

## Behavioral Other-Enhancement: Strategically Obscuring the Link Between Performance and Evaluation

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A strategy related to self-handicapping in which individuals supply a comparison other with a performance advantage rather than handicap their own performance was investigated in two experiments. In Experiment 1 greater other-enhancement was found among men than among women. In addition, men engaged in the most other-enhancement when expecting that their performance would be compared with that of a coparticipant. In Experiment 2 the hypothesis that subjects would facilitate their coparticipant's performance primarily under conditions of uncertainty and competition was supported.

A defining feature of contemporary Western society is the extraordinary emphasis placed on achievement and success. Striving for success seems to pervade every aspect of human interaction from the classroom, to the playing field, to the corporate boardroom. This emphasis on achievement and success suggests that people might make every effort to ensure possession of the necessary resources to maximize performance. Individuals would be expected to reach for any and every advantage to facilitate performance, including eliminating obstacles or disabilities that might interfere with success. Nevertheless, recent research shows that individuals are sometimes willing to create impediments to performance, making failure more likely. Berglas and Jones (1978) labeled this intriguing finding "self-handicapping."

In self-handicapping, individuals seek out or create a handicap (an external, inhibitory factor that interferes with performance) strategically to obscure the link between performance and evaluation (at least in the case of failure). Persuasive handicaps diminish the likelihood of success but permit the handicapper to attribute a forthcoming failure to some source other than lack of competence. By self-handicapping, individuals can exert control over the types of attributions made for performance outcomes. By acquiring or claiming a handicap and blocking the expression of ability, an individual can diminish lack of ability as the most plausible attribution for failure. In attributional terminology, self-handicapping is a strategy designed to discount ability as an explanation for poor perfor-

mance (Kelley, 1972). There now are several reviews of the self-handicapping literature (e.g., Arkin & Baumgardner, 1985; Higgins, Snyder, & Berglas, 1990; Leary & Shepperd, 1986).

### Behavioral Other-Enhancement

With self-handicapping, individuals preemptively create or report debilitating circumstances that interfere with performance to provide a persuasive nonability explanation should failure occur. In comparative contexts another closely related, but no less subtle, strategy is available. Rather than handicapping one's own performance, one can achieve the same attributional goal (i.e., arranging the attributions that can be made for an outcome) by enhancing the performance of a relevant comparison other. Specifically, in a comparative or competitive setting, individuals can diminish the extent to which a relative failure is attributed to their own lack of ability by ensuring that the other is performing with an advantage. The term "other-enhancement" has been coined to describe this alternative attributional strategy (Shepperd, Strathman, & Arkin, 1987).

In several respects, self-handicapping and other-enhancement are comparable. Similar to self-handicapping, other-enhancement capitalizes on the discounting and augmentation principles (Kelley, 1972). The advantage enjoyed by the opponent can serve as a plausible explanation for one's own failure and thereby undermines (or "discounts") personal lack of ability as the most obvious explanation for relatively inadequate performance. Furthermore, should the individual perform better than the opponent, despite the opponent's advantage, then the individual is seen as all the more able, and ability is augmented.

In other ways, however, self-handicapping and other-enhancement are distinct. With self-handicapping, individuals actually create or report barriers that serve as obstacles to their own successful performance. By contrast, with other-enhancement, individuals do nothing to affect their own performance. Instead, they provide their opponent with resources that promote a better performance. Thus, other-enhancement permits the individual to pursue optimal performance and at the same

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time protects "the self" from threat arising from poor performance relative to the comparison other. Moreover, other-enhancement has still another positive feature not found in self-handicapping. In providing an advantage to the other, an individual can sometimes foster an image of being altruistic or unselfish.

In this investigation we examined behavioral forms of other-enhancement in which individuals supplied a comparison other with actual performance advantages. Importantly, other-enhancement has a cognitive form as well. With cognitive other-enhancement, individuals either perceive a comparison other as enjoying advantages or exaggerate the perceived importance of a particular advantage (Shepperd, 1988). For example, prior to the qualifying heats of a race, a runner may be motivated to believe that the other runners in the race enjoy better coaching, are in better shape, or have other advantages that provide an edge in the race. Cognitive other-enhancement is distinct from self-handicapping (at least behavioral or created forms; Arkin & Baumgardner, 1985; Leary & Shepperd, 1986) and behavior other-enhancement in that it represents an intrapsychic rather than a behavioral strategy (Baumgardner & Arkin, 1987). In cognitive other-enhancement the advantage conferred to the opponent exists entirely within the individual's own thinking. In no way is the performance of the opponent actually facilitated.

#### Circumstances Promoting Behavioral Other-Enhancement

Several conditions might be expected to foster behavioral other-enhancement. First, the goal of other-enhancement is to diminish the extent to which lack of ability is viewed as the cause of one's own performance falling short of that of a comparison other. Implicit in this goal is the assumption that a relative comparison of performances can and will be made. However, the utility of other-enhancement is undermined if the relative comparison is impossible because no comparison other exists, because individuals are performing noncomparable tasks, or because individuals are denied access to the performance outcomes of others. In terms of creating ambiguity regarding the cause of a relative failure, individuals stand to gain nothing by enhancing the performance of an individual with whom they will not, or cannot, be compared.

Second, behavioral other-enhancement should be expected when individuals are uncertain they can perform well relative to a comparison other. A repeated finding in the self-handicapping literature is that individuals who are uncertain that they will perform well on a forthcoming ego-relevant task are more likely to self-handicap (e.g., Higgins & Harris, 1988; Kolditz & Arkin, 1982; Mayerson & Rhodewalt, 1988; Tucker, Vuchinich, & Sobell, 1981). Presumably, uncertainty regarding one's ability to perform a task successfully is preferable to the knowledge that a successful performance is unobtainable. When handicapped, the hope (or perhaps illusion) that a successful performance is obtainable is sustained. In a similar way, individuals who are uncertain that they can outperform a comparison other may engage in other-enhancement. Should they then perform poorly relative to the other individual, they nevertheless

can sustain the belief that the other can be bested in a future comparison.

#### Experiment 1: A Pilot Study

In a pilot study we examined the first condition theorized to elicit other-enhancement, namely, that other-enhancement will occur under conditions in which performances will be compared. In addition, a number of investigations of self-handicapping have revealed greater handicapping among men than among women (Berglas & Jones, 1978; Rhodewalt & Davison, 1986; Shepperd & Arkin, 1989b). Several explanations have emerged for the sex differences in self-handicapping, including the use of sex-typed tasks in self-handicapping experiments (Berglas & Jones, 1978; Mathis & Kernis, 1990) and sex differences in attributional style, with men being more likely than women to make ability attributions for outcomes and, consequently, being more concerned than women with deflecting ability attributions for failure (Shepperd & Arkin, 1989b). Regardless of the reasons for the sex differences, given the similarity between self-handicapping and behavioral other-enhancement, a second purpose of the pilot study was to examine sex differences in other-enhancement. It was predicted that, consistent with self-handicapping, other-enhancement would be found more among men than among women.

#### Method

*Subjects.* Subjects were 40 male and 40 female undergraduate psychology students who participated individually and received course credit for participation. Data from 6 subjects (3 men and 3 women) were eliminated because of suspicion regarding the procedures or because of failure to follow instructions. Female subjects participated in sessions with a male experimenter and a female confederate; male subjects participated in sessions with a female experimenter and a male confederate.

*Procedure.* Shortly after the subject arrived for the experiment, a second subject (actually an experimental confederate posing as a subject) arrived. Both were greeted by an experimenter and seated at a table on which a cassette recorder and tray holding five cassettes had been placed. The cassettes were arrayed from right to left beginning with a cassette with two red labels (scored as 1 on a 5-step scale), one with one red label, and one with no label, followed by one with one green label, and one with two green labels (scored as 5 on a 5-step scale). In a paradigm used in previous research (Shepperd & Arkin, 1989a, 1989b), subjects were instructed that they were participating in an experiment investigating the effect of music on performance on a test of intellectual ability. An elaborate cover story noted that other researchers had studied mood music in settings such as supermarkets, elevators, and car dealerships and that the present study was focused on investigating the effects of music on test taking and performance on intellectual tasks.

Subjects were told that a cassette marked with a red label would inhibit performance on the upcoming test, whereas a cassette marked with a green label would enhance performance. Furthermore, it was explained that the music on a cassette marked with two red labels inhibited performance more than that on a cassette marked with one red label and that the music on a cassette marked with two green labels had been found to enhance performance more than that on a cassette marked with one green label. Finally, it was explained that the unmarked cassette had been shown neither to enhance nor to obstruct

test performance, but was included in the selection set to serve as a standard against which the effects of the remaining cassettes could be compared.

The experimenter informed the participants that they were participating in a nationwide effort to validate a new test of verbal abilities called the Verbal Reasoning Aptitude Test (or the V-RAT for short). They were also told that, although the validation procedures for the V-RAT were still in progress, preliminary analyses revealed that the V-RAT correlated highly with intelligence and appeared to be an excellent predictor of future scholastic performance.

*Absolute versus relative comparison standard.* Next, in the *relative* comparison standard condition, the experimenter explained that on completion of the V-RAT, both of their tests would be scored and then compared with one another. These instructions were designed to create the perception that the subject's performance would be evaluated relative to the coparticipant's. In the *absolute* comparison standard condition, subjects were instructed that they were in a noncomparison condition. These subjects were informed that their test performance would not be compared with that of their coparticipant and that the only feedback they would receive would be a statement reporting how they performed relative to national norms. This feedback would be sent to them in a few weeks from a neighboring university, and neither they nor their experimenter would be told how subjects at their college performed relative to one another. The purpose of these instructions was to foster an expectation that the subjects' test performance would not and could not be evaluated relative to the performance of the coparticipant.

After giving these instructions, the experimenter announced that a set of practice problems had been assembled for purposes of "warm-up" prior to taking the V-RAT. The practice problems consisted of a list of 20 anagrams, the first few of which were quite easy whereas the remainder ranged from difficult to impossible. The problems were designed to make the subjects uncertain of their ability to perform the task successfully. It was explained that, although the V-RAT did not consist of anagrams, the practice problems required the same sort of symbolic reorganization ability and analytical thinking. The experimenter added that previous research had shown that people who solve anagrams easily tend to perform very well on the V-RAT. After distributing the practice problems, the experimenter left the room, allowing the subject and confederate to work on the problems by themselves. After 5 min the experimenter returned and told the subjects to discard their practice problems. The experimenter then announced that the participants would be taking the V-RAT in different rooms, one in the present room and one in a second experimental room located in another part of the building. To determine room assignment, the subject was asked to guess whether the experimenter was thinking of an odd or an even number. The experimenter revealed that the number guessed was correct; thus, the subject would take the V-RAT in the present room. Next the experimenter escorted the confederate from the room, promising to return to the subject in a few minutes. The confederate was then dismissed.

After 2 min, the experimenter returned to the initial experimental room, where the subject waited. All subjects were instructed that, because they had won the coin toss, they were in the control condition and thus would be taking the test while listening to neutral music. The experimenter then opened a drawer and selected the neutral cassette from a second set of cassettes and placed it in the cassette player. It was emphasized again that this music had been documented to neither help nor hinder performance on the V-RAT.

At this point the experimenter announced that, while away from the room, he or she had encountered the project director, who had requested his or her attendance at a meeting immediately. The experimenter added that another member of the research team would com-

plete the experiment, but that it would be about 5 min before the second experimenter would be available to administer the V-RAT. The experimenter requested that the subject wait quietly until the second experimenter arrived. The experimenter then collected his or her coat and left the room.

After 30 s, the experimenter hurried back into the room and announced that he or she had forgotten to make a music selection for the other participant. Hurriedly, the experimenter stated that he or she was supposed to randomly select a cassette for the other participant using a random numbers table but had forgotten to bring the table to the session. The experimenter also stated that there was no time for him or her to take the cassette to the other experiment room. Then, as if spontaneously, the experimenter asked whether the subject would be willing to select a cassette for the coparticipant. All subjects readily agreed. The subject then was instructed to select any cassette from the tray. It was explained that data would have to be collected on individuals listening to each of the five music options, so it did not matter which cassette the subject chose for the coparticipant. The subject next was instructed to take the selected cassette down the hall to a specified room and to drop it in a large envelope attached to the door. The experimenter, when certain that the subject understood these new instructions, left the room in a hurry. In all cases the experimenter left the room before the subject made the cassette selection. Thus, the experimenter was seemingly unaware of and unconcerned with which cassette the subject selected.

These procedures were intended to foster the belief that the experimenter would have no knowledge of what music the subject chose for the other participant. The purpose was to minimize self-presentation concerns as a determinant of the subjects' music choice. Specifically, by having the experimenter apparently ignorant of the subject's music choice, the goal of making a specific selection to convey an image of being helpful or altruistic (i.e., choosing facilitating music) was undermined.

The subject was allowed 5 min to deliver the cassette to the second experiment room, after which the experimenter returned and announced that the experiment was over and that there would be no test. All subjects were thoroughly debriefed and thanked for their participation.

## Results

A 2 (sex: male vs. female)  $\times$  2 (performance standard: absolute vs. relative) unweighted means analysis of variance (ANOVA) revealed a single significant main effect of sex,  $F(1, 70) = 4.30, p < .05$ . Men ( $M = 3.40$ ) selected more facilitating music for their coparticipant than did women ( $M = 2.65$ ). Although the interaction of performance standard and sex was not significant, the pattern of means was in the predicted direction for men but not women. Specifically, among men, the expectation that performances would be compared tended to produce greater other-enhancement ( $M = 3.65$ ) than did the expectation that performances would not be compared ( $M = 3.12$ ). Among women, no differences in other-enhancement emerged regardless of whether subjects expected ( $M = 2.68$ ) or did not expect ( $M = 2.61$ ) that their performances would be compared.

Providing an opponent with a performance advantage makes the cause of the opponent's better performance ambiguous to some extent regardless of the magnitude of the advantage conferred. Consequently, the mere act of giving or not giving an opponent a performance advantage might be viewed as one

more important measure of other-enhancement. With this in mind, subjects were divided into two groups: (a) those who selected facilitating music for their coparticipant (music with either one or two green dots); and (b) those who did not (i.e., subjects selecting neutral music or music with one or two red dots). The data were reanalyzed separately for men and women using chi-square. The analysis for men revealed a significant effect of performance standard,  $\chi^2(1, N = 37) = 4.38, p < .05$ . Subjects anticipating a comparison of performances were significantly more likely to select facilitating music for their coparticipant than were subjects anticipating no comparison of performances: 16 of 20 men in the relative standard condition chose facilitating music for their coparticipant, whereas only 8 of 17 men in the absolute standard condition did so. The analysis for women revealed no difference in music selection across conditions,  $\chi^2(1, N = 37) < 1$ . Among women, 6 of 18 in the absolute condition and 6 of 19 in the relative condition selected facilitating music for their coparticipant.

### Discussion

Consistent with research on self-handicapping, men enhanced the performance of their coparticipant more than did women. In addition, greater other-enhancement was found among men anticipating a relative comparison of performances than among men anticipating no comparison of performances. Presumably, anticipating a comparison of performances elicited concerns over performing poorly relative to the comparison other. Moreover, given the difficulty of the practice problems, subjects likely viewed a favorable comparison as questionable. By supplying their coparticipant with an advantage, subjects in the relative condition could deflect lack-of-ability attributions for their relatively poor performance. Consequently, subjects who anticipated the comparison of performances enhanced their coparticipant's performance to obscure its meaning.

By contrast, subjects in the absolute condition had nothing to gain from selecting facilitating music for the coparticipant. Moreover, because the music selections were private, there were no self-presentational benefits (e.g., favorably impressing the experimenter or confederate by appearing altruistic) associated with choosing facilitating music. Thus, subjects in the absolute condition were not expected to other-enhance, and their music selections for the coparticipant showed no preferential selection of facilitating music. In short, men other-enhanced, but only when they anticipated a comparison of performances.

### Experiment 2

Experiment 1 demonstrated that, when anticipating a comparison of performances, individuals will enhance the performance of the comparison other. Implicit in this experiment was the assumption that subjects other-enhanced because they were uncertain that they could outperform their coparticipant on the forthcoming task. However, subjects' expectations regarding their own and the confederate's performance were neither manipulated nor assessed. In Experiment 2 we examined directly whether uncertainty regarding the likelihood of success

relative to a comparison other is a factor in promoting other-enhancement. Experiment 2 also included an additional manipulation of performance comparability to provide a stronger test of the impact of explicit comparability on other-enhancement.

### Overview and Summary of Hypotheses

Male subjects were led to feel certain or uncertain that they could perform well in comparison with a second subject (actually an experimental confederate) on a forthcoming test of intelligence. In addition, subjects were led to believe that their test and the confederate's test would or would not be compared with one another to see who performed better. Finally, half of the subjects were informed that a change in the procedures required that they take a test that was completely different from their coparticipant's (*different test* condition). The remaining subjects were given no such instructions. Instead, they continued to believe that they would be taking the same test as the confederate (*same test* condition).

It was predicted that behavioral other-enhancement would occur most among one group of subjects: those who (a) believed that they were taking the same test as the coparticipant, (b) were uncertain that they would outperform their coparticipant, and (c) believed that their performance and that of the coparticipant would be directly compared by the experimenter.

### Method

*Subjects.* Subjects were 92 male introductory psychology students who received course credit for experimental participation and were randomly assigned to the eight experimental conditions.

*Procedure.* Several changes were made in the design and procedures relative to Experiment 1 to permit a more critical examination of other-enhancement. First, because greater other-enhancement was found among men than among women, only male subjects were recruited for Experiment 2. In all cases, the experimenter was female and the confederate was male. Second, to permit greater variability in the music selections, two additional music selections (one with three red labels scored as 1 on a 7-step scale and one with three green labels scored as 7 on a 7-step scale) were available to subjects. Thus, subjects chose from a selection of seven cassettes arrayed from right to left beginning with one with three red labels, one with two red labels, and one with one red label, followed by one with no label, one with one green label, one with two green labels, and one with three green labels. Third, as suggested by the hypotheses in the previous section, two additional independent variables (success vs. uncertain outcome expectation and same vs. different test) were manipulated in Experiment 2. The manipulation of the comparison standard (absolute vs. relative) was identical to that used in Experiment 1. Fourth, new procedures were introduced to increase the plausibility of the need for the subjects to select the music for the coparticipant. The additional manipulations and the refinements in the procedures are described next.

*Success versus uncertain outcome expectation.* A manipulation of outcome certainty was included in the design to examine the role played by uncertainty in other-enhancement. Half of the subjects were led to expect success relative to the confederate on the V-RAT; the remaining subjects were made uncertain of the prospect of success. This was accomplished by varying the performance of the confederate on the practice anagrams. In the *success expectation* condition, the confederate complained to the subject about his inability to solve these types of problems. Moreover, because of the close proximity of their

seating, subjects in the success expectation condition were able to observe the confederate as he seemed to struggle to solve the practice anagrams. Several times during the practice period the confederate grimaced, sighed audibly, ran his fingers through his hair in apparent frustration, and erased his unsuccessful attempts to solve the anagrams. At the end of the practice period, the confederate had solved at most three of the practice problems, and sometimes fewer, depending on the performance of the subject. That is, in the few cases in which the subject solved fewer than seven anagrams, the confederate solved only two anagrams. In the rare case in which the subject solved fewer than four anagrams, the confederate countered by solving no anagrams.

In the *uncertain expectation* condition, the confederate stated offhandedly to the subject that he found these sorts of problems rather easy. In addition, subjects in the uncertain outcome condition observed the confederate solve many of the anagrams with little difficulty. Occasionally, the confederate audibly counted through the number of anagrams he had solved, thus keeping the subject aware of his superior performance. Finally, the confederate announced with glee that he had found two answers to one of the anagrams (LYPTAR). He then proceeded to reveal (in a friendly manner) to the subject the two answers (PARTLY and PALTRY). At the end of the practice period, the confederate had solved approximately seven anagrams more than the subject.

When the 5-min practice period had passed, the experimenter returned to the room and instructed the subject and confederate to discard their practice problems in a nearby wastebasket. The confederate discreetly discarded his practice test in a way that kept the experimenter ignorant of how many anagrams he had solved. Consequently, the experimenter was kept blind to the performance expectation condition of the subject.

*Same versus different test.* As in Experiment 1, the experimenter announced that the test would be taken in separate rooms and escorted the confederate from the room after the subject had "successfully" guessed the number the experimenter was thinking. On the experimenter's return, subjects were led to believe one of two things. In the different test condition, subjects learned that there had been a slight change in the procedures. These subjects were told that the experimenter, while away from the room, had encountered the project director, who had informed her that only one of the participants needed to complete the V-RAT. The experimenter informed the subject that he now would complete the Diagnostic Spatial Relations Aptitude Test (DSRAT), whereas the confederate would continue to take the V-RAT. The experimenter explained that the DSRAT was a very different test, completely unrelated to the V-RAT. Moreover, it was explained that, although it was related to performance on the V-RAT, performance on the practice anagram problems was completely unrelated to performance on the DSRAT. The experimenter then proceeded to show subjects several sample problems from the DSRAT. In the same test condition, subjects were told nothing of the DSRAT. These subjects continued to believe that both participants were taking the V-RAT.

At this point a telephone in the hallway began to ring. After three rings the experimenter excused herself to answer the phone, leaving the door to the experiment room slightly ajar. The telephone was actually rigged and had been set by the confederate to ring after a designated period of time. After the fourth ring the experimenter picked up the receiver and engaged in a rehearsed conversation, in a voice loud enough for the subject to overhear, that made it apparent that the experimenter was being called away from the experiment to attend a meeting with a professor on the other side of campus. It also was apparent that the experimenter was arranging for the caller (another member of the research team) to come to the psychology lab room to complete the experiment.

At the completion of the conversation, the experimenter hung up the phone and returned to the experiment room. She then informed the subject of the content of the conversation and stated that another member of the research team would arrive in about 5 min to administer the V-RAT (or DSRAT). She asked the subject to wait quietly until the second experimenter arrived. The experimenter then collected her coat and left the room.

After 30 s, the experimenter hurried back into the room, announcing that she had forgotten to do two things before she left. First, she pulled a questionnaire (the pretest questionnaire) from a drawer and handed it to the subject, instructing him to complete it before taking the test. Second, she announced that she had forgotten to make a music selection for the other participant to listen to while taking the V-RAT. The remaining procedures were identical to those used in experiment 1, with the experimenter soliciting the subject to select music for the coparticipant and then leaving the room before the music selection was made.

The subject was allowed 10 min to deliver the cassette to the second experiment room and to complete the pretest questionnaire. After 10 min the experimenter returned to the room, collected the pretest questionnaire, and explained that the experiment was over and that there would be no test. All subjects then were thoroughly debriefed, carefully probed for suspicion about the experiment, and thanked for their participation. No subject expressed any suspicion of the staged phone conversation or any other aspect of the experiment.

*Pretest questionnaire.* The pretest questionnaire was administered after subjects made their tape selection and included instructions stating that the questionnaire was designed to assess subjects' thoughts about the experiment and to assess how well participants in this study understood the instructions. Subjects were informed that their responses on the questionnaire would remain completely anonymous. To ensure anonymity, subjects were instructed not to place their name anywhere on the questionnaire.

The pretest questionnaire was composed of several manipulation check and ancillary items. Two dichotomous manipulation check items assessed whether subjects understood the meaning of the red and green labels on the cassettes. In five 9-point, Likert-type manipulation check items, subjects were requested (a) to rate how important it was for them to do well on the forthcoming test, (b) to report the extent to which the context of the experiment made them feel as though they were competing with their coparticipant, (c) to rate how well they expected to perform on the forthcoming test, (d) to rate how well they expected their coparticipant was likely to perform on the forthcoming test, and (e) to state the extent to which they believed their music selection for the other participant was known by the experimenter.

Included in the pretest questionnaire were two items assessing subjects' hypothetical attributions for their performance on the upcoming test. In the first question subjects were requested to assign percentages to five different categories that might contribute to a very good performance on the test (ability, trying hard, easy test, good luck, and other). The category of other was included to allow subjects to make attributions to the music. The second question requested subjects to assign percentages to five different categories that might contribute to a very poor performance on the test (lack of ability, not trying hard, difficult test, bad luck, and other). The percentages subjects assigned in each category within questions could range from 0% to 100%. The only stipulation to subjects was that the total of the percentages they assigned in each question sum to 100%.

## Results

Unless otherwise indicated, all analyses reported next were conducted using a 2 (performance standard: absolute vs. rela-

tive)  $\times$  2 (outcome expectation: success vs. failure)  $\times$  2 (type of test: same vs. different) unweighted means ANOVA. Only effects that approached or reached conventional levels of significance are reported.

*Manipulation checks.*<sup>1</sup> Analysis of the item asking subjects the extent to which they felt they were competing with their coparticipant revealed main effects of performance standard,  $F(1, 82) = 12.39, p < .01$ , and type of test,  $F(1, 82) = 3.18, p < .08$ . Subjects reported experiencing a feeling of competition that was greater in the relative ( $M = 4.93$ ) than in the absolute ( $M = 3.24$ ) condition and greater in the same test ( $M = 4.49$ ) than in the different test ( $M = 3.64$ ) condition. Thus, both the manipulation of performance standard and the manipulation of type of test appear to have been successful.

The two items asking subjects to estimate their own and their coparticipant's performance on the V-RAT were analyzed together using a mixed-model ANOVA. In this analysis, performance standard, performance expectation, and type of test were treated as between-subjects variables, and target of the rating (self vs. coparticipant) was treated as a repeated measure. The analysis revealed a significant main effect of target,  $F(1, 82) = 5.33, p < .03$ , with subjects reporting that their own performance ( $M = 6.18$ ) would be better than that of their coparticipant ( $M = 5.70$ ). However, the target main effect was qualified by a significant two-way interaction of target and outcome expectation,  $F(1, 82) = 13.86, p < .001$ . In the success expectation condition, subjects estimated that they would perform better on the upcoming test ( $M = 6.38$ ) than would their coparticipant ( $M = 5.16$ ),  $p < .05$ . By contrast, in the uncertain outcome condition, subjects estimated that they ( $M = 5.98$ ) and their coparticipant ( $M = 6.24$ ) would perform equally well ( $p > .20$ ). Thus, subjects in the uncertain outcome condition were, as expected, unsure that they could outperform their coparticipant.

An unanticipated main effect of outcome expectation emerged for the item asking subjects the extent to which their music choice would be known by the experimenters,  $F(1, 82) = 5.34, p < .05$ . Subjects in the success expectation condition were more likely to believe that their music choice would be known by the experimenter ( $M = 5.38$ ) than were subjects in the uncertain expectation condition ( $M = 4.00$ ). Given the number of analyses performed, this surprising effect could easily be attributable to random error.

Subjects did not differ in their responses to the item asking how important it was for them to perform well on the test. In addition, all subjects correctly identified the difference between tapes with red labels and tapes with green labels on the dichotomous measures provided. In sum, then, all conditions for testing the hypotheses regarding behavioral other-enhancement appear to have been met.

*Music selection.* As described earlier, the music selections were weighted using a continuum ranging from 1 = *highly debilitating* to 7 = *highly facilitating*. Analysis of subjects' music selection for their coparticipant revealed a significant main effect of type of test,  $F(1, 82) = 11.00, p < .002$ , and a marginally significant main effect of performance standard,  $F(1, 82) = 3.36, p < .07$ . Subjects anticipating taking the same test as their coparticipant chose more facilitating music for their coparticipant ( $M = 4.60$ ) than did subjects anticipating taking a different test ( $M =$

3.06). In addition, subjects expecting that their test performance would be compared with that of their coparticipant chose more facilitating music for their coparticipant ( $M = 4.22$ ) than did subjects expecting that their and their coparticipant's test performance would not be compared ( $M = 3.41$ ).

The two main effects were qualified by a significant three-way interaction of performance standard, type of test, and outcome expectation,  $F(1, 82) = 4.53, p < .04$ . As is evident in Table 1, subjects in the different test condition did not differ in the music they selected for their coparticipant. Indeed, the means revealed that subjects in these conditions tended to select performance-debilitating music for their coparticipant (i.e., all means are below the neutral point of 4.0). By contrast, in the same test condition, subjects anticipating a relative comparison of performances and uncertain of their ability to outperform their coparticipant on the V-RAT selected facilitating music for their coparticipant (see Table 1).

*Publicity and music selection.* It might be argued that, to the extent that subjects perceived their music choice as known by the experimenter, the more likely they would be to choose facilitating music. By so doing, they could seem to be altruistic. However, the correlation between subjects' music selection (ranging in value from 1 = *very debilitating* to 7 = *very facilitating*) and their responses on the publicity item was .01, suggesting that this type of self-presentational concern had no influence on subjects' music selection.

*Attributions.* A 2 (performance standard)  $\times$  2 (outcome expectation)  $\times$  2 (type of test)  $\times$  2 (hypothetical outcome)  $\times$  5 (attribution category) mixed-model ANOVA was conducted to examine the attributions (ability, effort, task difficulty, luck, and other) subjects provided to explain the two hypothetical outcomes (performing well vs. performing poorly) on the upcoming test. Attribution category and hypothetical outcome were treated as repeated measures; the remaining three variables were treated as between-subjects variables.

An examination of the cell variances in this analysis revealed a lack of homogeneity. Consequently, the percentages subjects assigned to each of the five categories within the two attribution questions were subjected to a square root transformation. The means reported in Table 2 represent the means for the transformed percentages.

The analysis revealed a significant main effect of attribution category,  $F(4, 382) = 79.39, p < .0001$ . Subjects were most likely to make ability attributions for the hypothetical outcomes. This in turn was followed by attributions to the amount of effort they exerted and the difficulty of the task attribution (see bottom row of Table 2). Subjects appeared least willing to attribute a hypothetical outcome either to luck or to the category labeled *other*. Although it was hoped that the category *other* would tap attributions to the music itself, it seems apparent that, without an explicit cue, subjects did not think of the music when assigning the percentages.

The main effect of attribution category was qualified by a

<sup>1</sup> Two subjects failed to complete the postexperiment questionnaire. Consequently, the analyses of the manipulation check questions are based on data from 90 subjects.

**Table 1**  
*Mean Music Choice as a Function of Performance Standard, Outcome Expectation, and Type of Task*

Performance standard	Different test				Same test			
	Success expectation		Uncertain expectation		Success expectation		Uncertain expectation	
	<i>M</i>	%	<i>M</i>	%	<i>M</i>	%	<i>M</i>	%
Absolute standard	2.0 <sub>a</sub>	8	3.6 <sub>ab</sub>	46	4.3 <sub>b</sub>	58	3.8 <sub>b</sub>	46
Relative standard	3.6 <sub>ab</sub>	36	3.2 <sub>ab</sub>	25	4.4 <sub>ab</sub>	55	5.8 <sub>c</sub>	73

*Note.* Higher numbers reflect greater other-enhancement. A score of 4.0 represents the neutral point. Means within rows and columns that do not share common subscripts differ at  $p < .05$  using the pooled error term ( $MS_e = 4.83$ ). Percentages represent the proportion of subjects in each cell choosing performance-enhancing music for their coparticipant.

significant interaction of attribution category and hypothetical outcome,  $F(4, 328) = 18.42, p < .0001$ . The pattern of means for this interaction is presented in the top two rows of Table 2. Subjects made greater ability attributions when explaining a hypothetical success than when explaining a hypothetical failure. By contrast, subjects made greater attributions to the difficulty of the task when explaining a hypothetical failure than when explaining a hypothetical success. This finding is consistent with previous research examining attributions for anticipated performance outcomes (Shepperd & Arkin, 1989a) and provides additional evidence for the pervasive self-serving bias in causal attribution (e.g., Bradley, 1978).

The analysis also yielded an interaction of attribution category and performance expectation,  $F(4, 328) = 2.56, p < .04$ . Although subjects in the success expectation condition ( $M = 6.38$ ) did not differ significantly in their ability attributions from subjects in the uncertain outcome condition ( $M = 6.04$ ), they were less likely than uncertain expectation subjects to make task difficulty attributions for a hypothetical outcome ( $M_s = 3.73$  and  $4.76$ , respectively) and more likely than uncertain expectation subjects to make luck attributions ( $M_s = 2.59$  and  $2.24$ , respectively).

Finally, an interaction of attribution category, performance

standard, and type of task emerged for the items asking subjects to make attributions for a hypothetical success or failure,  $F(4, 328) = 2.74, p < .04$ . However, subsequent pairwise comparisons revealed this interaction to be unreliable.

*Discussion*

Experiment 2 replicates and extends the findings of Experiment 1, providing compelling evidence for the existence of the preemptive coping strategy of other-enhancement. As in Experiment 1, when subjects anticipated a comparison of performances, they were more likely to provide their coparticipant with a performance advantage than when they did not anticipate a comparison of performances. Furthermore, Experiment 2 also revealed greater other-enhancement among subjects who anticipated taking the same test as their coparticipant than among subjects who anticipated taking a different test.

More important, however, was the emergence of a three-way interaction of comparison standard, type of task, and performance expectation for the main dependent measure. Subjects were most likely to supply their coparticipant with a performance advantage when they (a) anticipated that they and their coparticipant would take the same test, (b) were uncertain that

**Table 2**  
*Mean Attribution for Hypothetical Success and Hypothetical Failure*

Condition	Attribution category				
	Ability	Task difficulty	Effort	Luck	Other
Hypothetical success	6.74 <sub>a</sub>	3.53 <sub>c</sub>	3.92 <sub>c</sub>	2.55 <sub>d</sub>	2.39 <sub>d</sub>
Hypothetical failure	5.68 <sub>b</sub>	4.98 <sub>b</sub>	3.35 <sub>c</sub>	2.28 <sub>d</sub>	2.51 <sub>d</sub>
Pooling across hypothetical outcome	6.21 <sub>a</sub>	4.25 <sub>b</sub>	3.64 <sub>b</sub>	2.42 <sub>c</sub>	2.45 <sub>c</sub>

*Note.* Raw scores were transformed using a square root transformation to correct for homoscedasticity. Thus, the means reported were generated from the transformed scores. Higher numbers indicate greater responsibility assigned to a particular attribution as the cause of a forthcoming outcome. Means within rows and (for the top two rows) columns that do not share common subscripts are reliably different at  $p < .05$  using the pooled error term ( $MS_e = 2.26$ ).

they would outperform their coparticipant, and (c) expected a relative comparison of performances. Among these subjects, 73% chose facilitating music for their coparticipant. This is in sharp contrast to the behavior of subjects in the absolute comparison condition who anticipated performing well and believed performances could not be compared. Among these subjects, only 8% selected performance-enhancing music for their coparticipant to hear while taking the test. The balance selected performance-debilitating music for their coparticipant,  $\chi^2(1, N = 23) = 10.01, p < .001$ .<sup>2</sup>

The preference among success expectation subjects in the different test/absolute standard condition of selecting debilitating music for the coparticipant is intriguing. These subjects chose to undermine their coparticipant's performance even though performances ostensibly would not and could not be compared. One might interpret the music selection in this condition as evidence that the subjects in our sample were inherently malevolent, choosing to cripple their coparticipant's performance even though there were no personal benefits to be gained. However, an alternative, more appealing interpretation is possible. Subjects may have been engaging in a sophisticated act of face-saving for their coparticipant (Goffman, 1959), intentionally undermining his performance, yet setting the stage so that a nonability attribution could be made by the coparticipant in the event he performed poorly. Because performance comparisons ostensibly were impossible, subjects had nothing to lose from assisting the attributional inferences of their coparticipant. Of course, this alternative interpretation is purely speculation. Nevertheless, it provides a tantalizing explanation for subjects' behavior and suggests a possible direction for future research.

## General Discussion

### *Alternative Interpretations of the Findings*

The findings from Experiment 2 appear to rule out alternative explanations for the data. For example, it might be argued that those subjects selecting facilitating music for their coparticipant did so for impression management reasons; that is, they hoped to appear helpful or altruistic to the experimenter. Yet this explanation seems unlikely for several reasons. First, care was taken during the procedures to convince subjects that the experimenter was unaware of and unconcerned with the music chosen by the subject for the coparticipant. During the debriefing no subject voiced suspicion about the experimenter's need to leave the experiment early nor about the necessity for the subject to select music for the coparticipant. Second, the only effect emerging for the item assessing the publicity of the music selection was an inexplicable main effect for outcome expectancy, an effect likely due to random error. Furthermore, subjects who rated their selection significantly more public were not more likely to select facilitating music for their coparticipant. Finally, across conditions there was no correlation between subjects' music selection and their responses on the item assessing the perceived publicity of that selection. Taken together these findings militate against this type of impression management interpretation of the findings.

It might be argued that subjects selecting facilitating music for their coparticipant were motivated by compassion rather than by a desire to escape lack-of-ability attributions for a forthcoming failure. That is, selecting facilitating music could represent a sincere desire to help the coparticipant perform better on the forthcoming test. For such an explanation to be supported, however, one would anticipate the greatest helping among subjects participating with a confederate who had difficulty with the practice problems (success expectation condition). It is here that the greatest compassion for their coparticipant should emerge. However, subjects were actually less likely to help the confederate by selecting facilitating music when the confederate performed worse than the subject himself on the practice test than when he bested the subject.

Of course, subjects in the uncertain expectation condition, having been helped by a confederate who supplied two answers to one of the anagrams, might have reciprocated the help by selecting facilitating music for the coparticipant. Alternatively, these subjects may have disliked the confederate and thus selected debilitating music for him because he appeared to be bragging or gloating. Yet uncertain expectation subjects were no more likely than success expectation subjects to select facilitating music. Thus, neither of these alternative explanations account for the pattern of means in Table 1.

### *Results From the Ancillary Measures*

Several other findings in the second experiment deserve mention. First, when asked to speculate about the cause of hypothetical outcomes (a good vs. poor performance on the forthcoming test), subjects were more likely to make ability attributions for a hypothetical success than for a hypothetical failure. By contrast, subjects were more likely to make task difficulty attributions for a hypothetical failure than for a hypothetical success. This finding is consistent with research on the self-serving attribution bias (Bradley, 1978), demonstrating the tendency for individuals to internalize responsibility for positive outcomes yet externalize responsibility for negative outcomes.

More interesting, however, is the difference in attributions found between subjects in the uncertain expectation and success expectation conditions. Recall that uncertain and success expectation subjects received identical practice problems. The only difference between the two conditions was the behavior of the confederate. In the success expectation condition the confederate appeared to have difficulty solving the practice problems; in the uncertain expectation condition the confederate was obviously superior to the subject on the practice problems. Yet uncertain expectation subjects were more likely than success expectation subjects to attribute a hypothetical outcome to the difficulty of the task. Apparently, the behavior of the confederate, in addition to influencing subjects' confidence in their

<sup>2</sup> No subject in this condition selected performance-neutral music. Indeed, only 3 subjects in all of Experiment 2 selected performance-neutral music for the coparticipant (see also Shepperd & Arkin, 1989a).



own performance on the forthcoming test, colored subjects' perception of the difficulty of the test. This finding suggests that individuals do not automatically use information garnered from others to draw inferences about themselves (i.e., self-evaluation, self-enhancement, or both; Tesser & Campbell, 1983; Wills, 1981; Wood, 1989) but may instead use this information to draw inferences about the social environment, a finding consistent with the use of consensus information in causal attributions (Kelley, 1972).

The results from the attribution items were not perfect. For example, one would expect that ability attributions would be related to other-enhancement. That is, the more facilitating the music selected for the confederate, the more likely subjects would be to attribute a hypothetical success on their part to their ability and the less likely they would be to attribute a hypothetical failure to a lack of ability. Yet ability attributions were unrelated to other-enhancement. This finding should be viewed with caution, however, in the light of the hypothetical nature of the items.

### *Other-Enhancement and Downward Comparison*

At first glance, the results of the present study seem contrary to research on downward comparison (Wills, 1981). According to Wills, when individuals experience a threat to their self-esteem, they are motivated to enhance their sense of well-being by comparing themselves with others who are worse off, a process he termed *downward comparison*. Furthermore, Wills argued that "downward comparison can be achieved by actively causing harm to another person, thereby creating the opportunity for comparison with a less fortunate other" (p. 246).

In the present study, subjects in the uncertain expectation condition, aware of their coparticipant's superior performance on the practice problems, undoubtedly experienced a threat to their well-being. Further, this threat to their well-being was surely magnified among uncertain expectation subjects in the same test, relative comparison condition. These subjects faced most readily the prospect of performing poorly on the forthcoming test relative to their coparticipant. Yet, rather than selecting debilitating music for their coparticipant, and thereby undermining his performance and ensuring their own favorable comparison, these subjects overwhelmingly selected facilitating music.

Although these findings seem problematic for the downward comparison model, Wills (1981) stipulated that individuals experiencing a threat to self-esteem will engage in downward comparison only when they cannot remedy their frustration or misfortune with instrumental action. In the present study, subjects could remedy their situation instrumentally by providing their coparticipant with facilitating music. This is precisely what uncertain expectation subjects in the same test, relative comparison condition did. Thus, the present findings, rather than contesting the downward comparison model, provide a nice illustration of an alternative strategy (see also Tucker et al., 1981).

### *Summary*

The present study documents the existence of a preemptive strategy available to individuals confronted with the prospect of comparing poorly with a comparison other. Rather than making the cause of a relatively poor performance ambiguous by self-handicapping, individuals can achieve the same attributional end by supplying a comparison other with a persuasive performance advantage. Indeed, given the social benefits accrued from providing another with a performance boost (i.e., appearing altruistic), one might expect that other-enhancement would be preferred to self-handicapping in contexts in which both strategies are available. This would be true particularly when the available handicaps (alcohol use or abuse, procrastination, and so on) are negatively sanctioned. It also should be true when performance quality is assessed in terms of the relative performance of two individuals and social approval and disapproval result from social comparison, yet there remains value to personal achievement in an absolute sense. Performance in a rigorous graduate doctoral program comes to mind, in which relative comparisons seem inevitable, but to interfere with one's own performance by self-handicapping is to court disaster. Regardless, the present findings suggest that some illustrations of helping behaviors among competitors (e.g., a tennis player providing pointers to an opponent) may represent a clever means of managing attributions rather than examples of good sportsmanship or altruism.

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