

# Self-Esteem as an Interpersonal Monitor: The Sociometer Hypothesis

Mark R. Leary  
Wake Forest University

Ellen S. Tambor  
Johns Hopkins University

Sonja K. Terdal  
Northwestern Michigan College

Deborah L. Downs  
Ohio State University

Five studies tested hypotheses derived from the sociometer model of self-esteem according to which the self-esteem system monitors others' reactions and alerts the individual to the possibility of social exclusion. Study 1 showed that the effects of events on participants' state self-esteem paralleled their assumptions about whether such events would lead others to accept or reject them. In Study 2, participants' ratings of how included they felt in a real social situation correlated highly with their self-esteem feelings. In Studies 3 and 4, social exclusion caused decreases in self-esteem when respondents were excluded from a group for personal reasons, but not when exclusion was random, but this effect was not mediated by self-presentation. Study 5 showed that trait self-esteem correlated highly with the degree to which respondents generally felt included versus excluded by other people. Overall, results provided converging evidence for the sociometer model.

The proposition that people have a fundamental need to maintain their self-esteem has provided the cornerstone for a great deal of work in personality, social, developmental, clinical, and counseling psychology. In the century since William James (1890) first referred to self-esteem as an "elementary endowment of human nature," many classic theories of personality have addressed the importance of self-esteem needs, many emotional and behavioral problems have been attributed to unfulfilled needs for self-esteem, and many psychotherapeutic approaches have focused in one way or another on the client's feelings about himself or herself (Adler, 1930; Allport, 1937; Bednar, Wells, & Peterson, 1989; Horney, 1937; Maslow, 1968; Rogers, 1959). Among social psychologists, the self-esteem motive has been offered as an explanation of a wide array of phenomena, including self-serving attributions (Blaine & Crocker, 1993), reactions to evaluation (S. C. Jones, 1973), self-handicapping (E. E. Jones & Berglas, 1978), downward social comparison (Wills, 1981), attitude change (Steele, 1988), and in-group/out-group perceptions (Crocker, Thompson, McGraw, & Ingerman, 1987).

Despite the fact that the self-esteem motive has been invoked to explain so many phenomena, little attention has been paid to the source or functions of the self-esteem motive itself. The field has taken it for granted that people have a motive to protect

their self-esteem without adequately addressing the question of why they should have such a motive or what function it might serve. In five studies we evaluated the hypothesis that the self-esteem system functions as a *sociometer* that monitors the degree to which the individual is being included versus excluded by other people and that motivates the person to behave in ways that minimize the probability of rejection or exclusion.

## Explanations of the Self-Esteem Motive

Although few efforts have been made to systematically address the functions of the self-esteem motive, at least three general explanations of the motive can be gleaned from the literature.

The most widely acknowledged explanation is that people strive for self-esteem because high self-esteem promotes positive affect by buffering the person against stress and other negative emotions and by enhancing personal adjustment, whereas low self-esteem is associated with depression, anxiety, and maladjustment. Research findings attest that people with low self-esteem experience virtually every negative emotion more commonly than those with high self-esteem (e.g., Cutrona, 1982; Goswick & Jones, 1981; Leary, 1983; Taylor & Brown, 1988; White, 1981). Furthermore, high self-esteem appears to buffer people against feelings of anxiety, enhance coping, and promote physical health (Baumeister, 1993; Greenberg et al., 1992; Taylor & Brown, 1988).

Although the link between self-esteem, affect, adjustment, and health is undisputed, it is less clear why self-esteem should produce these effects. One possibility is that, because self-esteem is associated with confidence and high expectations of success, high self-esteem is associated with optimism and lowered anxiety. In a variation on this theme, Greenberg, Pyszczynski, and Solomon (1986) suggested that high self-esteem serves as a buffer against the existential anxiety people experience when they contemplate their own fragility and mortality. However, it

---

Mark R. Leary, Department of Psychology, Wake Forest University; Ellen S. Tambor, Genetics and Public Policy Studies, Johns Hopkins University; Sonja K. Terdal, Department of Sociology, Northwestern Michigan College; Deborah L. Downs, Department of Psychology, Ohio State University.

We thank Robin Kowalski, Cathy Seta, and James Shepperd for their comments on earlier versions of this article.

Correspondence concerning this article should be sent to Mark R. Leary, Department of Psychology, Wake Forest University, Winston-Salem, North Carolina 27109.

is unclear why such a psychological system for buffering people against anxiety and uncertainty should have developed. Indeed, from an evolutionary perspective, we might expect that people who worried about possible misfortunes (including death) would have been more likely to survive and reproduce.

A second set of explanations emphasizes the role of high self-esteem in promoting goal achievement. The motive to seek self-esteem may have developed because high self-esteem enhances people's willingness to strive toward desired goals and to persist in the face of obstacles and setbacks (Bandura, 1977; Greenwald, 1980; Kernis, 1995). In a related vein, Tedeschi and Norman (1985) suggested that people seek self-esteem because self-esteem is associated with feelings of control over one's environment.

In support of explanations that implicate goal accomplishment, people with high self-esteem often work harder and perform better after an initial failure than people with low self-esteem (Perez, 1973; Shrauger & Sorman, 1977). However, it is also true that high self-esteem may lead to nonproductive persistence when tasks prove to be insurmountable (McFarlin, Baumeister, & Blascovich, 1984). Although self-efficacious cognitions can undoubtedly facilitate achievement, this explanation cannot explain why self-esteem is inherently affectively laden (Brown, 1993). Although we concur that it may often be useful for people to think that they possess certain favorable attributes or abilities (i.e., to have high self-efficacy), this does not explain why self-esteem is intimately linked to strong self-relevant emotions.

A third set of explanations of the self-esteem motive involves the possibility that people seek self-esteem for its own sake. Many writers have implicitly assumed the existence of a self-system that maintains a sense of integrity or adequacy (e.g., Epstein, 1973; James, 1890; Steele, 1988). One difficulty with this assumption is that it fails to explain why a motive to behave in ways that promote self-esteem should exist at all. It also does not adequately explain why certain events pose threats to self-integrity and others do not. In fact, to the extent that, over the long run, rewarding encounters and the attainment of one's goals depends on accurate knowledge of oneself, a self-system that functioned purely to elevate one's sense of self may actually be less adaptive than one that sought accurate self-knowledge (Heatherton & Ambady, 1993).

### Properties of the Self-Esteem System

Although each of these explanations can explain why people prefer to evaluate themselves positively under certain circumstances, none clearly and fully explains why people appear generally to need self-esteem and regularly behave in ways to maintain and enhance it. Before offering an alternative explanation of the self-esteem motive that we believe parsimoniously explains the properties of the self-esteem system, we must clarify precisely what we mean by the term *self-esteem*.

Self-esteem has often been described as an attitude, specifically an attitude toward oneself (Coopersmith, 1967; Rosenberg, 1965). Like all attitudes, self-esteem has cognitive and affective components. A distinction can be drawn between the self-concept (beliefs about the self) and self-esteem (evaluation of oneself in light of those beliefs). Although self-esteem is often

based on self-relevant cognitions, not all cognitions about the self, even evaluatively laden ones, are relevant to a person's self-esteem. Each person has many self-beliefs that have no affective quality. People may believe firmly that they are very good or very bad at certain mundane tasks, for example, yet experience no corresponding increase or decrease in their self-esteem.

Self-esteem includes an essential affective quality that "cold" cognitions about the self do not. Brown (1993) persuasively argued that self-esteem is fundamentally based in affective processes, specifically positive and negative feelings about oneself. People do not simply think favorable or unfavorable self-relevant thoughts; they *feel* good or bad about themselves. Furthermore, they fiercely desire to feel good rather than bad. Most previous explanations of the self-esteem motive have difficulty explaining the inherent emotional and motivational qualities of self-esteem. We return to this point shortly.

Although people can be characterized as having some average level of self-esteem over situations and time (trait self-esteem), self-esteem inevitably fluctuates as people move about their daily lives (state self-esteem). To our knowledge, researchers have not previously addressed the question of whether people are motivated to maintain state self-esteem, trait self-esteem, or both. However, we think it is reasonable to assume that people want both to feel good about themselves in the present moment as well as maintain positive self-feelings over time. As will become clear, *state self-esteem* is of paramount importance in the explanation of the self-esteem system we describe.

### Self-Esteem System as a Sociometer

The hypothesis to be considered in this article is that the self-esteem system is a sociometer that is involved in the maintenance of interpersonal relations (Leary, 1990; Leary & Downs, 1995). Specifically, a person's feelings of state self-esteem are an internal, subjective index or marker of the degree to which the individual is being included versus excluded by other people (the person's *inclusionary status*) and the motive to maintain self-esteem functions to protect the person against social rejection and exclusion. We believe that this perspective on self-esteem more parsimoniously explains the emotional and motivational aspects of self-esteem than other explanations.

Many writers have observed that human beings possess a fundamental motive to seek inclusion and to avoid exclusion from important social groups and that such a motive to promote gregariousness and social bonding may have evolved because of its survival value (Ainsworth, 1989; Barash, 1977; Baumeister & Leary, in press; Baumeister & Tice, 1990; Bowlby, 1969; Hogan, 1982; Hogan, Jones, & Cheek, 1985). Because solitary human beings in a primitive state are unlikely to survive and reproduce, psychological systems evolved that motivated people to develop and maintain some minimum level of inclusion in social relationships and groups.

Successfully maintaining one's connections to other people requires a system for monitoring others' reactions, specifically the degree to which other people are likely to reject or exclude the individual. Such a system must monitor one's inclusionary status more or less continuously for cues that connote disapproval, rejection, or exclusion (i.e., it must be capable of functioning preconscious), it must alert the individual to changes

in his or her inclusionary status (particularly decrements in social acceptance), and it must motivate behavior to restore his or her status when threatened. In our view, the self-esteem system serves precisely the functions of such a sociometer.

From this perspective, what have previously been viewed as threats to self-esteem are, at a more basic level, events that make the possibility of social exclusion salient. Events that lower self-esteem appear to be those that the person believes may jeopardize his or her social bonds. Ego-threatening events are aversive because they signal a possible deterioration in one's social relationships.

Strictly speaking, then, people do not have a need to maintain self-esteem *per se*. Self-esteem is simply an indicator of the quality of one's social relations vis-à-vis inclusion and exclusion. To use an analogy, a behavioral researcher from another planet might conclude that Earthlings who drive automobiles are motivated to keep the indicator on their fuel gauges from touching the E (empty); every time the indicator approaches E, Earthlings behave in ways that move the indicator back toward F (full). However, the fuel gauge is simply a monitor to help people avoid running out of gas, just as self-esteem is a monitor to help people avoid social exclusion. Thus, our analysis departs sharply from explanations that impute people with an inherent need to maintain self-esteem.

As noted earlier, self-esteem is closely tied to affective processes (Brown, 1993). Self-esteem involves how people feel about themselves; high self-esteem "feels" good, whereas low self-esteem does not (Scheff, Retzinger, & Ryan, 1989). Most motivational and drive systems elicit aversive affect when potential threats to the organism's well-being are detected (i.e., when needs are not being met). People experience unpleasant affect when they are hungry, thirsty, sleepy, or in physical danger, for example, but feel better when they are well fed, hydrated, rested, and safe. In the case of self-esteem, negative emotions arise when cues that connote disapproval, rejection, or exclusion are detected. It is for this reason that "some of the best evidence for changes in self-esteem can be inferred from self-reports of mood" (Heatherton & Polivy, 1991, p. 896).

The affective reactions to changes in self-esteem tend to center around the "self-relevant" emotions, such as feelings of pride and shame. In particular, losses of self-esteem are associated with feeling foolish, ashamed, inadequate, or awkward, whereas increased self-esteem is associated with pride, self-satisfaction, and confidence (Scheff et al., 1989).

Real or potential threats to self-esteem also elicit anxiety. Not only does state self-esteem correlate highly with state anxiety but trait self-esteem and trait anxiety correlate as well (Spivey, 1989). According to the sociometer model, lowered self-esteem and anxiety are coeffects of perceived exclusion (Leary, 1990). Baumeister and Tice (1990) argued that anxiety is a natural consequence of perceived threats to one's social bonds. Viewed from this perspective, social anxiety, which originates from people's concerns with others' impressions of them (Leary & Kowalski, *in press*; Schlenker & Leary, 1982), is also a product of the sociometer. Concerns about other people's impressions raise the specter of disapproval and rejection.

This is not to say that self-esteem is nothing more than mood (see Heatherton & Polivy, 1991). Changes in mood occur for a wide variety of reasons that have nothing to do with social

exclusion or with self-esteem. Even so, decreases in self-esteem are invariably accompanied by negative affect.

Our conceptualization offers a functional perspective on the self-esteem motive and explains several facts about self-esteem. Although space does not permit a full discussion of the implications of this explanation (see Leary & Downs, 1995), we offer a few examples that demonstrate its applicability as a general model of self-esteem. For example, viewing the self-esteem system as a sociometer explains Cooley's (1902) observation that people's feelings about themselves are highly sensitive to how they think they are being regarded by other people. The more support and approval people receive, the higher their self-esteem tends to be (Harter, 1993). Such feelings are a direct reflection of one's inclusionary status, with deflations of self-esteem alerting the individual to the possibility that their standing in important groups or relationships is in jeopardy.

The sociometer model also explains why people place varying degrees of importance on different domains of the self (e.g., intellectual, athletic, social), as well as why the importance people place on these domains correlates highly with the importance they think others place on them. It also explains why self-esteem correlates highly with the individual's performance in domains judged important to others (Harter & Marold, 1991). People strive to excel in domains that will enhance their inclusion by certain other people. As a result, they adopt others' standards, and their self-esteem is affected by performance in domains that others value. People's self-evaluations are also differentially affected when they visualize different significant others (Baldwin & Holmes, 1987), presumably because the sociometer is sensitive to the idiosyncratic standards of particular people. What may not jeopardize one's image in one person's eyes may lead to rejection by another.

This perspective also helps us understand why people with lower self-esteem are more sensitive to socially relevant cues than those with high self-esteem (Brockner, 1983). People who already feel included, accepted, and socially integrated need not be as concerned with fitting in as people who feel less so (Moreland & Levine, 1989; Snodgrass, 1985).

The sociometer hypothesis also answers the seemingly paradoxical question of why, if people possess a system for maintaining self-esteem, some people have low self-esteem (Baumeister, 1993). The answer is that people do not have a system for maintaining self-esteem *per se* but a system for avoiding social exclusion. To function properly, the system must lead the person who faces potential exclusion or ostracism to feel badly about it. Over time, people who experience real or imagined rejection repeatedly will have lower trait self-esteem than people who feel warmly included.

### Overview of Our Research

In brief, conceptualizing the self-esteem system as a sociometer that monitors one's standing with others helps to explain most of its central properties. In addition, it confers an essential function on self-esteem that helps to explain why the need for self-esteem appears to be innate and universal.

Empirical validation of the sociometer conceptualization of state self-esteem requires the evaluation of at least three general theoretical implications. Most fundamentally, the theory stipu-

lates that changes in self-esteem should be closely associated with changes in the degree to which people perceive they are being included versus excluded by other people (perceived inclusionary status). Second, research must show that the sociometer model accounts for such changes better than alternative conceptualizations of self-esteem. Third, research must demonstrate that behavioral reactions to what have been viewed as threats to self-esteem are in fact responses to real, potential, or imagined social exclusion.

Obviously, fully testing these three general implications of the theory will require much research. In this article we report the results of five studies that focused on the first (and most fundamental) theoretical implication just described: that self-esteem is highly sensitive to changes in perceived inclusionary status. Failure to demonstrate an integral link between perceived inclusion-exclusion and self-esteem would provide disconfirmatory evidence for the sociometer perspective. On the other hand, converging support from these five studies would lend credence to the notion that the self-esteem system is involved in the monitoring of the quality of one's social bonds vis-à-vis inclusion-exclusion.

### Study 1: Self-Feelings and Anticipated Inclusion-Exclusion

At minimum, the sociometer model of self-esteem predicts that the effects of people's own behavior on their self-feelings should closely parallel the degree to which they expect those behaviors may result in rejection or exclusion. Casual observation suggests that this is the case: Events that raise self-esteem (e.g., achievement, recognition, compliments, being helpful, being loved) tend to be associated with improvement in the individual's chances of being accepted and included, whereas events that lower self-esteem (e.g., failure, moral violations, possession of socially undesirable attributes, rejection) are associated with decreased inclusion likelihood.

To test this fundamental prediction, participants in Study 1 indicated how they would expect other people to react to each of several behaviors. In addition, they rated how they would feel about themselves if they had personally performed each of these actions. The sociometer model predicts that these sets of ratings should be positively correlated.

### Method

**Participants.** Seventy-five male and 75 female undergraduate students served as participants in fulfillment of a course research requirement.

**Procedure.** Participants completed two questionnaires that were embedded in a much longer instrument. Each questionnaire described 16 behaviors that varied in social desirability (e.g., I lost my temper; I cheated on a final exam; I donated blood; I saved a drowning child). One questionnaire asked respondents to indicate on 5-point scales how they thought others would react toward them if they had performed each behavior (1 = *many other people would reject or avoid me*, 5 = *many other people would accept or include me*).

The second questionnaire asked respondents to rate on four 7-point bipolar adjective scales how they personally would feel about themselves if they performed each behavior (i.e., good-bad, proud-ashamed, valuable-worthless, happy-dejected). Ratings on these adjectives were

summed to provide an index of self-esteem feelings resulting from each behavior; higher ratings indicated more positive self-feelings.

To minimize the extent to which participants' might try to be consistent in their responses to the two questionnaires, (a) the items were presented in a different random order on each questionnaire, (b) different response formats were used (5-point vs. 7-point scales), and (c) the questionnaires were separated by several unrelated instruments that took approximately 30 min to complete. One half of the respondents completed the inclusion-exclusion ratings first, whereas the others completed the self-feelings ratings first.

### Results

Each of the four-item self-feelings scales demonstrated an adequate degree of interitem reliability (Cronbach's alpha was greater than .70 for all 16 behaviors). Also, considerable agreement was obtained across participants regarding the relative orderings of the 16 situations. Kendall's coefficient of concordance was .79 for ratings of inclusion-exclusion and .87 for self-reported self-feelings.

The canonical correlation between respondents' ratings of others' reactions (inclusion-exclusion) and their own feelings of resultant self-esteem across all 16 situations was .70. That is, expectations of the degree to which one's behaviors would result in social inclusion-exclusion correlated highly with the impact of those behaviors on feelings of self-esteem.

On an item-by-item basis, the correlations between expectations of social inclusion-exclusion and state self-esteem across the 16 situations ranged from .14 to .47, with an average of .32. As can be seen in Table 1, the order of respondents' ratings was virtually identical on the two sets of questions. Thus, the effects of performing the 16 behaviors on self-esteem closely mirrored their effects on others' expected reactions.

### Discussion

Participants' ratings of their self-feelings after performing 16 behaviors mirrored their expectations regarding how others would respond to these behaviors. Across all 16 situations, ratings of others' expected reactions accounted for nearly 50% of the variance in self-feelings. The correlations for each of the 16 situations ranged from small to moderate, but it must be remembered that they were based on single-item measures of unknown reliability. These data are open to alternative explanations but are consistent with the proposition that self-esteem feelings serve as an internal index of the degree to which one's behavior is likely to result in inclusion versus exclusion.

### Study 2: Personal Experiences Involving Reactions to Exclusion

One weakness inherent in Study 1 is that participants responded to hypothetical target behaviors. As a result, some respondents would not have experienced many of these behaviors, either as a participant or as an observer. In the absence of direct experience, respondents may have relied on their personal assumptions about how people would react to such behaviors. To the extent that these assumptions may have been based on their own personal evaluations of the actions, we would obtain a spurious correlation between respondents' ratings of how others

Table 1

*Study 1: Perceived Effects of the 16 Behaviors on Others' Reactions and Self-Esteem*

Rank order of ratings			
Inclusion-exclusion	Self-feelings	$r^a$	Item
1	2	.42	I cheated on a final exam in a course.
2	1	.17	I carelessly caused a traffic accident in which someone was permanently paralyzed.
3	3	.27	I dropped out of college.
4	4	.34	I was unfaithful to my boyfriend or girlfriend.
5	6	.19	I lost my temper and yelled at someone.
6	5	.36	I received a negative evaluation on my work performance from my boss.
7	7	.46	I accidentally sneezed on someone standing in front of me in a checkout line.
8	8	.21	I took care of a friend's houseplants while she was out of town.
9	9	.33	I gave a dollar to a beggar.
10	11	.25	I volunteered to donate blood.
11	12	.34	I was accepted into an honor society.
12	10	.33	I was voted "best-looking" person in my class.
13	13	.14	I was a Big Brother or Big Sister to an underprivileged child.
14	14	.47	As president of a campus organization, I was responsible for raising \$15,000 to buy food and Christmas toys for abandoned children.
15	16	.26	I saved a drowning child who had fallen into a pool.
16	15	.33	I donated one of my kidneys to a dying person.

<sup>a</sup> Correlation between ratings of expected inclusion-exclusion and resultant self-feelings.

would react and their own self-feelings. As a first step in counteracting this alternative interpretation of the findings, Study 2 examined the relationship between exclusion and self-esteem in situations that respondents had actually experienced.

To avoid producing demand characteristics that would focus respondents' attention on inclusion and exclusion specifically, we asked the respondents to write essays describing the last time they experienced situations that involved either positive or negative emotions. They then answered questions concerning their reactions to the occasion they described; embedded in these questions were ratings involving perceived exclusion and self-feelings. We predicted that their ratings of how included versus excluded they felt in the situations they described would correlate highly with their self-esteem feelings in these situations.

### Method

**Participants.** Eighty male and 80 female undergraduates enrolled in introductory psychology courses received credit toward a class requirement for their participation.

**Procedure.** Participants were randomly assigned to write a paragraph about the last occasion on which they experienced one of four negative emotional responses (i.e., social anxiety, loneliness, jealousy, or depression) or the opposite, positive pole of one of these responses—"feeling particularly at ease in a social situation" (nonanxious), "satisfied about having as many close friends and family as desired" (nonlonely), "particularly secure in a relationship" (nonjealous), or "particularly happy in response to a social situation or relationship" (nondepressed). We felt that writing about interpersonal situations that produced negative and positive affect would lead participants to write about situations that varied in inclusion-exclusion (without cuing participants into the fact that this was the focus of the study). Each respondent wrote an essay about one of these eight types of experiences.

After completing the paragraph, participants rated how they felt on five 7-point scales intended to measure how included or excluded they felt in the situation (i.e., accepted, excluded, welcomed, rejected, included); higher ratings were associated with greater feelings of social

exclusion. A second set of 15 unipolar scales asked respondents how they felt about themselves on the occasion they described (i.e., good, adequate, attractive, inferior, ashamed, bad, socially desirable, popular, likable, proud, worthless, superior, confident, valuable, and competent, each paired with its opposite); higher numbers reflected more positive self-feelings.

Participants were also asked to state in a phrase the primary reason why they felt as they did in the situation they described. This phrase was later coded to determine the extent to which it involved factors relevant to inclusion and exclusion (1 = clear evidence of inclusion, 2 = probable inclusion, 3 = unclear or not relevant to inclusion-exclusion, 4 = probable exclusion, 5 = clear evidence of exclusion).

Respondents also rated their emotional reactions on 7-point scales intended to measure anxiety (i.e., relaxed, tense, anxious, calm, nervous), loneliness (i.e., lonely, popular, involved, lonesome, isolated), jealousy (i.e., trusting, jealous, secure, possessive, suspicious), and depression (i.e., cheerful, happy, sad, depressed, gloomy).

### Results

Cronbach's alpha for the measure of perceived exclusion was .94, and alpha for the index of self-feelings was .95. The Pearson product-moment correlation between ratings of perceived exclusion and self-feelings was calculated separately for participants who wrote each of the kinds of essays (i.e., social anxiety, loneliness, jealousy, and depression). As can be seen in Table 2, their ratings of how excluded they felt in the situation correlated highly with how they felt about themselves in that situation ( $-.68 < r_s < -.92$ ,  $ps < .001$ ). In addition, their attributions for their feelings clearly reflected the effect of exclusion. Attributions relevant to exclusion, coded from answers to the open-ended question, correlated as expected with self-feelings ( $-.38 < r < -.68$ ,  $ps < .01$ ).

Cronbach's alphas for the four affective measures each exceeded .84. Respondents' affective ratings (scored so that higher numbers indicated negative affect) also correlated highly with

Table 2  
*Study 2: Correlations Between Situational Self-Feelings  
 and Perceived Exclusion*

Essay type	Perceived exclusion	Attribution to exclusion
Social anxiety	-.68**	-.38*
Loneliness	-.92**	-.68**
Jealousy	-.83**	-.64**
Depression	-.80**	-.45*

\*  $p < .01$ . \*\*  $p < .001$ .

perceived exclusion ( $.52 < r < .97$ ,  $ps < .001$ ) and with attributions to exclusion ( $.23 < r < .76$ ,  $ps < .08$ ). These data show that changes in inclusion status were accompanied by affective changes as well.

### Discussion

Respondents' retrospective accounts of personal experiences involving positive or negative affect again showed a strong relationship between perceived exclusion and self-feelings. The more excluded respondents reported they felt in each type of situation, the less positively they indicated they felt about themselves in that setting. Importantly, in each instance, the magnitude of the correlation approached the reliability of the scales. For all practical purposes, self-feelings were a proxy for perceived exclusion.

Furthermore, their reports of why they felt as they did corroborated this finding. Attributions that invoked interpersonal exclusion as an explanation correlated with participants' self-feelings in each type of situation.

### Study 3: State Self-Esteem in Reaction to Exclusion From a Group

The first two studies showed clearly that self-esteem feelings are strongly tied to perceived social exclusion. However, the correlational nature of both of these studies leaves open alternative explanations other than that perceived exclusion causes self-esteem to decrease. In particular, both studies are open to the explanation that people who evaluate themselves positively may assume that others will like and accept them, whereas those with lower self-esteem are primed to perceive others' behaviors as rejecting (Alloy, 1988; Beck, 1967).

To directly examine the causal effects of exclusion on self-esteem, we experimentally manipulated social inclusion-exclusion in a third study. In this experiment, respondents were informed that they were either included or excluded from a laboratory work group. In addition, respondents were told that this selection was based either on a random procedure or on the preferences of other group members. According to the sociometer hypothesis, when the selection is based on others' preferences, and thus reflects personally on the individual, respondents should demonstrate increased self-esteem when they are included and decreased self-esteem when they are excluded, compared with random inclusion and exclusion.

### Method

**Participants.** One hundred twelve male and female undergraduates recruited from introductory psychology courses served as participants and received required credit for their participation.

**Procedure.** Five respondents participated in each experimental session, but they reported to separate locations and were brought individually to separate cubicles in the same laboratory to limit interaction among them throughout the study. (Data from 3 respondents were discarded to create equal cell sizes.)

Respondents were told that the study involved group and individual decision making. To begin, participants completed a brief "information exchange questionnaire" that they were told would be shown to the other 4 participants. This questionnaire asked them to rate themselves on thirteen 7-point scales (e.g., open-closed, tense-relaxed, athletic-nonathletic) and to write two short essays on "what it means to be me" and "the kind of person I would most like to be." These questions were designed to provide participants with information that would provide the basis for their subsequent evaluations of one another. After they finished, the researcher circulated each participant's questionnaire to all of the other participants.

After viewing the other participants' responses, each participant completed a form on which he or she rated the other 4 respondents. They also indicated which 2 of the other participants they would most want to work with and which 2 could be most relied on in time of trouble, and they rank ordered the other participants in terms of who they would most want to work with later in the study.

After taking time to ostensibly collate respondents' ratings of one another, the researcher distributed sheets that made task assignments. First, respondents were told that 3 of the 5 participants would work together on the decision-making problems as a group and that the other 2 participants would work on the same problems individually. They were then told that (a) they either would work as a member of the 3-person group (included condition) or would work alone (excluded condition) and (b) this selection was based either on the other members' preferences (based on the rating sheets that respondents completed earlier) or on a random procedure. (The random procedure was justified by noting that the researcher wanted to assign participants to groups irrespective of their preferences.) Thus, the experimental design was a 2 (included in vs. excluded from the group)  $\times$  2 (assignment based on others' preferences or random procedure) randomized factorial.

Respondents then completed a questionnaire that assessed their reactions and rated how they currently felt about themselves on twelve 7-point bipolar adjective scales. The adjectives, which were drawn from McFarland and Ross' (1982) low and high self-esteem feelings factors, were as follows: good, competent, proud, adequate, useful, superior, smart, confident, valuable, important, effective, and satisfied, each paired with its opposite. On half of the items, the positive pole was on the left end of the scale, and on half it was on the right. Participants also rated how excluded they felt on three 7-point scales (i.e., included-excluded, rejected-accepted, welcomed-avoided).

Respondents were also asked to rate the other respondents (as a group) on seven 7-point scales (i.e., good, competent, adequate, useful, smart, valuable, and likable, each paired with its opposite) and to indicate how much they had wanted to be selected for the 3-person group.

Finally, manipulation check questions asked (a) how the assignments to the experimental tasks were made and (b) whether the participant was assigned to work alone or with the group. Respondents were then fully debriefed, and the rationale for the study and all deceptions were explained.

### Results

**Manipulation checks.** All but 3 of the 112 participants accurately reported whether they were assigned to work with the

3-person group or alone. Thus, the manipulation of task assignment was apparently effective.

Twelve participants incorrectly answered the question that asked how assignments to the group were made. Examination of the pattern of errors revealed a roughly equal number of errors across conditions. Analyses conducted with and without these 12 participants did not produce different findings.

*Self-feelings.* Cronbach's alpha for the self-feelings scale was .84. A  $2 \times 2 \times 2$  (Inclusion–Exclusion  $\times$  Mode of Assignment  $\times$  Gender) analysis of variance (ANOVA) performed on the mean of participants' self-ratings revealed a significant main effect of inclusion–exclusion,  $F(1, 104) = 9.36, p < .01$ , that was qualified by a significant Inclusion–Exclusion  $\times$  Mode of Assignment interaction,  $F(1, 104) = 9.60, p < .01$ . Tests of simple main effects showed that inclusion–exclusion affected participants' self-esteem feelings only if it was attributable to acceptance or rejection by the group,  $F(1, 104) = 18.55, p < .05$  (see Table 3).

Furthermore, the pattern of data suggests that this effect was attributable to the effects of exclusion rather than inclusion. Whereas participants felt no better about themselves when the group included them than when they were included randomly,  $F(1, 104) = 1.42, p > .20$ , respondents who thought they were excluded on the basis of the group's preferences rated themselves significantly more negatively than those who believed they had been randomly excluded,  $F(1, 104) = 10.00, p < .01$ .

A main effect of participant sex,  $F(1, 104) = 4.01, p < .05$ , and an Inclusion–Exclusion  $\times$  Sex interaction were also obtained on participants' self-ratings,  $F(1, 104) = 6.63, p < .01$ . Tests of simple effects revealed that, although men ( $M = 5.6$ ) and women ( $M = 5.6$ ) rated themselves identically when they were included in the group, women ( $M = 4.8$ ) rated themselves significantly less positively than did men ( $M = 5.5$ ) following exclusion ( $p < .05$ ). Interestingly, this effect was not qualified by mode of assignment. Finally, participants' feelings about themselves correlated strongly with their feelings of being excluded ( $r = -.75, p < .001$ ).

*Ratings of the other participants.* Ratings of the other 4 respondents also showed a main effect of inclusion–exclusion,  $F(1, 104) = 14.18$ , which was qualified by the two-way Inclusion–Exclusion  $\times$  Mode of Assignment interaction,  $F(1, 104) = 7.96, ps < .01$ . As shown in the second line of Table 3, respondents rated one another significantly less positively when they believed they had been excluded by the group rather than

when the group had included them,  $F(1, 104) = 23.41, p < .001$ . When the assignment was random, participants' ratings of one another were unaffected by whether they were assigned to work with the group,  $F(1, 104) = 0.47, p > .40$ . In addition, participants derogated one another more when exclusion was based on group members' preferences rather than on a random selection procedure,  $F(1, 104) = 8.67, p < .01$ . The more excluded respondents felt, the more negatively they rated the other participants ( $r = -.52, p < .001$ ).

*Retrospective inclusion motivation.* An Inclusion–Exclusion  $\times$  Mode of Assignment interaction was also obtained on the item that asked respondents, "How much did you want to be selected for the 3-person 'central' group?," although the effect just failed to reach the .05 level of significance,  $F(1, 104) = 3.61, p < .06$ . As can be seen in the third line of Table 3, a sour-grapes effect was obtained: Participants who thought the group had included them retrospectively indicated a greater desire to be included than those who thought the group had excluded them,  $F(1, 104) = 4.74, p < .03$ . The simple effect of inclusion–exclusion was not significant when selection was ostensibly random,  $F(1, 104) = 0.24, p > .60$ .

## Discussion

The central conclusion to be drawn from the findings of Study 3 is that exclusion that reflects rejection by others produces strong effects on self-feelings and social perceptions. Compared with respondents who thought their peers had selected them to participate in the group, those who thought the group had excluded them rated themselves more negatively, more strongly derogated the other group members, and claimed less interest in being a member of the group. By contrast, inclusion and exclusion had no discernible effect on respondents' responses when they were based on a random selection procedure. Furthermore, the data showed that exclusion had a stronger effect in lowering respondents' self-feelings than inclusion had in raising them.

These data suggest that exclusion that implies disapproval or rejection results in lowered self-esteem even in contexts in which social inclusion has no identifiable implications for people's well-being (e.g., survival, assistance, or comfort). In fact, given the experimental situation, we were surprised that respondents responded as strongly as they did to being excluded by the group. Participants had neither a history of previous experience

Table 3  
*Study 3: Effects of Exclusion and Mode of Assignment*

Variable	Mode of assignment			
	Random		Group choice	
	Included	Excluded	Included	Excluded
Self-feelings	5.5	5.5 <sub>a</sub>	5.7 <sub>b</sub>	4.8 <sub>ab</sub>
Ratings of other participants	5.6	5.5 <sub>a</sub>	5.9 <sub>b</sub>	4.9 <sub>ab</sub>
Desire to be included	5.1	5.6	6.5 <sub>a</sub>	4.9 <sub>a</sub>

*Note.* Means in a single row that share a common subscript differ significantly by tests of simple main effects,  $p < .05$ .

nor expectations of future interaction (beyond this study) with other group members; they did not even know who the other members were. In addition, it was not clear that working on the decision-making problems with the group was in any way more desirable than working alone, and the basis on which respondents were excluded was limited and superficial. Yet, those who were rejected by the group suffered a decrease in state self-esteem. These findings attest to the strength of people's desire to avoid disapproval and rejection in the absence of any tangible benefits of being accepted.

They may also shed light on people's motivation to maintain and foster their connections to seemingly meaningless groups. As research using the minimal in-group paradigm shows, even when people are "members" of a group in name only, they come to identify with the group and its members (e.g., Tajfel, 1981). Given that the motivation toward social inclusion and away from social exclusion is potent, maintained by an inner sociometer that monitors inclusionary status, even a minimal sense of "belongingness" may be rewarding.

The effects of exclusion on ratings of the other group members comes as no surprise, but it deserves attention from the perspective of the sociometer hypothesis. Traditional approaches to self-esteem would explain that, by derogating those who rejected them, individuals could minimize the importance or validity of the others' evaluations and thereby protect their own self-esteem. People's self-esteem is less likely to be damaged if they can convince themselves that those who rejected them were socially undesirable people they did not want to associate with anyway. We have no complaints with this explanation as far as it goes. Given that perceived exclusion is anxiety producing, once permanent rejection is detected, people may indeed try to reduce their distress through cognitive means, such as by derogating the rejector or minimizing the importance of acceptance.

However, the sociometer model suggests two additional explanations. First, the derogation of sources of rejection may reflect an interpersonal tactic aimed at others who are present. Being rejected calls one's social acceptability into question in the eyes of others who are privy to the rejection. By lambasting the rejector, the individual may lead others to ignore or discount the rejection. (If a person who was recently rejected by a romantic partner praises the ex-partner's judgment and social qualities, new acquaintances may conclude that such a wonderful person had good reasons for dumping him or her.) Other evidence on self-serving reactions to failure and negative evaluation shows that such reactions are sometimes for the benefit of others (Leary & Forsyth, 1987; Schlenker, 1980). In Study 3, rejected participants might have derogated the other group members to convince the researcher that they did not deserve to be excluded.

Second, from a practical standpoint, continuing to seek inclusion by those who have excluded the individual is not an optimal strategy. When rejection is permanent and irreversible, as it was in this study, the person should turn his or her attention away from the rejectors and toward those who may be more accepting. Focusing on the desirability of being included by a rejecting group may actually impede the person's general success in establishing and maintaining connections with other people. Thus, derogating the group and minimizing the impor-

tance of its acceptance may be adaptive in terms of facilitating one's ability to move on to other groups and relationships. All three of these processes operate to produce the derogation effect obtained here, and we have no way to choose among them. However, they provide a ripe source of hypotheses for future research.

Overall, male and female respondents reacted similarly to the experimental manipulations. The only gender difference obtained showed that women who were excluded rated themselves less positively than did men irrespective of whether they were excluded randomly or because of other respondents' preferences. Although obtained on only a single measure, this finding suggests that women may be more sensitive than men to cues that connote exclusion, possibly because typical patterns of socialization in American culture lead them to be more attuned to others' reactions (Snodgrass, 1985) or more motivated to emphasize communal relationships (Eagly & Wood, 1991). If, indeed, this is a general finding, research is needed to explore the sources of gender differences in reactions to exclusion.

#### Study 4: Interpersonal Exclusion and Self-Esteem Feelings

Study 3 provided concrete evidence that social exclusion results in lowered self-esteem, at least when the exclusion was based on others' personal evaluations and preferences, and this effect occurred even when exclusion has no notable implications for the individual. The purpose of Study 4 was to conceptually replicate and extend these findings using a somewhat different paradigm and different measures.

In this experiment, participants provided information about themselves via an intercom to an anonymous participant in another room. They then received feedback from the other participant that connoted either inclusion and acceptance or exclusion and rejection, or else they received no feedback relevant to inclusion-exclusion. Participants then rated their feelings about themselves on a questionnaire that they believed would be seen by either the same participant who had listened to them previously (and who, in two conditions, had ostensibly provided his or her feedback) or to a new participant.

This latter manipulation was included to examine the possibility that the effects of inclusion-exclusion on self-ratings were mediated by self-presentational rather than self-esteem processes. If respondents know their self-ratings will be seen by someone who is aware of the fact they were previously included or excluded, they may use their self-ratings as a self-presentational strategy in an attempt to support or counteract the prior effects of inclusion or exclusion on their social image. This possibility would be detected if participants' self-ratings after inclusion or exclusion differed as a function of who would be seeing their ratings.

#### Method

*Participants.* Forty-five male and 45 female undergraduates served as subjects in return for required credit in an introductory psychology course.

*Pretesting.* As part of a large mass testing procedure conducted early in the semester, all participants rated themselves on 12 evaluatively laden adjectives: cheerful, absent-minded, honest, clear thinking, de-



ceitful, friendly, forgetful, dependable, arrogant, intelligent, prejudiced, and irresponsible. Ratings were done on 12-point scales with five equally spaced scale labels (not at all, slightly, moderately, very, and extremely). These ratings were used as a pretest measure of self-feelings.

**Experimental session.** Each session used a mixed-sex pair of participants who went to different locations to maintain anonymity. They were informed that the study was concerned with how people form impressions of others. They would be asked to talk into a microphone about themselves while another respondent of the other sex listened. After the participant signed an informed consent form, the researcher gave each participant a personal information sheet ostensibly completed by the other participant in the session. This information was provided to convince the respondent of the presence of the other respondent and involved innocuous demographic information.

Participants then spoke into a microphone for 5 min about topics drawn from a standard list, believing that the other participant was listening. These topics were intended to be moderately disclosing so that the participant would discuss enough personal information for the other person to ostensibly make a personal appraisal. For example, one question asked participants to describe aspects of themselves they liked best and least.

After the 5-min verbal presentation, participants were randomly assigned to receive feedback indicating that the other person either liked, accepted, and wanted to interact with them (inclusion condition); to receive feedback indicating that the other participant did not particularly like, accept, or want to interact with them (exclusion condition); or to receive no feedback from the other participant (no-feedback condition). In the inclusion and exclusion conditions, the feedback sheet participants received contained ratings on a number of dimensions that connoted inclusion and exclusion. For example, one question asked whether the listener would want to continue a conversation with the participant, and another asked whether the listener would want to introduce the participant to a friend. In response to each question, the other participant had ostensibly marked "yes," "no," or "unsure."

It should be noted that although respondents in the inclusion condition received predominately accepting feedback (with a couple of "unsure" responses marked), those in the exclusion condition received predominately "unsure" responses (with a couple of rejecting answers) to minimize the aversiveness of the manipulation. We felt that uncertain and ambivalent responses would connote sufficient rejection for purposes of the study. To preserve the illusion that the researcher was ignorant of the ratings, this feedback was provided in an envelope, and participants were told not to read the ratings until the researcher left the room.

After reading the feedback, participants were asked to complete a questionnaire about themselves that would ostensibly be shown to either the participant who had heard and evaluated them or to another participant. Participants rated themselves on the same 12 self-relevant adjectives they had provided during mass testing several weeks earlier using 12-point scales.

On a questionnaire that respondents were told only the researcher would see, they indicated the degree to which the other respondents' perceptions of them were accurate (1 = *not at all*, 12 = *extremely*). To assess the effectiveness of the feedback manipulation, they also indicated how positively or negatively the other respondent regarded them (1 = *extremely negative*, 12 = *extremely positive*). After completing the experimental questionnaires, participants were fully debriefed, with all deceptions explained in detail.

## Results

**Manipulation check.** An ANOVA conducted on participants' ratings of the feedback they received revealed that the manipulation of inclusion-exclusion was highly successful,

$F(1, 86) = 8.76, p < .01$ . A Tukey's test revealed that participants who received positive feedback reported that they were perceived most positively ( $M = 11.4$ ), followed by participants receiving no feedback ( $M = 7.9$ ) and those who received rejecting feedback ( $M = 2.4$ ; all  $ps < .05$ ).

**Self-feelings.** Examination of the interitem reliability of the 12 self-ratings revealed that one item (intelligent) had an unacceptably low item-total correlation. After this item was dropped, Cronbach's alpha coefficient for the remaining 11 items was .79.

A  $3$  (feedback: acceptance, rejection, none)  $\times 2$  (target: same vs. other respondent) ANOVA was conducted on the sum of the 11 self-ratings after reverse scoring the negatively worded items. This revealed only a significant main effect of feedback,  $F(2, 90) = 4.93, p < .01$ . Inspection of condition means revealed that respondents receiving accepting feedback subsequently rated themselves more positively ( $M = 106.5$ ) than did those who received no feedback ( $M = 103.2$ ) and rejecting feedback ( $M = 104.4$ ).

To explore the extent to which respondents' self-esteem deviated from their "typical" self-feelings following inclusion and exclusion, difference scores were calculated between the sum of the self-ratings obtained during mass testing and the sum of the self-ratings obtained during the experiment itself. A  $3 \times 2$  ANOVA indicated a significant main effect of feedback,  $F(2, 91) = 5.95, p < .01$ . A Tukey's test revealed that rejected participants' self-feelings were significantly more negative relative to the ratings they gave during mass testing (mean difference =  $-5.9$ ) compared with accepted participants (mean difference =  $2.0, p < .05$ ). Participants who received no feedback did not differ from the other two groups (mean difference =  $-1.4, ps > .05$ ).

The  $t$  tests comparing the mean difference score in each feedback condition with a score of zero (which would reflect "no change" from mass testing) indicated that although participants who were rejected rated themselves significantly more negatively than they rated themselves during mass testing,  $t(32) = 3.64, p < .05$ , the ratings of accepted and no-feedback participants did not differ from their mass testing ratings ( $ps > .10$ ). Thus, rejection significantly lowered self-feelings, but acceptance did not significantly raise them.

**Accuracy ratings.** Respondents' ratings of the accuracy of the other respondents' perceptions of them were also significantly affected by the feedback they received,  $F(2, 86) = 4.60, p < .01$ . A Tukey's test showed that accepted respondents believed the other respondent to be significantly more accurate ( $M = 8.2$ ) compared with respondents who were rejected ( $M = 3.6$ ) and those who received no feedback ( $M = 5.5, ps < .05$ ). However, the rejected and no-feedback conditions did not differ significantly ( $p > .05$ ).

## Discussion

The results of Study 4 provide a conceptual replication of the primary findings of Study 3 using a different paradigm, cover story, and measures: Those who were accepted on the basis of personal reasons subsequently felt more positively about themselves than did those who were excluded. Furthermore, as in Study 3, exclusion had a notably stronger effect in lowering par-

ticipants' self-esteem than inclusion had in enhancing their self-feelings. As we discuss in the General Discussion section, these findings suggest that the self-esteem system may be more sensitive to decrements than increments in inclusionary status.

The effects of feedback on self-feelings described earlier were obtained even though participants in the exclusion condition explicitly dismissed the feedback. Respondents who were rejected rated the other person's perceptions as highly inaccurate, but their feelings about themselves were affected nonetheless. This finding suggests that people need not view exclusion as warranted in order for it to affect self-esteem. Although it stands to reason that self-esteem would suffer when people are rejected because of their actual transgressions and shortcomings, the fact that self-esteem fell even when respondents dismissed the feedback as inaccurate provides further support that self-esteem is sensitive to others' reactions *per se*.

The fact that the identity of the target for whom respondents rated themselves did not moderate the effects of exclusion on self-feelings suggests that the findings of Studies 3 and 4 are unlikely to be attributable to participants' attempts to convey certain impressions of themselves to those who had accepted or rejected them. Although it is impossible to prove the null hypothesis, the failure to find an effect of target at least renders such an interpretation implausible.

### Study 5: Individual Differences in Self-Esteem

In each of the first four studies, we were interested in the effects of social inclusion and exclusion on people's state self-esteem in a given social setting. However, a corollary of the sociometer model is that *individual differences* in trait self-esteem should be related to individual differences in the extent to which people generally feel that they are socially included versus excluded. On one hand, a history of real or perceived exclusion may ultimately result in lowered trait self-esteem (Harter, 1993; Shrauger & Schoeneman, 1979). Furthermore, once formed, self-esteem may color people's perceptions of others' reactions. People with low self-esteem may be more likely to perceive others' reactions as rejecting than people with high self-esteem.

### Method

**Participants.** Two hundred twenty male and female undergraduates participated in the study to fulfill a requirement for their introductory psychology course.

**Perceived inclusionary status.** A scale to measure individual differences in perceived inclusionary status was constructed and pilot tested on a sample of 150 respondents. This measure consisted of nine items that assessed the extent to which individuals feel they are generally included versus excluded by others. Examples included, "People often seek out my company," "I often feel like an outsider in social gatherings," and "If I want to socialize with my friends, I am generally the one who must seek them out." Cronbach's alpha was .77 in pilot testing. Although unpublished, this scale has demonstrated usefulness in previous research (Miller, *in press*).

**Self-esteem.** General self-esteem was measured with two scales. Rosenberg's (1965) Self-Esteem Scale is a 10-item scale that has high internal consistency ( $\alpha = .85$ ) and test-retest reliability (.85) and is perhaps the most widely used measure of dispositional self-esteem.

In a factor analysis of self-relevant mood items, McFarland and Ross (1982) found that the following items loaded on a self-esteem feelings

factor: proud, competent, confident, smart, resourceful, effective, efficient, inadequate, incompetent, stupid, worthless, and shameful. Thus, the sum of these items (after reverse scoring negatively worded items) was used as a second measure of self-esteem.

**Procedure.** Each of the scales just described was administered during two separate sessions. Regardless of the original response format, participants answered all items on 5-point scales.

### Results

Cronbach's alpha was acceptable for all three measures: perceived inclusionary status (.80), Rosenberg self-esteem (.88), and McFarland and Ross self-feelings scale (.91). The two measures of self-esteem correlated .75.

The Pearson product-moment correlation between perceived exclusionary status and Rosenberg self-esteem scores was  $-.55$  ( $p < .001$ ). The correlation between perceived exclusionary status and the McFarland and Ross measure of self-feelings was  $-.51$  ( $p < .001$ ).

### Discussion

As predicted by the sociometer model, the degree to which people think they are generally excluded versus included correlated moderately with two different measures of trait self-esteem. Whereas Rosenberg's (1965) measure asks respondents to indicate their agreement or disagreement with 10 statements about their self-perceived worth, McFarland and Ross's (1982) items consist of self-descriptive adjectives. Although the correlational nature of the data does not rule out the possibility that self-esteem feelings mediate perceptions of inclusion rather than vice versa, the data further support the hypothesized link between perceived exclusion and self-esteem.

To extend our analogy of a fuel gauge, trait self-esteem may be conceptualized as the typical or average resting position of the "indicator needle" on the person's sociometer. This position reflects the person's perception of his or her inclusionary status in the absence of explicit cues connoting inclusion or exclusion. As noted, the relationship between perceived exclusion and trait self-esteem is probably reciprocal. A history of exclusion may lead to low trait self-esteem, and having low trait self-esteem predisposes the person to perceive rejection more readily. Because their sociometers are calibrated differently, people with very low trait self-esteem may perceive others as rejecting most of the time, whereas those with higher self-esteem generally feel they are being accepted.

### General Discussion

Taken together, these five studies provide converging evidence for the hypothesized relationship between perceived social exclusion and self-esteem. In Study 1, we found that participants' self-feelings varied with how they thought others would react to various behaviors vis-à-vis inclusion-exclusion. Study 2 showed that respondents' retrospective reports of how they felt about themselves in recent social encounters correlated highly with how included versus excluded they felt in those situations. Studies 3 and 4 used experimental designs to demonstrate that exclusion by other people results in lower state self-esteem than inclusion. Study 5 showed that the degree to which people gen-

erally believe that others include versus exclude them correlated negatively with two different measures of trait self-esteem. Although alternative explanations may be offered for some of these findings, we believe that the consistency of our findings across widely disparate studies, using different paradigms and measures of self-feelings, provides converging support for the hypothesized link between perceived social exclusion and self-esteem.

Of course, an empirical demonstration of this relationship does not necessarily indicate that the function of the self-esteem system is to monitor social exclusion; such a functional explanation is difficult to test directly. Even so, we believe that the sociometer model provides a parsimonious explanation of both our results and previous findings. State self-esteem appears to function as a subjective marker that reflects, in summary fashion, the individual's social standing in a particular social setting and thus serves to apprise the individual of changes in his or her inclusionary status (Leary, 1990; Leary & Downs, 1995). In essence, one function of self-esteem may be to provide a relatively fast and automatic assessment of others' reactions vis-à-vis inclusion and exclusion. Such an ongoing inclusion assessment mechanism would enhance the individual's likelihood of establishing and maintaining supportive social relationships and of avoiding social exclusion (Baumeister & Tice, 1990).

From the earliest days of psychology and sociology, theorists interested in the self have suggested that people's self-images, as well as their self-esteem, are based heavily on their perceptions of the evaluative reactions of other people. In particular, symbolic interactionists have long maintained that one's self-perceptions reflect others' perceptions of and reactions to the individual (Cooley, 1902; Mead, 1932; see Shrauger & Schoeneman, 1979). The sociometer perspective shows clearly why this is the case. The self-esteem system serves its primary function only if it is sensitive to others' reactions.

In everyday life, inclusion-exclusion and interpersonal evaluations are highly confounded. We tend to associate with those we regard positively while avoiding those we regard negatively. To the extent that social evaluations are closely related to inclusion and exclusion (Baumeister & Tice, 1990), people's self-esteem is often affected by evaluative feedback. Yet, we believe that the degree to which others appear to include versus exclude the individual, rather than the nature of others' evaluations per se, is the most important determinant of self-esteem. Furthermore, we believe that, in behaving in ways that promote self-esteem, people are striving to enhance their inclusionary status rather than to be evaluated positively per se. We find it easy to understand why a potent mechanism to increase inclusion would have evolved among humans but more difficult to understand why a motive to be perceived positively would have developed.

Throughout this article we have alternated between referring to self-esteem as a means of enhancing inclusion and as a means of avoiding exclusion. Although the data on this point are only suggestive, we believe that the sociometer system responds primarily, if not exclusively, to exclusion rather than to inclusion. First, at a conceptual level, most motivation and drive systems, both physiological and psychological, respond to deprivation states rather than to less-than-complete satiation. For example, people are far more motivated to avoid being hungry than they

are to remain full. Just as there is little merit in a system that constantly motivated a person to maintain a full stomach, there would be little reason for a psychological system to evolve that pushed a person toward greater and greater inclusion by increasing numbers of people. In fact, the excessive social responsibilities associated with multiple group memberships may be disadvantageous. The sociometer system would serve its purpose if it simply assured that the person maintained sufficient social connections with a relatively small set of personally significant people (Baumeister & Leary, in press).

Second, in both Study 3 and Study 4, respondents who thought they were excluded showed a decrement in self-esteem, but those who were included showed no corresponding increment. Similarly, previous writers have discussed the asymmetry of positive and negative feedback. Although receiving positive reactions may be mildly pleasant, negative reactions carry far more weight. Not only does a slightly negative reaction have a much greater impact on most people than even a strongly positive one, but a single negative reaction can counteract and undo a plethora of accolades. Although other explanations are possible (e.g., because most interactions range from neutral to positive, positive responses from others lack the saliency and diagnosticity of negative ones), the sociometer hypothesis provides a parsimonious explanation of this pattern. Specifically, our psychological systems are designed to detect and place greater emphasis on reactions that connote exclusion than reactions that connote inclusion.

Kernis and his colleagues have recently shown that people's reactions to esteem-threatening events are moderated not only by their level of self-esteem but by its stability. Some people show little variation in self-esteem across situations and time, whereas other people's self-esteem is exceptionally labile. People with unstable self-esteem, whether low or high, show more extreme emotional and behavioral reactions to events involving negative evaluations by other people and other threats to self-esteem (for a review, see Kernis, 1993). In our view, people with unstable self-esteem essentially have an unstable sociometer that overresponds to cues that connote acceptance and rejection. For such people, minor changes in inclusion or exclusion result in large changes in the sociometer (and self-esteem). In extreme cases of unstable self-esteem, the fluctuations of the sociometer may be only minimally tied to real changes in inclusionary status, much like a faulty gas gauge that registers "full" one minute, "half full" a few minutes later, then "three-quarters full" after that.

Several theorists have conceptualized the self as having at least two distinct facets, which are commonly labeled *public* and *private* (Baumeister, 1986; Buss, 1980; Carver & Scheier, 1981; Fenigstein, 1987; Greenwald & Breckler, 1985; Schlenker, 1985). For example, ego-task analysis theory (Greenwald, 1982; Greenwald & Breckler, 1985) suggests that different aspects of the self are sensitive to different aspects of self-evaluation and perform different "tasks" in the service of protecting the ego. Whereas the public self "is sensitive to the evaluation of others and seeks to win the approval of significant outer audiences" (Greenwald & Breckler, 1985, pp. 132-133), the private self evaluates oneself on the basis of the individual's internalized standards. We concur that, once the self develops in childhood,

people are able to evaluate themselves from the perspectives of both themselves and various other people.

However, we propose that this ability to perceive and evaluate oneself from varying perspectives does not necessarily involve the sociometer mechanism that we have described in this article. After all, people are able to evaluate all manner of stimuli, including themselves, and some of their self-judgments are irrelevant to their feelings of self-esteem. As we have argued, the self-esteem system appears specifically designed to detect real or potential changes in the individual's inclusionary status and to elicit emotional and motivational processes in response to threats to one's connections with other people. Some events to which the sociometer responds are "private" ones involving thoughts and feelings that, if known by others, might jeopardize their inclusion in important groups and relationships, whereas other such events are "public" ones that others may easily observe. Even so, the sociometer responds to both private and public events in terms of their potential effects on inclusion-exclusion. Thus, the sociometer and the self-esteem feelings it mediates are responsive to both private and public self-relevant events.

In summary, the self-esteem system appears to function as a sociometer designed to detect possible deleterious changes in people's inclusionary status. Furthermore, rather than serving primarily to maintain one's inner sense of self, the self-esteem motive prompts people to behave in ways that maintain their connections with other people.

## References

- Adler, A. (1930). *Understanding human nature*. New York: Greenberg.
- Ainsworth, M. D. S. (1989). Attachments beyond infancy. *American Psychologist*, 44, 709-716.
- Alloy, L. (1988). *Cognitive processes in depression*. New York: Guilford Press.
- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York: Holt.
- Baldwin, M. W., & Holmes, J. G. (1987). Salient private audiences and awareness of self. *Journal of Personality and Social Psychology*, 52, 1087-1098.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Barash, D. P. (1977). *Sociobiology and behavior*. New York: Elsevier.
- Baumeister, R. F. (1986). *Public self and private self*. New York: Springer-Verlag.
- Baumeister, R. F. (Ed.). (1993). *Self-esteem: The puzzle of low self-regard*. New York: Plenum.
- Baumeister, R. F., & Leary, M. R. (in press). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*.
- Baumeister, R. F., & Tice, D. M. (1990). Anxiety and social exclusion. *Journal of Social and Clinical Psychology*, 9, 165-195.
- Beck, A. (1967). *Depression: Clinical, experimental, and theoretical aspects*. Philadelphia: University of Pennsylvania Press.
- Bednar, R. L., Wells, M. G., & Peterson, S. R. (1989). *Self-esteem: Paradoxes and innovations in clinical theory and practice*. Washington, DC: American Psychological Association.
- Blaine, B., & Crocker, J. (1993). Self-esteem and self-serving biases in reactions to positive and negative events: An integrative review. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 55-85). New York: Plenum.
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- Brockner, J. (1983). Low self-esteem and behavioral plasticity: Some implications. *Review of Personality and Social Psychology*, 4, 237-271.
- Brown, J. D. (1993). Self-esteem and self-evaluations: Feeling is believing. In J. Suls (Ed.), *Psychological perspectives on the self* (Vol. 4, pp. 27-58). Hillsdale, NJ: Erlbaum.
- Buss, A. H. (1980). *Self-consciousness and social anxiety*. San Francisco: Freeman.
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control-theory approach to human behavior*. New York: Springer-Verlag.
- Cooley, C. H. (1902). *Human nature and the social order*. New York: Scribner.
- Coopersmith, S. (1967). *The antecedents of self-esteem*. San Francisco: Freeman.
- Crocker, J., Thompson, L., McGraw, K., & Ingerman, C. (1987). Downward comparison, prejudice, and evaluations of others: Effects of self-esteem and threat. *Journal of Personality and Social Psychology*, 52, 907-916.
- Cutrona, C. E. (1982). Transition to college: Loneliness and the process of social adjustment. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research, and therapy* (pp. 291-309). New York: Wiley.
- Eagly, A. H., & Wood, W. (1991). Explaining sex differences in social behavior: A meta-analytic perspective. *Personality and Social Psychology Bulletin*, 17, 306-315.
- Epstein, S. (1973). The self-concept revisited: Or a theory of a theory. *American Psychologist*, 28, 404-416.
- Fenigstein, A. (1987). On the nature of public and private self-consciousness. *Journal of Personality*, 55, 543-554.
- Goswick, R. A., & Jones, W. H. (1981). Loneliness, self-concept, and adjustment. *Journal of Psychology*, 107, 237-240.
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of a need for self-esteem: A terror management theory. In R. F. Baumeister (Ed.), *Public self and private self* (pp. 189-207). New York: Springer-Verlag.
- Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., Burling, J., Lyon, D., Simon, L., & Pinel, E. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffering function. *Journal of Personality and Social Psychology*, 63, 913-922.
- Greenwald, A. G. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, 35, 603-613.
- Greenwald, A. G. (1982). Ego task analysis: An integration of research on ego-involvement and awareness. In A. H. Hastorf & A. M. Isen (Eds.), *Cognitive social psychology* (pp. 109-147). New York: Elsevier.
- Greenwald, A. G., & Breckler, S. (1985). To whom is the self presented? In B. R. Schlenker (Ed.), *The self and social life* (pp. 126-145). New York: McGraw-Hill.
- Harter, S. (1993). Causes and consequences of low self-esteem in children and adolescents. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 87-116). New York: Plenum.
- Harter, S., & Marold, D. B. (1991). A model of the determinants and mediational role of self-worth: Implications for adolescent depression and suicidal ideation. In G. Goethals & J. Strauss (Eds.), *The self: An interdisciplinary approach*. New York: Springer-Verlag.
- Heatherton, T. F., & Ambady, N. (1993). Self-esteem, self-prediction, and living up to commitments. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 131-145). New York: Plenum.
- Heatherton, T. F., & Polivy, J. (1991). Development and validation of a

- scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, 60, 895-910.
- Hogan, R. (1982). A socioanalytic theory of personality. In M. Page (Ed.), *Nebraska Symposium on Motivation* (pp. 55-89). Lincoln: University of Nebraska Press.
- Hogan, R., Jones, W. H., & Cheek, J. M. (1985). Socioanalytic theory: An alternative to armadillo psychology. In B. R. Schlenker (Ed.), *The self and social life* (pp. 175-198). New York: McGraw-Hill.
- Horney, K. (1937). *The neurotic personality of our time*. New York: Norton.
- James, W. (1890). *Principles of psychology*. New York: Dover.
- Jones, E. E., & Berglas, S. (1978). Control of attributions about the self through self-handicapping strategies: The appeal of alcohol and the role of underachievement. *Personality and Social Psychology Bulletin*, 4, 200-206.
- Jones, S. C. (1973). Self- and interpersonal evaluations: Esteem theories versus consistency theories. *Psychological Bulletin*, 79, 185-199.
- Kernis, M. (1993). The roles of stability and level of self-esteem in psychological functioning. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 167-182). New York: Plenum.
- Kernis, M. (1995). *Efficacy, agency, and self-esteem*. New York: Plenum.
- Leary, M. R. (1983). *Understanding social anxiety: Social, personality and clinical perspectives*. Newbury Park, CA: Sage.
- Leary, M. R. (1990). Responses to social exclusion: Social anxiety, jealousy, loneliness, depression, and low self-esteem. *Journal of Social and Clinical Psychology*, 9, 221-229.
- Leary, M. R., & Downs, D. (1995). Interpersonal functions of the self-esteem motive: The self-esteem system as a sociometer. In M. Kernis (Ed.), *Efficacy, agency, and self-esteem*. New York: Plenum.
- Leary, M. R., & Forsyth, D. R. (1987). Attributions of responsibility for collective endeavors. In C. Hendrick (Ed.), *Group processes* (pp. 167-188). Newbury Park, CA: Sage.
- Leary, M. R., & Kowalski, R. M. (in press). *Butterflies, blushes, and bashfulness: Social anxiety and interpersonal behavior*. New York: Guilford.
- Maslow, A. H. (1968). *Motivation and personality*. New York: Harper & Row.
- McFarland, C., & Ross, M. (1982). Impact of causal attributions on affective reactions to success and failure. *Journal of Personality and Social Psychology*, 43, 937-946.
- McFarlin, D. B., Baumeister, R. F., & Blascovich, J. (1984). On knowing when to quit: Task failure, self-esteem, advice, and nonproductive persistence. *Journal of Personality*, 52, 138-155.
- Mead, G. H. (1932). *Mind, self, and society*. Chicago: University of Chicago Press.
- Miller, R. S. (in press). On the nature of embarrassment: Shyness, social-evaluation, and social skill. *Journal of Personality*.
- Moreland, R., & Levine, J. (1989). Newcomers and oldtimers in small groups. In P. Paulus (Ed.), *Psychology of group influence* (Vol. 2, pp. 143-186). Hillsdale, NJ: Erlbaum.
- Perez, R. C. (1973). The effect of experimentally-induced failure, self-esteem, and sex on cognitive differentiation. *Journal of Abnormal Psychology*, 81, 74-79.
- Rogers, C. (1959). A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 3, pp. 184-256). New York: McGraw-Hill.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Scheff, T. J., Retzinger, S. M., & Ryan, M. T. (1989). Crime, violence, and self-esteem: Review and proposals. In A. M. Mecca, N. J. Smelser, & J. Vasconcellos (Eds.), *The social importance of self-esteem* (pp. 165-199). Berkeley: University of California Press.
- Schlenker, B. R. (1980). *Impression management*. Monterey, CA: Brooks/Cole.
- Schlenker, B. R. (1985). Identity and self-identification. In B. R. Schlenker (Ed.), *The self and social life* (pp. 65-99). New York: McGraw-Hill.
- Schlenker, B. R., & Leary, M. R. (1982). Social anxiety and self-presentation: A conceptualization and model. *Psychological Bulletin*, 92, 641-669.
- Shrauger, J. S., & Schoeneman, T. J. (1979). Symbolic interactionist view of self-concept: Through the looking glass darkly. *Psychological Bulletin*, 86, 549-573.
- Shrauger, J. S., & Sorman, P. B. (1977). Self-evaluations, initial success and failure, and improvement as determinants of persistence. *Journal of Consulting and Clinical Psychology*, 45, 784-795.
- Snodgrass, S. E. (1985). Women's intuition: The effect of subordinate role on interpersonal sensitivity. *Journal of Personality and Social Psychology*, 49, 146-155.
- Spivey, E. (1989). *Social exclusion as a common factor in social anxiety, loneliness, jealousy, and social depression: Testing an integrative model*. Unpublished master's thesis, Wake Forest University, Winston-Salem, NC.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. *Advances in Experimental Social Psychology*, 21, 261-302.
- Tajfel, H. (1981). *Human groups and social categories*. Cambridge, England: Cambridge University Press.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.
- Tedeschi, J. T., & Norman, N. (1985). Social power, self-presentation, and the self. In B. R. Schlenker (Ed.), *The self and social life* (pp. 293-322). New York: McGraw-Hill.
- White, G. L. (1981). Some correlates of romantic jealousy. *Journal of Personality*, 49, 129-147.
- Wills, T. A. (1981). Downward comparison principles in social psychology. *Psychological Bulletin*, 90, 245-271.

Received October 13, 1993

Revision received August 24, 1994

Accepted August 28, 1994 ■