study 1. SDE = self-deceptive enhancement; IM = impression management.

U.S. participants. The predicted Cultural Group \times Regulatory Focus interaction was significant, $F(1, 129) = 55.73, p < .001, r = .56$. U.S. participants scored higher on promotion focus ($M = 3.60$) than did Hong Kong participants ($M = 2.89$), $t(129) = 8.47, p < .001, r = .60$, whereas Hong Kong participants scored higher on prevention focus ($M = 3.12$) than did U.S. participants ($M = 2.79$), $t(129) = 2.91, p < .01, r = .24$ (see the bottom panel of Figure 1).

Mediation analyses. To test the hypothesis that regulatory focus would mediate the relation between cultural group and socially desirable responding, we followed the procedure outlined by Baron and Kenny (1986) using a series of three regression equations. The results support our predictions. In separate regression equations, the effects of cultural group (dummy coded as 0 = United States, 1 = Hong Kong) on self-deceptive enhancement ($\beta = -0.52$), $t(129) = 7.00, p < .001$, and promotion focus ($\beta = -0.60$), $t(129) = 8.47, p < .001$, were significant. In the third equation, when self-deceptive enhancement was regressed on cultural group and promotion focus simultaneously, both promotion focus ($\beta = 0.46$), $t(128) = 5.48, p < .001, r = .43$, and cultural group ($\beta = -0.24$), $t(128) = 2.93, p < .005, r = .25$, were significant, but the effect of cultural group was reduced considerably. A Sobel test indicated that the mediation was significant ($z = 4.60, p < .001$). This pattern of results meets the criteria for partial mediation.

We also tested the second component of our mediation hypothesis, that prevention focus would mediate group differences in impression management. Again, the results were supportive. Cultural group predicted impression management ($\beta = 0.11$), $t(129) = 1.29, p < .10$, and prevention focus ($\beta = 0.25$), $t(129) = 2.91, p < .005$, in separate regression equations, although the former relation only approached significance. When impression management was regressed both on cultural group and prevention focus simultaneously, prevention focus was significant ($\beta = 0.61$), $t(128) = 8.32, p < .001, r = .59$, but cultural group was not ($\beta = -0.04$), $t(128) = -0.52, p > .60, r = .04$. A Sobel test indicated that the mediation was significant ($z = 2.74, p < .01$). These results support our theorizing and suggest that people in different cultural groups engage in distinct socially desirable responding styles because of different regulatory goals.

One limitation of this study is that it used cultural group as a proxy for cultural values. On the basis of previous research (Singelis et al., 1999; Triandis, 1995), we assumed that the U.S. participants were, on average, more individualistic and less collectivistic than the Hong Kong participants. Although this assumption seems defensible, given that we have included only two cultural groups, it is difficult to ascertain that the group differences we obtained reflect group differences in the relative distribution of individualism and collectivism (Smith, Dugan, & Trompenaars, 1996; Smith et al., 2002). To address this limitation, we measured individualism and collectivism at the individual level in Studies 2 and 3.

Study 2

In Study 2, we were interested in extending the generalizability of our findings. In particular, we wanted to determine whether the hypothesized relations between cultural values, regulatory goals, and distinct forms of socially desirable responding hold for other

judgments and self-presentations that are indicative of self-deceptive enhancement and impression management (rather than just responses to trait measures). To accomplish this, we assessed the degree to which cultural values and regulatory focus predict self-presentation in specific contexts relevant to either self-reliance or image protection. Because individualism is associated with a self-presentational style characterized by self-deceptive enhancement, we predicted that it would also be associated with a tendency to present one's likely actions in ways that make one appear self-reliant. In contrast, because collectivism is associated with a self-presentational style characterized by impression management, we predicted that it would also be associated with a tendency to present one's likely actions in ways that protect one's image from loss of face. We further hypothesized that the former relation would be mediated by promotion focus, whereas the latter would be mediated by prevention focus.

Method

Participants and procedure. Ninety-four undergraduate students (55 men, 38 women, and 1 participant who did not report gender; mean age = 20.72 years, $SD = 1.11$) from a large public university participated in exchange for partial course credit. After providing informed consent, participants filled out a questionnaire, were debriefed, thanked, and dismissed.

Measures. Participants' chronic cultural values were measured using the 16-item Triandis and Gelfand (1998) scale (8 items each for individualism and collectivism) on 7-point Likert-type scales (1 = *strongly disagree*, 7 = *strongly agree*). Examples of items measuring individualism include, "I'd rather depend on myself than others" and "It is important that I do my job better than others." Examples of items measuring collectivism include, "If a coworker gets a prize, I would feel proud" and "Parents and children must stay together as much as possible." Each set of items was averaged to form composite indices for individualism ($\alpha = .77$) and collectivism ($\alpha = .79$). The measures of self-deceptive enhancement ($\alpha = .74$) and impression management ($\alpha = .75$) were the same as those used in Study 1. Participants also responded to a regulatory focus measure adapted from Lockwood et al. (2002) and Pham and Avnet (2004), as well as demographic questions. An example of an item tapping promotion focus included, "I frequently imagine how I will achieve my hopes and aspirations." An example of an item tapping prevention focus included, "I would prefer to do whatever it takes to keep my promises as opposed to go wherever my heart takes me." All variables were treated as continuous in subsequent analyses.

The key dependent measures asked participants to respond to scenarios relevant to either self-reliance or image protection. These scenarios were constructed to reflect everyday situations that people are likely to encounter. The self-reliance scenarios had people rate their future confidence in deciding to accept a job, their anticipated performance on the job, and their likelihood of earning a distinction or award for their performance. The image-protection scenarios had people rate their future likelihood of plagiarizing a friend's paper for a course, assigning difficult tasks to others in a team, and cheating on an exam. An example of a self-reliance scenario read as follows:

You are interviewing for an internship at a company called "XYZ." Doing the job well would require self-reliance and independence on

your part to set goals and to meet them. If you were offered the job, how confident would you be that you'd make the right decision about it? (1 = *not at all confident*, 9 = *very confident*).

An example of an image-protection scenario read as follows:

The end of the semester is nearing, and you have a lot of assignments to complete, besides studying for the finals. One important assignment is due in and you have yet to write it. The marks for this assignment count for 40% of your overall grade for Marketing and it is not your best subject. You are friends with a student who took the same course the year before you and he/she offers to give you his/her assignment to help you out. He/she got 85 for their essay. What is the likelihood that you would borrow your friend's assignment and use it to prepare yours? (1 = *not at all likely*, 9 = *very likely*).

Principal-components analysis confirmed that the scenario items loaded on their expected factors (two factors with eigenvalues greater than 1, factor loadings ranging from 0.44 to 0.94). Thus, the three items for each factor were averaged to form composite indices of self-reliance ($\alpha = .93$) and image protection ($\alpha = .47$).¹ As in the previous study, self-deceptive enhancement was found to be moderately associated with impression management ($r = .25$, $p < .05$). Neither promotion and prevention focus ($r = .09$, $p > .37$) nor individualism and collectivism ($r = .08$, $p > .45$) were significantly correlated.

To assess the validity of the scenarios, we tested whether the relation between individualism and scores on the self-reliance scenarios was mediated by trait self-deceptive enhancement and whether the relation between collectivism and scores on the image-protection scenarios was mediated by trait impression management. Individualism was significantly associated with both the self-reliance scenario scores ($\beta = 0.26$), $t(92) = 2.62$, $p < .01$, and trait self-deceptive enhancement ($\beta = 0.19$), $t(92) = 1.90$, $p < .05$, in separate regression equations. However, when individualism and trait self-deceptive enhancement were entered into the model simultaneously, the influence of individualism decreased ($\beta = 0.22$), $t(91) = 2.22$, $p < .05$, $r = .22$, whereas that of trait self-deceptive enhancement remained significant ($\beta = 0.20$), $t(91) = 1.99$, $p < .05$, $r = .20$, providing evidence for partial mediation. Similar results were obtained for the image-protection scenarios and trait impression management. Collectivism significantly predicted trait impression management ($\beta = 0.19$), $t(91) = 1.87$, $p < .05$, and scores on the image-protection scenarios ($\beta = 0.19$), $t(91) = 1.86$, $p < .05$, in separate regression equations. However, when collectivism and trait impression management were entered into the model simultaneously, collectivism was no longer significant ($\beta = 0.12$), $t(91) = 1.20$, $p > .23$, $r = .12$, whereas trait impression management remained significant ($\beta = 0.39$), $t(91) = 4.01$, $p < .001$, $r = .39$, suggesting complete mediation.

Results and Discussion

Cultural values and socially desirable responding. We expected that individualism (but not collectivism) would be positively related to scores on the self-reliance scenarios, whereas collectivism (but not individualism) would be positively related to scores on the image-protection scenarios. Regression analyses confirmed these predictions. When both individualism and collectivism scores were entered into the model simultaneously to pre-

dict self-reliance scores, individualism was a significant predictor ($\beta = 0.25$), $t(91) = 2.52$, $p < .05$, $r = .26$, but collectivism was not ($\beta = 0.13$), $t(91) = 1.32$, $p > .28$, $r = .14$. Similarly, when both individualism and collectivism were entered simultaneously to predict image-protection scores, collectivism was a significant predictor ($\beta = 0.18$), $t(91) = 1.79$, $p < .05$, $r = .18$, but individualism was not ($\beta = 0.08$), $t(91) = 0.77$, $p > .44$, $r = .08$. Thus, these results replicate those of the previous study using behavioral scenarios instead of trait measures of socially desirable responding.

Mediation analyses. We also expected that a promotion focus would mediate the relation between individualism and the self-reliance scenario scores and that a prevention focus would mediate the relation between collectivism and the image-protection scenario scores. Regression analyses confirmed these predictions. Individualism predicted scores on the self-reliance scenarios ($\beta = 0.26$), $t(92) = 2.62$, $p < .01$, and promotion focus ($\beta = 0.31$), $t(92) = 3.16$, $p < .005$, in separate regression equations. However, when the self-reliance scenario scores were regressed on promotion focus and individualism simultaneously, promotion focus remained significant ($\beta = 0.47$), $t(91) = 5.00$, $p < .001$, $r = .46$, but individualism did not ($\beta = 0.11$), $t(91) = 1.20$, $p > .23$, $r = .12$. A summary of these results can be found in Table 1. A Sobel test indicated that the mediation was significant ($z = 2.67$, $p < .01$). This pattern of results supports full mediation. Likewise, for the prevention focus mediation analyses, collectivism predicted scores on the image-protection scenarios ($\beta = 0.19$), $t(92) = 1.86$, $p < .05$, and prevention focus ($\beta = 0.33$), $t(91) = 3.36$, $p < .001$, in separate regression equations. However, when the image-protection scenario scores were regressed on prevention focus and collectivism simultaneously, prevention focus remained significant ($\beta = 0.22$), $t(90) = 2.03$, $p < .05$, $r = .21$, but collectivism did not ($\beta = -0.10$), $t(90) = 0.90$, $p > .36$, $r = .09$, indicating full mediation. A Sobel test indicated that the mediation approached significance ($z = 1.73$, $p < .08$).

These results show that the mediating role of regulatory focus can be extended to behavioral judgments that are consistent with socially desirable responding. Thus, the effects hold regardless of whether the dependent variable is a scale measure of socially desirable responding or behavioral manifestations of it. Further analyses confirmed this conjecture. When the same mediation analyses were conducted using Paulhus's (1991) Deception Scale measures of self-deceptive enhancement and impression management as the criterion variables (as was done in Study 1), the same pattern of results emerged. A promotion focus fully mediated the relation between individualism and self-deceptive enhancement,

¹ The alpha for this measure is lower than the generally accepted standard. The interitem correlation for the assigning difficult tasks to others in a team scenario was lower than for the other two. However, removing that item from the scale only marginally improved the scale reliability to $\alpha = .55$ and did not materially change the outcomes of any of the analyses. In addition, it may be argued that the domains assessed by each image-protection scenario (cheating on an exam, using a friend's paper, assigning difficult tasks to others) are different and thus may not be expected to correlate highly.

Table 1
Beta Weights for Cultural Values and Socially Desirable
Responding (Scenario Measure) in Study 2

No. and relation	Predicted relation	β
1. IND-SDE	Positive	0.26**
2. IND-IM	None	0.09
3. COLL-SDE	None	0.15
4. COLL-IM	Positive	0.19*
5. IND-PROM	Positive	0.31**
6. COLL-PREV	Positive	0.33***
7. IND-SDE ^a	Weakened from #1	0.11
8. COLL-IM ^b	Weakened from #4	0.10

Note. $N = 94$. IND = individualism; SDE = self-deceptive enhancement; IM = impression management; COLL = collectivism; PROM = promotion focus; PREV = prevention focus.

^a Controlling for PROM. ^b Controlling for PREV.

* $p < .05$. ** $p < .01$. *** $p < .001$.

and a prevention focus fully mediated the relation between collectivism and impression management.²

To show that promotion and prevention focus uniquely mediated the respective relations between culture and socially desirable responding we just tested, we also tested the possibility that prevention focus may have mediated the relation between individualism and self-deceptive enhancement and that promotion focus may have mediated the relation between collectivism and impression management. The results indicate that this was not the case. Prevention focus did not predict self-reliance scenario scores ($\beta = 0.03$), $t(91) = 0.30$, $p > .76$, $r = .03$, nor did promotion focus predict image-protection scenario scores ($\beta = 0.11$), $t(91) = 1.02$, $p > .71$, $r = .11$.

The results of this study provide further support for the hypothesized mediating role of regulatory focus in the relation between cultural values and socially desirable responding. Specifically, the results show that individualism is associated with a response style characterized by self-reliance, whereas collectivism is associated with a response style characterized by image protection, and these relations are mediated by promotion and prevention focus, respectively. Of importance, we successfully replicated Study 1 results using direct measures of individualism and collectivism, a different measure of prevention and promotion focus, and multiple measures of self-deceptive enhancement and impression management. The convergent findings increase the generality of the relations across measures.

Studies 1 and 2 provide relatively robust support for the relations between culture and socially desirable responding, as well as for the mediating role of regulatory goals. However, the boundaries of these findings remain unclear. Are these relations uniform for all people, or are they more pronounced among some individuals? Study 3 addressed this question by examining the potential moderating role of self-consciousness in the relation between cultural values, regulatory goals, and socially desirable responding. As elaborated earlier, we expect private self-consciousness to weaken the link between individualism, promotion focus, and self-deceptive enhancement and public self-consciousness to strengthen the link between collectivism, prevention focus, and impression management.

Study 3

Method

Participants and procedure. Four hundred seventy-two undergraduate students participated in exchange for class credit. After providing informed consent, participants were asked to complete a booklet of scales.

Measures. The measures of individualism ($\alpha = .73$) and collectivism ($\alpha = .74$) were the same as those used in Study 2, and the measures of promotion focus ($\alpha = .55$), prevention focus ($\alpha = .78$), self-deceptive enhancement ($\alpha = .66$), and impression management ($\alpha = .75$) were the same as those used in Study 1. Public and private self-consciousness were measured using Fenigstein et al.'s (1975) scale. Examples of items measuring private self-consciousness (10 items, $\alpha = .83$) include, "I never scrutinize myself" (reverse coded) and "I'm always trying to figure myself out." Examples of items measuring public self-consciousness (7 items, $\alpha = .80$) include, "I'm self-conscious about the way I look" and "I'm concerned about what other people think of me." Correlational analyses indicate a small association between self-deceptive enhancement and impression management ($r = .17$, $p < .001$), between promotion focus and prevention focus ($r = .19$, $p < .01$), and between individualism and collectivism ($r = .12$, $p < .01$). Public and private self-consciousness were moderately correlated ($r = .31$, $p < .001$).

Results and Discussion

Cultural values and socially desirable responding. As predicted, regression analyses with both individualism and collectivism simultaneously entered as independent variables indicated that individualism was positively related to self-deceptive enhancement ($\beta = 0.18$), $t(463) = 3.97$, $p < .001$, $r = .18$, but collectivism was not ($\beta = 0.04$), $t(463) = 0.78$, $p > .43$, $r = .04$. In contrast, collectivism was positively related to impression management ($\beta = 0.12$), $t(463) = 2.57$, $p < .01$, $r = .12$, but individualism was not ($\beta = -0.07$), $t(463) = -1.59$, $p > .11$, $r = .07$.

Moderated mediation analyses. We conducted a series of regression equations using standardized variables to test the moderated mediation models just outlined (Muller, Judd, & Yzerbyt, 2005).³ In the first equation, the dependent variable was regressed on the independent variable, the moderator, and their interaction. In the second equation, the mediator was regressed on the independent variable, the moderator, and their interaction. In the third equation, the dependent variable was regressed on the independent variable, the moderator, the mediator, and the interactions between independent variable and moderator and between the moderator and mediator. If the independent variable in the first and second equations and the interaction between the mediator and the moderator in the third equation are significant, then the criteria for moderated mediation have been fulfilled (Muller et al., 2005).

² In a separate study not reported here, similar results were obtained using the same measure of regulatory focus that was used in Studies 1 and 3.

³ We also tested for the same simple mediations predicted and observed for Studies 1 and 2. All of the predicted relations were replicated when we collapsed across levels of public and private self-consciousness.

First, we tested whether private self-consciousness moderated the interrelation among individualism, promotion focus, and self-deceptive enhancement. A summary of these results can be found in the top portion of Table 2. In the first and second equations, individualism significantly predicted self-deceptive enhancement ($\beta = 0.20$, $t(457) = 4.40$, $p < .001$, $r = .20$, and promotion focus ($\beta = 0.12$, $t(457) = 2.64$, $p < .01$, $r = .12$). In the third equation, private self-consciousness and promotion focus interacted to predict self-deceptive enhancement ($\beta = 0.10$), $t(455) = 2.35$, $p < .02$, $r = .11$, fulfilling all three criteria for moderated mediation.

To decompose these relations, we used a median split to divide participants into two groups based on their private self-consciousness scores ($Mdn = 4.80$) and conducted separate mediation analyses. For participants low in private self-consciousness, individualism significantly predicted self-deceptive enhancement ($\beta = 0.30$), $t(228) = 4.71$, $p < .001$, and promotion focus ($\beta = 0.17$), $t(228) = 2.64$, $p < .01$, in separate regression equations. In the third equation, when both individualism and promotion focus were entered in the model to predict self-deceptive enhancement, the influence of individualism decreased appreciably but remained significant ($\beta = 0.22$), $t(228) = 3.90$, $p < .001$, $r = .25$. Promotion focus also remained significant ($\beta = 0.41$), $t(228) = 7.05$, $p < .001$, $r = .42$, suggesting partial mediation. A Sobel test also supported the mediation ($z = 2.47$, $p < .02$).

In contrast, for participants high in private self-consciousness, in separate regression equations, individualism did not predict self-deceptive enhancement ($\beta = 0.10$), $t(230) = 1.62$, $p > .10$, or promotion focus ($\beta = 0.08$), $t(230) = 1.19$, $p > .23$, indicating no mediation. Hence, for participants scoring high in private self-consciousness, promotion focus did not mediate the relation between individualism and self-deceptive enhancement. Collectively, these findings support our hypothesis that the mediational relation of individualism \rightarrow promotion focus \rightarrow self-deceptive en-

hancement was stronger for participants who were low in private self-consciousness than for those who were high in private self-consciousness.

Next, we examined whether public self-consciousness moderated the link between collectivism, prevention focus, and impression management. The results of these analyses can be found in the bottom portion of Table 2. In the first and second regressions, collectivism significantly predicted impression management ($\beta = 0.12$), $t(459) = 2.71$, $p < .01$, $r = .13$, and prevention focus ($\beta = 0.14$), $t(459) = 3.03$, $p < .005$, $r = .14$. In the third equation, public self-consciousness and prevention focus interacted to predict impression management ($\beta = -0.09$), $t(457) = -2.07$, $p < .05$, $r = .10$, fulfilling all three criteria for moderated mediation.

To decompose these relations, we divided participants into two groups based on a median split of their public self-consciousness scores ($Mdn = 4.86$) and conducted separate mediation analyses for both groups. For participants high in public self-consciousness, collectivism predicted impression management ($\beta = 0.13$), $t(235) = 1.96$, $p < .05$, and prevention focus ($\beta = 0.16$), $t(235) = 2.38$, $p < .02$, in separate regression equations. In the third equation, prevention focus significantly predicted impression management ($\beta = 0.34$), $t(234) = 5.42$, $p < .001$, $r = .33$, but collectivism did not ($\beta = 0.07$), $t(234) = 1.20$, $p = .23$, $r = .08$. A Sobel test confirmed that the mediation was significant ($z = 2.18$, $p < .03$), providing evidence for full mediation.

For participants low in public self-consciousness, collectivism predicted both impression management ($\beta = 0.12$), $t(233) = 1.85$, $p < .07$, and prevention focus ($\beta = 0.11$), $t(235) = 1.76$, $p < .08$, in separate equations, although these relations only approached conventional levels of significance despite substantial power. When both collectivism and prevention focus were entered in the model to predict impression management, prevention focus remained significant ($\beta = 0.39$), $t(235) = 6.61$, $p < .001$, $r = .40$, but collectivism did not ($\beta = 0.08$), $t(235) = 1.24$, $p > .21$, $r =$

Table 2
Beta Weights for Cultural Values and Socially Desirable Responding as a Function of Public and Private Self-Consciousness in Study 3

No. and relation	Low private SC		High private SC	
	Predicted relation	β	Predicted relation	β
1. IND-SDE	Positive	0.30***	Weaker than for low private SC participants	0.10
2. IND-PROM	Positive	0.17***	Weaker than for low private SC participants	0.08
3. PROM-SDE ^a	Positive	0.41***	Positive	0.43***
4. IND-SDE ^b	Weakened from #1	0.22***	Weakened from #1	0.07
Drop in beta value from #1 to #4	Stronger than for high private SC participants	0.08	Weaker than for high private SC participants	0.03
No. and relation	Low public SC		High public SC	
	Predicted relation	β	Predicted relation	β
5. COLL-IM	Weaker than for high public SC participants	0.12 [†]	Positive	0.13*
6. COLL-PREV	Weaker than for high public SC participants	0.11 [†]	Positive	0.16*
7. PREV-IM ^c	Positive	0.39***	Positive	0.34***
8. COLL-IM ^d	Weakened from #5	0.08	Weakened from #5	0.07
Drop in beta value from #5 to #8	Weaker than for high public SC participants	0.04	Stronger than for low public SC participants	0.06

Note. $N = 472$. SC = self-consciousness; IND = individualism; SDE = self-deceptive enhancement; PROM = promotion focus; COLL = collectivism; IM = impression management; PREV = prevention focus.

^a Controlling for IND. ^b Controlling for PROM. ^c Controlling for COLL. ^d Controlling for PREV.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

.08. A Sobel test indicated that the mediation approached significance ($z = 1.70, p < .09$). Hence, although the mediation was supported in both conditions, it was stronger for participants high in public self-consciousness than for those low in public self-consciousness. Indeed, the drop in the influence of collectivism on impression management from the first to the third equation was 50% greater in the high public self-consciousness condition (drop in $\beta = 0.13 - 0.07 = 0.06$) than in the low public self-consciousness condition (drop in $\beta = 0.12 - 0.08 = 0.04$). The differential strength of the mediation for participants high and low in public self-consciousness was also supported by Muller et al.'s (2005) three-step model.

Integration of Results Across Studies

For some findings we have just reported, the predicted relations only approached conventional levels of significance. To ascertain the robustness of the results and to better understand the strength of the relations, we conducted a meta-analysis using the software Comprehensive Meta-Analysis (Borenstein & Rothstein, 1999) across the three studies and the one mentioned in Footnote 2, resulting in four distinct data sets. The key findings can be found in Table 3. The effect size was calculated using a fixed effects model when the Q statistic indicated that the homogeneity assumption was not violated; otherwise, the effect size was calculated using a random effects model.

As Table 3 indicates, all of the predicted relations were significant. Across the four studies, there is strong support for the mediating role of promotion focus in the relation between individualism and self-deceptive enhancement and the mediating role of prevention focus in the relation between collectivism and impression management. For instance, the effect size of the individualism–self-deceptive enhancement link reduced considerably when promotion focus was included in the model ($r = .15$) compared with when it was not included ($r = .30$). Moreover, the number of studies averaging a null effect that would be required to render the individualism–self-deceptive enhancement relation nonsignificant reduced from 76 when promotion focus was not included in the model to 22 when it was included. Similarly, the

effect size of the collectivism–impression management link was lower when prevention focus was included in the model ($r = .08$) compared with when it was not included ($r = .13$). Further, the number of studies averaging a null effect required to render the collectivism–impression management relation nonsignificant reduced from 13 when prevention focus was not included in the model to 4 when it was included.

In one instance (the relation between individualism and impression management), we expected to find no significant relation, and this was the case in all of the studies. However, as the meta-analysis shows, when summing across all of the studies, the effect is significant, albeit very small. Indeed, only two more studies finding null effects would be needed to render the effect size nonsignificant.

General Discussion

Theoretical and Substantive Contributions

Our goal in this research was to determine whether and how cultural values influence distinct forms of socially desirable responding. Instead of seeking to explain these influences in terms of static characteristics of the relevant cultures, our goal was to explicate the basic motivational processes that mediate the dynamic unfolding of socially desirable responding differences across cultural values. Furthermore, we sought a more nuanced description of the phenomenon by specifying why and under what circumstances the motivations will be stronger or weaker.

Our research shows that cultural values are related to socially desirable responding. Some past studies have implied that people in collectivist cultures are more prone to socially desirable responding than are those in individualist cultures (Johnson, 1998; Johnson & van de Vijver, 2002; Jones, 1984; Triandis, 1995; van Hemert, van de Vijver, Poortinga, & Georgas, 2002). Our research qualifies these findings and shows that both individualism and collectivism are related to socially desirable responding but in different ways. Across three studies that used different measures of cultural values and socially desirable responding, we found that collectivism is related to impression management but individual-

Table 3
Meta-Analysis of the Key Relations Across the Studies

No. and relation	Predicted relation	Effect size (r)	Confidence interval (95%)	File-drawer N	Q for homogeneity test	p for homogeneity test
1. IND–COLL	No prediction	.07	.01 < r < .14	0	3.31	.19
2. PROM–PREV	No prediction	.01	–.03 < r < .23	7	10.59	.01
3. SDE–IM	Positive	.18	.12 < r < .24	30	0.48	.92
4. IND–SDE	Positive	.30	.15 < r < .44	76	15.01	.00
5. IND–IM	None	–.08	–.15 < r < –.01	2	0.93	.82
6. COLL–SDE	None	–.06	–.32 < r < .21	0	48.27	.00
7. COLL–IM	Positive	.13	.07 < r < .19	13	0.59	.90
8. IND–PROM	Positive	.31	.09 < r < .50	67	33.75	.00
9. COLL–PREV	Positive	.18	.11 < r < .24	32	3.89	.27
10. IND–SDE ^a	Weakened from #4	.15	.01 < r < .21	22	2.67	.44
11. COLL–IM ^b	Weakened from #7	.08	.02 < r < .14	4	0.40	.94

Note. The file drawer N refers to the number of studies required to nullify the observed meta-analytic results and render them nonsignificant. It was calculated using two-tailed tests. IND = individualism; COLL = collectivism; PROM = promotion focus; PREV = prevention focus; SDE = self-deceptive enhancement; IM = impression management.

^a Controlling for PROM. ^b Controlling for PREV.

ism is not, whereas individualism is related to self-deceptive enhancement but collectivism is not.

Our research also indicates that regulatory focus mediates these relations. Because individualists' stronger promotion focus draws their attention to the self's positive distinctiveness, individualists tend to engage in self-deceptive enhancement. In contrast, because collectivists' stronger prevention focus directs their attention to avoiding loss of face in social situations, collectivists tend to engage in impression management.

We also identified boundary conditions of the cultural values–regulatory focus–socially desirable responding relations. Because people who are high in private self-consciousness have keen insights into their own personalities and minds, they should have a more realistic understanding of their skills and capabilities and hence be less prone to self-deceptive enhancement. Consistent with this expectation, our results showed that the individualism–promotion focus–self-deceptive enhancement relation is stronger for people low (vs. high) in private self-consciousness. In contrast, publicly self-conscious people, who seek to mold others' impressions of themselves, should be more likely to engage in impression management. Our results also supported this expectation: The strength of mediation of the collectivism–prevention focus–impression management relation is stronger for those who are high (vs. low) in public self-consciousness.

Methodological Contributions

In survey research, it is often assumed that socially desirable responding adds noise to the data and is therefore an impending threat to the validity of self-reported surveys (Fisher, 1993). Various experimental and statistical techniques have been devised to disentangle this noise from the data (e.g., Paulhus, 1991; van de Vijver & Leung, 1997). If a particular kind of socially desirable responding is more prevalent in one cultural group than another, various statistical tools are available to establish measurement equivalence of the data before performing cross-cultural comparisons. However, if culture-dependent variations in socially desirable responding are due to distinct motivational predilections, as we found, then socially desirable responses should not necessarily be treated as noise. Instead of separating and eliminating them from the respondents' answers, socially desirable responses may be understood in terms of their relevance to the prevalent values in a cultural group (see also Hamamura, Heine, & Paulhus, 2008). When a measure is highly correlated with socially desirable responding, the measure is not necessarily contaminated or invalid. Instead, the construct assessed by this measure may be functionally connected to certain chronic cultural values. This may explain why many attempts to adjust for socially desirable responding have been unsuccessful (e.g., Kozma & Stones, 1987; McCrae & Costa, 1983; also see Heine et al., 2002). By shedding light on the motivational underpinnings of culture-dependent variations in socially desirable responding, this research enhances our understanding of the reasons why people with different cultural values may be likely to engage in the distinct types of socially desirable responding and of the distinct goals served by doing so.

In the event that researchers do want to control for socially desirable responding, our research also provides important direction on which effects are critical in different cultural groups and need to be measured and controlled under various conditions. For

instance, recall that higher levels of private self-consciousness can reduce the interrelations between individualism, promotion focus, and self-deceptive enhancement and that lower levels of public self-consciousness can reduce the interrelations between collectivism, prevention focus, and impression management. To reduce culture-dependent socially desirable responding when collecting survey data, investigators can use methods that increase (or avoid decreasing) private self-consciousness or reduce (or avoid increasing) public self-consciousness. In this regard, research on public and private self-consciousness has identified some techniques for manipulating public and private self-consciousness. For instance, the presence of video cameras, full-length mirrors, and an audience can be used to situationally increase public self-consciousness, and the presence of a small mirror (reflecting head and shoulders only) and providing instructions to focus on personal thoughts, feelings, and emotions can be used to situationally increase private self-consciousness (Govern & Marsch, 2001; Heine, Takemoto, Moskalkenko, Lasaleta, & Henrich, 2008; Webb, Marsh, Schneiderman, & Davis 1989). Applying these findings to reducing culture-dependent socially desirable responding, it seems that the overt use of video cameras and reminders that an audience is viewing—both of which are routinely used in focus group research—should be avoided to minimize impression management. It also seems that providing specific instructions to focus on thoughts, feelings, and emotions, and when practical, having respondents complete survey instruments in cubicles that have a mirror as a backdrop, may reduce self-deceptive enhancement. In line with these arguments, Heine et al. (2008) reported that Canadian participants (who are known to highly individualistic) who were in front of a mirror were more self-critical (i.e., engaged in less self-deceptive enhancement) than those who were not in front of a mirror.

Conclusions

As noted, there is a vast literature on cultural differences in response styles, and a large number of studies have documented differences in Eastern and Western cultures on various aspects of socially desirable responding. However, most studies investigating socially desirable responding have not implicated individualism and collectivism specifically. In the present research, we showed that East–West differences in socially desirable responding (Study 1) mirror the associations between personal endorsement of individualism–collectivism and socially desirable responding (Studies 2 and 3). Furthermore, the same motivational factors mediated both the cultural group differences in socially desirable responding (Study 1) and the associations between individualism–collectivism and socially desirable responding (Studies 2 and 3). The parallel results we obtained from comparing Chinese and Americans and from assessing individual differences in individualism and collectivism lend credence to the possibility that individualism–collectivism and regulatory focus underlie previously obtained East–West differences in socially desirable responding. That said, we may risk committing the ecological fallacy if we infer from our results that individual differences in values and group differences in values operate in the same way to influence socially desirable responding (Fischer & Smith, 2003; Smith, 2004b). Nonetheless, the dualism between individual values and cultural values should not be oversold. As Triandis (1989) argued,

the level of cultural individualism (collectivism) reflects the ecological affordances of the private (collective) self in the cultural environment. Thus, individuals in a predominantly individualist (collectivist) society are more likely to sample aspects of the private (collective) self when pursuing their valued goals in the society. To the extent this is the case, both cultural and individual individualism (collectivism) may reflect the same goal priorities afforded by the environment and the constraints the cultural environment imposes on the pursuits of individual goals. In keeping with the spirit of this line of thinking, the present research sought to identify the common principles pertaining to how individuals pattern their self-presentation strategies by negotiating goal priorities (promotion or prevention goals) against the background of the dominant values in their individual phenomenology and shared reality. That said, we invite future studies that directly examine how individuals negotiate their goal priorities and self-presentation strategies at the interface of both cultural and individual values.

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