Social Ostracism by Coworkers: Does Rejection Lead to Loafing or Compensation?

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A new theoretical model and research paradigm are introduced to investigate the phenomenon of social ostracism—being ignored by others who are in one's presence. The authors examined the effects of social ostracism on individuals' subsequent contributions to a group task. Social loafing typically occurs on collective tasks. However, to regain their sense of belonging to the group, the authors expected ostracized individuals to socially compensate—to work harder collectively than coactively. Participants were asked to generate as many uses as they could for an object, either coactively or collectively with two others who had either ostracized or included them in an earlier ball-tossing exchange. Ostracized females socially compensated, whereas nonostracized females neither loafed nor compensated. Ostracized and nonostracized males socially loafed. Based on these data and the accompanying attributional and nonverbal analyses, the authors surmised that males and females interpret and respond to social ostracism differently.

Social ostracism is a pervasive and ubiquitous phenomenon. Nations, tribes, and religious sects socially ostracize those who have transgressed against a norm or rule (Basso, 1972). Amish individuals who violate the elders' rulings are placed under a *Meidung*, a treatment in which they are not spoken to by community members (Gruter, 1986; Kraybill & Olshan, 1994). In organizations and industry, employers and coworkers shun whistle-blowers (Miceli & Near, 1992; Sheler, 1981), and individuals employ indirect and disengagement power tactics such as ignoring others to obtain compliance from them (Kipnis, 1984). In daily life, angry spouses use the silent treatment on each other (Gottman, 1980; Gottman & Krokoff, 1992; Gottman & Levenson, 1992;

Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991), and children use it as a form of peer rejection (Asher & Coie, 1990; Asher & Parker, 1989; Dodge, Pettit, McClaskey, & Brown, 1986). Even animals ostracize each other as a form of rejecting a nonproductive member (Goodall, 1986; Lancaster, 1986). Despite the widespread use of social ostracism, there have been no programmatic attempts to examine this phenomenon empirically or to integrate theoretically its impact on individuals' emotions, cognitions, and behaviors.

Social ostracism is defined as the perception of being ignored by others in one's presence (Williams, 1994, in press). Social ostracism can elicit strong negative reactions and thus provides an effective, yet potentially harm-

ful, technique for those who use it to manipulate the behaviors of others. The purposes of this article are to call attention to this important phenomenon, briefly introduce a model that can assist the understanding of its complexities and consequences, and present a paradigmatic experiment that examines one of these consequences.

The behavioral and emotional consequences of anticipated social exclusion are apparent. To avoid exclusion from others, people conform, obey, comply, inhibit their socially undesirable or idiosyncratic behaviors, change their attitudes, work harder, and generally try to present themselves in a favorable manner (see Baumeister & Leary, 1995). Psychologists know that failure to conform to others can lead to being excluded from many groups (Schachter, 1959). Yet, psychologists know relatively little about how or why ostracism affects individuals. For instance, how does ostracism affect people's desire to relate with those who have rejected them? What causal attributions does it elicit? How does it affect people's self-concepts?

In his *Principles of Psychology*, William James (1890) wrote a powerful indictment against social ostracism:

A man's Social Self is the recognition which he gets from his mates. We are not only gregarious animals, liking to be in sight of our fellows, but we have an innate propensity to get ourselves noticed, and noticed favorably, by our kind. No more fiendish punishment could be devised, were such a thing physically possible, than that one should be turned loose in society and remain absolutely unnoticed by all the members thereof. If no one turned round when we entered, answered when we spoke, or minded what we did, but if every person we met cut us dead, and acted as if we were nonexisting things, a kind of rage and impotent despair would ere long well up in us, from which the cruelest bodily tortures would be a relief; for these would make us feel that, however bad might be our plight, we had not sunk to such a depth as to be unworthy of attention at all. (James, 1890, pp. 293-294)

A brief review of the experimental literature on social ostracism appears to confirm James's view. The silent treatment leads to many negative psychological consequences. Geller, Goodstein, Silver, and Sternberg (1974) found that females who were ignored during a conversation by two female confederates reported feeling more alone, withdrawn, shy, dull, frustrated, anxious, nervous, and bored than did females who were not ignored. Craighead, Kimball, and Rehak (1979) and Samolis and Williams (1994) found that participants who imagined being ignored (also in conversations) generated significantly fewer positive self-referent statements than did participants who imagined successful attempts at social interaction. Specifically, ostracized individuals imagined

that they would experience more sadness, frustration, anger, disengagement, passivity, puzzlement, rejection, loneliness, and feelings of unworthiness.

A Need-Threat Model of Ostracism

Williams (1994, in press) suggested that social ostracism can prevent individuals from satisfying four fundamental needs. First, ostracism deprives people of a sense of *belongingness* to others (e.g., Baumeister & Leary, 1995; Baumeister & Tice, 1990), a need that is argued to be not only emotionally desirable but also evolutionarily adaptive (Buss, 1990). Baumeister and Leary (1995) argued that the need to belong, defined as the desire for frequent, positive, and stable interactions with others, is a fundamental human motivation that guides cognitive processing and leads to positive affect. Studies show that the absence of affiliation and intimacy with others produces a host of negative psychological consequences, including depression, anxiety, stress, and physical and mental illness. Theories of social identity (Brewer, 1991, 1993; Hogg & Abrams, 1988; Tajfel & Turner, 1986) and group-level social comparison (Goethals & Darley, 1987) also postulate that feelings of belongingness strengthened by in-group distinctiveness are central to the maintenance of self-esteem and a positive self-concept. Second, ostracism threatens its victims' abilities to maintain high *self-esteem*, the belief that they are good and worthy people (e.g., Steele, 1988; Tesser, 1988). The importance of maintaining self-esteem is central to many theories as a primary determinant of self-efficacy and mental health (e.g., Bandura, 1995; Barnett & Gotlib, 1988; Leary, Tambor, Terdal, & Downs, 1995). Third, ostracism also robs individuals of a sense of *control* over their interactions with others (Bruneau, 1973), weakening self-efficacy and thereby harming their psychological well-being (e.g., Seligman, 1975; Taylor & Brown, 1988; Taylor et al., 1992). And fourth, because social ostracism involves a withdrawal of attention or recognition by others, individuals repeatedly exposed to it may question whether their existence is *meaningful* or important (e.g., Cooley, 1902; James, 1890; Mead, 1934; Solomon, Greenberg, & Pyszczynski, 1992).

The model assumes that depending on which need or needs have been threatened, the individual will initially react in such a way as to regain or strengthen what has been deprived. These needs are not necessarily mutually exclusive. An increased sense of belongingness may raise self-esteem, which can provide a greater feeling of control and efficacy. However, depending on the type of ostracism that is used or perceived, just one of these needs is likely to be salient, causing corrective action to focus on ameliorating that particular threat. Finally, if an individual endures long-term ostracism, attempts to regain these needs may give way to despair and helpless-

ness. This is consistent with research and theory on long-term loss of control (Peterson, Maier, & Seligman, 1993; Seligman, 1975) and rejection (Leary, 1990).

Ostracism: A Taxonomy

Ostracism is a broadly used term referring generally to the exclusion of an individual or group from others. There are, however, several types of ostracism, and each possesses special attributes that may result in threats to a particular need or set of needs, different perceptions of its use, and different consequences to its targets. A taxonomy may prove helpful to understand these differences, although at present the categories in that taxonomy are not seen as necessarily mutually exclusive or exhaustive (Williams, 1994, in press). One important distinction is that of *physical* versus *social* ostracism. Physical ostracism describes physical separation, which includes banishment, exile, solitary confinement, and "time-out" in a separate room. At an interpersonal level, physical ostracism can involve simply leaving or being left alone. Social ostracism describes instances in which people are ignoring or being ignored while in the physical presence of others. This would include such terms as the *silent treatment, cold shoulder,* and *freezing out,* all which refer to the apparent invisibility of a person in the midst of others.

Another distinction can be made between the perceived motives of the ostracism and includes *not ostracism, role prescribed, punitive, defensive,* and *oblivious* ostracism. The first two are conditions that essentially excuse or discount the impact of the ostracism. Sometimes, when one is not looked at or spoken to, one is not being ostracized. People recognize this possibility when they decide that the person might have been thinking of something else or was otherwise preoccupied. Role prescribed ostracism refers to instances for which temporary roles dictate that a person playing one role does not acknowledge or speak to someone playing the other role, such as the inattention people typically give wait staff at restaurants. Punitive ostracism refers to acts of ignoring that are perceived or intended to be deliberate and aversive. Exile, banishment, shunning, and the silent treatment are typical examples of this. Ironically, as the object of inattention, the target of punitive social ostracism may become highly self-aware—a psychological state often experienced by people who are the focus of attention. Defensive ostracism is preemptive in nature and may be used in anticipation of negative, threatening feedback from others or expected ostracism by others. It is meant more as ego protection or as a means of retaining some control over the situation rather than as an offensive weapon. Oblivious ostracism refers to those occasions when ostracizers have little or no regard for the victims and view the victims as unworthy of their attention. It is not an effortful form of ostracism, as punitive ostracism is, because the user is not trying to ostracize the victim. Rather than being the object of inattention, the obliviously ostracized person becomes invisible or unworthy of attention.

The quantity of ostracism can also be placed along a continuum, from *partial* to *complete.* Partial ostracism often involves spending less time with the individual or, during social ostracism, giving monosyllabic responses to queries or minimal concession to social norms (e.g., saying "excuse me" when passing by the individual or saying "pass the salt" when sitting next to the individual at the dinner table). Complete ostracism is the total absence of language and eye contact. These degrees of ostracism may be important both in protecting the user from having to apologize ("I was not ignoring you; I said, 'Excuse me'!") and also in making it difficult for the target to know for certain that he or she is actually being ostracized.

Finally, the reasons for ostracism can vary along the dimension of causal clarity. *Causally unclear* ostracism occurs when the target is completely in the dark about why it is occurring, whereas *causally clear* ostracism occurs when a declaration is made that ostracism will occur for a specific reason (for example, as a punishment for some norm violation). Causally unclear ostracism, although not explicitly punitive, may actually threaten someone's self-concept more, because its victims may manufacture myriad self-deprecating internal attributions to account for the ostracism (e.g., "It is because I was late for dinner"; "The last time I saw him, I must have insulted him"; "They do not like me because I'm different from them").

Each type of ostracism can have a different impact on the thoughts, feelings, and behaviors of its victims and thus may offer a different strategic value for its user. For instance, oblivious ostracism may trigger needs to feel recognized or be perceived as meaningful. Punitive ostracism may cause a person to seek self-affirmation or connectedness or a sense of belonging with others, all to augment self-esteem (Leary et al., 1995). Partial ostracism may provide its user with a safe sanctuary from accountability (e.g., "You must be paranoid; I was not ignoring you"), whereas total ostracism offers a clearer statement of exclusion.

This model is complex and largely untested. Our initial empirical investigation is, however, modest in its scope. Because there are increasing reports of coworkers socially ostracizing whistle-blowing employees (Miceli & Near, 1992) and because of our prior interest in coworker relations as they affect social loafing (Sommer, 1991; Williams & Karau, 1991), we chose to study the effects of social ostracism by coworkers on coactive versus collective group tasks. Coactive group tasks involve working alongside coworkers on the same task but producing

individual output, whereas collective group tasks involve working alongside others on the same task but combining one's output with the output of the coworkers to form a single group product. There are two superordinate goals: The first goal is to develop a paradigm for studying social ostracism that creates in a laboratory setting the psychological drama of being ignored. The second goal is to examine one possible effect of being socially ostracized by group members: Does it affect contributions to a group task?

An Experiment

The present study investigates productivity on group tasks in males and females following exposure to one of three situations—one in which individuals are continually included, one in which individuals are ostracized, and one (control) condition in which social interaction is neither permitted nor expected. The type of ostracism employed, using the taxonomy mentioned earlier, is social (individuals are ignored in the presence of the group), complete (no eye contact, no interaction by group members), yet causally unclear (no explanation given). Because participants are included initially in the group activity prior to the onset of their ostracism, we suspect that the ostracism will be interpreted by participants as punitive, as opposed to defensive or oblivious. We chose this particular form of ostracism because it appeared to represent a baseline ostracism condition: simple to manipulate and unfettered by excessive extraneous context. It was not meant, however, to represent necessarily the most typical form or most punitive form of ostracism.

We offer several predictions. First, control individuals will exert more effort in the coactive condition than in the collective condition, replicating previous research on social loafing (Latané, Williams, & Harkins, 1979; for a review, see Karau & Williams, 1993). When individual outputs are combined so that only the group product can be evaluated (i.e., a collective task), the motivation to exert maximum effort on a task decreases, and performance falls short of that achieved when individual outputs can be evaluated (i.e., a coactive task). Thus, the control group will serve as a replication of the conditions that typically produce social loafing.

Second, because of heightened perceptions of group cohesiveness, included individuals will be about as productive in the collective condition as in the coactive condition. This is consistent with arguments made by Hogg (1992) and with research by several others (Hardy & Latané, 1988; Karau & Williams, in press; Worchel, Hart, & Butemeyer, 1989) indicating that group cohesion attenuates or eliminates social loafing. Apparently, as the group becomes more cohesive, it is perceived in some respects as an extension of self; the group becomes an

in-group. Therefore, the group's success becomes as important as the individual's success.

Third, as predicted by Williams's (1994, in press) model and consistent with Baumeister and Leary's (1995) position, ostracized individuals will be motivated to maximize feelings of belongingness with the group and thus will exert more effort in the collective than in the coactive condition. Williams and Karau (1991) referred to this effect as social compensation, which, in their experiments, occurred when individuals believed that their coworkers would not, or could not, contribute adequately to the group outcome. In their review of the social loafing literature, Karau and Williams (1993) suggested that social compensation may occur under other conditions as well—specifically, whenever individuals desire to avoid group failure because they stand to benefit psychologically from a good group performance. We contend that ostracized individuals who must pool their contributions with those who have ostracized them may in fact benefit more from a good group performance. Victims of ostracism ought to experience deprived feelings of belongingness from their group (Baumeister & Leary, 1995). They may attempt to remedy their sense of exclusion by socially compensating—maximizing their efforts on collective (but not on coactive) tasks. Working hard coactively would serve only to promote the self, without improving one's sense of belonging to the group, whereas working hard when one's contributions to the group are submerged would serve to promote the group. Selflessly promoting a group should increase the sense that one belongs to that group.

Another outcome is plausible: People may further disengage from the group, essentially rejecting those who have rejected them. This option would result in a social loafing effect: Individuals would indulge in self-promotion by working hard when they were in coactive groups but not work very hard when their contributions were submerged into the group's output. Such behavior would deprive the group of a favorable outcome and evaluation.

The few studies that have examined ostracism and its effect on people's behavior with and toward the ostracizing group members offer conflicting results. Some studies found that ostracized individuals dislike and prefer to avoid the ostracizers. Geller et al. (1974) found that females ignored in a conversation by two female confederates were less likely than included females to reward the confederates later. Some evidence suggests that excluded individuals are also less likely than included individuals to want to work with the rejecting group in the future (Pepitone & Wilpizeski, 1960), particularly if they are low in self-esteem (Dittes, 1959) or high in public self-consciousness (Fenigstein, 1979). Similarly, Predmore and Williams (1983) found that socially ostracized males

were more likely to want to be with a different group of people, rather than staying in the same group or being alone. However, other evidence suggests that the desire for group membership does not decrease when a rejecting group is viewed as highly attractive (Jackson & Saltzstein, 1957). In our experiment, participants have to work with the people who are ostracizing them. They do not have an option to exit, nor can they directly punish the ostracizers (without also punishing themselves). Under these conditions, we expect that ostracized participants will do whatever they can to maximize their chances for reinclusion.

Furthermore, we expect that attributions for ostracism are likely to affect its impact on people. Snoek (1962) had groups reject individuals by not talking to them, either because (ostensibly) they were not worthy of group membership or because the group was too full. He found that when people were strongly rejected for impersonal reasons, their desire to affiliate with the group decreased. But when they were rejected for personal reasons, people maintained their desire to belong. Snoek concluded that personally rejected individuals possessed a need for social reassurance that could be fulfilled only by remaining in the group. These results suggest that the attributions generated by ostracized individuals may mediate their subsequent desire for group membership. Because the participants in our study are not provided with any explanations for their ostracism (i.e., causally unclear ostracism), they are likely to engage in attributional processing. Without making specific predictions, we explore our participants' attributions in the present study.

METHOD

Participants and Design

Participants were 228 undergraduates from introductory psychology classes at the University of Toledo. They received extra course credit for their research participation. Of these participants, 51 were excluded from the final data analyses. Nine people were omitted because they did not speak English well enough to perform the task, 16 were omitted due to equipment failure or procedural errors, and 26 were omitted due to early suspicion regarding the true purpose of the experiment. There were no differences in suspicion between included and ostracized participants, although both of these groups reported higher levels of suspicion than did the control participants. The final sample consisted of 96 males and 81 females. A 3 (pretask activity: control vs. inclusion vs. ostracism) × 2 (work condition: coactive vs. collective) × 2 (participant gender: male vs. female) between-subjects design was employed.

Procedure

One participant and two confederates (of the same gender as the participant) arrived for an experiment entitled Brainstorming. The laboratory was divided in half by two large cloth partitions. In the first phase of the experiment, the participant and confederates sat in the half of the laboratory with an observation window. They sat in a triangular configuration, approximately 5 ft apart from one another. The confederates occupied the two chairs placed against the walls, which forced the participant to sit in the remaining chair, allowing for unobtrusive observation and videotaping. Next to one confederate was a crate filled with toys, a ball, and books. Above the crate hung a sign reading "Child Play Behavior." Similar signs reading "Child Observation" were hung in the hallway next to the laboratory, all to create the illusion that the same laboratory was used for conducting another study (in which toys and observation were necessary).

All participants gave us their written consent for the research, and on the same form, 91% also agreed to let us videotape them. The experimenter then administered a preexperimental questionnaire, which assessed such background information as class rank, age, and major. The purpose of the questionnaire was to prevent participants from initiating conversation with the confederates. The experimenter announced that she had a few things to do while the participants completed their questionnaires and mentioned that "The upcoming task is a group verbal task, so for the purposes of the experiment, it is important that no one talks." The experimenter then left the room and observed the participant and confederates through the one-way mirror. When the participants completed their questionnaires, the experimenter began timing everyone. She reentered the room 5 min later and announced that it was time to begin the experiment. During this 5-min period, one of three pretask activities took place.

Pretask Activity Manipulations

Control. The confederates simply read over their questionnaires or took out reading materials from their backpacks and sat silently, as instructed, for the 5 min until the experimenter returned.

Inclusion. When the participant completed the questionnaire, one confederate began rummaging through the crate, ostensibly to pass the time. After looking through a book and examining a few toys, the confederate noticed the racquetball and began bouncing the racquetball, first by him- or herself and then to the other group members (i.e., the other confederate and participant). Both confederates included the participant, both by bouncing him or her the ball and by smiling and

making eye contact. The ball was tossed back into the crate when the experimenter entered the room.

Ostracism. This started out the same way as the inclusion condition, except that after approximately 1 min of ball tossing passed, the confederates began bouncing and tossing the ball only to each other. They neither looked nor smiled at the participant for the remaining 4 min. When the confederates heard the experimenter walking toward the room, they quickly tossed the ball back into the crate.

If the participant initiated conversation, the confederates' responses varied according to condition. In the inclusion and control conditions, the confederates responded politely but as briefly as possible to control for the amount of social (verbal) interaction that took place. In the ostracism condition, the confederates responded politely and briefly only during the first minute. After that, any attempts at interaction were ignored. Because the experimenter explicitly asked them not to talk, few participants attempted to interact verbally in any of the conditions.

When the experimenter returned, participants and confederates were led to the other half of the room (previously concealed by large partitions) and seated in a circular configuration. The three desks were separated by 6 ft high cloth partitions, so participants and confederates could neither see nor speak to one another. Each person received a sheet of instructions that was read aloud by the experimenter. All participants heard that they would be generating as many uses as possible for a given object and that quality or creativity was not important (these are standard instructions used in social loafing experiments).

Work Condition Manipulations

Coactive condition. In the coactive condition, the experimenter explained that she was interested in individual performance and that each person's output would be compared with that of the other group members. Participants heard that they would receive feedback about their individual performance at the end of the experiment. A container with three small slits in the lid was removed from the center of the room and shown to each person. The container was divided into three sections by cardboard, and the experimenter noted that individual responses would be separated and evaluated.

Collective condition. In the collective condition, the experimenter explained that she was interested in the group's performance and that the group's total output would be compared with that of other groups. Participants also believed that the group's output would be reported to them at the conclusion of the experiment. The experimenter showed participants the same empty container

(without partitions) and noted that their responses would be combined there.

After answering any questions regarding the task, the experimenter replaced the container at the center of the room and said, "You have twelve minutes to generate as many uses as you can for the object 'knife.' " She then started the stopwatch and left the room. Responses were written with red felt-tip pens on slips of paper (one response per paper, $2\frac{1}{2} \times \frac{1}{2}$ in. in size) and inserted into slits positioned directly in front of the participants. Confederates simply wrote their names or scribbled on each slip, so that the experimenter could easily separate the participants' responses from those of the confederates (especially in the collective condition). The confederates inserted the same number of papers into the bucket regardless of condition (approximately 20 to 25).

The experimenter stopped the task after 12 min. She handed each participant a questionnaire, noting that the questionnaires would be completed in separate rooms. The experimenter "arbitrarily" chose the real participant as the one who would remain in the laboratory and suggested that the other two come with her. The confederates were then escorted out of the laboratory.

Postexperimental questionnaire. The questionnaire first probed for suspicion by requesting participants to describe any thoughts they had regarding the purpose of the study. Several questions were then asked to assess the effectiveness of the work condition and ostracism/inclusion manipulations. Additional items assessed the participants' self-reported effort on the task, their feelings toward their partners, their mood, and their attributions for why others stopped tossing the ball to them (described in Table 2). Toward the end of the questionnaire, participants learned that we were interested in the silent treatment, and they were asked questions about whether it had been used on them, if they used it on others, and the circumstances of its use by themselves or others.

Participants were then debriefed and dismissed. Participants in the ostracism condition were reintroduced to the confederates during the debriefing session, and extra measures were taken to ensure that all of the participants understood that they were randomly chosen to be ostracized. We found that the process of reintroducing the confederates with the participant benefited all parties involved. The confederates were slightly uneasy and anxious about ostracizing the participants and felt more comfortable when afforded the opportunity to talk with them after the experiment. During this phase of the debriefing, the confederates and participants interacted freely, and the experimenter played a secondary role. The debriefing also allowed participants to talk out their feelings about being ostracized. This appeared to reduce any residual anxiety caused by the ostracism.

RESULTS

Because this is a new paradigm, we were particularly interested in participants' reactions to the experimental setting and the ostracism manipulation. From casual observation, we noticed that most participants reacted gleefully to the initial exchange of ball tosses. They seemed to view this behavior as a "loophole" that allowed them to interact without violating the experimenters request for no talking. Participants often acted as though they were coconspirators in an attempt to get away with a small norm violation. Those who were not ostracized appeared to enjoy tossing the ball throughout the waiting period. Often, their enthusiasm escalated, resulting in trick bounces, throws off the wall or ceiling, and suppressed laughter. In the ostracism condition, however, a very different pattern of behavior emerged. First, participants laughed or smiled when they noticed they were not being thrown the ball. Then, they looked at the confederates to make eye contact. As seconds passed and neither eye contact nor the ball was returned, various signs of displeasure and disengagement were displayed. In fact, these reactions were rather unpleasant and disturbing interchanges to observe, even after dozens of experimental sessions. So, from casual observation alone, it was quite apparent that something negative was happening as social ostracism occurred.

Unless otherwise mentioned, self-report and behavioral data were analyzed in a 3 (pretask condition: control vs. inclusion vs. ostracism) × 2 (task condition: coactive vs. collective) × 2 (participant sex: male vs. female) ANOVA. Sex was treated as a factor in case females and males reacted differently to social ostracism. Unless otherwise mentioned, all Likert-type items were measured on 100-point scales (1 = *not at all* to 100 = *very high or extremely*). All significant main effects and interactions are reported.

Manipulation Checks

Postexperimental questionnaire data indicated that the manipulations were effective. For example, participants in the included and ostracized conditions were asked the open-ended question "Why did the others stop throwing the ball to you?" near the end of the questionnaire. None (0%) of the ostracized denied that this occurred, and all of them offered some sort of explanation for their ostracism. In contrast, 81.6% of the included participants said that the confederates never stopped throwing them the ball, $\chi^2(1, N = 101) = 70.28$, $p < .01$. Those included participants who gave a reason for why the ball was not thrown to them simply claimed that the ball was not thrown to them all the time. Responses to the question "How much interaction did you have with your partners" revealed only a main effect for pretask activity, $F(2, 163) = 30.98$, $p < .01$. The reported levels of interaction were highest in the inclusion condition, followed by the ostracism condition and then the control condition (Ms on 100-point scales = 51.5, 31.0, 12.0, respectively). Planned comparisons revealed that each of these means differed significantly ($ps < .05$) from the others.

Two additional questions also supported the anticipated impact of the ostracism manipulation. Participants were asked (on a 100-point scale) to assess the level of group cohesion in their groups. The analysis revealed a main effect for pretask Activity, $F(2, 159) = 13.5$, $p < .01$. Group cohesion was rated highest in the inclusion condition, lower in the ostracism condition, and lowest in the control condition (Ms = 63.0, 31.8, 17.5, respectively). Planned comparisons again revealed that each of these means differed significantly ($ps < .05$) from the others. Finally, a 6-point semantic differential item ("Did you feel: accepted vs. rejected") also tended to support the effectiveness of the ostracism manipulation, with a nearly significant main effect for preactivity condition, $F(2, 163) = 2.95$, $p < .06$. Planned comparisons showed that ostracized participants felt somewhat more rejected ($M = 4.4$) than did participants in the control condition ($M = 4.8$), $p < .10$, and significantly more rejected than did participants in the inclusion condition ($M = 5.0$), $p < .05$. The control and inclusion conditions did not differ significantly.

The work condition manipulations also appeared to be successful. Compared with participants who worked collectively ($M = 42.4$), those who worked coactively ($M = 82.1$) were more likely to believe that the experimenter would know how many uses they generated for a knife, $F(1, 165) = 87.4$, $p < .05$. Additionally, collective participants felt significantly more responsible to their groups ($M = 67.1$) than did coactive participants ($M = 59.2$), $F(1, 164) = 3.96$, $p < .05$, and females reported feeling significantly more responsible to their groups ($M = 68.8$) than did males ($M = 58.4$), $F(1, 164) = 6.25$, $p < .05$. Lastly, collective participants tended to perceive having less control over their group's performance ($M = 67.8$) than did coactive participants ($M = 74.9$), $F(1, 165) = 3.73$, $p < .06$.

Self-Reported Effort

The means for the questions "How hard did you try on the task?" and "How concerned were you about doing well on the task?" ($\alpha = .72$) were averaged to provide an index of perceived effort on the task. An analysis of this index revealed a significant interaction between work condition and pretask activity, $F(2, 165) = 4.06$, $p < .05$. This interaction is consistent with previous work on social loafing and with our predictions regarding actual effort. Post hoc (Tukey) tests revealed no differences in perceived effort for control participants between the

coactive task (M = 68.6) and the collective task (M = 68.1). Most social loafing studies similarly show little or no participant awareness of motivation losses (Karau & Williams, 1993). Included participants, however, tended to report working harder coactively (M = 76.1) than collectively (M = 65.7), $p < .06$, whereas ostracized participants reported working significantly harder collectively (M = 82.0) than coactively (M = 70.0), $p < .05$.

Feelings Toward Partners

Participants' moods ("Describe your overall mood while waiting") during the pretask activity, their liking for partners ("How much did you like the other participants in the experiment?"), and their desire to work again with partners ("How much would you like to work with the same participants in another experiment?") were highly correlated (α = .78). The mean of these variables provided an index of participants' feelings toward their partners. The three-way ANOVA revealed a main effect for pretask activity, $F(2, 165)$ = 7.56, $p < .01$. Participants' feelings toward their partners were most positive in the inclusion condition, followed by the ostracism and control conditions (Ms = 69.0, 62.2, and 57.5, respectively). Post hoc (Tukey) tests revealed that the inclusion condition differed significantly ($p < .05$) from both the ostracism and control conditions, whereas the ostracism and control conditions did not differ significantly from one another.

Output: Number of Uses Generated

The mean number of uses generated by participants in each condition is presented in Table 1. The three-way ANOVA revealed no significant main effects. The predicted interaction between pretask activity and work condition was not significant ($F < 1$). However, a marginally significant Gender × Work Condition interaction emerged, $F(1, 165)$ = 3.80, $p < .06$. Post hoc (Tukey) tests indicated that males worked about the same collectively (M = 25.5) as coactively (M = 27.5), whereas females tended to work harder collectively (M = 26.1) than coactively (M = 22.9), $p < .08$.

This two-way interaction, however, was qualified by a significant Pretask Activity × Work Condition × Gender interaction, $F(2, 165)$ = 4.22, $p < .05$. We conducted a series of planned contrasts to determine whether males and females demonstrated productivity gains or losses in a collective setting after being included or ostracized by their groups. First, we expected social loafing in the control condition. Male participants showed a tendency to loaf in this condition, $F(1, 165)$ = 2.74, $p < .10$, whereas females did not, $F < 1$. Second, based on previous research suggesting minimal or no loafing in cohesive groups, we expected no differences on collective versus coactive tasks in the inclusion condition. There were, in

fact, no such differences for males or females, $Fs < 1$. Third, we expected social compensation in the ostracism condition. Male participants displayed a nonsignificant tendency to loaf, $F(1, 165)$ = 1.90, $p = .17$, whereas females socially compensated, $F(1, 165)$ = 7.78, $p < .01$, as predicted.

Attributions for Ostracism and Nonverbal Behaviors

Because males and females seemed to react differently to the ostracism manipulation, we examined more carefully the participants' attributions for, and nonverbal reactions to, social ostracism.

Attributions. Participants were asked to report on two 100-point scales the extent to which the ball was not thrown to them because of (a) something they themselves did and (b) the type of people the other two participants were. We performed a 2 (male vs. female) × 2 (reason for ostracism: something one did vs. type of people they were) mixed-model ANOVA, with reason for ostracism entered as a repeated measures variable. A significant main effect for reason for ostracism occurred, such that participants were more likely to attribute the ostracism to the type of people their partners were (M = 37.8) than to their own behavior (M = 24.8), $F(1, 50)$ = 5.58, $p < .05$.

Additionally, participants were asked to explain, in their own words, why the other participants stopped throwing them the ball. The second author and a research assistant blind to the hypotheses coded the responses of ostracized participants. A list of eight mutually exclusive categories was generated, and each participant's response reflected one or more of the attributions listed in Table 2. Interrater reliability for these codings was high, Cohen's k = .96, z = 12.97, $p < .01$. Disagreements were resolved through discussion. Chi-square analyses revealed that females were significantly more likely than males to attribute the ostracism to their own poor character. Compared with females, males tended to attribute the ostracism to their own disinterest or to the fact that they did not appear to the others to be interested in bouncing the ball (regardless of whether they were truly interested in playing), although this difference did not reach significance, $p > .10$.[1]

Nonverbal behaviors. As noted earlier, ostracized and included participants who consented to videotaping were videotaped during the ball-tossing activity. These videotaped segments, along with several segments from a related study employing the same ostracism paradigm, were coded by two coders who were blind to the conditions (one of whom was also blind to the hypotheses) for the presence or absence of several nonverbal behaviors for 56 females and 43 males (Sommer, Bogle, Grahe, & Williams, 1995). These behaviors fell into one of two

TABLE 1: Mean Number of Uses Generated as a Function of Work Condition, Gender, and Pretask Activity

Condition	Male			Female			Total
	Ostracism	Inclusion	Control	Ostracism	Inclusion	Control	
Coactive							
n	14	13	18	13	14	16	
SD	9.90	8.45	9.5	6.86	7.63	8.06	
M	28.7	24.5	28.8	20.7	24.6	23.1	25.4
Collective							
n	13	18	20	12	13	13	
SD	5.96	13.22	10.00	10.58	8.28	6.67	
M	23.9	28.4	23.9	30.9	23.3	26.5	24.5
Total	26.4	27.2	26.2	25.6	24.0	23.7	25.6

TABLE 2: Percentages of Attributions Generated by Ostracized Males and Females Explaining Why They Thought the Others Stopped Throwing the Ball to Them

Attribution	Males	Females	χ^2
Do not know why they stopped	7.4	12.0	0.32
They stopped because it was part of the experiment.	11.1	16.0	0.79
Self-choice (i.e., the participant said she or he decided to stop throwing to the others)	48.2	28.0	2.23
Layout of room (e.g., "There was no wall near me," "They were facing each other.")	37.0	24.0	1.04
Dissimilarity (i.e., the participant mentioned differences between self and others; e.g., "They are more aggressive than I am," "They are friends.")	18.5	16.0	0.06
Others: poor character (e.g., "They are stuck-up," "They are immature.")	11.1	16.0	0.27
Self: poor character (e.g., "I am not friendly enough," "I'm not attractive to the others.")	3.7	24.0	4.59*
Self: task-specific behavior (e.g., "I didn't bounce the ball well enough," "I'm not very coordinated.")	7.4	12.0	0.32

*$p < .05$.

general categories: engagement (forward lean, eye contact, and talking) and ambiguous behaviors (smiling, laughing, and object manipulation). Ambiguous behaviors were those that did not connote a clear positive or negative reaction to ostracism. For example, object manipulation—such as taking out a book, examining keys, or retying shoes—might connote disinterest but may also reflect an effort to save face. After observing the tapes carefully, we decided to separate the ambiguous behaviors into two subcategories: smiling and laughing, and object manipulation. Smiling and laughing co-occurred and appeared to reflect the presence of genuine positive affect; conversely, object manipulation occurred independently of smiling and laughing and appeared to manifest mainly as a strategy for masking anxiety.

Two coders counted the number of nonverbal behaviors displayed by included and ostracized participants during the last 4 min of the pretask activity. (Recall that during the first minute, all participants were included.) All nonverbal analyses were based on the mean of coders' ratings. Engagement was defined as the sum of forward lean, eye contact, and talking. Good interjudge reliability was achieved; intraclass correlations ranged from .90 to .99 and were all significant ($ps < .05$). A 2 (ostracism vs. inclusion) × 2 (male or female participant)

between-subjects ANOVA yielded a significant interaction for engagement behaviors, $F(1, 80) = 5.48$, $p < .05$. Included participants were more engaged than ostracized participants, but post hoc (Tukey) tests revealed that this effect was significant only among ostracized females, $p < .05$.

The ambiguous behaviors of smiling/laughing and object manipulation were analyzed separately. Intraclass correlations ranged from .63 to .81 and were all significant ($ps < .05$). A 2 (ostracism vs. inclusion) × 2 (male or female participant) between-subjects ANOVA revealed that smiling and laughing were higher for included than ostracized participants, $F(1, 80) = 18.48$, $p < .01$, and higher among females than males, $F(1, 80) = 6.40$, $p < .05$. Lastly, there emerged a significant two-way interaction for object manipulation, $F(1, 75) = 7.85$, $p < .01$. Ostracized males were more likely than any other group (included males, ostracized females, or included females) to manipulate objects in their environments.[2]

DISCUSSION

Our first goal was to develop and present a new experimental paradigm to study social ostracism. To explore the phenomenology of being ostracized and to

ensure that it would have an impact on the participants, it seemed important to use a behaviorally and emotionally engaging procedure, one that was high in experimental realism. Participants were first enticed into spur-of-the-moment free play by tossing a ball around with two other people while awaiting the return of the experimenter. After about 1 min, a third of our participants found themselves in an odd situation: Suddenly, and for the remainder of the waiting period, they were no longer thrown the ball. There was no explanation, no conversation, and no eye contact associated with this ostracism. Responses varied but typically followed a pattern of looking at the confederates, smiling, looking around, not smiling, withdrawing, and sometimes initiating another activity (like looking in a purse or wallet). During this time, participants were no doubt thinking about what was happening and why it was occurring. The confederates, although willing and able to carry out their research assignments, nevertheless indicated that it was difficult to engage in social ostracism. And from our own perspectives, it was uncomfortable to watch the ostracism take place.

There were other indications that social ostracism was a potent topic for participants. When asked to recall episodes of the silent treatment from their pasts, participants wrote more and were more open about their feelings than we have become accustomed to in other research. Several participants used curse words to describe episodes in their lives when people had ostracized them. A male participant admitted beating up his girlfriend in response to her silent treatment, and one female admitted to continually poking her boyfriend until he yelled back at her. Almost everyone reported that they had been given the silent treatment at some point in their lives and that it was memorable and unpleasant. Yet, almost all of them also reported that they had used the silent treatment themselves, on friends, loved ones, or relatives, as an effective means of punishing or dealing with those people. Usually, they justified their behavior by claiming it was the only method that would work in their particular circumstances. These reports strengthened our belief that social ostracism is a widespread and powerful tactic of social influence.

Our second goal was to examine the effects of social ostracism on how much individuals contributed to a group task. Our predictions rested mainly on the assumption that people generally strive for inclusion or acceptance in groups. We expected that social ostracism would activate needs for belongingness, causing people to work harder collectively than coactively, a form of social compensation. We also acknowledged, however, that ostracized individuals might simply reject the group that was rejecting them. The results were interesting and indicated support for both behavioral options. The so-

cial compensation effect was robust for ostracized females, but ostracized males tended to socially loaf. Complicating these results was the fact that females did not demonstrate a reliable social loafing effect in the control conditions. This is not as disturbing as one might think, however, given the literature on sex differences in social loafing. In their meta-analysis of social loafing studies, Karau and Williams (1993) concluded that although social loafing was a reliable effect across various populations, the effect size was considerably smaller for females than for males. In fact, several studies with female participants have shown weak or no social loafing effects.

Why the Sex Differences?

What caused males and females to react differently to social ostracism? Perhaps male participants were simply oblivious to the fact that they were being ignored. Prior research shows that women are more likely to pick up nonverbal cues, especially when those cues communicate tension or stress (Hall, 1984). We regard this explanation as unlikely, however, because all ostracized participants acknowledged during the debriefing that the confederates had stopped throwing them the ball. And both ostracized males and females reported lower perceptions of group cohesiveness than did included males and females.

Perhaps ostracism was threatening to females but not to males. This conclusion is consistent with our finding that females were more likely than males to blame their own poor characters or abilities for the ostracism and that females (but not males) socially compensated following rejection by their groups. Both sexes may have interpreted the ostracism as rejection but experienced dissimilar emotional and cognitive consequences. Although we do not deny that sex roles can lead to differences in how males and females satisfy their needs for belongingness, we are reluctant to conclude that social ostracism was not threatening to males.

We believe that males and females both labeled their experiences as ostracism and suffered comparable deprivations in belongingness—but employed different coping mechanisms for dealing with this threat. In a recent review of the literature on sex differences in impression management, Leary (1995) concluded that most societies expect and even encourage women to be self-revealing and expressive. Males who display such behaviors, however, risk making negative impressions on others and thus worry about appearing too open or disclosing too much about their feelings. Applied to the present situation, social norms constraining the display of negative emotions in males may have raised concerns about saving face or exerting control over their experiences. Indeed, this conclusion gains support from both the relatively high levels of object manipulation among

ostracized males and the relatively high levels of disengagement among ostracized females.

This social norms explanation for the obtained gender differences in reactions to ostracism receives further support from the patterns of attributional responses. Males tended to pretend that the ostracism was not imposed on them but, rather, was self-chosen. Conversely, and consistent with social norms encouraging expression and communication between females, the ostracized females questioned more candidly their desirability to others. That is, females tended to look to their own poor characters or skills to explain why they were ignored.

Drawing from both the nonverbal and attribution data, females appeared to acknowledge openly their feelings of rejection. They questioned their own attractiveness and abilities, reduced their liking for ostracizing coworkers, and disengaged from the group. When placed in a situation in which they could improve the group's evaluation, however, they maximized their contributions.

Males, conversely, appeared to cope with the ostracism while it was occurring by redirecting their interests toward objects in their environment. We propose that males' concerns for impression management caused them to mask their emotional responses to ostracism, possibly helping them to regulate their emotions by reinterpreting their lack of inclusion in a nonthreatening way (i.e., understanding the event as one of self-choice). Through these face-saving coping mechanisms, males were able to remedy or at least reduce the negative impact of ostracism—leaving them in the same psychological position (ready to loaf, as usual) as their counterparts in the control group.

We must admit that these explanations are speculative. Sex differences are obviously confounded with a multitude of other psychological factors, and future research will have to disentangle these factors to determine which ones can account for the divergent results. Furthermore, our methodology limited participants to same-sex groups, so it is also plausible that participants' behaviors were affected not just by their own sex but also by the sex of their coworkers.

Implications for Further Research on Social Ostracism

The results of the present experiment encourage further research. The ball-tossing paradigm effectively produced in participants perceptions of being ignored by the others who were present. In a relatively short period of time, social ostracism can be manipulated successfully and meaningfully to participants. The strength of this initial investigation lies in setting forth a theoretical framework and empirical path on which to pursue a richer understanding of social ostracism and its

effects. In the present experiment, we tested one combination in the taxonomy (participants were subjected to social, punitive, and complete ostracism that occurred for unclear reasons) as it affected one need (belonging). Future research should examine other combinations in the ostracism taxonomy to determine their impact on people's needs for belonging, control, self-esteem, and meaningful existence. With this in mind, we close with a brief discussion of several issues that we feel warrant investigation.

Group size and group composition. The number of group members ostracizing the victim (one, two, or more) or the number of other victims who share the ostracism (none, one, or more) may also have a substantial impact on the perceptions of and reactions to the ostracism. Higher numbers of ostracizers ought to increase the negative impact on the victim, and higher numbers of victims being ostracized should diffuse the impact (Latané, 1981). Attributions for the ostracism are also likely to be affected by group size. For instance, higher numbers of ostracizing group members might, through perceived consensus, increase the likelihood that the ostracized individual attributes the ostracism internally (Kelley, 1971).

Group composition may also play an important role. One's status within the group, for instance, may mitigate the impact of the ostracism. Newcomers may expect a certain degree of inattention by old-timers within the group (Moreland, 1991), thus allowing them to dismiss the importance of social ostracism if it occurs. Also, compositional differences between the victim and the ostracizers could alter the attributions and consequences of ostracism. If a female is being ostracized by two males, she can easily attribute the ostracism to her (or their) sex. Another salient dimension of group composition is race. Benjamin O. Davis, Jr., was the first Black cadet at West Point in the 20th century. For 4 years, his fellow cadets "silenced" him, never talking to him except in the line of duty. Davis believed (no doubt, accurately) that he was silenced because he was Black (Davis, 1991, p. 21). Engaging salient social identities could serve two purposes: (a) to reestablish ostracized individuals' sense of belonging to important others and (b) to allow them to deflect the blame toward self to blame toward group membership, thus diffusing the impact (cf. Crocker, Voelkl, Testa, & Major, 1991).

Ostracized participants in our experiment were first included before being ostracized. In a sense, they were thus accepted as group members initially and then rejected. We chose this procedure to make the ostracism more noticeable and to demonstrate that participants toss the ball when included. But suppose participants were ignored from the outset. Then, they would be less inclined to consider the others as an in-group. This sug-

gests another group composition question: What are the psychological differences between being ostracized by in-group versus out-group members? If ostracized from the outset (by an out-group, therefore), it is likely that participants would be less affected by the ostracism because they could (a) infer that the other two were previously acquainted and therefore part of their own in-group, (b) not internalize the ostracism as being due to their own lack of skill, and (c) be able to justify their own noninvolvement by convincing themselves that they would have never behaved so inappropriately as to toss a ball around while waiting for the experimenter to return.

Physical versus social ostracism. We have characterized ostracism as having primarily negative consequences for individuals. Future research should consider the possibility that, under certain circumstances, ostracism may have, at least in the short term, positive consequences. A few participants reported in their questionnaires that when they used the silent treatment in their past relationships, it allowed both individuals time to cool off. When asked to elaborate on the nature of the ostracism, they talked about leaving the house or going into a separate room. Similarly, one of the most widely recommended and successful forms of disciplining children by teachers and parents is to remove a child from social attention by issuing a time-out (Brooks, Perry, & Hingerty, 1992). Indeed, some therapists are now advocating using time-outs within families to ward off family violence (Veenstra & Scott, 1993). Little or no attention is given in either the time-out or the effective arguing literatures to the possibly important distinction between physically versus socially isolating the individual from the classroom, family, or spouse. Both types of ostracism are used. Perhaps the positive effects of ostracism emerge only from physical ostracism, in which social cues and social interactions are not expected, rather than from social ostracism, in which available social interaction is continuously and conspicuously denied. Experimental comparisons of the two types of ostracism would help shed light on this possibility.

The dimension of ambiguity. An important aspect of the present paradigm is that the ostracism was ambiguous (Mettee, Taylor, & Fisher, 1971; Williams, 1994). When the cause of ostracism is ambiguous (causally unclear), individuals are left to generate their own attributions for their treatment, allowing relatively stable sex or personality differences to exert their greatest impact. Thus, we found that although females became disillusioned by their coworkers' treatment of them, they nevertheless contributed considerably to a collective task—one that required high levels of individual effort to ensure a successful group performance. Ostracized males, con-

versely, demonstrated a tendency to reduce their effort when working collectively. Future experiments should focus on manipulating the reasons for the ostracism, making them clear. To the extent that individuals are given clear explanations for the ostracism (e.g., "You are different from us" or "You violated a rule"), they can more easily narrow the negative impact of social ostracism either by pinpointing the exact reason for the ostracism, thereby increasing their sense of control over their environment, or by directing the attributions to specific external causes. Both consequences ought to weaken the impact of ostracism. Future studies should attempt to determine whether different types of ostracism (e.g., punitive, oblivious, physical) produce different attributions, thus resulting in different emotional and behavioral consequences.

Long-term ostracism. Finally, we recognize that short-term social ostracism produced by strangers in a laboratory will likely be reacted to differently than long-term social ostracism by family, friends, or familiar coworkers, in which needs for maintaining ongoing, positive relationships are most strong. Understanding the effects of long-term social ostracism will probably require nonexperimental methodologies. Interviews with long-term users and victims of social ostracism who have experienced chronic silent treatment in their marriages, jobs, or schools may provide a rich, descriptive foundation from which to understand the long-term effects of social ostracism. Additionally, content analyses of these interviews could be conducted to assess their fit to the present model of social ostracism and to develop testable hypotheses (Faulkner & Williams, 1995). The apparent positive, short-term effects of popularized deployments of ostracism (such as those resulting from classroom time-outs) may be followed by more negative, long-term consequences to self-esteem, self-efficacy, and feelings of belongingness. The present experimental paradigm, therefore, should be considered only as one of several methods to investigate the effects of social ostracism. Alternative methodologies should not be ignored.

NOTES

1. The frequency of attributions in this category was too small to allow a direct test of the degree to which attributions for ostracism may have mediated the relationship between ostracism and productivity.

2. These analyses were conducted as part of a separate study on nonverbal responses to ostracism, which included data from two experiments that used the exact manipulations for inclusion and ostracism. Unfortunately, we could not separate out the data only for this experiment because the tapes were not coded properly. We were also unable to match participants' nonverbal behaviors with their productivity levels (output) or responses to questionnaire measures. This prevented a direct test of the degree to which nonverbal behaviors may have moderated the impact of ostracism on coactive and collective output.

REFERENCES

Asher, S. R., & Coie, J. D. (Eds.). (1990). *Peer rejection in childhood*. New York: Cambridge University Press.

Asher, S. R., & Parker, J. G. (1989). Significance of peer relationship problems in childhood. In B. H. Schneider, G. Attili, J. Nadel, & R. P. Weissberg (Eds.), *Social competence in developmental perspective* (pp. 5-23). Amsterdam: Kluwer Academic.

Bandura, A. (1995). *Self-efficacy in changing societies*. New York: Cambridge University Press.

Barnett, P. A., & Gotlib, I. H. (1988). Psychosocial functioning and depression: Distinguishing among antecedents, concomitants and consequences. *Psychological Bulletin, 104*, 97-126.

Basso, K. H. (1972). "To give up on words": Silence in the Western Apache culture. In P. P. Giglioli (Ed.), *Language and social context* (pp. 67-86). Baltimore: Penguin.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529.

Baumeister, R. F., & Tice, D. M. (1990). Anxiety and social exclusion. *Journal of Social and Clinical Psychology, 9*, 165-195.

Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin, 17*, 475-482.

Brewer, M. B. (1993). The role of distinctiveness in social identity and group behaviour. In M. A. Hogg & D. Abrams (Eds.), *Group motivation* (pp. 1-16). London: Harvester Wheatsheaf.

Brooks, N. C., Perry, V., & Hingerty, S. E. (1992). Modifying behavior through time out from positive reinforcement. *Vocational Evaluation and Work Adjustment Bulletin, 25*, 93-95.

Bruneau, T. J. (1973). Communicative silences: Forms and functions. *Journal of Communication, 23*, 17-46.

Buss, D. M. (1990). The evolution of anxiety and social exclusion. *Journal of Social and Clinical Psychology, 9*, 196-201.

Cooley, C. H. (1902). *Human nature and the social order*. New York: Scribner.

Craighead, W. E., Kimball, W. H., & Rehak, P. J. (1979). Mood changes, physiological responses, and self-statement during social rejection imagery. *Journal of Consulting and Clinical Psychology, 47*, 385-396.

Crocker, J., Voelkl, K., Testa, M., & Major, B. (1991). Social stigma: The affective consequences of attributional ambiguity. *Journal of Personality and Social Psychology, 60*, 218-228.

Davis, B. O., Jr. (1991). *Benjamin O. Davis, Jr., American: An autobiography*. Washington, DC: Smithsonian Institution.

Dittes, J. E. (1959). Attractiveness of group as function of self-esteem and acceptance by group. *Journal of Abnormal and Social Psychology, 59*, 77-82.

Dodge, K. A., Pettit, G. S., McClaskey, C. L., & Brown, M. M. (1986). Social competence in children. *Monographs of the Society for Research in Child Development, 51*, 1-85.

Faulkner, S., & Williams, K. D. (1995, May). *The causes and consequences of social ostracism: A qualitative analysis*. Paper presented at the Midwestern Psychological Association, Chicago.

Fenigstein, A. (1979). Self-consciousness, self-attention, and social interaction. *Journal of Personality and Social Psychology, 37*, 75-86.

Geller, D. M., Goodstein, L., Silver, M., & Sternberg, W. C. (1974). On being ignored: The effects of the violation of implicit rules of social interaction. *Sociometry, 37*, 541-556.

Goethals, G., & Darley, J. (1987). Social comparison theory: Self-evaluation and group life. In B. Mullen & G. Goethals (Eds.), *Theories of group behavior* (pp. 21-47). New York: Springer-Verlag.

Goodall, J. (1986). Social rejection, exclusion, and shunning among the Gombe chimpanzees. *Ethology and Sociobiology, 7*, 227-236.

Gottman, J. (1980). Consistency of nonverbal affect and affect reciprocity in marital interaction. *Journal of Consulting and Clinical Psychology, 48*, 711-717.

Gottman, J., & Krokoff, L. J. (1992). Marital interaction and satisfaction: A longitudinal view. *Journal of Consulting and Clinical Psychology, 57*, 47-52.

Gottman, J. M., & Levenson, R. W. (1992). Marital processes predictive of later dissolution: Behavior, physiology, and health. *Journal of Personality and Social Psychology, 63*, 221-233.

Gruter, M. (1986). Ostracism on trial: The limits of individual rights. *Ethology and Sociobiology, 7*, 271-279.

Hall, J. A. (1984). *Non verbal sex differences: Communication accuracy and expressive style*. Baltimore: Johns Hopkins University Press.

Hardy, C. J., & Latané, B. (1988). Social loafing in cheerleaders: Effects of team membership and competition. *Journal of Sport and Exercise Psychology, 10*, 109-114.

Hogg, M. A. (1992). *The social psychology of group cohesiveness: From attraction to social identity*. New York: New York University Press.

Hogg, M. A., & Abrams, D. (1988). *Social identification: A social psychology of intergroup relations and group processes*. London: Routledge.

Jackson, J. M., & Saltzstein, H. D. (1957). The effect of person-group relationships on conformity processes. *Journal of Abnormal and Social Psychology, 57*, 17-24.

James, W. (1890). *Principles of psychology, Vol. 1*. New York: Dover.

Karau, S. J., & Williams, K. D. (1993). Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology, 65*, 681-706.

Karau, S. J., & Williams, K. D. (in press). The effects of group cohesiveness on social loafing and social compensation. *Group Dynamics: Theory, Research, and Practice*.

Kelley, H. H. (1971). Attribution theory in social interaction. In E. E. Jones, D. Kanouse, H. H. Kelley, et al. (Eds.), *Attribution: Perceiving the causes of behavior*. Morristown, NJ: General Learning.

Kipnis, D. (1984). The use of power in organizations and in interpersonal settings. In S. Oskamp (Ed.), *Applied social psychology annual* (Vol. 5, pp. 179-210). Newbury Park, CA: Sage.

Kraybill, D. B., & Olshan, M. A. (1994). *The Amish struggle with modernity*. Hanover, NH: University Press of New England.

Lancaster, J. B. (1986). Primate social behavior and ostracism. *Ethology and Sociobiology, 7*, 215-225.

Latané, B. (1981). The psychology of social impact. *American Psychologist, 36*, 343-356.

Latané, B., Williams, K., & Harkins, S. (1979). Many hands make light the work: The causes and consequences of social loafing. *Journal of Personality and Social Psychology, 3*, 822-832.

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. (1995). *Self-presentation: Impression management and interpersonal behavior*. Dubuque, IA: Brown & Benchmark.

Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology, 2*, 518-530.

Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.

Mettee, D. R., Taylor, S. E., & Fisher, S. (1971). The effect of being shunned upon the desire to affiliate. *Psychonomic Science, 23*, 429-431.

Miceli, M. P., & Near, J. P. (1992). *Blowing the whistle: The organizational and legal implications for companies and employees*. New York: Lexington.

Moreland, R. L. (1991). Social categorization and the assimilation of new group members. *Journal of Personality and Social Psychology, 48*, 1173-1190.

Pepitone, A., & Wilpizeski, C. (1960). Some consequences of experimental rejection. *Journal of Abnormal and Social Psychology, 60*, 359-364.

Peterson, C., Maier, S. F., & Seligman, M.E.P. (1993). *Learned helplessness: A theory for the age of personal control*. New York: Oxford University Press.

Predmore, S., & Williams, K. D. (1983, May). *The effects of social ostracism on affiliation*. Paper presented at the Midwestern Psychological Association, Chicago.

Rusbult, C., Verette, J., Whitney, G., Slovik, L., & Lipkus, I. (1991). Accommodation processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology, 60*, 53-78.

Samolis, M. M., & Williams, K. D. (1994). *The effects of ostracism and communication level on self and task-referents, feelings, and action*. Unpublished manuscript.

Schachter, S. (1959). *The psychology of affiliation*. Stanford, CA: Stanford University Press.

Seligman, M.E.P. (1975). *Helplessness: On depression, development, and death.* San Francisco: Freeman.

Sheler, J. L. (1981, November 16). When employees squeal on fellow workers. *U.S. News & World Report,* pp. 81-82.

Snoek, J. D. (1962). Some effects of rejection upon attraction to a group. *Journal of Abnormal and Social Psychology, 64,* 175-182.

Solomon, S., Greenberg, J., & Pyszczynski, T. (1992). A terror management theory of self-esteem and its role in social behavior. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 93-159). New York: Academic Press.

Sommer, K. L. (1991). *The effects of situationally induced trust on social loafing.* Unpublished honors thesis, University of Toledo.

Sommer, K. L., Bogle, M., Grahe, J. E., & Williams, K. D. (1995, July). *Nonverbal and attributional reactions to social ostracism.* Paper presented at the American Psychological Society conference, New York.

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 261-302). New York: Academic Press.

Tajfel, H., & Turner, J. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. Austin (Eds.), *Psychology of intergroup relations* (pp. 33-48). Chicago: Nelson-Hall.

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103,* 193-210.

Taylor, S. E., Kemeny, M. E., Aspinwall, L. G., Schneider, S. G., Rodriquez, R., & Herber, M. (1992). Optimism, coping, psychological distress, and high-risk sexual behavior among men at risk for acquired immunodeficiency syndrome (AIDS). *Journal of Personality and Social Psychology, 63,* 460-473.

Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 181-227). San Diego, CA: Academic Press.

Veenstra, G. J., & Scott, C. G. (1993). A model for using time out as an intervention technique with families. *Journal of Family Violence, 8,* 71-87.

Williams, K. D. (1994, October). *Social ostracism.* Invited talk at the Small Groups Preconference of the Society for Experimental Social Psychologists, Lake Tahoe, NV.

Williams, K. D. (in press). Social ostracism. In R. Kowalski (Ed.), *Aversive interpersonal behaviors.* New York: Plenum.

Williams, K. D., & Karau, S. J. (1991). Social loafing and social compensation: The effects of expectations of coworker performance. *Journal of Personality and Social Psychology, 61,* 570-581.

Worchel, S., Hart, D., & Butemeyer, J. (1989, April). *Is social loafing a group phenomenon?* Paper presented at the Southwestern Psychological Association Meeting, Houston, TX.