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# Enhancement Bias in Descriptions of Self and Others

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*Self-enhancement bias is the tendency to describe oneself more positively than a normative criterion would predict. This article reviews the common-rater and common-target paradigms for the assessment of enhancement bias and proposes a social-normative paradigm as an alternative. In this paradigm, enhancement bias is conceptualized as an egocentric pattern of discrepancies between self-ratings and relevant social norms. Correlations between a person's ratings of trait descriptiveness and ratings of trait desirability indicate the degree of enhancement (or diminishment) when the group averages of these ratings are controlled. Two studies demonstrate that most people self-enhance, expect others to self-enhance, and abstain from self-enhancement when instructed to estimate the social norms. Results suggest that enhancement is a controllable bias rather than a cognitive illusion.*

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People tend to emphasize the positive when they describe themselves. They express optimism about the future (Heckhausen & Krueger, 1993; Weinstein, 1980), they feel in control of their lives (Krueger & Heckhausen, 1993; Langer, 1975), and they describe their own personalities in highly favorable terms (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; Brown, 1986). These egocentric judgment patterns raise important questions. When is a self-description too positive? What are the psychological processes producing self-enhancement biases? Are such biases so subtle that they emerge only in controlled studies, or do people have an intuitive grasp of their existence? In search of some preliminary answers, I review and critique existing paradigms of self-enhancement research. I then propose a new paradigm and test some of its predictions.

## THE COMMON-RATER AND THE COMMON-TARGET PARADIGMS

Philosopher Adolf Horwicz expressed the spirit of the common-rater paradigm (CRP) when he asked "How

much more intelligent, soulful, better, is everything about us than about anyone else?" (Horwicz, 1878, p. 267). The CRP is popular among social psychologists interested in social comparison processes. The paradigm requires participants to rate themselves and another person, or to rate themselves relative to the average. An informal class survey illustrates this approach. No student expected to perform worse than average on the midterm exam, and 47% claimed that "For a logical problem that 20% of Brown students could solve, [they] would come up with a solution." Effects such as these occur across a wide variety of tasks and contexts. Descriptions of personality are no exception. Compared with their ratings of the average person, most people rate desirable attributes to be more descriptive of themselves and undesirable attributes to be less descriptive (see Taylor & Brown, 1988, for a review).

The CRP has two limitations. First, it is possible that most people are better than average. Assuming that upper-division students are a positively biased sample of the student population, they may indeed be more likely to solve difficult logical problems. Even within this select group, most members may deliver above-average exams if the distribution of their scores is positively skewed.<sup>1</sup> Unless distributional biases are controlled, the interpretation of self-other differences remains ambiguous. An individual's claim to be better than average need not be erroneous or egocentric, but the CRP does not provide a mechanism that would discriminate between the self-enhancers and the actual elite.

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Second, investigators typically do not know, let alone control, whom the rater imagines the average other to be, yet they tend to assume that ratings of the average other are unbiased. By implication, they fault ratings of the self as being biased when self-other differences occur. This strategy ignores the possibility that ratings of the other may also be susceptible to bias. Other-ratings may be even more biased because knowledge of others tends to be less certain and less accessible than knowledge of the self. Two types of bias can be envisioned: People may claim that below-average others are really average in an effort to make themselves look good, or they may rate average others more negatively than they really are (Wills, 1981). These maneuvers would confound self-enhancement and other-diminishment (Kowalik & Gotlib, 1987). On the other hand, many people project their attributes to others (Krueger, 1998). Raters who describe themselves positively may view other individuals as being above average as well. This maneuver would confound self-enhancement and other-enhancement.

The commontarget paradigm (CTP) is popular among personality psychologists interested in the accuracy of self-perception. The criterion for the accuracy of self-perception is external to the person because the CTP requires participants to rate themselves and be rated by observers (Campbell & Fehr, 1990). To ensure the reliability and validity of the criterion, ratings (or rankings) by several diverse observers (peers and staff psychologists) are aggregated. This strategy avoids the distribution and criterion problems that plague the CRP. Self-enhancement, when it occurs, is not likely to result from observer harshness (Colvin, Block, & Funder, 1995; John & Robins, 1994). The small size of the self-enhancement effects in the CTP suggests that the CRP confounds the enhancement of the self with the diminishment of the average other.

Across cases, however, the findings obtained in the two paradigms would converge if both were brought to bear on the same data. Consider hypothetical John and fictitious Paul, who rate themselves and each other on a desirable personality trait. Both have a true score of 5 on a 9-point scale, and both inflate their own score by 2 points while perceiving the other accurately. The CRP would show that John rates himself more favorably than he rates Paul, and the CTP would show that John rates himself more favorably than he is rated by Paul. Even if the true scores varied across raters and if their ratings contained some error, the results in the CRP and the CTP would converge in the long run. The higher John rates himself, the more likely he is to rate Paul lower (CRP) and to receive a lower rating from Paul (CTP). Although it is possible that one rater shows self-enhancement according to one paradigm while showing self-

diminishment according to the other, it is not possible that both raters self-enhance according to one (the same) paradigm and self-diminish according to the other. For these reasons, a negative correlation between the results of the two paradigms is unlikely.

Both paradigms treat self-enhancement as the tendency to rate socially desirable attributes as too descriptive of the self and socially undesirable attributes as not descriptive enough. That is, the variance of interest lies in the individual differences in ratings of trait desirability. Individual differences in ratings of trait desirability are treated as measurement error and are eliminated through aggregation. In other words, both paradigms consider differences in desirability ratings only between traits, not between people. One consequence of this strategy is that across raters, self-enhancement effects covary with the positivity of the self-image. A person who rates socially desirable traits as highly self-descriptive and rates socially undesirable traits as weakly self-descriptive expresses a positive self-image and is likely to be charged with self-enhancement. In theory, both paradigms can identify exceptions to this pattern. People with positive self-images may self-diminish by rating others even more positively (CRP) or by being rated more positively by others (CTP). People with negative self-images may self-enhance by rating others even more negatively (CRP) or by being rated more negatively by others (CTP). In practice, however, ceiling and floor effects limit the expression of self-diminishment and self-enhancement, respectively. This limitation is troublesome because it may obscure psychologically relevant forms of bias.

#### THE SOCIAL-NORMATIVE PARADIGM

Given social norms of what constitutes desirable and undesirable personalities, individuals differ. Some personalities are indeed more desirable than others (Colvin & Block, 1994). The proposed new look at biases of self-description focuses on the discrepancies between how a person describes him or herself and how the same person would be described given prevalent social norms. The goal of this approach is to consider the possibility that a person's self-description may be enhanced or diminished at any level of normative description. The key innovation of the social-normative paradigm lies in its assumption about trait desirability. Whereas both traditional paradigms assume that desirability is a property only of the trait, the social-normative paradigm assumes that the person's self-description also affects the perception of trait desirability. Although interrater correlations of desirability ratings across traits are high (e.g., mean  $r = .84$ , Krueger, 1996), the average (i.e., social) desirability ratings may not fully capture individuals' perceptions. Interrater variability in ratings of trait desir-

ability may be, in part, systematic and egocentric, such that most individuals rate self-descriptive traits as more desirable than others do, and rate nondescriptive traits as less desirable than others do. People may agree, for example, that it is better to be kind than cold, but their self-descriptions may predict the extremity of their ratings of trait desirability. To test the self-enhancement hypothesis, each person's bias will be assessed by correlating the ratings of trait descriptiveness with the ratings of trait desirability ratings while controlling for the group averages of the desirability ratings (i.e., social desirability). A positive partial correlation would indicate that the person's self-image is more positive than the traits' social desirabilities would predict. A negative partial correlation would indicate self-diminishment. These biased patterns remain undetected in the traditional paradigms because individual differences in desirability ratings are aggregated away.

The rationale for the self-enhancement hypothesis follows from well-documented egocentric biases. People evaluate objects (physical or symbolic) with reference to the self. For attitudes, the congruence between possession (i.e., self-reference) and evaluation is obvious. People have attitudes because they feel that their possession is good (Eiser, 1986). It would be odd to say that "I support regressive taxation but I think it is a terrible idea." Egocentric evaluations occur even when possession is involuntary. People despise villains less whose birthdays coincide with their own (Finch & Cialdini, 1989), they value goods more once they own them (Thaler, 1980), and they prefer letters occurring in their own names (Nuttin, 1985). In-group members appear more favorable than out-group members even when group membership has no discernible meaning (Howard & Rothbart, 1980).

Such egocentric evaluations may signal attempts to establish balanced relations between units (possessions) and sentiments (evaluations; Abelson et al., 1968; Heider, 1958). There is no reason why egocentric balance relations should not apply to perceptions of personality traits. It has been shown, for example, that people rate socially desirable behaviors as more prototypic of a target trait when the trait describes them than when it does not (Dunning & McElwee, 1995); similarly, they see self-descriptive traits as being most central to the successful execution of socially desirable roles (Dunning, Perie, & Story, 1991; Kunda, 1987). Lambert and Wedell (1991) found that people rate an ambiguous behavior as being more desirable when the relevant target trait describes them than when it does not. Both Dunning and Lambert view increases in balance relations as a consequence of differences in egocentric construals. In the case of ratings of trait desirability, people who describe themselves as cold may envision different (i.e., more desirable) overt

behaviors or hidden meanings than do people who reject that trait.

These examples suggest that egocentric balance relations occur for socially desirable and undesirable characteristics alike. In other words, enhancement bias may be independent of the normative positivity of the self-description. A person who describes herself as lazy and unkind, for example, has a negative normative self-image but may self-enhance by overrating the desirability of being lazy or by underrating the desirability of being kind.<sup>2</sup> If this is so, the self-enhancement effects observed in the social-normative paradigm will be independent of traditional measures of bias. Someone who describes himself as lazy may overrate the desirability of laziness (social-normative self-enhancement) and rate another person to be less lazy than himself (self-diminishment in the CRP) or be rated by others as less lazy (self-diminishment in the CTP).

#### AWARENESS

Perhaps people realize that they and others self-enhance. The informal test on percentile rankings, reported above, suggested they do. When asked what percentage of students would claim to solve a problem with a known success rate of 20%, estimates were adequately inflated ( $M = 47\%$ ). Forty-seven percent of students did expect to succeed. Possibly, people know that their own ratings of trait desirability are self-enhancing and perhaps they can correct the egocentric variance. This awareness hypothesis is consistent with models of social judgment that postulate the existence of flexible—and often accurate—theories about sources of bias (Baumeister & Newman, 1994; Strack, 1992; Wegener & Petty, 1995). People correctly attribute attitudinal contrast effects (Dawes, Singer, & Lemons, 1972), in-group favoritism (Vivian & Berkowitz, 1992), and social projection (Krueger & Zeiger, 1993) to others. They also partially recognize self-serving biases in causal attribution (Snyder, Stephan, & Rosenfield, 1976) and the actor-observer biases in trait attribution (Krueger, Ham, & Linford, 1996).

The self-enhancement hypothesis and the awareness hypothesis were tested in two studies that concurrently examined the perspectives of the standard paradigms (CRP and CTP in Studies 1 and 2, respectively).

#### STUDY 1: ENHANCEMENT AND CORRECTION

Participants described themselves and the average other on a series of trait adjectives. Half of the participants also rated the personal desirability of each trait (personal desirability condition), and the other half estimated the average of the desirability ratings obtained in a separate sample (social desirability condition). For

each rater, the zero-order correlation between ratings of trait descriptiveness and the group averages of the ratings of trait desirability indexed the normative positivity of the self-description. The correlations between ratings of trait descriptiveness and the person's own ratings of trait desirability indexed enhancement bias when the group averages of desirability ratings were controlled. The self-enhancement hypothesis was that most of these partial correlations would be positive, and that across raters, these enhancement biases would be independent of the normative positivity of the self-descriptions. The awareness hypothesis was that raters could correct their own self-enhancement, so that partial correlations would be smaller in the social desirability condition than in the personal desirability condition. The CRP effect was expected to be replicated in that the average desirability ratings would be more highly correlated with descriptions of the self than with descriptions of the average other. The social-normative self-enhancement effect was expected to be independent of the CRP effect.

### Method

#### PARTICIPANTS AND MATERIALS

Students in an introductory psychology course ( $N=138$ ) at the University of Rhode Island participated in exchange for course credit. All participants completed a questionnaire during class time. Eighteen trait-descriptive adjectives were selected from Goldberg's (1973) list of 1,710 adjectives. Goldberg reported the average desirability ratings obtained from University of Oregon ( $N=187$ ) and University of Michigan ( $N=100$ ) students, as well as the percentage of students who considered the term self-descriptive. The 18 traits were candid, dependent, domineering, easygoing, expressive, extroverted, intellectual, jealous, lazy, moody, nervous, outspoken, perfectionistic, quiet, selfish, shy, sophisticated, and traditional. Across traits, the average desirability ratings obtained in Oregon and in Michigan were highly correlated ( $r=.87$ ). The grand mean of the desirability ratings (assessed on a 9-point scale and computed across Oregon and Michigan samples) was near the midpoint of the scale ( $M=5.13$ ,  $SD=1.26$ ). The most negative trait was selfish ( $M=3.08$ ); the most positive trait was expressive ( $M=7.08$ ). The average interval between the mean desirability ratings of the rank-ordered traits was .24. The list did not include extremely desirable or extremely undesirable traits to minimize ceiling and floor effects in personal desirability ratings.

#### DESIGN AND PROCEDURE

In varying order, participants made three types of ratings for each adjective: descriptiveness for the self, descriptiveness for the average other, and desirability. Below the query "Does the trait describe you?" the traits

were listed alphabetically and raters were instructed to enter a "1" if the trait was self-descriptive; otherwise they were to enter a "0." On a separate page, the query "Does this word describe the average person of your age and sex?" elicited descriptions of the average other. Desirability ratings were collected in two ways. In the personal desirability condition, raters were asked "How desirable or undesirable do you feel it is for people to be or act this way?" (1 = *very undesirable*, 5 = *neutral*, 9 = *very desirable*). In the social desirability condition, raters learned that previous participants had rated the personal desirability of the traits. They were shown the rating scale and then read that

*your task is to estimate the average desirability rating for each trait, using the scale above. The rating you are making may or may not reflect your own judgment of the desirability of the trait. The important thing is to guess as accurately as possible the average rating expressed by the group.*

### Results

Mean ratings of trait desirability (grand  $M=4.79$ , mean  $SD=1.90$ ) were highly correlated with the mean ratings from the Oregon sample,  $r(16)=.73$ ,  $p<.01$ , and the Michigan sample,  $r(16)=.92$ ,  $p<.01$ . Interrater reliabilities were computed by correlating each rater's responses with the responses of each other rater across items. The means of these pairwise correlations, after  $r$ - $Z$ - $r$  transformations, showed that ratings of trait desirability were more reliable (personal desirability condition:  $M=.62$ ; social desirability condition:  $M=.57$ ) than ratings of trait descriptiveness (self-ratings:  $M=.13$ ; average-other ratings:  $M=.18$ ).

#### IDIOGRAPHIC ANALYSES

The first analysis addressed self-enhancement as conceptualized in the CRP. For each rater, point-biserial correlations between ratings of trait descriptiveness (of self or the average other) and ratings of trait desirability were computed.<sup>3</sup> The means, displayed in the top two rows of Table 1, show that these correlations were greater when the target was the self rather than the average other. A 2 (target: self, other)  $\times$  2 (rating: personal vs. social desirability) mixed-design analysis of variance (ANOVA) with dependent measures on the first variable was performed on the  $Z$  scores. This analysis yielded the expected effect of target,  $F(1, 133)=49.63$ ,  $p<.001$ . The shape of the interaction between rating condition and target indicated that the CRP enhancement effect was larger in the personal desirability condition than in the social desirability condition,  $F(1, 133)=9.98$ ,  $p<.05$ . Even in the social desirability condition, however, the bias was reliable,  $F(1, 73)=10.02$ ,  $p<.01$ .

**TABLE 1: Experiment 1: Mean Within-Subjects Correlations Indicating the Positivity of Person-Descriptions (self and other) and the Degree of Self-Enhancement**

Type of Correlation	Condition	
	Personal Desirability	Social Desirability
Zero-order: Positivity of description		
Self with average desirability	.26** (.35)	.22** (.43)
Average other with average desirability	-.08 (.24)	.04 (.44)
Partial: self-enhancement		
Self with desirability by average desirability	.35** (.34)	.14** (.33)
Self with desirability by average desirability by average other	.32** (.36)	.10* (.34)

NOTE: Standard deviations of the *Z* scores are in parentheses.

\* $p < .01$ .

\*\* $p < .001$ .

The second analysis addressed the self-enhancement hypothesis as conceptualized in the social-normative paradigm. According to this hypothesis, correlations between ratings of trait descriptiveness for the self and ratings of trait desirability would be positive even when the group averages of the desirability ratings were controlled. As shown in the left column of the third row of Table 1, the mean enhancement index was reliable. As suspected, however, descriptions of the average other were correlated with descriptions of the self in the personal desirability condition ( $M = .18$ ) and in the social desirability condition ( $M = .28$ ). To test whether these projective descriptions of the other affected the degree of self-enhancement, the partial correlations were computed again while also controlling for the rater's descriptions of the average other. As shown in the last row of Table 1, projection did not diminish the self-enhancement effect,  $t(135) < 1$ .

The awareness hypothesis stated that there would be less self-enhancement in the social desirability condition than in the personal desirability condition. The decrease in the partial correlations was reliable (see Table 1),  $t(135) = 3.83$ ,  $p < .001$ , but it was unclear whether raters reduced their self-enhancement by changing their ratings of trait desirability or by changing their ratings of trait descriptiveness. Trait-by-trait analyses were performed to test whether raters in the social desirability condition made less egocentric ratings of trait desirability.

#### TRAIT-BASED ANALYSES

With the exception of the trait "easygoing," average personal ratings of trait desirability were higher among those raters who considered the trait to be self-descriptive than among those who did not consider it to be self-

descriptive. These enhancement effects were smaller in the social desirability condition. For ease of display and convenience of analysis, the 72 mean desirability ratings (18 traits  $\times$  2 descriptiveness  $\times$  2 rating conditions) were standardized and then averaged separately for the 6 negative traits (selfish, lazy, jealous, moody, nervous, and shy), the 6 neutral traits (quiet, domineering, perfectionistic, dependent, traditional, and outspoken), and the 6 positive traits (candid, extroverted, sophisticated, expressive, intellectual, and easy-going). Figure 1 shows the 12 average *Z* scores. A 2 (rating: personal vs. social desirability)  $\times$  2 (descriptiveness: yes, no)  $\times$  3 (valence: negative, neutral, positive) mixed-design ANOVA with dependent measures on the last two variables showed the expected effects. Raters who considered a trait to be self-descriptive gave higher desirability ratings than raters who did not consider the trait to be self-descriptive,  $F(1, 10) = 32.98$ ,  $p < .001$ . The type of rating moderated this effect,  $F(1, 10) = 6.57$ ,  $p < .05$ . Simple comparisons revealed that the effect of descriptiveness was stronger for ratings of personal desirability,  $F(1, 5) = 21.13$ ,  $p < .01$ , than for ratings of social desirability,  $F(1, 5) = 13.67$ ,  $p < .05$ . The social desirability of the traits (valence) had the expected effect,  $F(2, 20) = 350.61$ ,  $p < .001$ , and the lack of interactions suggested that desirability ratings were self-enhancing at all levels of social desirability.

#### ACROSS-RATERS ANALYSES

To examine whether the social-normative enhancement effects were independent of traditional biases, individualized enhancement indices were created for the CRP. Each rater's *Z*-scored correlation of the positivity of other-image was subtracted from the *Z*-scored correlation of the positivity of self-image. Across raters, the social-normative index of enhancement (i.e., the partial correlation) was independent of the CRP index ( $r = .08$  and  $.03$  in the two conditions), and it was independent of the positivity of the normative self-image ( $r = .002$  and  $.09$ ). Also as expected, the CRP index covaried with the positivity of the self-image,  $r(62) = .72$ ,  $p < .01$ , and  $r(72) = .81$ ,  $p < .01$ , in the personal desirability and social desirability conditions, respectively.

#### Discussion

Study 1 provided an initial demonstration of a social-normative view of enhancement biases. The key hypothesis was that personal desirability ratings would systematically enhance the self-descriptions of most raters. Most traits were rated as more desirable by participants who considered them self-descriptive than by participants who did not consider them self-descriptive. Across raters, the social-normative index of bias was not correlated with either the CRP index or with the normative positivity of the self-image. On average, the social-normative

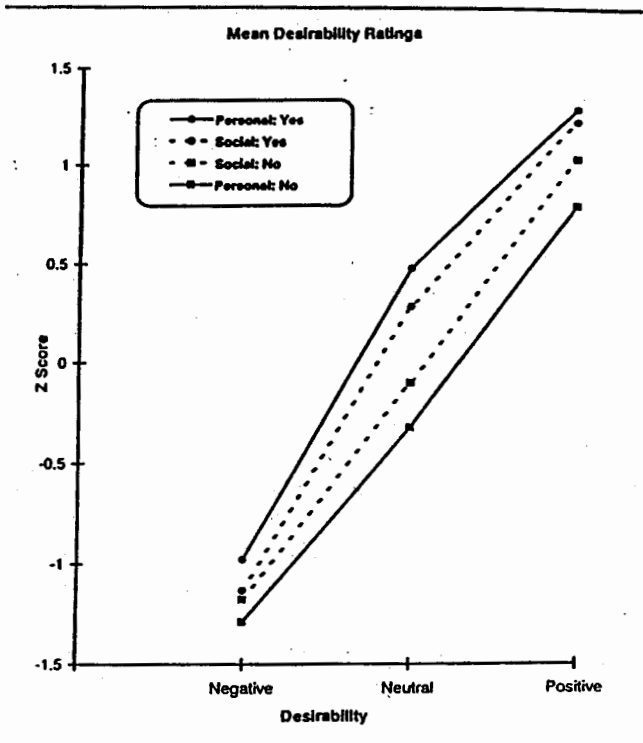


Figure 1 Average personal ratings of trait desirability and social desirability as made by participants who considered the trait self-descriptive and participants who did not consider the trait self-descriptive.

paradigm appears to be more sensitive to self-enhancement bias than the CRP. In the personal desirability condition, 89% of the raters self-enhanced according to the social-normative index, whereas only 54% self-enhanced according to the CRP index. Supporting the view that self-enhancement is controllable, both indices were smaller in the social desirability condition.

Raters' awareness of their own self-enhancement biases implies that they realize that other people rate the desirability of traits differently. When estimating the social norm of the trait desirabilities, individual raters showed insight into the fact that others as a group would not necessarily share their personal views. It seems likely, therefore, that raters also expect individual others to self-enhance. Following balance theory, the logic is simple. If John thinks he is talkative, he can balance this cognition with the associated sentiment that the trait talkative is highly desirable. Upon reflection, however, John may realize that quiet Paul rates the trait talkative to be less desirable. The goal of Study 2 was to examine whether raters would attribute enhancement bias to other individuals they know. This study also examined whether social-normative self-enhancement is independent from the bias as measured in the CTP.

#### STUDY 2: ENHANCEMENT AND ATTRIBUTION

Participants were recruited in pairs of roommates in university dormitories. One participant, the target person, made ratings to describe him or herself, while the other, the observer, made ratings to describe the target person. Both participants made two sets of ratings. Standard ratings were descriptions of the target from the participant's own point of view (i.e., self- and observer-ratings). Predicted ratings were estimates of how the roommate would rate the target. This means that targets predicted how they were rated by the observers, while observers predicted how the targets rated themselves.

As was illustrated earlier, enhancement bias in the CTP is correlated with the bias in the CRP. The average level of bias, however, tends to be smaller in the former than in the latter paradigm. Differences in target familiarity may account for this effect (Prentice, 1990). In the CTP, observers know the target, and because of this, their ratings may be considered valid criteria for the accuracy of the target's self-perception (Colvin et al., 1995). In the CRP, it is unclear how well raters know the (average) other. When the other is a familiar individual (e.g., a friend or relative), self-enhancement biases disappear or reverse (Alicke et al., 1995; Brown, 1986; Edwards, 1959; Goldberg, 1978). Because roommates tend to know each other well, no self-enhancement was expected to emerge in the present CTP analysis.

The main prediction was that targets would self-enhance relative to social norms. To increase the sensitivity of measurement, the methods developed for Study 1 were modified. Recall that in Study 1, only social norms of trait desirability were assessed and controlled. Norms of trait descriptiveness were not assessed. Such norms exist, however, as people collectively consider some traits to be more self-descriptive than others. When trait descriptiveness is rated on a graded scale, the average rating may represent a social norm. The modified measurement of enhancement (or diminishment) bias therefore involves the analysis of four interrelated variables: The person's own ratings of trait descriptiveness, his or her own ratings of trait desirability, and the group averages of the two sets of ratings. One may expect all four variables to be positively correlated because people hold shared (i.e., normative) views regarding which traits are common and which are desirable. The correlation between the group norms means that most individuals have positive self-images, as they are typically defined. That is, most correlations between a person's ratings of trait descriptiveness and the average ratings of trait desirability should be positive.

The test of the enhancement hypothesis requires that the correlations between each person's ratings of trait descriptiveness and his or her own ratings of trait desir-

ability ratings be computed while both sets of averages are partialled out. Self-enhancement occurs when a person considers a trait to be more self-descriptive than the group does and when the person considers this trait to be more desirable than the group does; or when the person considers a trait to be less self-descriptive than the group does and considers it to be less desirable than the group does. In other words, idiosyncratic deviations from group norms are self-enhancing when their direction is consistent across the two norms. Inconsistent deviations indicate self-diminishment. Relative to the group norm, self-diminishers overrate a trait's descriptiveness while underrating its desirability, or they under-rate a trait's descriptiveness while overrating its desirability. The self-enhancing or self-diminishing quality of the deviations depends only on their direction (relative to each other), not on the normative level of trait descriptiveness or desirability.

The awareness hypothesis was that observers would expect targets to consider highly self-descriptive traits to be highly desirable and to consider nondescriptive traits to be highly undesirable. Partial correlations between observers' predicted ratings of trait descriptiveness and their predicted ratings of trait desirability capture attributions of self-enhancement when the two sets of averages are partialled out.

Again, enhancement bias was expected to be independent of the normative positivity of the person description. It should be possible to obtain any combination of enhancement or diminishment, on one hand, and a positive or negative normative person-image, on the other. A person with a negative self-image may be self-enhancing, while a person with a positive self-image may be self-diminishing. It also was expected that self-enhancement scores would be independent of bias as measured in the CTP. CTP scores, however, should covary with positivity of self-image.

#### Method

Participants were 30 male and 50 female first and second-year undergraduate students who volunteered to participate. The following 18 adjectives were selected from Baxter and Goldberg (1987): benevolent, brilliant, fidgety, forward, happy, imitative, impulsive, inconsistent, innovative, inquisitive, particular, patient, pretentious, sarcastic, selfish, self-satisfied, sophisticated, and vibrant. The experimenter recruited participants in undergraduate dormitories. If both roommates agreed to participate, he designated the person to his right as the target and the other as the observer. Participants were not informed whom their roommate was rating. The first part of the questionnaire elicited standard ratings of the target on a 7-point scale ranging from -3 (*not characteristic*

*at all*) to +3 (*very characteristic*). The second part elicited predictions. "Put yourself in your roommate's shoes. Using the 7-point rating scale, imagine and rate how your roommate would describe you (himself or herself) on the following person-descriptive adjectives." The third part elicited personal ratings of trait desirability for each adjective (1 = *very undesirable*, 9 = *very desirable*). Both targets and observers made these ratings from the target's perspective.

#### Results

The distribution of mean ratings of trait desirability (grand  $M = 5.37$ , mean  $SD = 2.17$ ) was similar to the one observed in Study 1. The means of the within-rater correlations between ratings of trait descriptiveness and average ratings of desirability were positive,  $p < .001$  in all conditions. The CTP analysis did not reveal an enhancement bias for the average pair of participants. Targets did not describe themselves more positively ( $M = .42$ ) than they were described by their matched observers ( $M = .56$ ). Similarly, targets did not expect to be described more positively by observers ( $M = .46$ ) than observers expected targets to describe themselves ( $M = .57$ ). A 2 (role: target, observer)  $\times$  2 (rating: standard, predicted) ANOVA for dependent samples was performed on the Z scores. The overall self-diminishment effect was not surprising because of the high familiarity between the matched raters,  $F(1, 39) = 7.49$ ,  $p < .01$ .

One may now ask if this familiarity also fostered accuracy in the predicted ratings. Were observers sensitive to individual differences in the positivity of the targets' self-images, or did they merely recognize that students collectively report positive self-images? To examine these possibilities, the Z-scored correlations were correlated across raters. Observers' ratings merely satisfied a stereotypic form of accuracy (Kenny & DePaulo, 1993). Their predictions of how positively targets described themselves were not correlated with the actual positivity of targets' self-descriptions,  $r(38) = .08$ , *ns*. Similarly, targets' predictions of how positively observers described them were not reliably correlated with the actual positivity of observers' descriptions,  $r(38) = .22$ , *ns*. In other words, neither observers nor targets could predict how positive their roommates' ratings were relative to the ratings of other members of their social group.

Predicted ratings revealed social projection. The more positively targets described themselves, the more positively they expected to be described by their matched observers,  $r(38) = .60$ ,  $p < .01$ ; and the more positively observers described the targets, the more positively they expected their matched targets to describe themselves,  $r(38) = .42$ ,  $p < .01$ . That is, raters' predictions about the positivity of their roommates' ratings

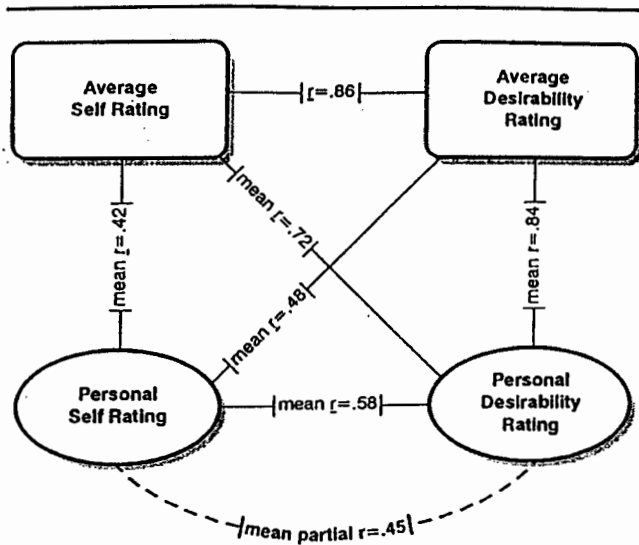


Figure 2 Interrelations between personal and average standard ratings of trait descriptiveness and trait desirability. NOTE: Standard deviations are between 0.3 and 0.4.

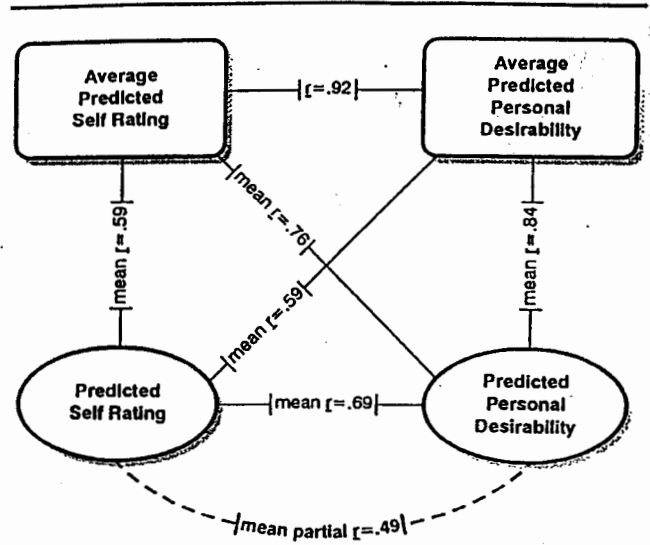


Figure 3 Interrelations between personal and average predicted ratings of trait descriptiveness and trait desirability. NOTE: Standard deviations are between 0.3 and 0.4.

were more similar to the positivity of their own standard ratings than to the positivity of the ratings they were trying to predict. Standard descriptions by targets and observers tended to agree in the degree of positivity,  $r(38) = .30, p < .05$ .

The test of the self-enhancement hypothesis drew on the intercorrelations between raters' self-ratings, their desirability ratings, and the two sets of group averages. Figure 2 shows that all mean correlations were highly positive. Because of the interrater consensus on how descriptive and how desirable traits are, an individual rater's self-descriptions and desirability ratings could be predicted from group averages. Partial correlations removed the effects of interrater agreement from the idiographic ratings and revealed that ratings of trait descriptiveness predicted ratings of trait desirability even when both sets of averages were controlled.

To test the awareness hypothesis, parallel analyses were conducted for the ratings that the observers attributed to their roommates. Figure 3 shows that observers expected targets to self-enhance. When both sets of averages were controlled, the mean partial correlation between predicted self-ratings and predicted desirability ratings was highly reliable,  $p < .001$ , and not different from targets' actual level of self-enhancement,  $t(78) < 1$ . Consistent with analyses in the CTP, observers were not accurate judges of the degree of their roommates' self-enhancement,  $r(38) = -.21, ns$ .

To test the independence of social-normative enhancement and CTP enhancement, an index for the latter was created for each pair of raters. This was done

by subtracting the observer's ( $Z$ -scored) normative positivity correlation from the target's ( $Z$ -scored) normative positivity correlation. As expected, this index was not correlated with the social-normative enhancement bias,  $r(38) = -.21, ns$ , but it was correlated with the normative positivity of the self-image,  $r(38) = .51, p < .01$ . As in Study 1, social-normative self-enhancement was independent of the positivity of the self-image,  $r(38) = .27, ns$ . Finally, the degree of self-enhancement observers attributed to the targets was independent of the positivity of the attributed self-image,  $r(38) = .17, ns$ .

#### Discussion

The initial demonstration of self-enhancement bias was replicated and extended with a modified measure. The positivity of most raters' (88%) self-descriptions was enhanced because it could not be fully explained by the social norms of trait desirability, trait descriptiveness, or a combination of the two. When judged by the social norms, most raters' trait profiles were desirable, but nevertheless, some raters who had a negative self-image were self-enhancers, whereas others who had a positive self-image were self-diminishers. Again, the social-normative index was independent of the traditional index, and it was more sensitive in detecting bias (only 37.5% were self-enhancers in the CTP).

Observers predicted that their roommates would self-enhance, and these predictions were accurate in the stereotypic sense. Is it possible that imagined (i.e., projected) or actual similarities between matched participants contaminated the prediction of enhancement



bias? If observers' self-ratings were nearly identical to observers' predicted ratings, predicted self-enhancement could have been a by-product of observers' own self-enhancement. Because observers did not rate themselves, this possibility was not tested directly, but two findings minimize the potential influence of projective bias. First, projection correlations were small in Study 1. Even if, in Study 2, observers' own self-enhancement biases affected the bias they attributed to the targets, projection alone could not explain why own and attributed enhancement were equally strong. Second, targets' self-enhancement and observers' predictions of enhancement were unrelated across pairs, which indicates that neither actual nor projected similarity played a role in observers' predictions of bias.

#### GENERAL DISCUSSION

Three questions motivated this research. Which criteria determine whether self-descriptions are considered biased? What are the psychological processes producing bias (or the lack thereof)? Can bias be considered illusory? Given the present findings, I suggest some preliminary answers.

##### *Criteria for Bias*

Enhancement (and diminishment) biases were examined against the background of social norms. Most individual raters yielded positive correlations between ratings of trait descriptiveness and ratings of trait desirability when the relevant group averages were partialled out. Although there were substantial individual differences in the degree of bias, the average effect size was moderate to large. But how can one be sure that positive partial correlations reflect enhancement bias? One clue is the index's face validity. It is self-enhancing to consider those traits one finds more self-descriptive than others do to be more desirable than others do. It is also self-enhancing to consider those traits one finds less self-descriptive than others do to be less desirable than others do. Another clue is the index's predictive validity. In a follow-up study, the index was positively correlated with self-esteem and negatively correlated with depression. Correlations with measures of impression management and self-deception were low (Sinha & Krueger, in press).

The use of social criteria for the assessment of bias stems from the view that the perceived desirability of an individual's personality is a matter of social judgment. This is true for each of the discussed research paradigms. None of them compares a person's self-perception with an objective standard. What the present research has shown is that criteria of bias do not necessarily agree with one another. A person may be self-enhancing in a traditional paradigm but be self-diminishing in the social-

normative paradigm, or vice versa. It is therefore important to be explicit about the choice of criteria and about the consequences arising from these choices (Robins & John, 1997b). In the CRP, the question is whom the raters describe. Is it the (hypothetical) average other or a known individual? In the CTP, the question is who the observers are. Are they peers or trained professionals? In the social-normative paradigm, the question is which social group provides the aggregate data that enter an individual's index of bias.

The introductory review of the traditional paradigms identified the distribution and the criterion problems as flaws of the CRP that were overcome in the CTP. Because the results of the two traditional paradigms are correlated across cases but uncorrelated with the results of the social-normative paradigm, it appears that most would be learned from a joint application of the CTP and the social-normative paradigm. Besides tapping a source of variance ignored in the CTP, the social-normative paradigm is attractive because it is economical. It does not require the recruitment of observers for each target, and the averaging of the ratings is fairly resistant to sampling biases. Most sample means of the present types of ratings are good estimates of population norms. Norms of trait desirability are especially stable.<sup>4</sup> Moreover, it does not matter much if a particular sample is positively biased relative to the population because each group member's bias is assessed relative to the norms prevalent in his or her in-group. A positive sample bias makes the detection of enhancement bias more difficult. In contrast to the CTP, however, the social-normative paradigm yields no information about the accuracy of self-description.<sup>5</sup>

##### *Psychological Process*

Most self theories share the assumption that "people are motivated to increase their feelings of self-worth" (Swann, Griffin, Predmore, & Gaines, 1987, p. 881). People may achieve this goal by boosting their desirability ratings of traits they possess or by lowering their ratings of traits they do not possess. Horney (1950) considered this maneuver a facet of "neurotic pride." Heider (1958) came to a similar conclusion after deriving balance theory from Gestalt principles in visual perception. He suggested that many associations between social units and sentiments stem from deliberate processes of "self-anchoring." These processes may explain the internal consistencies (or balance) of the present ratings. Using one's ratings of trait descriptiveness as anchors for one's ratings of trait desirability is one way to attain cognitive balance. Another way is to use one's ratings of trait desirability as anchors for one's ratings of trait descriptiveness. To ascertain the relative weight of these two processes is a challenge for future experimental work.

Consistent with the idea that the establishment of cognitive balance is motivated and at least in part controllable, the present studies showed that raters could reduce their own bias and attribute bias to others. Studies in the CRP have yielded similar results. People show less bias after success than after failure feedback (Dunning, Leuenberger, & Sherman, 1995), and they report fewer desirable behaviors (e.g., voting, maintaining dental hygiene) when they are urged to be truthful (Gordon, 1987). A mere reversal of perspective is insufficient to reduce bias. Raters who are allowed to see themselves as others see them (on videotape) show as much enhancement bias as raters who judge themselves from their egocentric perspective (Robins & John, 1997a). In other words, a motivational, rather than perceptual, factor appears to be at play. If so, the recent analogy between enhancement bias and "visual illusions" needs to be reexamined.

### *Elusive Illusions*

It has become popular to call various judgmental errors and biases illusory. Visual illusions in particular have been offered as metaphors for self-enhancement. According to this view, perceptions of the self as being above average are akin to lawful misperceptions of physical displays such as the Müller-Lyer or the Ponzo arrangements (Janoff-Bulman, 1989). The appeal of the illusion metaphor is that it invokes familiar images, but is this intuitive appeal accompanied by equally strong validity? A first note of caution is that the evidence for the illusory nature of self-enhancement mainly stems from the CRP. The claim that "it is logically impossible for most people to be better than the average person" (Taylor & Brown, 1988, p. 195) is incorrect (see note 1). Many of those who claim to be better than average actually are, and their numbers increase as the accuracy of their self-perceptions grows. If the perception of the self as being above average is considered illusory, then the perception of another individual as being above average would also have to be considered illusory. The CTP, which avoids the ambiguities of ratings of the average other, yields little evidence for self-enhancement.

A second note of caution is that the psychological implications of the illusion metaphor are much richer than the claim of inaccuracy. Citing a dictionary, Taylor and Brown (1988) suggested that inaccuracy is the defining characteristic of an illusion. "[An illusion] is a perception that represents what is perceived in a way different from the way it is in reality. An illusion is a false mental image or conception which may be a misrepresentation of a real appearance or may be something imagined" (Stein, 1982, p. 662, cited in Taylor & Brown, 1988, p. 194). In contrast, I suggest that prototypical visual illusions, such as those stimulated by the Müller-

Lyer and the Ponzo displays, are characterized not only by their inaccuracy but also by their reliability and diagnosticity (Gregory, 1991).

Illusory percepts are evidently inaccurate when measured against an objective standard. All the horizontal lines in either the Müller-Lyer or the Ponzo display are equally long. Illusory percepts are reliable in that they are largely controlled by the stimulus. Idiosyncrasies of the perceivers (i.e., their "selves") have little effect on the experience. Nearly everyone perceives the line with inward arrows to be longer than the line with outward arrows (Müller-Lyer), and nearly everyone perceives a horizontal line to be longer the closer it is to the vanishing point of two converging vertical lines (Ponzo). Animals also fall prey to these illusions (Fujita, Blough, & Blough, 1991; Malott, Malott, & Pokrzyński, 1967), and humans typically fail when trying to change or undo the illusory nature of the percept (Levine & Shefner, 1991). This lack of control distinguishes illusions from other perceptual biases. Perceptions of reversible figures (e.g., the Necker cube), for example, are not illusory but "multistable" (Attneave, 1971). Whereas illusions involve lawful misperceptions of an unambiguous stimulus reality, reversible figures permit incompatible but equally legitimate interpretations of reality. Finally, visual illusions occur under highly specific conditions, designed to trick the visual system. By exposing the system's constraints, the illusions also demonstrate its strengths. Illusions are diagnostic by teaching important lessons about the capacity of the system to work well under ecologically valid conditions. The Müller-Lyer and the Ponzo illusions result from an analysis of depth cues that yields accurate and adaptive percepts in most three-dimensional environments but fails when the stimulus array is forced into a two-dimensional space (Funder, 1987).

A conservative application of the illusion metaphor to social judgment would reserve the metaphor for cases that satisfy all three criteria. Despite the large amount of evidence for enhancement biases in two out of three paradigms, these biases do not appear to be illusory. First, there are sizable individual differences in the degree and the direction of bias, and people can reduce their biases when properly instructed. These findings contradict the idea that illusions are stimulus driven. Second, highly positive self-images or positive differences between self and other descriptions are not necessarily invalid. This finding contradicts the idea that bias equals inaccuracy. Third, there is no conclusive evidence that enhancement biases are diagnostic of more general psychological mechanisms that serve adaptive functions under most circumstances. The claim that enhancement biases promote well-being is still being debated (Colvin & Block, 1994; Taylor & Gollwitzer, 1995).

Whereas the correctness of enhancement bias served as a starting point for questioning the illusion metaphor, correctness is not an unambiguous criterion of illusion. Students in introductory psychology classes can be convinced, for example, that two lines are actually equally long although they do not seem to be. The visual experience does not change, but the judgment does. In the area of visual perception, a case can be made for a dissociation between an automatic (or "associative") perceptual experience and a more controlled (or "inferential") cognitive response (Sloman, 1996). In the area of self-perception, the jury is still out on the possibility of similar dissociations between personal ratings of traits and ratings attributed to others.

#### NOTES

1. Many distributions of actual performance scores are positively skewed. The inflation of academic grades, for example, creates skewed distributions as the mean approaches the ceiling of the scale. Similarly, interpersonal behaviors (and the traits they imply) are positively skewed to the extent that social norms demand desirable behavior. Undesirable behaviors are more diagnostic of personality traits than are desirable behaviors because undesirable behaviors are relatively rare. Consider differences in driving skill. Good drivers are less detectable than poor drivers because there are more ways to drive worse than average than ways to drive better than average.

2. Self-enhancement would not be independent of the positivity of the self-image if the latter were indexed idiographically; that is, if the person's ratings of trait descriptiveness were correlated with his or her own ratings of trait desirability rather than with the group averages of the desirability ratings.

3. In the two rating conditions, average ratings of trait desirability were the means of the personal ratings and the means of the normative ratings, respectively.

4. The intercorrelations between the ratings from Rhode Island, Oregon, and Michigan (see Study 1) showed that geographical diversity has little effect on desirability norms. Similarly, average ratings of trait desirability are highly similar across Black and White racial groups (data reanalyzed from Krueger, 1996). Inasmuch as there are between-groups differences in response norms, the use of in-group norms makes tests of bias particularly conservative.

5. There is no simple correspondence between "bias" and "inaccuracy." Depending on the judgment domain and the measurement strategy, there may be a positive or a negative relationship, or no relationship at all. In the area of consensus estimation, for example, greater projection (bias) predicts greater accuracy (Krueger, 1998). In the present research, the social-normative paradigm does not assume that greater self-enhancement entails greater inaccuracy. In Study 1, enhancement bias was reduced when raters estimated the normative ratings of trait desirability. To the extent that this change resulted from the successful operation of an accuracy motivation, one would expect interrater agreement to be greater in this condition than in the personal desirability condition. The opposite was the case, however.

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