Compensating for Stigma: Obese and Nonobese Women's Reactions to Being Visible

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The hypothesis that obese women compensate for the prejudice of others was tested by having obese and nonobese women converse by telephone with someone who they believed, correctly or incorrectly, could or could not see them. Partners rated obese women's social skills negatively when the women were visible (thus activating the partners' prejudice) but thought they were not. Obese women rated themselves as more likable and socially skilled than nonobese women did when the women thought they were visible to female partners. Judges' ratings of the women's contribution to the conversation indicated that there were no obvious differences in the impressions created by their verbal or nonverbal behaviors. Results support the hypothesis that obese women who were aware of the need to compensate for their partners' reactions to their appearance were able to do so.

In an article commemorating the 30th anniversary of Marilyn Monroe's death, the *New York Times* speculated that one key to her immortality as a cultural symbol is that she never got fat. Obesity is a condition so stigmatizing that people, especially women, would do almost anything to avoid it (Crandall & Biernat, 1990; DeJong & Kleck, 1986; Rothblum, 1992). Stereotypes about obese people and people with endomorphic (fat) physiques are pervasive (Lerner & Gellert, 1969; Rothblum, Miller, & Garbutt, 1988; Ryckman et al., 1991), and people blame the obese for their condition (Crandall, 1991; Weiner, Perry, & Magnusson, 1988). The reason is likely that our society maintains the belief that body weight is controllable, despite accumulating evidence that it is not (Rodin, Silberstein, & Striegel-Moore, 1984; Stunkard et al., 1986). In a society that prizes physical attractiveness and in which being thin is virtually a prerequisite for being attractive, the obese may face formidable barriers to establishing and maintaining social relationships.

Research has shown that people who have negative expectations about another alter their behavior toward that person in ways that often create a self-fulfilling prophecy (Deaux & Major, 1987; Miller & Turnbull, 1986). Self-fulfilling prophecies are insidious because the targets of such expectations become caught in a web in which their responses to others' treatment of them can affect how they think about themselves. Crocker and Major (1989) reviewed the many theoretical perspectives that converge to suggest that negative expectations should ultimately have deleterious consequences for the self-esteem of stigmatized people. Moreover, developmental theorists have pointed out that children who are perceived as physically unattractive may have repeated experiences with rejection and discrimination and may therefore have fewer opportunities for social interaction and social skill development. The cumulative effect of expectancy confirmation processes is the development of real, lifelong differences between attractive and unattractive people (Adams, 1977; Jarvie, Lahey, Graziano, & Framer, 1983; Langlois & Stephan, 1981).

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The hypothesis that stereotypes can have long-term effects on the social skills of physically unattractive people was tested in a study by Goldman and Lewis (1975), who reported that unattractive college students were evaluated less positively than attractive students by telephone partners who never saw them. Similarly, Miller, Rothblum, Barbour, Brand, and Felicio (1990) found that obese women who spoke by telephone to another person received lower ratings on social skills and likability from their telephone partners than nonobese women did, even though the partners never saw the women. These findings suggest that the social behaviors of unattractive and overweight people are negatively affected by their experiences with the reactions others have to their appearance.

Other research suggests that this may be too pessimistic a view of the lives of obese women and other stigmatized people. One clue that this view is not the whole story is that stigmatized people, including women, African Americans, obese people, and children with mental retardation, generally do not have low self-esteem (Crocker & Major, 1989). In a recent meta-analysis of the correlates of physical attractiveness, Feingold (1992) reported that self-esteem is not correlated with objective physical attractiveness, although it is correlated with self-rated attractiveness. Beyond the empirical evidence that being a member of a stigmatized group does not lead to lowered self-esteem as would be predicted by expectancy confirmation theories, there are other reasons to suspect that stigmatized people may somehow overcome people's prejudice against them.

Research on self-affirmation or self-enhancement suggests that people in general strive to maintain a positive image of themselves and go to great lengths to do so (Steele, 1988). One strategy they use is to compensate for undesirable traits or behaviors by bolstering or inflating other aspects of themselves. For example, Steele (1975) found that people who were criticized were more willing to volunteer for a worthy cause than people who received no criticism, even if what they were criticized about was irrelevant to volunteering. His explanation for this finding is that criticism threatened self-esteem, and people compensated for this by volunteering. In another experimental demonstration of compensation, Baumeister (1982) found that male students who knew that their partners had negative information about one aspect of their personalities did not try to refute the negative information when asked to describe themselves but did describe themselves positively on personality characteristics unrelated to their alleged shortcoming. An important feature of the self-affirmation process is that, as demonstrated by the experiments just described, individuals need not refute, correct, or deny the characteristic or behavior that threatens self-image. Compensation is flexible, so that the affirmation of qualities or values that are unrelated to the threat can restore self-worth.

Steele (1988) pointed out that membership in a stigmatized group poses two types of threat. Discrimination threatens the welfare of stigmatized people by denying them equal access to resources. Prejudice also threatens self-regard because stigmatized people are aware of the negative expectations others have of them. Research on self-affirmation suggests that stigmatized people, like anybody who faces a threat to self-regard, will try to buttress the integrity of the self by focusing on or bolstering socially desirable aspects of the self. This suggests that obese people will emphasize aspects of themselves other than appearance when they interact in situations in which they believe their weight will be a handicap.

In addition, research on self-verification by Swann and his colleagues indicates that people try to disconfirm information and expectations others have about them that are inconsistent with their self-concepts (see Swann, 1984, for a review). Swann (1984) pointed out that it is not surprising that self-verification often overcomes the effects of expectations, because in many situations the other has only just formed an expectation, but the target of that expectation may have a lifetime of experience with a particular self-concept.

Research on the efforts people make to maintain positive or consistent self-concepts has not been used much to understand stigmatized people. One reason is that the perspective of the stigmatized person has been neglected in prior research. With few exceptions (Crocker, Voelkl, Testa, & Major, 1991; Harris, Milich, Corbitt, Hoover, & Brady, 1992), researchers have been more likely to study stigmatized people as the targets or objects of prejudice than as active participants in social interaction.

In addition, Graham (1992) and Harris et al. (1992) pointed out that researchers rarely study people who are actually stigmatized. In much of the research on confirmation of expectations arising from stereotypes, the targets of the stereotyped expectations were not actually stigmatized people. Rather, they were college students who were randomly assigned to be labeled as members of a stigmatized group. This procedure is ideal for experimental control, but it might miss some important skills and strategies that people who are actually stigmatized have learned or developed to cope with negative expectations.

For example, in an experiment in which White male undergraduates were told that the person with whom they were about to interact had been informed that they were either a homosexual or a mental patient, Farina,

Allen, and Saul (1968) reported that one student who thought his partner had been told he was a homosexual became "obviously alarmed" when his partner put his arm around his shoulders to assist him in operating the equipment for the task they were performing. As this example illustrates, in such experiments the supposedly stigmatized students may be confronting for the first time in their lives what it is like to be stigmatized.

In other studies, college women have been randomly assigned to be labeled as a man or a woman (Skrypnek & Snyder, 1982), college women unselected for physical attractiveness have been labeled by way of a photograph that supposedly depicted them as being beautiful or ugly (Snyder, Tanke, & Berscheid, 1977), and White male college students were randomly assigned to interact with an interviewer who had been trained to treat them as other college students had previously behaved when they interviewed a Black or White confederate (Word, Zanna, & Cooper, 1974). Swann (1984) pointed out that most compelling demonstrations of behavioral confirmation have involved expectancies arising from stereotypes. But one reason these demonstrations produced such dramatic results may be that they involved experimental designs in which nonstigmatized college students played the role of a stigmatized person.

Finally, in many studies of expectancy confirmation, the person who has been assigned to play the role of a stigmatized person is not aware of this fact. This is in sharp contrast to the situations stigmatized people actually confront, in which they are usually well aware that they are members of a stigmatized group and they know or suspect that others will react to them accordingly. Hilton and Darley (1985), who were among the first to recognize the importance of awareness, informed some subjects, but not others, that another person with whom they were going to converse expected them to have a cold personality. The experimenters also manipulated whether the other person actually had been led to believe that the target had a cold personality. Results showed that a self-fulfilling prophecy effect occurred only in the condition in which targets were *unaware* of what had been said about them.

Results of other studies also show that when interacting with a person who was expected to be unfriendly, students compensated by increasing their own friendliness rather than reciprocating their partner's expected chilliness (Bond, 1972; Ickes, Patterson, Rajecki, & Tanford, 1982). People who know they must engage in an interaction with an unpleasant person are highly motivated to avoid unpleasantness, and so compensation will be the preferred strategy provided that there is some hope that the other person will respond to the friendly overture in a positive manner (Curtis & Miller, 1986; Miller & Turnbull, 1986; Neuberg, Judice, Virdin, & Carrillo, 1993).

Research on self-affirmation, self-verification, the importance of awareness in whether expectations become self-fulfilling prophecies, and the compensatory strategies people use to avert potentially unpleasant social situations suggests that there are a variety of ways in which people in general and stigmatized people in particular might cope with situations in which others have negative expectations about them.

There are also strategies that are uniquely available to members of stigmatized groups. In a review of a large volume of research, Crocker and Major (1989) concluded that members of stigmatized groups have devised strategies to protect themselves from the adverse consequences that stereotyping and prejudice would otherwise have for their self-esteem. People can attribute negative reactions from others to prejudice rather than to their own abilities, traits, or behaviors; they can limit social comparisons to other members of their group rather than comparing themselves with members of more advantaged groups; and they can selectively devalue characteristics on which their group is evaluated negatively.

Research on such self-protective strategies is just beginning, but it has shown that African Americans, women, and obese women attribute feedback received during an experiment to race, gender, and weight, respectively (Baumeister, Kahn, & Tice, 1990; Crocker, Cornwell, & Major, 1993; Crocker et al., 1991). Surveys indicate that obese people believe that weight interferes with their social activities (Rothblum, Brand, Miller, & Oetjen, 1990; Tiggemann & Rothblum, 1988). However, Crocker et al. (1993) suggested that for obese women, unlike other stigmatized people, attribution of negative social feedback to their stigma may not serve to buffer self-esteem, because they blame themselves for being overweight and therefore do not blame others for disliking them.

This suggests that obese people may need other strategies to protect themselves from the consequences of prejudice. Although the present experiment is the first to investigate this issue, studies of the social interactions of physically unattractive people offer some relevant insights. In a study in which college students kept diaries about their social interactions, Reis et al. (1982) found that physical attractiveness was positively correlated with the quality of women's social relationships, that social assertiveness and social competence were also positively correlated with the quality of women's social relationships, but that attractiveness was not correlated with women's social competence and was negatively related to social assertiveness. In interpreting their findings, Reis

et al. suggested that attractive and unattractive women establish satisfying social relationships in different ways. Attractive women rely on their looks, and less attractive women learn to be socially assertive.

Similarly, Major and Sherman (1976) found that low-attractive women tended to perform better with a partner in both competitive and noncompetitive cognitive tasks than attractive women. They suggested that attractive women may be accustomed to receiving social rewards as a result of their looks and that unattractive women may feel they have to try harder to compensate for their lack of beauty. Results of a study by Dion and Stein (1978) support this suggestion. Physically attractive and unattractive fifth- and sixth-graders tried to persuade another child to eat a cracker that had been coated with a bitter-tasting substance. Attractive girls were successful with boys, even though they made the fewest influence attempts and were judged by raters as least persistent and forceful. Unattractive girls were not successful with boys or girls but, consistent with Reis and associates' findings, they displayed a relatively assertive persuasive style. They made the most influence attempts overall and were rated as persistent. These might be the rudiments of a repertoire of behaviors that could eventually enable them to compensate for the detrimental effects of stereotypes about attractiveness.

Although compensation could be an important tool in stigmatized people's battle against the adverse consequences of stereotyping, it may also have some detrimental effects on performance and motivation. If stigmatized people are more motivated to perform well if they think the expectations of others will be a barrier to positive social interaction, they may consequently exert less effort when they think stereotypes will not be important. Because stigma creates considerable ambiguity about what explains negative social interactions (Crocker et al., 1991, 1993), stigmatized people may underestimate the effort and skills they would need to exert if their social interactions were uncontaminated by stereotypes and prejudice.

This reasoning suggests an alternative explanation for the findings that unattractive college students (Goldman & Lewis, 1975) and obese women (Miller et al., 1990) made relatively poor impressions during a telephone conversation even though their raters had no information about their appearance. Results of both studies have been interpreted as support for the view that appearance-related prejudices prevent people deemed unattractive from developing social skills. However, it is also possible that because stigmatized people must learn to compensate for their stigma, they may sometimes fail to recognize that the absence of stigma by itself does not guarantee smooth social relations. If the unattractive and overweight participants in these studies underestimated the level of social skills that nonstigmatized people must use to establish good relations, the relatively poor impressions they created on people who could not see them could result from not using, rather than from not having, the social skills to interact in a likable fashion.

In the present study, the hypothesis that obese women may be able to compensate for prejudice against fat people was tested by having obese and nonobese women participate in a brief telephone conversation with a man or a woman. We manipulated the telephone partners' expectations about the women by varying whether they could see the women on a television monitor during the conversation. Regardless of whether their telephone partners actually could see them, the women were led to believe either that their partners could see them or that their partners could not see them.

The hypothesis that obese women protect themselves or compensate for the effects of others' negative reactions to their weight predicts that the women's beliefs about whether their partners can see them should affect their self-descriptions and behavior. Research on self-affirmation suggests that obese women might affirm their self-worth by emphasizing desirable aspects of themselves other than their appearance. Research on self-verification and the efforts people in general make to disconfirm negative expectations suggests that obese women should also try to behave in a more socially desirable fashion when they think they can be seen than when they think they cannot be seen. If prejudice against fat people constitutes a threat to self-esteem, obese women who believe they are visible to their partners should be motivated to disconfirm negative expectations and/or enhance their self-description.

A corollary of this hypothesis is that obese women who think they are not visible to their partners may create a more negative impression than nonobese women. This follows from the reasoning that the need to compensate may lead stigmatized people to underestimate the social skills required in interactions that are unaffected by stigma. It also follows from previous research in which unattractive students (Goldman & Lewis, 1975) and overweight women (Miller et al., 1990) were evaluated relatively negatively when they were not visible to others.

EXPERIMENT 1

Method

DESIGN

Obese and nonobese women had a brief telephone conversation with a man or a woman. All the women were videotaped, and both the women and their telephone partners were audiotaped. Telephone partners' expecta-

tions about the women were manipulated by allowing half of them to see the women they spoke to on a video monitor (actually visible condition). The remaining partners conversed without seeing the women on the monitor (actually not visible condition). The women's beliefs about whether their appearance could affect their partners' reactions to them were manipulated by telling half of them that their partners could watch their behavior on a monitor (perceived visible condition) and telling the rest that their partners could not see them (perceived not visible condition).

In addition to the conditions just described, we included control groups of obese women and of nonobese women who were audiotaped, but not videotaped, during the conversation. Their telephone partners, half of whom were male and half female, were unable to see the women, and the women knew this. The reason for including these control conditions is that all women in the experimental conditions were videotaped. This was necessary because otherwise the effects of the experimental manipulations of actual and perceived visibility would be confounded with behavioral changes that might result from the videotaping itself (see Wicklund, 1975, for a review of theory and research relevant to this issue).

The women were randomly assigned to all experimental and control conditions, including random assignment to a male or female telephone partner.

SUBJECTS

Women. The women were 77 obese and 78 nonobese women who were recruited for a study of "women's experiences across the life span" through advertisements in local newspapers. The advertisements stated that we needed women with different experiences, including "married, single, divorced, overweight, etc." The women who answered the advertisement were screened by telephone to determine whether they fit our definitions of obesity and nonobesity. Women who were at least 20% more than the midpoint of the weight range for medium build for their height (according to Metropolitan Life Insurance Company tables) were classified as obese. Those who weighed within 10% of the average weight for their height were classified as nonobese. The telephone interviews followed a standard script, and the questions about the women's weight were embedded in other questions about their age, place of birth, and so on. Each woman received $20 for her participation, which lasted approximately 90 min.

On average, the obese women were somewhat older (M = 43.7 years) than the nonobese women (M = 39.9 years), $F(1, 155) = 6.62$, $p < .02$, and reported completing fewer years of college than the nonobese women (Ms = 3.6 and 4.4, respectively, where 3 = some college education, 4 = completed college, and 5 = some postgraduate education), $F(1, 155) = 14.47$, $p < .0002$.[1] Both obese and nonobese women reported having individual incomes in the $10,000-$20,000 range and household incomes in the $20,000-$30,000 range. All the obese women indicated that they were overweight and, on average they thought that they were 45.8 lb overweight. Only 50% of the nonobese women thought that the question about how many pounds overweight they were applied to them, and those who answered the question indicated, on average, that they were only 8.8 lb overweight. Dieting to lose weight was more prevalent among obese (49%) than nonobese (21%) women, $F(1, 149) = 14.34$, $p < .0002$. Scale weight measures obtained at the completion of the experiment indicated that obese women were, on average, 45.5% above the ideal weight for their height according to Metropolitan Life height and weight tables whereas nonobese women, on average, were 2% underweight for their height.

There were 7 obese and 6 nonobese women who attended an experimental session but declined to participate, and there were an additional 14 experimental sessions in which data could not be collected or had to be discarded. These sessions included 2 in which male telephone partners were unwilling or unable to participate, 7 in which there was equipment failure, 1 session in which the woman and her partner met by accident before the session began, 2 sessions in which the woman appeared to be disoriented, and 2 sessions in which the partner revealed whether the woman was actually visible.

The distribution of obese and nonobese women across experimental and control conditions produced cell sizes (collapsed across telephone partner gender) that ranged from 13 to 17. Within each condition, male and female telephone partners were represented in approximately equal numbers, with the largest difference (7 male and 10 female partners) in the nonobese woman/actually visible/perceived not visible condition.

Telephone partners. We also recruited, through newspaper advertisements for a study of first impressions, 76 men and 79 women to serve as telephone partners. These people received $10 for their participation, which lasted approximately 1 hr.

The telephone partners' answers to questions they completed at the end of the experiment showed that their mean age was 37.6 years for men and 39.1 years for women. On average, the men had completed four-year college degrees and had individual incomes in the $20,000-$30,000 per year range and household incomes in the $30,000-$40,000 range. The women, on average, had some college education, individual incomes slightly less than $10,000 per year, and household incomes in the $30,000-$40,000 range. In general, both male and female telephone partners perceived themselves to be average weight to slightly overweight. The only signifi-

cant difference between male and female telephone partners was that males reported significantly higher individual incomes, $F(1, 153) = 20.31$, $p < .0001$.

PROCEDURE

The women were scheduled to arrive at the experiment 15 min before their telephone partners to preclude their meeting by chance before the experiment began. When they arrived, a female experimenter told the women that they would have a telephone conversation with a man or woman from the local community. They were asked to permit the experimenter to record them on audiotape and, except for women in the audiotape-only control condition, were also asked to allow the experimenter to videotape them for later analysis.[2] Those assigned to the perceived visible conditions were told that the camera was connected to a monitor in their partner's room so that the partner could see as well as hear them. Those assigned to the perceived not visible conditions were told that they were being recorded for later analysis but that their partner could not see them. Regardless of what the women were told, partners in the actually visible conditions could see the women on a monitor connected to the video camera by a cable. Partners in the actually not visible conditions could not see the women on the monitor.

At the same time, a second female experimenter was preparing the telephone partner for the conversation. The partner was told that he or she would be talking on the telephone with a woman from the local area and that the purpose of the experiment was to study the formation of first impressions.

Before the telephone conversation began, telephone partners in the actually visible conditions watched the woman briefly (for approximately 10 s) on the monitor. The experimenter explained that this was to make certain the equipment was working properly. During this brief period, the woman was instructed to sit quietly while the equipment was being checked. Immediately after this brief exposure to the woman's appearance, the telephone partners completed a conversation rating form on the basis of their expectations of what she would be like, using their first impressions. Telephone partners in the actually not visible conditions were simply asked to complete the conversation rating form, knowing only that the woman with whom they were about to speak was from the local community.

The conversation rating form consisted of items to assess partners' perceptions of how likable, socially skilled, and physically attractive the women were. Each item asked the partner to rate how true a statement was about the woman (1 = *not at all true*, 5 = *very true*). The phrase "During the conversation, do you think your partner will be . . ." introduced the items, which were randomly ordered. The liking items were "friendly," "nice for you to have as a friend," "likable," "a potentially good co-worker for you," and "able to make a good impression on you." The social skills items were "able to get off to a good start in the conversation," "socially skilled during the conversation," "a good conversationalist," "poised," "competent," "able to put you at ease," "easy for you to talk with," and "able to end the conversation well." The physical attractiveness items were "comfortable with her physical appearance," "physically attractive," and "someone who has a good body." Composite likability, social skills, and physical attractiveness scores were computed by averaging across items.

The same items, reworded so that they referred to self, were included on a rating form the women completed about themselves before the conversation began. For example, in the phrase that introduced the items, *you* was substituted for *your partner*. Each item asked the woman to rate how she thought she would be during the conversation.

The women and their partners were instructed to try to get to know the other person by conversing on the telephone. To protect confidentiality, both parties were instructed to use their first names only or, if they preferred, a fictitious first name. In addition, all telephone partners were told to give a noncommittal answer if the woman asked whether they could see her, regardless of whether they could in fact see her. As mentioned above, only two partners were unable to follow this instruction, and data from these sessions were excluded from all analyses.

The women and their partners were allowed 5 min to converse about whatever they liked. The experimenters were not present during the conversation. After it was over, the experimenters gave both the women and their partners, still seated in their respective rooms, a conversation rating form to complete. These questionnaires were identical to the ones they had completed just before the conversation, except that the questions were in the past tense. Composite scores for likability, social skills, and attractiveness were computed in the same way as for the preconversation ratings.

At this point, the women and their partners were debriefed separately and given the option of erasing any record made of their behavior. During the debriefing, the women were photographed in a standard full-body shot and were weighed. None of the women voiced any suspicions about the manipulations of actual or perceived visibility to their partners, and none chose to erase recordings of the conversation.

Results

Overview. We used analysis of covariance (ANCOVA) to examine ratings made by the women and their tele-

phone partners. The covariates in all analyses were the women's age and education, and all means are adjusted for these covariates. The women's weight, their actual visibility to their telephone partners, and perceived visibility to their partners were used as between-subjects factors in all analyses of the experimental conditions. In addition, the audiotape-only control condition (in which obese and nonobese women conversed without being videotaped) was analyzed separately with ANCOVAs in which the women's weight was the only between-groups factor.

Partners' ratings of the women. The hypothesis that telephone partners would stereotype obese women predicts an interaction between the women's weight and their actual visibility to their partners. As might be expected, this interaction occurred in partners' ratings of the women's physical attractiveness; preconversation $F(1, 107) = 3.42$, $p = .07$; postconversation $F(1, 108) = 6.66$, $p < .01$.[3]

Simple effects comparisons between partners' postconversation means indicated that partners of obese women gave lower attractiveness ratings than partners of nonobese women in the actually visible condition (*M*s = 3.2 and 3.7), $F(1, 109) = 6.75$, $p = .01$, but not in the actually not visible condition (*M*s = 3.7 and 3.5), $F(1, 109) = 0.89$, $p = .35$. In addition, partners of obese women rated them as significantly less attractive when they could see them than when they could not, $F(1, 109) = 6.61$, $p = .01$, whereas actual visibility of nonobese women to their partners had no effect on partners' postconversation ratings of their attractiveness, $F(1, 109) = 1.06$, $p = .31$.

Simple effects tests on preconversation attractiveness ratings showed that partners of obese women who could see them gave significantly lower attractiveness ratings than partners of obese women who could not see them, $F(1, 110) = 3.77$, $p = .05$, whereas nonobese women's visibility to their partners did not affect their attractiveness ratings, $F(1, 110) = 0.18$, $p = .67$. However, in neither visibility condition did partners of obese women make significantly lower ratings of their attractiveness than partners of nonobese women (*M*s = 3.0 and 3.2, respectively, when partners could see the women; *M*s = 3.3 and 3.1, respectively, when partners could not see the women), Fs$(1, 110) \leq 2.28$, ps$\geq .13$. The fact that partners had stronger reactions to the women's appearance after the conversation was over than before it began may be attributable to the greater amount of exposure partners had to the women's appearance when they completed the postconversation ratings.

These findings suggest that the partners noticed the women's appearance and evaluated the obese women's attractiveness relatively negatively, especially after the conversation was over. Analysis of the partners' perceptions of the women's likability and social skills indicated that the women's actual visibility to the partners did not by itself result in negative ratings of obese women. There was instead a significant interaction between the women's weight, actual visibility, and perceived visibility on the partners' postconversation ratings of the women's social skills, $F(1, 108) = 4.23$, $p < .04$.

Simple effects *F* tests revealed that obese women received relatively low ratings on social skill when their partners could see them, but only if the women thought their partners could *not* see them (see Table 1). The mean rating by partners of obese women in the actually visible/perceived not visible condition was lower than that by partners of nonobese women in this condition, $F(1, 110) = 4.41$, $p = .04$. The mean partner rating in the obese woman/actually visible/perceived not visible condition was also lower than the mean partner rating in the obese woman/actually visible/perceived visible condition, $F(1, 110) = 3.02$, $p = .09$, and in the obese woman/actually not visible/perceived not visible condition, $F(1, 110) = 9.53$, $p = .003$. There were no other significant effects in partners' pre- or postconversation ratings of the women's likability and social skills.

The finding that it was obese women who were unaware that their partners could see them who received relatively low ratings on social skills suggests that obese women may need to use compensatory strategies to overcome the effect of their stigmatized appearance on others' reactions to them. Telephone partner perceptions of obese and nonobese women in the control condition in which the women were audiotaped (but not videotaped) supply some additional insight on this point. In this condition, the women were aware that they were not visible during the conversation to their partners and would not be visible later to other people. It is interesting, therefore, that partners' postconversation ratings of women in the control condition revealed that partners of obese women liked them less ($M = 4.1$) than partners of nonobese women ($M = 4.6$), $F(1, 29) = 5.86$, $p = .02$. Partners of obese and nonobese women in the control condition did not differ in their ratings of the women's social skills (*M*s = 4.2 and 4.5, respectively), $F(1, 29) = 2.36$, $p = .13$, or attractiveness (*M*s = 3.5 and 3.7, respectively), $F(1, 29) = 1.13$, $p = .30$, although obese women did tend to receive lower ratings on both measures.

Because partners in the control condition did not see the women before the conversation began, we included the partners' preconversation ratings of the women (which were based solely on the information that they were about to speak to a woman from the local area) as a covariate in the ANCOVAs in addition to the women's age and education. This provides a more sensitive test of the impressions created by the women's behavior because it controls for preexisting and theoretically irrele-

TABLE 1: Partners' Mean Postconversation Ratings of Women's Social Skills, Experiment 1

	Actually Visible		*Actually Not Visible*	
	Perceived Visible	*Perceived Not Visible*	*Perceived Visible*	*Perceived Not Visible*
Obese women	4.2 (13)	3.7 (13)	4.4 (16)	4.5 (15)
Nonobese women	4.1 (17)	4.2 (17)	4.5 (15)	4.2 (14)

NOTE: Ratings could range from 1 (least favorable) to 5 (most favorable). Means are adjusted for women's age and education. Numbers in parentheses are cell *n*s.

vant individual differences among partners' preconversation impressions.

Finally, we redid all the foregoing analyses of the telephone partner ratings with telephone partner gender included as an additional between-groups factor. There were no significant effects that qualified any of the effects described above, all *p*s > .67.

Women's self-ratings. In the control condition, the women's preconversation self-ratings showed that obese women predicted that they would be less likable (M = 3.5) than nonobese women did (M = 3.8), $F(1, 28) = 4.69$, $p = .04$. This finding is of special interest because the telephone partner ratings discussed above showed that, in the control condition, the telephone partners of obese women did, in fact, like them less than the telephone partners of nonobese women. This suggests that the obese women may have been less motivated to make a good impression when they could not be seen. Prior to the conversation, obese women in the control condition also rated themselves as less attractive (M = 2.5) than nonobese women did (M = 3.6), $F(1, 30) = 16.43$, p = .0003. There were no other significant differences between the ratings made by obese and nonobese women, and telephone partner gender had no significant effects on ratings made by women in the control condition.

The hypothesis that obese women compensate for prejudice against fat people suggests that, in the experimental conditions, obese women should try to be or claim to be more likable and socially skilled when they think they are visible. The expected interaction between the women's weight and perceived visibility was not significant for any of the women's self-ratings. However, inclusion of telephone partner gender in the analysis revealed that the predicted results did occur for women who spoke to female partners. That is, there was a weight by perceived visibility by partner gender interaction for women's pre- and postconversation self-ratings of likability, *F*s(1, 104) = 10.33, $p = .002$ (pre), and 4.30, $p = .04$ (post), social skills, *F*s(1, 104 = 5.11, $p = .03$ (pre), and 3.23, $p = .08$ (post), and attractiveness, *F*s(1, 104) = 5.68, $p = .02$ (pre), and 7.14, $p = .009$ (post).

As seen in Table 2, when the women spoke to female telephone partners, self-ratings of obese and nonobese women did not differ when the women thought they could *not* be seen, whereas obese women rated themselves as more likable and socially skilled than nonobese women did when the women thought they *could* be seen by their female partners. These differences between obese and nonobese women's ratings are attributable to two trends. Obese women who thought they were visible tended to inflate their self-ratings (relative to obese women who did not think they were visible), whereas nonobese women tended to deflate their self-ratings when they thought they were visible.

Obese women rated themselves as less physically attractive than nonobese women did, but only when the women thought they were not visible to their female partners. The difference between attractiveness ratings made by women in the perceived visible and perceived not visible conditions was not significant for either obese women or nonobese women.

Obese women who spoke to male partners consistently rated themselves as less physically attractive than nonobese women did. Moreover, obese women who spoke to male partners rated themselves as significantly less physically attractive in the perceived visible condition than in the perceived not visible condition. Otherwise, the ratings of women who spoke to male partners revealed only that nonobese women rated themselves (both before and after the conversation) as more socially skilled in the perceived visible condition than in the perceived not visible condition, and before the conversation began, nonobese women in the perceived visible condition also rated themselves as significantly more socially skilled than obese women in this condition did.

Summary and discussion. These findings indicate that the perception of being visible altered what obese and nonobese women said about their behavior and, depending on whether the partners actually could see the women, also altered how the women were perceived by their partners. This raises the question of what the women did to affect their partners' perceptions of them.

EXPERIMENT 2

We examined the women's behavior by asking naive judges to indicate how likable, socially skilled, and attractive they thought the women were after reviewing the audiotapes or the videotapes of the women's contribution to the conversation. We chose this route because there are innumerable specific verbal and nonverbal behaviors that might account for the impressions that the women created on their partners, and the fact that the interaction we studied was not face to face creates difficulties in interpreting many specific variables such

TABLE 2: Women's Mean Self-Ratings and Simple Effects Comparisons for Women's Weight and Perceived Visibility, Experiment 1

	Preconversation Ratings			*Postconversation Ratings*		
Condition and Rating	*Perceived Visible*	*Perceived Not Visible*	*Effect of Visibility* F =	*Perceived Visible*	*Perceived Not Visible*	*Effect of Visibility* F =
Female partners						
Likability						
Obese women	3.9	3.7	1.32	4.5	4.1	3.40*
Nonobese women	3.5	4.1	10.03***	3.8	4.3	5.03**
Effect of weight *F* =	4.87**	3.73*		9.74***	<1	
Social skill						
Obese women	3.8	3.5	1.28	4.1	4.1	1.60
Nonobese women	3.4	3.6	1.12	3.7	4.1	2.22
Effect of weight *F* =	3.38*	<1		9.06***	<1	
Attractiveness						
Obese women	2.8	2.5	1.08	3.3	3.0	1.84
Nonobese women	3.1	3.6	2.14	3.3	3.8	2.66
Effect of weight *F* =	1.67	14.68***		<1	8.14***	
Male partners						
Likability						
Obese women	3.5	3.6	<1	4.1	4.0	<1
Nonobese women	3.7	3.5	1.76	4.1	3.9	<1
Effect of weight *F* =	2.44	<1		<1	<1	
Social skill						
Obese women	3.4	3.4	<1	4.2	3.9	1.62
Nonobese women	3.7	3.2	6.24***	4.2	3.7	5.55**
Effect of weight *F* =	3.34	<1		<1	<1	
Attractiveness						
Obese women	2.0	2.7	4.00**	2.4	3.1	5.81**
Nonobese women	3.5	3.5	<1	3.6	3.1	<1
Effect of weight *F* =	27.66***	5.99**		15.64***	2.11	

NOTE: Ratings could range from 1 (least favorable) to 5 (most favorable).
*$p < .07$; **$p < .05$; ***$p < .01$.

as eye gaze and body orientation. Finally, we believed it was more important to determine the general domain (verbal vs. nonverbal) in which the women's behavior may have differed than to measure a large number of behaviors in the hope that some number of them might reveal how the women altered their behavior.

Design and Hypotheses

Having judges evaluate either the audiotapes or the videotapes provides an indication of whether verbal behaviors, such as what the women spoke about, or nonverbal behaviors, such as facial expression, were responsible for the impressions the women created on their partners. An obvious problem with simply comparing ratings based on audiotapes with those based on videotapes is that judges are subject to the same prejudices as everyone else. Ratings made of videotapes are likely to reflect judges' reactions to the women's weight as well as the women's behavior. For this reason, the audiotapes were evaluated under two conditions—one in which judges heard the audiotape of each woman accompanied by the photograph of her taken at the end of the experimental session (audiotape plus photograph condition) and the other in which the audiotapes were not accompanied by a photograph (audiotape-only condition). Including the audiotape plus photograph condition is one way to disentangle the effects of the women's nonverbal behaviors (which can be seen only in the videotapes) from the effects of their weight (which is visible in both the videotapes and the photographs).

If the content of the women's conversation explains why the women's beliefs about whether they were visible to their telephone partners affected the partners' impressions of them, then judges in the audiotape-only condition should form a more positive impression of the social skills of obese women in the perceived visible condition than in the perceived not visible condition. Similarly, if nonverbal cues were important, obese women in the perceived visible condition should receive more positive ratings than obese women in the perceived not visible condition from judges who see videotapes but not from those who hear audiotapes.

Method

Judge recruitment. We recruited members of eight nonprofit organizations (e.g., parents of children on athletic

teams and other school-related parent groups) to supply volunteers from their group to serve as judges. We divided $750 among these volunteers, who participated in order to donate the money to their organization. Organizations heard about the study through word of mouth and contacted us to volunteer.

Mean ages of the organization members were 40.2 years for women (n = 124) and 38.0 years for men (n = 74). On average, judges reported having some college education.

Rating procedures. Volunteers from each organization judged the behavior of 20 of the women. These women included 16 women who each represented one cell of our 2 (Women's Weight) × 2 (Perceived Visibility) × 2 (Actual Visibility) × 2 (Partners' Gender) design and 4 women from our 2 (Women's Weight) × 2 (Partners' Gender) audiotape-only control condition. In this way, we were able to have groups of judges evaluate participants who represented one complete replication of the experiment, thereby ensuring that any differences between members of different organizations would not be confounded with any of our experimental manipulations. The women judged by each group were randomly selected within these constraints.

Volunteers from each organization participated in subgroups of five to six judges. These subgroups were randomly assigned to evaluate women representing the same complete replication of the experiment under different conditions. One subgroup judged the women's audiotapes, another judged their videotapes, and a third subgroup judged the women's audiotapes accompanied by their photographs. These rating sessions lasted for approximately 2 1/2 hr. The subgroup assigned to evaluate the videotapes evaluated only 16 women (rather than 20) because the 4 women within a replication who participated in the control conditions were not videotaped.

Judges were not aware of what experimental condition the women and their partners were in and, in fact, were unaware that the recordings were made under different conditions. Judges rated the women and their partners on social skills, likability, and physical attractiveness. The questions used to assess these dimensions were the same ones used to assess the women's and telephone partners' pre- and postconversation evaluations of each other, and composite scores were computed as in Experiment 1.

These scores were averaged across the judges within a subgroup. Thus, for each woman we obtained an average rating made by five to six judges of her likability, social skill, and physical attractiveness. There were three sets of these scores, one for the audiotape-only condition, one for the audiotape plus photograph condition, and one for the videotape condition. We computed average judge scores for each woman because to use the judges rather than the women as the unit of analysis would inflate the degrees of freedom.

Results

Judges' ratings of women in the experimental conditions were analyzed by a repeated-measures ANCOVA in which the between-subjects factors were the women's weight, perceived visibility, actual visibility, and telephone partner gender; the repeated-measures factor was the condition in which the judges rated the women (audiotape only, audiotape plus photograph, videotape); and the covariates were the women's age and education.

The only theoretically relevant effect in these analyses was an interaction between the women's weight and rating condition on ratings of the women's physical attractiveness, $F(2, 200) = 11.60$, $p < .0001$. Judges rated obese women as less physically attractive than nonobese women when they saw the women on videotape (Ms = 2.5 and 3.3, respectively), $F(1, 112) = 58.42$, $p < .0001$, when they saw photographs of them (Ms = 2.8 and 3.4, respectively), $F(1, 112) = 27.04$, $p < .00001$, and when they listened to but did *not* see them (Ms = 3.1 and 3.4, respectively), $F(1, 112) = 7.72$, $p = .006$. The finding that judges in the audiotape plus photograph and videotape conditions rated obese women as less attractive indicates that judges who saw the women perceived obese women as relatively unattractive. The finding that judges in the audiotape-only condition also perceived obese women they never saw as relatively unattractive replicates our previous study (Miller et al., 1990) in which people who never saw obese women evaluated them relatively negatively.

Judges' ratings of women in the control conditions were analyzed by 2 (Women's Weight) × 2 (Partner Gender) repeated-measures ANCOVAs in which the repeated measure, rating condition, had only two levels (audiotape only and audiotape plus photograph) because women were not videotaped in the control conditions. The only relevant effect was a main effect for the women's weight on judges' attractiveness ratings, $F(1, 21) = 11.99$, $p = .002$. However, the interaction between the women's weight and rating condition approached significance, $F(1, 23) = 3.44$, $p = .08$, and separate analysis of each rating condition revealed that judges in the audiotape plus photograph condition rated obese women as less attractive ($M = 2.8$) than nonobese women ($M = 3.5$), $F(1, 23) = 18.04$, $p = .0003$, whereas judges in the audiotape-only condition did not (Ms = 3.1 and 3.3, respectively), $F(1, 23) < 1$.

GENERAL DISCUSSION

Partner ratings of the women's attractiveness revealed that the partners noticed the women's appearance and

rated obese women as less attractive than nonobese women but, as might be expected, only when the partners actually saw the women. Partner ratings of the women's likability and social skills indicated that obese women received relatively low ratings in two instances. First, obese women received low ratings on social skills in the condition in which the partners' prejudices were activated (because they could see the women) but the women did not know this (because they thought they could not be seen). Second, obese women in the control condition, who knew that they could not be seen by their partners and would not be seen by anyone else (because no video camera was present), were rated as less likable than nonobese women.

One explanation for the finding that the obese women who received low ratings were those who were unaware that their partners could see them is that partners did have stereotypes about obese women but that something occurred in the condition in which the women thought they could be seen that prevented this stereotype from affecting the partners' reactions. We suspect that what blocked the biasing effects of the partners' expectations may have been something that the women did to compensate for the handicap their weight poses for social interactions. This interpretation is consistent with prior research that indicates that physically unattractive women and girls may be more socially assertive (Dion & Stein, 1978; Reis et al., 1982). It is also consistent with evidence that reports about the social relationships of obese and nonobese women made by the women themselves and by people who know them (friends and coworkers) do not reveal any differences between the social relationships of obese and nonobese women (Miller, Rothblum, Brand, & Felicio, 1995). These findings suggest that obese women's compensatory response to the handicap posed by their weight may meet with long-term as well as immediate success.

The finding that obese women in the control condition were liked less by their partners than nonobese women replicates a previous study in which we found that obese women who knew that nobody could observe them during a telephone conversation received lower ratings on social skills and likability than nonobese women, even though the raters never saw the women (Miller et al., 1990). We had previously interpreted results of that study as support for the hypothesis that repeated experiences with rejection reduce the opportunities obese women have to develop social skills. In light of the present data, another explanation for the finding that obese women make a more negative impression than nonobese women when they think they are not visible to others is that compensation, even when effective in overcoming prejudice, may have detrimental effects on the motivation and performance of obese women when they believe their weight will not be a factor in an interaction.

Because stereotyping and discrimination provide an explanation for negative outcomes received by members of stigmatized groups, group members may have difficulty disentangling the effects of stigma from their own contributions to the outcomes they receive (Crocker & Major, 1989; Crocker et al., 1991; Pettigrew, 1979). It is difficult for members of stigmatized groups to know for certain whether others are reacting to what they did or to who they are.

We believe that the possibility that their weight could explain why obese women receive negative social outcomes is likely to have detrimental effects on their behavior in situations where they think their weight is not important—as was the case in the control conditions of the present study and in our previous experiment (Miller et al., 1990). Because obese women are likely to attribute negative experiences to their weight (Baumeister et al., 1990; Crocker et al., 1993), they may imagine that thin women enjoy positive interpersonal interactions just by virtue of being thin. Consequently, obese women might underestimate the level of effort and social skills needed in situations in which weight is not an issue. Perhaps, then, obese women have acquired social skills comparable to or even better than those of nonobese women, but they may not use them optimally if they believe weight will not be an important influence on those with whom they interact.

The self-ratings of obese and nonobese women revealed that obese women reported being more likable and socially skilled than nonobese women when the women thought they were visible to their female partners. When they thought they were not visible to female partners, and when they spoke to male partners, obese and nonobese women generally did not differ in their self-ratings except that obese women consistently rated themselves as less attractive.

One explanation for these findings is that obese women attempted to be more likable and socially skilled than nonobese women did when they thought they would have to compensate for their partners' negative reaction to seeing that they were obese. Their self-ratings reflected what their intentions and goals for the interaction were. Alternatively, the more positive ratings made by obese women when they thought their partners could see them may indicate an effort to bolster their self-image because their partners' awareness of their appearance constituted a threat to self-esteem. They could not alter their appearance or their partners' reactions to it, but they could emphasize how likable and socially skilled they were by inflating their self-ratings.

That obese women did this when they spoke to women but not when they spoke to men suggests that obese and

nonobese women may have had different expectations about how men and women would react to their appearance. Stigmatized people may have stereotypes about the type of person who would stereotype them (Jones et al., 1984), and people who believe they are disliked by others do not try to disconfirm the others' expectations if they think the others' opinion is unlikely to change (Curtis & Miller, 1986). Accordingly, obese women might have had little confidence that they could compensate for the negative reactions they thought males would have to their appearance. In support of this conclusion, there is some research showing that unattractive women are more competitive with men than with women whereas attractive women are relatively noncompetitive with men (Kahn, Hottes, & Davis, 1971; Major & Sherman, 1976). These researchers concluded that unattractive females may feel that they have nothing to gain or lose socially by outperforming a male because he will not be attracted to them in either case, so they might as well maximize their outcomes on the experimental task. In the present study, obese women may have been more motivated when interacting with a woman, whereas nonobese women may have been more motivated when interacting with a man.

The self-ratings of nonobese women are consistent with this view. Nonobese women who thought they were visible to men inflated their self-rated social skills, whereas nonobese women who thought they were visible to women rated themselves relatively negatively on social skills and likability. These ratings could reflect differences in nonobese women's motivation to make a good impression on male and female partners.

The judges' ratings suggest that whatever effects perceived visibility had on obese and nonobese women's intentions, neither the content of what the women said nor the way they spoke to their partners differed sufficiently for the judges to detect any differences between obese and nonobese women in the perceived visible and perceived not visible conditions. Evidently, therefore, differences in the women's behavior that were detected by the telephone partners were more subtle than what topics the women chose to discuss or whether their facial expressions and other nonverbal cues radiated warmth and friendliness or reserve and withdrawal.

The only difference between obese and nonobese women that the judges did detect was that they rated obese women they saw (in a photograph or on videotape) and obese women they did not see as less physically attractive than nonobese women. Beyond confirming that obese women sometimes make negative impressions on others who are unaware of their weight, these findings cannot explain what obese and nonobese women might have done differently as a consequence of believing they were visible, because this effect occurred regardless of the women's beliefs about their visibility.

The present study has limitations that suggest the need for additional research. The interpretation that can be made of the women's self-ratings is not as clear as it could be, because it is impossible to know whether the ratings reflect the women's intentions with respect to the interaction, an attempt to affirm their self-worth, or some other motivation. Moreover, even if the self-ratings reflect what the women were trying to accomplish during the interaction, the self-ratings do not fully explain how the partners reacted to the women. On the one hand, this is only to be expected, because the partners' ratings are likely to be affected by the partners' stereotypes and interpretations of the women's behavior as well as by what the women actually did. On the other hand, it is difficult to reconcile the finding that obese and nonobese women's self-descriptions in the different perceived visibility conditions depended on their partners' gender but the partners' reports about the women did not. This finding suggests that the social skills ratings made by partners reflect a behavioral change on the part of obese and nonobese women of which the women themselves were unaware. If so, it is consistent with a finding in our previous study, which showed that the self-ratings of obese and nonobese women following a telephone conversation showed no awareness of the fact that obese women had actually made a poorer impression on their partners than nonobese women (Miller et al., 1990). Nevertheless, there was some correspondence between what the women said they would be like and how their partners perceived them. Obese women in the control condition said they were relatively unlikable, and their partners, who never saw them, agreed.

This study also suffers from the sampling problems that plague virtually all experimental studies. Although we had the advantage of recruiting a noncollege sample, there is no way of knowing whether the obese and nonobese women who participated were particularly troubled or untroubled by social relationships, relative to a representative sample of obese and nonobese women. One advantage of the present sample is that the obese women were far more obese than the typical college sample. As we pointed out earlier, the practice of randomly assigning college students to be labeled temporarily as members of a stigmatized group is ideal for experimental control but not for describing what people do when they must live with the prejudices of others.

In summary, compensating for prejudice against fat people may have both desirable and undesirable effects on the social interactions of obese women. Although they cannot entirely escape the effects of prejudice, the skills and strategies they acquire to mitigate its consequences might make obese women more resilient in the long run. In discussing their finding that less attractive women were more socially assertive than more attractive

women, Reis and his colleagues said, "After having learned to enjoy socializing enhanced in large part by the reactions of others to one's appearance rather than one's social competence, a deficiency endures that becomes consequential once beauty fades and other people no longer provide the spark" (Reis et al., 1982, p. 994). The pervasive prejudice that exists against those who do not fit current narrow definitions of beauty and fitness ensures that obese women will have some difficulties to overcome in establishing social relationships but may, in the process, learn how to provide their own spark.

NOTES

1. The finding that obese women reported fewer years of college than nonobese women is consistent with research showing that obese women receive less parental financial support for higher education (Crandall, 1991).

2. The present experiment is part of a larger investigation of obese and nonobese women's social skills and social relationships. At the beginning of the experiment, the women filled out a number of questionnaire measures about their social relationships. The results of these measures are reported elsewhere (Miller, Rothblum, Brand, & Felicio, in press).

3. Degrees of freedom differ slightly for different analyses because of missing data and differing software package criteria for inclusion of subjects with missing data.

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