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Person perception and social comparison of coping capabilities in depressives and nondepressives

Elbin, Susan Dori, Ph.D.

The Ohio State University, 1987

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PERSON PERCEPTION AND SOCIAL COMPARISON OF COPING CAPABILITIES IN DEPRESSIVES AND NONDEPRESSIVES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the degree Doctor of Philosophy in the Graduate School of the Ohio State University

By

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* * * * *

The Ohio State University

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CHAPTER I
INTRODUCTION

Despite the fact that coping and adaptation to stressful situations have become very popular topics for investigation (e.g., Lazarus, 1966; Folkman & Lazarus, 1980; Nezu & Ronan, 1985), little attention has been given to the actual development or acquisition of these behaviors. That is, what are the mechanisms that help us learn how to cope? According to Bandura (1977a), many aspects of human experience develop as a result of observational learning and behavioral modeling. Therefore, it is likely that watching others cope can provide useful information that eventually may be applied in order to solve one's own problems. Along these lines, Moore, Strube, and Lacks (1984) found that for some people, the presence of a successful model can increase that person's expectations for future success. Bandura (1977b) has shown that one of the best predictors of subsequent performance is a feeling of personal efficacy (i.e., an expectation for success). This finding seems to hold true regardless of whether the expectations are derived from direct or vicarious experience. Given that
some people are better at coping with stress than others (e.g., Billings & Moos, 1984; Parkes, 1984), it may be the case that deficient coping skills are related to different perceptions of how other people cope in similar situations or with how one's own coping capabilities compare with those of other people.

One of the purposes of the current study was to examine how depressed and nondepressed college students perceive others attempting to cope with stressful situations. Past research on person perception has indicated that the self can be an important part of the development of ideas about other people. For example, people tend to use the same traits to evaluate others that they use to evaluate themselves (Shrauger & Peterson, 1974; Lemon & Warren, 1974). Moreover, Shrauger & Peterson (1974) and Lemon & Warren (1974) found that we automatically make self-other comparisons when we process information about other people. Jones and Gerard's (1967) comparative appraisal theory of self-development and Festinger's (1954) social comparison theory also show how the self can shape our view of others. Indeed, Snygg and Combs (1959) have suggested that all information is processed in relation to the self as the reference point.
If it is true that the self influences perception of others, then the negative self-concept characteristic of depression could be associated with particular patterns of social comparison. More specifically, it has been suggested that depressives may use social comparison information in a way that reinforces their negative image of themselves. Beck (1967) notes that depressives often compare themselves unfavorably with others. Lobitz and Post (1979) found that depressives feel they are less deserving of rewards than nondepressives with a similar level of performance. Tabachnik, Crocker, & Alloy (1983) found that the tendency to depreciate one's self in comparison to others was a good predictor of severity of depression.

Based on the research cited above, the current investigation sought to explore further how depressed individuals might use social comparison information in a way that reinforces their negative image of themselves. To begin, it is important to note that although depressives tend to interpret self-relevant information in accordance with their negative view of self, world, and future (Beck, Rush, Shaw, & Emery, 1979), this negative view does not seem to generalize to their perception of others. For example, Sweeney et al. (1983) found that depressives and nondepressives did not differ
in their causal attributions for negative outcomes experienced by others (but differences were noted in their attributions for their own outcomes). One possible explanation for this apparent contrast in how depressives interpret their own outcomes in comparison to how depressives interpret the outcomes of others is that depressives generally feel that they are somehow different from other people. Along these lines, Tabachnik et al. (1983) found that depressed college students perceived themselves as being less similar to "the average college student" than nondepressed college students. If it is true that depressives seem to perceive themselves as being less similar to others than nondepressives then it is not surprising that the attributions depressives make for their own outcomes do not generalize to their perceptions of others. Thus, while depressives may blame themselves for their own failures and fail to take credit for their own successes, they would have no reason to believe that this also should be true for the outcomes of others.

Another question addressed by Tabachnik et al. (1983) was the extent to which depressives depreciate themselves in comparison to others and, in this way, reinforce an image of themselves as being inferior to others. Tabachnik et al. (1983) found that the tendency
to depreciate one's self in comparison to others on negative, depression-relevant items (i.e., by rating more of these depression-relevant items as true of one's self than of the average college student) was a better predictor of severity of depression than self-perceptions (i.e., ratings of how true item is for self) or other perceptions (i.e., ratings of how true item is for average college student) alone. Although Tabachnik et al. (1983) originally thought that depressed subjects would believe that depression-relevant items were more true of themselves relative to the average college student and that nondepression-relevant items were less true of themselves relative to the average college student, the results reflected an evenhandedness for depressed subjects for the two sets of items. However, it is important to note that nondepressed subjects in the study consistently enhanced themselves in comparison to others by rating depression-relevant items as less true of themselves and non-depression relevant items as more true of themselves relative to the average college student. In their conclusions Tabachnik et al. (1983) highlighted the role of the lack of an ego-enhancing bias in depression.

In light of the research cited above, it appears that self-depreciation and the lack of an ego-enhancing
bias can affect the way in which depressives interpret information about others and that this particular interpretational style can serve to reinforce their inferior self-image. How would self-depreciation and the lack of an ego-enhancing bias be reflected in the current investigation? In the case of self-depreciation, depressives would be expected to portray themselves more negatively in comparison to others than nondepressives. In the case of the lack of an ego-enhancing bias, nondepressives would be expected to portray themselves more positively in comparison to others than depressives. The tendency to depreciate one's self is consistent with Beck's theory and would seem to provide the most direct evidence to a depressed person that he/she compares unfavorably with others. In addition, Tabachnik et al. (1983) found some, although not consistent, support for self-depreciation in depression. Overall, the research seems to suggest that social comparison in depression is predominated by self-depreciation. That is, the lack of ego-enhancement can set up a (negative) contrast between one's self and a comparison other.

To begin to explore the hypotheses in the present study related to self-depreciation and the lack of ego-enhancement in depression, depressed and nondepressed college students read four separate case studies about
another college student who experienced a stressful event. Two of these case studies described an academic problem and the other two case studies described an interpersonal problem. Both academic and interpersonal problems were included in this study in an effort to allow subjects to respond to a broader range of stressful situations. For example, Hammen, Marks, and Mayol (1985) were able to classify their sample of depressed and nondepressed college students into two groups. The dependent/sociotropic group consisted of depressed and nondepressed subjects who were more sensitive to interpersonal stress. The autonomous/self-critical group consisted of depressed and nondepressed subjects who were more sensitive to academic stress. Group membership was not associated with level of depression.

Another way in which the case studies differed was the type of coping strategy used by the hypothetical actor. Of the four stories read by each subject, one described a college student who used problem-focused coping to deal with an interpersonal problem. One story described a college student who used emotion-focused coping to deal with an interpersonal problem. One story described a college student who used problem-focused coping to deal with an achievement problem. And one story described a college student who used emotion-focused
coping to deal with an achievement problem. According to Lazarus and his colleagues (e.g., Lazarus & Launier, 1978; Folkman & Lazarus, 1980), problem-focused coping occurs when the person attempts to cope with the source of stress either by changing environmental conditions or by changing his/her own problem-maintaining behavior. Emotion-focused coping occurs when the person tries to deal with the situation by changing his/her thoughts and feelings to reduce emotional distress. Problem-focused coping tends to be associated with work-related stress and with situations in which the person believes something constructive can be done. Emotion-focused coping tends to be associated with health-related stress and with situations that the person believes must be accepted.

The inclusion of problem-focused coping and emotion-focused coping in the current investigation is based on Folkman and Lazarus' (1980) finding that both types of coping processes were represented in 98% of the 1300 stressful episodes described by 100 men and women over the course of one year. They reported that the proportion of each type depended on the extent to which the stressful event was appraised as being amenable to control. Problem-focused coping strategies were more common in situations that were thought of a changeable
(i.e., held the potential for control). Emotion-focused coping strategies were more common in situations that were thought of as not subject to change. However, in many instances people use a combination of emotion-focused coping and problem-focused coping to handle stress. "Theoretically, the effectiveness of problem-focused efforts depends largely on the success of emotion-focused efforts. Otherwise, heightened emotions will interfere with the cognitive activity necessary for problem-focused coping" (Folkman, 1984, p. 845).

The case studies in the present experiment were designed to make it appear as if both types of coping strategies could be equally effective in the situations. (The results of a pilot study that tested for the equivalence in effectiveness of coping strategies described in the case studies are reported in a later section.) Yet the actors in these particular case studies used either a problem-focused strategy or an emotion-focused strategy (i.e., not a combination of the two) and this modification represents a slight departure from the "ideal" approach described by Folkman (1984). The two types of coping strategies were described in separate case studies in order to obtain a clearer understanding of how depressed and nondepressed college students perceive them.
The final manipulation to be included in this study was the type of information subjects received about the actor's ability to solve the problem. For subjects in the Success condition, the college student portrayed in all four case studies successfully coped with the problem. For subjects in the Failure condition, the college student portrayed in all four case studies failed to cope with the problem. Subjects in the No Information/Control condition were not told whether the college student portrayed in all four case studies succeeded or failed. The manipulation of Type of feedback regarding outcome was included in this study in order to be consistent with the concept of coping being defined independently of its outcome (e.g., Folkman & Lazarus, 1980; Lazarus & Launier, 1987). "Coping refers to efforts to manage demands, regardless of the success of those efforts" (Folkman, 1984, p. 843.)

Several dependent variables were included in the current investigation to determine how subjects perceived and compared themselves to the actors described in the case studies. Subjects were asked to compare their own coping capabilities to those of the actor. Subjects also were asked to provide ratings of perceived similarity and attraction to the actor. In addition, subjects were asked to make causal attributions (along the dimensions
of internality, externality, globality, and stability) and non-causal attributions (along the dimensions of control, uncertainty, and upset) for the event. A question asking subjects to rate how effectively the actor had coped with the problem served as a check on the manipulation of Type of information regarding outcome. Finally, there was a more general question asking subjects who they usually use as a basis of comparison for their academic and interpersonal abilities.

What kind of predictions can be made for these dependent variables that would be consistent with the assumption that depressives may use social comparison information in a way that reinforces their negative image of themselves? To begin, it was expected that depressed subjects would give lower ratings than nondepressed subjects on the question asking them how well they would have coped with a similar situation. These results would suggest that depressives would equate their coping abilities more closely with someone who failed than with someone who succeeded whereas nondepressives would equate their coping abilities more closely with someone who succeeded than with someone who failed. It also was predicted that depressed subjects would believe they were more similar to the actor whose coping efforts were unsuccessful than to the actor whose coping efforts were
successful. It was predicted that nondepressed subjects would believe they were more similar to the successful actor than to the unsuccessful actor.

What about subjects' evaluation of the actors in the case studies? According to Byrne (1971), interpersonal attraction tends to be a direct function of real and perceived (attitude) similarity. London (1967) found that when it comes to evaluating others in terms of their abilities, people are highly attracted to others who have (both actual and perceived) high ability. London (1967) interpreted these results in terms of a "unidirectional drive upwards" for socially desirable behaviors (Festinger, 1954). If this is true then the prediction is that depressed and nondepressed subjects in the present study would be more attracted to the actor who succeeded than to the actor who failed. It may even be the case that depressives are more attracted to actors who succeed than to actors who fail because it reminds them of their inferior status and, in this way, is consistent with their tendency to engage in self-depreciation.

Another important topic addressed in the current investigation is the choice of a comparison other by depressed and nondepressed college students. According to Goethals and Darley (1977), people generally compare
their own abilities to the abilities of others who are similar to themselves, presumably in an effort to obtain an accurate appraisal of their abilities. Festinger (1954) proposed that the tendency to compare one's own abilities with a similar other increases as the abilities that are being compared become more important. Dakin and Arrowood (1981) noted that competitive comparison is greatest when the person and the comparison other are similar and when the person is slightly inferior (but still basically similar) to the comparison other. However, in certain instances, people may be motivated to compare themselves to dissimilar others (Mettee & Smith, 1977). For example, a person may be searching for social comparison information that is self-enhancing and therefore not necessarily accurate (Gruder, 1977).

According to Goethals and Darley (1977), when the motivation for a flattering self-appraisal (i.e., self-enhancement) is dominant, comparison with lower-performing others is likely and comparisons with higher performing others is avoided.

Based on the research of Goethals and Darley (1977), nondepressed subjects in the current study were expected to seek, in general, an accurate appraisal of their abilities such that they would report usually comparing themselves to a similar other. Although one might expect
nondepressives to engage in downward social comparison because the information derived from this particular type of comparison is ego-enhancing, the research suggests that this is not the case. Rather, it may be that when asked to report who they generally use as a basis of comparison, the responses of nondepressives reflect an overall sense of satisfaction with their abilities so that comparison with similar others is, in itself, ego-enhancing. Thus, nondepressed subjects in the present study were expected to feel good enough about their own abilities so that they would report generally comparing themselves to similar others.

With respect to the choice of a comparison other in depression, it was speculated that the results for this measure would be consistent with Beck's (1967) theory that depressives tend to believe they compare unfavorably with others and that this reinforces their negative image of themselves. If this is indeed the case, then depressed subjects in the current investigation would be expected to report that they generally compare themselves to higher performing others. In addition, such reports may reflect the depressed person's assumption that most other people are more capable than they are.

On the other hand, it should be noted that the results of a recent study by Gibbons (1986) indicate that
depressives may prefer to engage in downward comparison because it makes them feel better. In comparison to the nondepressed subjects, the depressed subjects in Gibbon's (1986) study preferred to read more about negative events experienced by others than positive events experienced by others. Furthermore, Gibbons (1986) found that for depressed subjects, reading about negative events experienced by others resulted in an improvement in mood. (Nondepressed subjects did not show any changes in mood after reading about negative events experienced by others.) Gibbons (1986) concluded that for a depressed person, realizing that there are other people who also are having trouble coping with problems (c.f., Coates & Winston, 1983) or who may be even worse off (c.f., Taylor, Wood, & Lichtman, 1983) can provide useful comparative information. However, it seems unlikely that depressed subjects in the current investigation will report that they usually (i.e., in their daily life) seek out such ego-enhancing information by generally comparing themselves to lower performing others. More specifically, it is being argued that self-deprecation and the lack of ego-enhancement will be the predominate factor in the social comparisons of depressives.

In formulating the predictions for the measures of coping comparison, perceived similarity and attraction to
the actor, and choice of comparison other, it has been argued that the responses of the depressed subjects would reflect their tendency to engage in self-deprecation. In contrast to the measures of coping comparison, similarity, attraction, and choice of comparison other which all seem to result directly from a self-other comparison, the measures of causal and noncausal judgments in the current investigation relate specifically to the subjects' perception of the actor. While it is likely that the type of information regarding outcome will have a pervasive effect on subjects' causal (along the dimensions of internality, externality, stability, and globablity) and non-causal (along the dimensions of control, uncertainty, and upset) attributions, specific predictions for these particular dependent variables in the current investigation were formulated in terms of an interaction between Level of Depression and Type of Outcome. More specifically, the major issue being explored with the inclusion of causal and noncausal judgments was how depressed and nondepressed subjects would perceive actors who succeed or fail at an academic or interpersonal task using a problem-focused or an emotion-focused coping strategy. In accordance with the results of Sweeney et al. (1982), it was expected that depressed and nondepressed subjects
would make similar causal and non-causal attributions for an actor's success or failure (i.e., a nonsignificant Level of Depression x Type of Outcome interaction effect). Given that depressives and nondepressives seem to differ in their self-attributions (e.g., depressives may blame themselves for their failures and fail to take credit for their successes) but not their attributions for the outcomes of others, depressives may be reinforcing an image of themselves as being different from and inferior to others.

In sum, the current investigation employed a 2 (Depressed, Nondepressed) x 3 (Success, Failure, No Information) x 2 (Academic Problem, Interpersonal Problem) x 2 (Emotion-focused Coping, Problem-focused Coping) split-plot design. Level of depression and Type of feedback were between-subjects factors. Type of problem and Type of coping strategy were within-subject factors. The dependent variables were as follows: perceived similarity, attraction, coping comparison, control, uncertainty, upset, internality, externality, globality, stability, and choice of comparison other for academic abilities and interpersonal abilities.
CHAPTER II

METHOD

Subjects

Under the guise of a study seeking normative information on several recently developed psychological scales, approximately 400 undergraduates enrolled in introductory psychology at Ohio State University completed the Beck Depression Inventory (BDI; Beck, 1967). From this pool, groups of depressed and nondepressed subjects were selected. The criterion for inclusion in the nondepressed group was a BDI score of 5 or below, and for inclusion in the depressed group a BDI score of at least 10 was required. These subjects then were contacted to arrange for their participation in a follow-up study. From 1-4 weeks ensued before subjects reported for the experimental procedure. To eliminate subjects who may have been experiencing a transient depressed state, the BDI was readministered at the time of the experiment (c.f., Sacco, 1981). If the second BDI score fell below 10 for the depressed subjects or went above 5 for the nondepressed subjects, those subjects were excluded from the final sample. Thirty subjects
fell into this transient category. The final sample included 30 depressed subjects (15 males and 15 females) and 30 nondepressed subjects (15 males and 15 females.) Of the 20 depressed subjects in this experiment, 18 were mildly depressed, 11 were moderately depressed, and 1 was severely depressed. For depressed subjects, the mean BDI scores for the first and second administration were 18.53 and 15.23, respectively. For nondepressed subjects, the mean BDI scores, for the first and second administration were 2.27 and 1.63, respectively. Within level of depression, subjects were randomly assigned to conditions such that all cell sizes were equal to 10 (see Table 1).

Procedure

Upon arrival at the experimental laboratory subjects were informed that the purpose of the study was to gain information about some psychological tests that were being developed by the research team. They were told that in the first part of the experiment they would be answering again a questionnaire that they had completed earlier in the quarter. The rationale for the second administration of this questionnaire (the BDI) was said to be an investigation of the psychometric properties of the inventory. Subjects were instructed to put the completed questionnaire in an envelope.
Table 1
Means and Standard Deviations of Second BDI Score

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor's Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Depressed</td>
<td>14.9</td>
<td>4.77</td>
<td>15.5</td>
</tr>
<tr>
<td></td>
<td>(10)</td>
<td></td>
<td>(10)</td>
</tr>
<tr>
<td>Nondepressed</td>
<td>1.8</td>
<td>1.03</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>(10)</td>
<td></td>
<td>(10)</td>
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Numbers in parentheses indicate the number of subjects in each condition.
The second part of the experiment presumably was concerned with the development of a scale for college students that focused on the topic of stress and coping. Subjects were given a booklet containing the four case studies (in counterbalanced order), the four questionnaires and the final questionnaire (see Appendix). They were told that the booklet contained four stories about college students who experienced some problems. The experimenter told subjects that they were to read each story and answer the questionnaire that followed. The experimenter also told subjects that they were to answer the final questionnaire at the very end. After subjects finished the questionnaires they were debriefed and dismissed.
CHAPTER III
RESULTS

Pilot Study

To check on the extent to which college students perceived the coping strategies described in the four case studies to be appropriate for the situation, a pilot study was conducted. Thirty-seven pilot study subjects (undergraduates enrolled in an advanced introductory psychology class at Ohio State University) read 2 case studies and, for each one, rated on a 9-point scale the extent to which the actor's coping strategy was appropriate for the situation (the higher the rating, the more appropriate the coping strategy). Pilot study subjects were given no information regarding the outcome of the situation (i.e., there was no feedback about whether the actor succeeded or failed). For the academic case studies, the results showed that problem-focused coping ($M=7.58$) and emotion-focused coping ($M=7.11$) were perceived as being equally appropriate for the situation, $t(35) = .976$, $p>.05$. The results for the interpersonal case studies showed that problem-focused coping ($M=7.55$) and emotion-focused coping ($M=6.84$) were
perceived as being equally appropriate for the situation \( t(35) = 1.72, p > .05. \)

**Preliminary Analyses**

To check for the effect of order of presentation for the ratings of similarity and attraction, half of the subjects were asked to make similarity ratings before rating their attraction to the actor. The other half of the subjects were asked to rate their attraction to the actor before making similarity ratings. A 2 (Level of Depression) x 3 (Type of Outcome) x 2 (Order of Ratings) analysis of variance indicated that the order of these questions had no effect on subjects' ratings of similarity or attraction (all \( ps > .09 \)).

To check for the effect that order of presentation of the case studies may have had on the experimental results, a 2 (Level of Depression) x 3 (Type of Outcome) x 4 (Order of Case Studies) analysis of variance was performed on subjects' responses to the questionnaires that followed the case studies. Although this analysis indicated that the order of the case studies did have a significant effect on some of the dependent variables, these effects appeared to be randomly distributed so that no one order could be associated with a particular pattern of results. Moreover, the order of the case studies was counterbalanced across subjects, making it
less likely that it could seriously challenge the overall effects of the independent variables. Therefore, the results were collapsed across order of presentation of the case studies.

Overview of Results

To analyze subjects' responses to the questionnaires that followed the case studies, separate 2 (Level of Depression: Depressed, Nondepressed) x 3 (Type of Outcome: Success, Failure, No Information) x 2 (Type of Coping Strategy: Problem-focused Coping, Emotion-focused Coping) x 2 (Type of Problem: Academic, Interpersonal) analyses of variance were performed. Level of Depression and Type of Outcome were treated as between-subjects factors. Type of Coping Strategy and Type of Problem were treated as within-subjects factors.

Effectiveness of Manipulation

Type of outcome. To check on the manipulation of type of feedback regarding outcome, subjects were asked to rate on a 9-point scale how effectively the actor portrayed in each case study had coped with the problem (the higher the score, the more effectively the actor had coped). Subjects in the control conditions were asked to judge probable effectiveness because they were not given any feedback on outcome. It was expected that there would be a significant main effect of Outcome such that
subjects in the success conditions would give higher effectiveness ratings than subjects in the failure conditions and control conditions. It also was expected that subjects in the failure conditions would give lower effectiveness ratings than subjects in the control conditions. As predicted, the $2 \times 3 \times 2 \times 2$ ANOVA of subjects' ratings on this measure yielded a significant effect for Type of Outcome, $F(2, 164) = 44.79$, $p<.0001$. Subjects in the success conditions gave significantly higher effectiveness ratings ($M=7.65$) than subjects in the failure conditions ($M=4.96$) and the control conditions ($M=6.45$). Subjects in the failure conditions gave significantly lower effectiveness ratings than subjects in the control conditions ($ps<.05$, Dunn's $a priori$ comparisons). The manipulation of outcome, then, was successful.

The $2 \times 3 \times 2 \times 2$ ANOVA on this measure also revealed a significant main effect for Type of Coping Strategy, $F(1, 164) = 91.46$, $p<.0001$. Subjects believed that the actors who used problem-focused coping were more effective ($M=7.2$) than the actors who used emotion-focused coping ($M=5.5$). The results of the $2 \times 3 \times 2 \times 2$ ANOVA on subjects' effectiveness ratings revealed 3 significant interaction effects. The two-way interaction between Type of Outcome and Type of Coping...
Strategy, $F(2, 164) = 5.81$, $p < .0036$ appeared to follow closely the pattern of results of the individual main effects (see Table 2). That is, subjects gave higher effectiveness ratings for actors who succeeded than for actors who failed and for actors who used problem-focused coping than for actors who used emotion-focused coping. However, post hoc comparisons among the means (Tukey's HSD) showed that only subjects in the failure and control conditions gave significantly higher mean effectiveness ratings for case studies involving problem-focused coping than for case studies involving emotion-focused coping. In addition, subjects gave significantly higher mean effectiveness ratings for actors who succeeded than for actors for whom no outcome information was given only for case studies involving emotion-focused coping.

Another two-way interaction effect that emerged from the $2 \times 3 \times 2 \times 2$ ANOVA on subjects' ratings of the effectiveness of the actor occurred between Type of Outcome and Type of Problem, $F(2, 164) = 3.65$, $p < .0283$ (see Table 3). However, post hoc comparisons among the means (Tukey's HSD) showed that there were no significant differences between subjects' mean effectiveness ratings for academic case studies and their mean effectiveness ratings for interpersonal case studies.
Table 2
Means for the Measure of Actor Effectiveness

<table>
<thead>
<tr>
<th>Type of Information Regarding Actors' Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion-focused coping</td>
<td>7.22</td>
<td>3.92</td>
<td>5.35</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>8.07</td>
<td>6.00</td>
<td>7.55</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>d</td>
<td>ae</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more effectively the actor coped with the situation. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
Table 3
Means for the Measure of Actor Effectiveness

<table>
<thead>
<tr>
<th>Type of Information Regarding Actors' Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Problem</td>
<td>8.05</td>
<td>4.80</td>
<td>6.72</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
<tr>
<td>Interpersonal Problem</td>
<td>7.25</td>
<td>5.12</td>
<td>6.17</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more effectively the actor coped with the situation. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
Finally, the $2 \times 3 \times 2 \times 2$ ANOVA on this measure yielded a three-way interaction effect between Level of Depression, Type of Outcome, and Type of Coping Strategy, $F(2, 164) = 5.33, p < .0057$. An examination of the means in Table 4 revealed an intricate (unpredicted) pattern of results. Significant differences ($p < .05$, Tukey's HSD) in effectiveness ratings between experimental and control condition means for case studies involving emotion-focused coping were noted for nondepressed, but not for depressed subjects. For case studies involving problem-focused coping, post hoc comparisons (Tukey's HSD) showed that there were no significant differences between experimental and control condition means for nondepressed subjects. However, depressed subjects in the control condition gave significantly higher effectiveness ratings than depressed subjects in the failure condition for case studies involving problem-focused coping ($p < .05$, Tukey's HSD). In addition, nondepressed subjects, but not depressed subjects, in the failure condition gave significantly higher effectiveness ratings for case studies involving problem-focused coping than for case studies involving emotion-focused coping ($p < .05$, Tukey's HSD).

Type of coping. As a check on whether or not subjects perceived the difference between problem-focused
<table>
<thead>
<tr>
<th></th>
<th>Nondepressed</th>
<th></th>
<th></th>
<th>Depressed</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Success</td>
<td>Failure</td>
<td>Control</td>
<td>Success</td>
<td>Failure</td>
<td>Control</td>
</tr>
<tr>
<td>Emotion-focused</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coping</td>
<td>7.50</td>
<td>3.60</td>
<td>5.70</td>
<td>6.95</td>
<td>4.25</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>a</td>
<td>b</td>
<td>abc</td>
</tr>
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<td></td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
</tr>
<tr>
<td>Problem-focused</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coping</td>
<td>8.10</td>
<td>6.45</td>
<td>7.30</td>
<td>8.05</td>
<td>5.55</td>
<td>7.80</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>d</td>
<td>ade</td>
<td>af</td>
<td>bd</td>
<td>ef</td>
</tr>
<tr>
<td></td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more effectively the actor coped with the situation. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
coping and emotion-focused coping, all subjects were asked to rate on a 9-point scale the extent to which the actor's efforts to cope with the situation were focused on solving the problem (the higher the rating, the more the effort to solve the problem). It was expected that there would be a significant main effect of Type of Coping Strategy such that subjects would give higher ratings on this question for case studies involving problem-focused coping than for case studies involving emotion-focused coping. As predicted, the 2 x 3 x 2 x 2 ANOVA on this question yielded a significant effect for Type of Coping Strategy, $F(1, 164) = 124.63, p < .0001$. Case studies involving a problem-focused coping strategy received higher ratings on this question ($M = 7.32$) than case studies involving an emotion-focused coping strategy ($M = 4.90$). The 2 x 3 x 2 x 2 ANOVA also revealed a significant main effect of Type of Outcome, $F(2, 164) = 5.88, p < .0049$. Subjects in the success conditions gave significantly higher ratings on this question ($M = 6.63$) than subjects in the failure conditions ($M = 5.72$) and the control conditions ($M = 5.97$) ($p < .05$, Tukey's HSD).

The 2 x 3 x 2 x 2 ANOVA on subjects' ratings of the extent to which the actor's efforts to cope with the situation were focused on solving the problem yielded one significant interaction effect: Type of Coping Strategy
x Type of Problem, $F(1, 164) = 9.19, p<.0028$. An examination of the means in Table 5 revealed that the effect of Type of Coping Strategy (i.e., higher ratings for case studies involving problem-focused coping than for case studies involving emotion-focused coping) was more pronounced for the academic situations than for the interpersonal situations.

As another check on whether or not subjects perceived the difference between problem-focused coping and emotion-focused coping, all subjects were asked to rate on a 9-point scale the extent to which the actor's efforts to cope with the situation were focused on reducing negative feelings toward the problem (the higher the rating, the more the effort to reduce negative feelings). It was expected that there would be a significant main effect of Type of Coping Strategy such that subjects would give higher ratings on this question for case studies involving emotion-focused coping than for case studies involving problem-focused coping. However, the results of the 2 x 3 x 2 x 2 ANOVA on this question showed that the main effect of Type of Coping Strategy was not significant, $F(1, 164) = .79, p>.3751$. Subjects did not give significantly higher ratings on this question for case studies involving emotion-focused
Table 5
Means for the Measure of Problem-focused Coping

<table>
<thead>
<tr>
<th>Type of Coping Strategy</th>
<th>Emotion-focused</th>
<th>Problem-focused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Problem</td>
<td>4.60 a</td>
<td>7.68 b</td>
</tr>
<tr>
<td></td>
<td>(60)</td>
<td>(60)</td>
</tr>
<tr>
<td>Interpersonal Problem</td>
<td>5.20 a</td>
<td>6.96 b</td>
</tr>
<tr>
<td></td>
<td>(60)</td>
<td>(60)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more the actor's efforts were focused on solving the problem. The numbers in parentheses indicate the number of observations in each condition. Condition means having a common subscript are not significantly different at the .05 level (Tukey's HSD).
coping (M=6.41) than for case studies involving problem-focused coping (M=6.58).

The 2 x 3 x 2 x 2 ANOVA on subjects' ratings of the extent to which the actors' efforts to cope with the situation were focused on reducing negative feelings toward the problem yielded a significant main effect of Type of Outcome, F(2, 164) = 9.82, p < .0002. Post hoc comparisons among the means showed that subjects in the success conditions gave significantly higher ratings on this question (M=7.15) than subjects in the failure conditions (M=5.57) (p < .05, Tukey's HSD). In addition, the mean ratings for subjects in the failure conditions were significantly lower than the mean ratings for subjects in the control conditions (M=6.76) (p < .05, Tukey's HSD). The 2 x 3 x 2 x 2 ANOVA on this measure also yielded a significant interaction effect between Type of Coping Strategy and Type of Problem, F(1, 164) = 18.29, p < .0001. An examination of the means in Table 6 showed that for academic situations, subjects gave higher ratings for the case study involving emotion-focused coping than for the case study involving problem-focused coping. This difference was not significant according to Tukey's HSD, although these means did follow the pattern originally predicted for this particular question. However, for interpersonal situations, subjects gave
### Table 6
Means for the Measure of Emotion-focused Coping

<table>
<thead>
<tr>
<th>Type of Coping Strategy</th>
<th>Emotion-focused</th>
<th>Problem-focused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Problem</td>
<td>6.92</td>
<td>6.25</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td></td>
<td>(60)</td>
<td>(60)</td>
</tr>
<tr>
<td>Interpersonal Problem</td>
<td>5.90</td>
<td>6.92</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>ac</td>
</tr>
<tr>
<td></td>
<td>(60)</td>
<td>(60)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more the actor’s efforts were focused on reducing negative feelings. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level.
significantly lower ratings for the case study involving an emotion-focused coping strategy than for the case study involving a problem-focused coping strategy (p<.05, Tukey's HSD).

**Actor Similarity**

Subjects were asked to rate on a 9-point scale how similar they believed they were to the actor portrayed in the case study (the higher the rating, the more perceived similarity). It was expected that there would be a significant Level of Depression x Outcome interaction effect such that nondepressed subjects in the success condition would give higher similarity ratings than nondepressed subjects in the failure condition. Depressed subjects in the success condition were expected to give lower similarity ratings than depressed subjects in the failure condition.

The 2 x 3 x 2 x 2 ANOVA yielded a significant main effect of Type of Outcome, F(2, 164) = 3.30, p<.0445. Post hoc comparisons revealed that subjects believed they were significantly more similar to the actor who succeeded (i.e., the success conditions; M=5.77) than to the actor who failed (i.e., the failure conditions; M=5.02). Subjects in the control conditions also gave significantly higher similarity ratings (M=5.77) than subjects in the failure conditions (ps<.05, Tukey's HSD).
In addition, there was a significant main effect for Type of Coping Strategy, $\chi^2(1, 163) = 7.94, p<.0054$.
Subjects believed they were more similar to actors who used problem-focused coping ($M=5.86$) than to actors who used emotion-focused coping ($M=5.18$).

With respect to the predictions that were made for this measure, the $2 \times 3 \times 2 \times 2$ ANOVA yielded a marginally significant Level of Depression x Type of Outcome interaction effect, $\chi^2(2, 163) = 2.66, p<.079$. An examination of the means in Table 7 revealed that nondepressed subjects in the success condition gave significantly higher similarity ratings than nondepressed subjects in the failure condition and that nondepressed subjects in the failure condition gave significantly lower similarity ratings than nondepressed subjects in the control condition. ($p<.05$, Dunn's a priori comparisons). However, analyses of the similarity ratings given by depressed subjects revealed no significant differences across the three conditions.

The $2 \times 3 \times 2 \times 2$ ANOVA on the measure of similarity also revealed a significant Level of Depression x Type of Coping Strategy interaction effect, $\chi^2(1, 163) = 6.85, p<.0097$. An examination of the means in Table 8 revealed that nondepressed subjects believed they were more similar to an actor who used problem-focused coping
| Type of Information Regarding Actor | Outcome | Nondepressed | | Depressed | |
|-------------------------------------|---------|--------------|-----------------|-------------|
| Success                            | Failure | Control      | Success         | Failure     | Control |
| Success                            | 5.97    | 4.48         | 5.85            | 5.57        | 5.55    | 5.70 |
| Failure                            | a       | b            | ac              | a           | ab      | a    |
| Control                            | (40)    | (39)         | (40)            | (40)        | (40)    |      |

Note: The higher the mean, the more similar the subject believed he/she was to the actor. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Dunn's a priori Multiple Comparison Test).
Table 8

Means for the Measure of Similarity to the Actor

<table>
<thead>
<tr>
<th>Type of Coping Strategy</th>
<th>Emotion-focused</th>
<th>Problem-focused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nondepressed</td>
<td>4.78</td>
<td>6.10</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>(60)</td>
<td>(59)</td>
</tr>
<tr>
<td>Depressed</td>
<td>5.58</td>
<td>5.63</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>ab</td>
</tr>
<tr>
<td></td>
<td>(60)</td>
<td>(60)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more similar the subject believed he/she was to the actor. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
than to an actor who used emotion-focused coping (p<.05, Tukey's HSD). Post hoc comparisons (Tukey's HSD) showed that the similarity ratings given by depressed subjects were equivalent for the two types of coping strategies. The 2 x 3 x 2 x 2 ANOVA on similarity ratings also yielded a significant Type of Outcome x Type of Coping Strategy interaction effect, F(2, 163) = 3.68, p<.0274. An examination of the means in Table 9 revealed that only subjects in the failure conditions gave significantly higher similarity ratings for actors who used problem-focused coping than for actors who used emotion-focused coping (p<.05, Tukey's HSD). In addition, post hoc comparisons (Tukey's HSD) among these means showed that subjects believed they were more similar to actors who succeeded than to actors who failed only when those actors used problem-focused coping.

**Actor Evaluation**

Subjects were asked to rate on 5 9-point scales the extent to which the actor seemed open-minded, likeable, sincere, reasonable, and competent (the higher the rating, the higher the evaluation). Subjects' ratings on these scales were highly intercorrelated (ps<.001) and, consequently, were summed and divided by 5 to yield a single evaluation (i.e., attraction) index. It was expected that there would be a significant main effect of
Table 9
Means for the Measure of Similarity to the Actor

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor</th>
<th>Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5.82</td>
<td>4.26</td>
<td>5.45</td>
</tr>
<tr>
<td>Emotion-focused coping</td>
<td></td>
<td>a</td>
<td>b</td>
<td>ab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(40)</td>
<td>(39)</td>
<td>(40)</td>
</tr>
<tr>
<td></td>
<td>Problem-focused coping</td>
<td>5.72</td>
<td>5.77</td>
<td>6.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a</td>
<td>a</td>
<td>ab</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more similar the subject believed he/she was to the actor. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
Outcome such that subjects in the success conditions would give higher ratings on this measure of attraction than subjects in the failure conditions. As predicted, the 2 x 3 x 2 x 2 ANOVA on this measure revealed a significant main effect of Type of Outcome, \(F(2, 164) = 54.62, p < .0001\). A priori comparisons (Dunn's) among the means showed that subjects were significantly more attracted to actors who succeeded (\(M = 6.95\)) than to actors who failed (\(M = 5.79\)) or to actors for whom no information regarding outcome was given (\(M = 6.51\)). Subjects were significantly less attracted to actors who failed than to actors for whom no information regarding outcome was given (\(p < .05\)).

The 2 x 3 x 2 x 2 ANOVA also yielded a significant main effect of Type of Coping Strategy, \(F(1, 164) = 124.63, p < .0001\). Subjects were more attracted to actors who used problem-focused coping (\(M = 6.92\)) than to actors who used emotion-focused coping (\(M = 5.92\)). In addition, a significant Type of Outcome x Type of Coping Strategy interaction effect emerged, \(F(2, 164) = 5.12, p < .007\). An examination of the means in Table 10 showed that only subjects in the failure and control conditions gave significantly higher mean attraction ratings for case studies involving problem-focused coping than for case studies involving emotion-focused coping (\(p < .05\),
Table 10
Means for the Measure of Actor Evaluation

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion-focused coping</td>
<td>6.75</td>
<td>5.14</td>
<td>5.85</td>
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<td>b</td>
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<td>(40)</td>
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<tr>
<td>Problem-focused coping</td>
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<td>7.17</td>
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<td></td>
<td>ae</td>
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<td>e</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the higher the evaluation of the actor. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
Tukey's HSD). In addition, the post hoc comparisons indicated that subjects gave significantly higher mean attraction ratings for actors who succeeded than for actors for whom no outcome information was given only for case studies involving emotion-focused coping (p<.05, Tukey's HSD).

Coping Comparison

Subjects were asked to rate on a 9-point scale how effectively they would have coped with a similar situation (the higher the rating, the more effectively they would have coped). It was expected that there would be a significant main effect of Level of Depression such that depressed subjects would give lower ratings on this measure than nondepressed subjects. As predicted, the 2 x 3 x 2 x 2 ANOVA yielded a significant main effect of Level of Depression, F(1, 164) = 25.81, p<.0001. Depressed subjects believed that they would have coped less effectively (M=5.83) than nondepressed subjects (M=7.05). The 2 x 3 x 2 x 2 ANOVA also revealed a significant Level of Depression x Type of Outcome x Type of Problem interaction effect, F(2, 164) = 5.29, p<.006. An examination of the means in Table 11 indicated that depressed subjects believed they would have coped less effectively than nondepressed subjects only in comparison to actors who succeeded in an academic situation and when
Table 11
Means for the Measure of Coping Comparison

<table>
<thead>
<tr>
<th></th>
<th>Academic Problems</th>
<th></th>
<th>Interpersonal Problems</th>
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<td></td>
<td>Success</td>
<td>Failure</td>
<td>Control</td>
<td>Success</td>
</tr>
<tr>
<td>Nondepressed</td>
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<td>6.75</td>
<td>6.95</td>
<td>6.90</td>
</tr>
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<td></td>
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<tr>
<td></td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
</tr>
<tr>
<td>Depressed</td>
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<td>5.55</td>
<td>6.55</td>
<td>6.00</td>
</tr>
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<td></td>
<td>b</td>
<td>ab</td>
<td>ac</td>
<td>ab</td>
</tr>
<tr>
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</tbody>
</table>

Note: The higher the mean, the more effectively the subject believed he/she would have coped with a similar situation. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
no information regarding the outcome was given in an interpersonal situation (p < .05, Tukey's HSD).

**Control**

Subjects were asked to rate on a 9-point scale how much control they believed the actor had over the problem (the higher the rating, the more control). It was predicted that depressed and nondepressed subjects would respond similarly on this measure as a function of the type of information regarding outcome. The 2 x 3 x 2 x 2 ANOVA revealed a significant main effect of Level of Depression, F(1, 163) = 4.54, p < .0376. The results showed that depressed subjects believed that the actors had less control over the problem (M = 6.56) than nondepressed subjects (M = 7.13). In addition, there was a main effect of Type of Outcome, F(2, 163) = 5.19, p < .0087. Subjects believed that actors who succeeded had significantly more control over the problem (M = 7.46) than actors who failed (M = 6.50) and actors for whom no information regarding outcome was given (M = 6.58) (p < .05, Tukey's HSD). The 2 x 3 x 2 x 2 ANOVA also yielded a significant main effect of Type of Problem, F(1, 163) = 5.09, p < .0254. Subjects believed that actors had more control over academic problems (M = 7.09) than over interpersonal problems (M = 6.61). In addition, there was a significant main effect of Type of Coping Strategy,
$F(1, 163) = 18.19, \ p < .0001$. Subjects believed that actors who used problem-focused coping had more control (M=7.28) than actors who used emotion-focused coping (M=6.41).

As predicted, the Level of Depression x Type of Outcome interaction effect was not significant, $F(2, 163) = 1.92, \ p > .16$. The 2 x 3 x 2 x 2 ANOVA revealed a significant Type of Outcome x Type of Coping Strategy interaction effect $F(2, 164) = 5.82, \ p < .0036$. An examination of the means in Table 12 revealed that only subjects in the success and control conditions believed that actors who used problem-focused coping had significantly more control over the problem than actors who used emotion-focused coping (ps < .05, Tukey's HSD). In addition, post hoc comparisons among the means showed that subjects believed that actors who succeeded had more control over the problem than actors who failed only when the actor used problem-focused coping (p < .05, Tukey's HSD).

Uncertainty

Subjects were asked to rate on a 9-point scale how much uncertainty they believed the actor had experienced as a result of the event described in the case study (the higher the rating, the more uncertainty). It was predicted that depressed and nondepressed subjects would
Table 12
Means for the Measure of Control

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor</th>
<th>Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion-focused coping</td>
<td></td>
<td>6.85</td>
<td>6.55</td>
<td>5.82</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td></td>
<td>8.07</td>
<td>6.45</td>
<td>7.32</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>b</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(39)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more control the actor had over the situation. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
respond similarly on this measure as a function of the type of information regarding outcome. The $2 \times 3 \times 2 \times 2$ ANOVA yielded a significant main effect of Type of Outcome $F(2, 164) = 3.41, p < .0402$. Post hoc comparisons among the means showed that subjects believed that actors who succeeded experienced significantly less uncertainty ($M = 5.72$) than actors who failed ($M = 6.52$) ($p < .05$, Tukey's HSD). Subjects believed that actors who failed experienced significantly more uncertainty than actors for whom no information regarding outcome was given ($M = 5.78$) ($p < .05$, Tukey's HSD).

The $2 \times 3 \times 2 \times 2$ ANOVA also revealed a significant main effect of Type of Problem, $F(1, 164) = 6.79, p < .01$. Subjects believed that actors who were coping with academic problems experienced less uncertainty ($M = 5.77$) than actors who were coping with interpersonal problems ($M = 6.25$). In addition, the $2 \times 3 \times 2 \times 2$ ANOVA revealed a significant main effect of Type of Coping Strategy, $F(1, 164) = 8.75, p < .0035$. Subjects believed that actors using problem-focused coping experienced less uncertainty ($M = 5.73$) than actors using emotion-focused coping ($M = 6.29$). As predicted, the Level of Depression x Type of Outcome interaction effect was not significant, $F(2, 164) = 2.31, p > .11$. 


Upset

Subjects were asked to rate on a 9-point scale how upsetting they believed the event had been for the actor (the higher the rating, the more upsetting). It was predicted that depressed and nondepressed subjects would respond similarly on this measure as a function of the type of information regarding outcome. The 2 x 3 x 2 x 2 ANOVA yielded a significant main effect of Type of Outcome, $F(2, 164) = 17.18, p < .0001$. Post hoc comparisons among the means showed that subjects believed that actors who succeeded were significantly less upset by the event ($M = 4.98$) than actors who failed ($M = 7.37$) and actors for whom no information regarding outcome was given ($M = 5.75$) ($ps < .05$, Tukey's HSD). Subjects believed that actors who failed were significantly more upset by the event than actors for whom no information regarding outcome was given ($p < .05$, Tukey's HSD).

As predicted, the Level of Depression x Type of Outcome interaction effect was not significant, $F(2, 164) = .46, p > .63$. The 2 x 3 x 2 x 2 ANOVA on this measure revealed a significant Type of Coping Strategy x Type of Problem interaction effect, $F(1, 164) = 5.11, p < .0252$. However, none of the post hoc comparisons among the means (Tukey's HSD) achieved statistical significance at the .05 level. In addition, a significant Type of Outcome x
Type of Coping Strategy interaction effect emerged from the $2 \times 3 \times 2 \times 2$ ANOVA, $F(2, 164) = 3.41$, $p < .0355$. An examination of the means in Table 13 revealed that subjects in the success conditions gave significantly lower ratings of perceived upset than subjects in the control conditions only when the actors in the case studies used emotion-focused coping ($p < .05$, Tukey's HSD). Post hoc comparisons among the means also showed that subjects in the failure conditions gave significantly higher ratings of perceived upset than subjects in the control conditions only when the actors in the case studies used problem-focused coping ($p < .05$, Tukey's HSD).

**Internality**

Subjects were asked to rate on a 9-point scale the extent to which the outcome was due (or, in the case of the control conditions, would be due) to something about the actor as a person (the higher the rating, the more internal the attribution). It was expected that depressed and nondepressed subjects would respond similarly to this question as a function of the type of information regarding outcome. The $2 \times 3 \times 2 \times 2$ ANOVA yielded a significant main effect of Type of Outcome, $F(2, 164) = 10.40$, $p < .0002$. Post hoc comparisons among the means showed that subjects made significantly more internal attributions for actors who
Table 13
Means for the Measure of Upset

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion-focused coping</td>
<td>4.97</td>
<td>7.20</td>
<td>6.20</td>
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<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>bc</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>5.00</td>
<td>7.55</td>
<td>5.30</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>ac</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more upsetting the event had been for the actor. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
succeeded (M=6.90) than for actors who failed (M=5.41) (p<.05, Tukey's HSD). Subjects made significantly less internal attributions for actors who failed than for actors for whom no information regarding outcome was given (M=6.81) (p<.05, Tukey's HSD).

As predicted, the Level of Depression x Type of Outcome interaction effect was not significant, F(2, 164) = .64, p>.53. The 2 x 3 x 2 x 2 ANOVA yielded a significant Type of Outcome x Type of Problem interaction effect, F(1, 164) = 3.14, p<.0458. However, post hoc comparisons among the means (Tukey's HSD) showed that there were no significant differences between subjects' internality ratings for academic case studies and their internality ratings for interpersonal case studies. The 2 x 3 x 2 x 2 ANOVA also yielded a significant Type of Outcome x Type of Coping Strategy interaction effect, F(2, 164) = 6.21, p<.0025. An analysis of the means in Table 14 revealed that subjects made more internal attributions for actors who succeeded than for actors who failed only when the actors used problem-focused coping (p<.05, Tukey's HSD). Similarly, subjects made significantly less internal attributions for actors who failed than for actors for whom no information regarding outcome was given only when the actors used problem-focused coping (p<.05, Tukey's HSD).
Table 14
Means for the Measure of Internality

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
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<td>Emotion-focused coping</td>
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<td>6.67</td>
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<td>(40)</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>7.22</td>
<td>4.97</td>
<td>6.95</td>
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<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>ac</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more internal the attribution. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
Externality

Subjects were asked to rate on a 9-point scale the extent to which the outcome was due (or, in the case of the control conditions, would have been due) to something about the nature of the situation (the higher the rating, the more external the attribution). It was expected that depressed and nondepressed subjects would respond similarly to this question as a function of the type of information regarding outcome. The 2 x 3 x 2 x 2 ANOVA revealed a significant main effect of Type of Problem, $F(1, 163) = 39.57, p < .0001$. Subjects made more external attributions for actors who experienced an interpersonal problem (M=6.05) than for actors who experienced an academic problem (M=4.82).

As predicted, the 2 x 3 x 2 x 2 ANOVA showed that the Level of Depression x Type of Outcome interaction effect was not significant $F(2, 163) = 1.60, p > .21$. The 2 x 3 x 2 x 2 ANOVA yielded a significant Type of Outcome x Type of Problem interaction effect, $F(2, 163) = 3.96, p < .0209$. An examination of the means in Table 15 indicated that subjects made significantly more external attributions for actors who experienced an interpersonal problem than for actors who experienced an academic problem only when information regarding outcome was given, ($ps < .05$, Tukey's HSD). Moreover, subjects made
Table 15
Means for the Measure of Externality

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor</th>
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</tr>
</thead>
<tbody>
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<td>Success</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Academic problem</th>
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<th>4.87</th>
<th>5.47</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>ab</td>
<td>bc</td>
</tr>
<tr>
<td>(39)</td>
<td>(40)</td>
<td>(40)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interpersonal problem</th>
<th>6.07</th>
<th>5.95</th>
<th>6.12</th>
</tr>
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<td></td>
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<td>c</td>
<td>c</td>
</tr>
<tr>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
<td></td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more external the attribution. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
significantly more external attributions for actors for whom no information regarding outcome was given than for actors who succeeded only when the actor experienced an academic problem (ps<.05, Tukey's HSD). The 2 x 3 x 2 x 2 ANOVA also yielded a significant Type of Outcome x Type of Coping Strategy interaction effect, F(2, 163) = 5.39, p<.0054. An examination of the means in Table 16 revealed that subjects made significantly less external attributions for actors who succeeded than for actors who failed only when the actors used problem-focused coping (p<.05, Tukey's HSD).

**Globality**

Subjects were asked to rate on a 9-point scale how effective they believed the actor would be in coping with other types of problems (the higher the rating, the more effective the actor would be). It was expected that depressed and nondepressed subjects would respond similarly to this question as a function of the type of information regarding outcome. The 2 x 3 x 2 x 2 ANOVA showed that there was a significant main effect of Outcome, F(2, 164) = 4.13, p<.0214. Post hoc comparisons among the means showed that subjects believed that actors who succeeded would be significantly more effective in coping with other types of problems (M=6.38) than actors who failed (M=5.70) (p<.05, Tukey's HSD). The mean
Table 16
Means for the Measure of Externality

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion-focused coping</td>
<td>5.50</td>
<td>5.05</td>
<td>5.95</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>ab</td>
<td>a</td>
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<tr>
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<td>(40)</td>
<td>(40)</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>4.69</td>
<td>5.77</td>
<td>5.65</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>ab</td>
</tr>
<tr>
<td></td>
<td>(39)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more external the attribution. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey’s HSD).
rating for subjects in the control conditions on this measure (M=6.01) was not significantly different from the mean ratings given by subjects in the success or failure conditions.

The 2 x 3 x 2 x 2 ANOVA also revealed a significant main effect of Type of Problem, $F(1, 164) = 8.54$, $p<.0040$. Subjects believed that actors who experienced an academic problem would be more effective in coping with other types of problems (M=6.27) than actors who experienced an interpersonal problem (M=5.79). In addition, a main effect of Type of Coping Strategy emerged, $F(1, 164) = 55.63$, $p<.0001$. Subjects believed that actors who used problem-focused coping would be more effective in coping with other types of problems (M=6.65) than actors who used emotion-focused coping (M=5.42). As predicted, the 2 x 3 x 2 x 2 ANOVA showed that the Level of Depression x Type of Outcome interaction effect was not significant, $F(2, 164) = .73$, $p>.48$.

**Stability of Coping Capabilities**

For academic case studies, subjects were asked to rate on a 9-point scale how effective they believed the actor would be in coping with future academic situations. For interpersonal case studies, subjects were asked to rate on a 9-point scale how effective they believed the
actor would be in coping with future interpersonal situations. (In both cases, the higher the rating, the more effective the actor would be in future situations.) It was expected that depressed and nondepressed subjects would respond similarly to these questions as a function of the type of information regarding outcome. The 2 x 3 x 2 x 2 ANOVA yielded a significant main effect of Type of Outcome, \( F(2, 164) = 25.76, p < .0001 \). Post hoc comparisons showed that subjects believed that actors who succeeded would be significantly more effective in coping with similar problems in the future (\( M = 6.99 \)) than actors who failed (\( M = 5.21 \)) or actors for whom no information regarding outcome was given (\( M = 6.37 \)). Subjects believed that actors who failed would be significantly less effective in coping with similar problems in the future than actors for whom no information regarding outcome was given (\( p < .05 \), Tukey's HSD).

In addition, the 2 x 3 x 2 x 2 ANOVA revealed a significant main effect of Type of Problem, \( F(1, 164) = 14.91, p < .0002 \). Subjects believed that actors who experienced an academic problem would be more effective in coping with a similar problem in the future (\( M = 6.54 \)) than actors who experienced an interpersonal problem (\( M = 5.84 \)). The 2 x 3 x 2 x 2 ANOVA also revealed a main
effect of Type of Coping Strategy, $F(1, 164) = 74.71$, $p<.0001$. Subjects believed that actors who used problem-focused coping would be more effective in coping with similar problems in the future ($M=6.97$) than actors who used emotion-focused coping ($M=5.41$).

As predicted, the $2 \times 3 \times 2 \times 2$ ANOVA showed that the Level of Depression x Type of Outcome interaction effect was not significant, $F(2, 164) = .20$, $p>.82$. The $2 \times 3 \times 2 \times 2$ ANOVA yielded a significant Type of Outcome x Type of Coping Strategy interaction effect, $F(2, 164) = 3.96$, $p<.0209$. An examination of the means in Table 17 showed that subjects believed that actors who succeeded would be more effective in coping with similar problems in the future than actors for whom no information regarding outcome was given only when the actors used emotion-focused coping ($p<.05$, Tukey's HSD). Post hoc comparisons among the means also revealed that subjects believed that actors for whom no information regarding outcome was given would be more effective in coping with similar problems in the future than actors who failed only when the actors used problem-focused coping ($p<.05$, Tukey's HSD).

**Estimate of Grade Point Average**

For case studies involving academic problems, subjects were asked to estimate the actor's cumulative
Table 17
Means for the Measure of Stability

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion-focused coping</td>
<td>6.47</td>
<td>4.50</td>
<td>5.25</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>b</td>
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<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>7.50</td>
<td>5.92</td>
<td>7.50</td>
</tr>
<tr>
<td></td>
<td>c</td>
<td>d</td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>(40)</td>
<td>(40)</td>
<td>(40)</td>
</tr>
</tbody>
</table>

Note: The higher the mean, the more effective the actor would be in coping with similar situations in the future. The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
grade point average. Although no specific predictions were made for subjects' responses to this question, the results should be related to subjects' ratings of how effectively the actor coped with the academic problem. In accordance with this reasoning, a 2 (Level of Depression) x 3 (Type of Outcome) x 2 (Type of Coping Strategy) ANOVA revealed a significant main effect of Type of Outcome, $F(2, 54) = 50.80, p<.0001$. Post hoc comparisons among the means showed that subjects believed that actors who succeeded had significantly higher grade point averages ($M=3.37$) than actors who failed ($M=2.45$) or actors for whom no information regarding outcome was given ($M=2.99$) ($p<.05$, Tukey's HSD). Subjects believed that actors who failed had significantly lower grade point averages than actors for whom no information regarding outcome was given ($p<.05$, Tukey's HSD).

The 2 x 3 x 2 ANOVA also yielded a significant main effect of Type of Coping Strategy, $F(1, 54) = 62.77, p<.0001$. Subjects believed that actors who used problem-focused coping had higher grade point averages ($M=3.17$) than actors who used emotion-focused coping ($M=2.70$). In addition, the 2 x 3 x 2 ANOVA yielded a significant Type of Outcome x Type of Coping Strategy interaction effect, $F(2, 54) = 5.33, p<.0077$. An examination of the means in Table 18 indicated that subjects believed that actors who
Table 18
Means for the Measure of Actor Grade Point Average

<table>
<thead>
<tr>
<th>Type of Information Regarding Actor Outcome</th>
<th>Success</th>
<th>Failure</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion-focused coping</td>
<td>3.23</td>
<td>2.24</td>
<td>2.61</td>
</tr>
<tr>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
</tr>
<tr>
<td></td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
</tr>
<tr>
<td>Problem-focused coping</td>
<td>3.51</td>
<td>2.65</td>
<td>3.36</td>
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<td>a</td>
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<td>ae</td>
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<tr>
<td></td>
<td>(20)</td>
<td>(20)</td>
<td>(20)</td>
</tr>
</tbody>
</table>

Note: The numbers in parentheses indicate the number of observations in each condition. Condition means sharing a common subscript are not significantly different at the .05 level (Tukey's HSD).
succeeded would have higher grade point averages than actors for whom no information regarding outcome was given only when the actors used emotion-focused coping (p<.05, Tukey's HSD). Post hoc comparisons among the means also showed that only subjects in the failure and control conditions believed that actors who used problem-focused coping had higher grade point averages than actors who used emotion-focused coping (p<.05, Tukey's HSD).

**Estimate of Number of Friends**

For case studies involving interpersonal problems, subjects were asked to estimate how many friends the actor had. Although no specific predictions were made for subjects' responses to this question, the results should be related to the subjects' ratings of how effectively the actor coped with the interpersonal problem. However, the 2 x 3 x 2 ANOVA revealed only a significant main effect of Type of Coping Strategy, F(1, 52) = 25.50, p<.0001. Subjects believed that actors who used problem-focused coping had more friends (M=3.82) than actors who used emotion-focused coping (M=2.52).

**Comparison for Academic Abilities**

Subjects were asked who they use as a basis of comparison for their academic abilities: no one, people with a higher GPA, people with an equivalent GPA, people
with a lower gpa, or other characteristics instead of their gpa. Subjects were told to choose only one of these alternatives. It was expected that depressed subjects would report comparing themselves to people with a higher gpa more frequently than nondepressed subjects. However, a chi-square analysis indicated that there were no significant differences between depressed and nondepressed subjects on this measure, $\chi^2 (4, n=60) = 1.3$, $p>.86$.

Comparison for Social-Interpersonal Abilities

Subjects were asked who they use as a basis of comparison for their social-interpersonal abilities: no one, people who have better social skills, people who have equivalent social skills, people who have poorer social skills, or other characteristics instead of their social skills. Subjects were told to choose only one of these alternatives. It was expected that depressed subjects would report comparing themselves to people who have better social skills more frequently than nondepressed subjects. The overall chi-square was not significant, $\chi^2 (4, n=60) = 6.3$, $p>.179$, but an analysis of the frequency distribution in Table 19 indicated that there were some differences in how depressed and nondepressed subjects responded to the first two alternatives. More specifically, it appeared to be the
Table 19
Frequency Distribution for Comparison for
Interpersonal Abilities

<table>
<thead>
<tr>
<th></th>
<th>No one</th>
<th>Better</th>
<th>Equal</th>
<th>Poorer</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nondepressed</td>
<td>11</td>
<td>11</td>
<td>5</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Depressed</td>
<td>3</td>
<td>17</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
case that nondepressed subjects were reporting using no one and people with better social skills equally often. However, depressed subjects seemed to be reporting using people with better social skills much more frequently than using no one as a basis for comparison. To follow up on this observation, the 2 x 2 matrix (i.e., depressed, nondepressed by no one, better social skills) was analyzed separately (see Wilks, 1948). Using Yates' correction for continuity, the new chi-square equals 4.3 which is significant at about the .01875 level (one-tailed). However, Ryan's method for adjusting the significance level when multiple comparisons are made indicates that the required probability level for achieving significance in this case is .01.

Friends and Grade Point Averages of Subjects

Subjects were asked how many close friends they had. A 2 (Level of Depression) x 3 (Type of Outcome) ANOVA yielded a significant main effect of Level of Depression, $F(1, 54) = 4.10, p<.0478$. Depressed subjects reported having fewer friends ($M=4.03$) than nondepressed subjects ($M=6.40$). Subjects also were asked what their cumulative grade point average was. A 2 x 3 ANOVA revealed a significant main effect of Level of Depression, $F(1, 49) = 7.88, p<.0072$. Depressed subjects reported having a lower grade point average ($M=2.58$) than nondepressed
subjects ($M=3.00$). Thus, although no specific predictions were made at the outset for these two measures, the results provide useful information pertaining to the abilities of depressives in comparison to nondepressives.
CHAPTER IV
DISCUSSION

The present study was an examination of how depressed and nondepressed college students perceive others attempting to cope with stressful situations. In addition, the present study was designed to gain more information about social comparison processes in depression. Several factors were explored in the current investigation; namely level of depression, type of outcome, type of problem, and type of coping strategy. This particular combination of factors was unique to the present study and, in some ways, this was an exploratory investigation. However, there were several aspects of the study that were expected to follow more directly from previous research on attributions and social comparison in depression and add to our understanding of these areas.

One of the primary hypotheses of the present study was that depressives have a negative self-image and that this could affect the way in which they compare themselves to others. For example, Beck et al. (1979) have postulated that depressives believe they compare
unfavorably with others and this reinforces their negative image of themselves. The other primary hypothesis that was explored in the present study was that although depressives tend to interpret self-relevant information in accordance with their negative view of self, world, and future, this negative view would not generalize to their perceptions of others. These two hypotheses were thought to be consistent with the concept of depressives feeling that they are different from others and that by contrasting themselves unfavorably with others, depressives show a tendency to engage in self-deprecation. In addition, it was thought that the lack of ego-enhancement in depression could set up a (negative) contrast between one's self and a comparison other.

How do the results of the current investigation fit in with the findings of past research? To begin, in accordance with the results of Sweeney et al. (1982), depressed and nondepressed subjects in the present study did not differ in their causal attributions (internality, externality, globality, and stability) for the actor's outcome. In addition, depressed and nondepressed subjects responded similarly when making non-causal attributions (control, uncertainty, and upset over the event). Because attributional judgments were not
expected to be independent of the actor's success or failure, the predictions for these measures were formulated in terms of an interaction effect between Level of depression and Type of information regarding outcome. However, an overall effect of Level of Depression emerged for one of these measures. More specifically, depressed subjects believed that the actor had less control over the event, irrespective of the actual outcome, in comparison to nondepressed subjects. At this point, it is difficult to determine why depressed and nondepressed subjects differed only in their judgments about the actor's control over the problem without taking into consideration the actor's success or failure at the task. It could be speculated that this particular pattern of results is related in some way to a chronic feeling of lack of control in depression (Warren & McEachren, 1983).

Although the hypotheses for the measures of causal and non-causal attributions were formulated specifically in terms of the lack of an interaction between Level of depression and Type of information regarding outcome, the pervasive main effect of Outcome was not unexpected. The results showed that (depressed and nondepressed) subjects made different attributions for an actor's success than for an actor's failure at a task. That is,
subjects made more internal, global and stable attributions when the actor succeeded than when the actor failed. In addition, subjects attributed more control and upset and less uncertainty when the actor succeeded than when the actor failed. Thus, while it has been found that people tend to make more internal attributions for their own successes than for the successes of others and more external attributions for their own failures than for the failures of others (e.g., Taylor & Koivumaki, 1976), the basic pattern appears to be the same for self-attributions and other-attributions.

The pattern of results for the measures of social comparison included in the present study suggested that there were important differences between depressed and nondepressed individuals in terms of how they believed they compared to others. For example, when asked to compare their own coping abilities to those of the actors, depressed subjects consistently portrayed themselves less favorably than nondepressed subjects. That is, depressed subjects gave lower ratings than nondepressed subjects on the question asking them to compare their own coping abilities to those of the actor's. Moreover, this pattern emerged regardless of the actor's outcome. This finding is consistent with the hypothesis that information about how one compares to
others can serve to reinforce an inferior self-image. In addition, it appears as if the estimates given by subjects in the present study reflect what actually occurs in their daily life. More specifically, it is interesting to note that depressed subjects reported having fewer friends and a lower cumulative grade point average than nondepressed subjects.

Another measure of social comparison that was included in the present study was subjects' perceived similarity to the actors in the case studies. The results showed that nondepressed subjects believed they were more similar to actors who succeeded than to actors who failed whereas depressed subjects believed they were as similar to actors who failed as to actors who succeeded. These results seem to parallel the results of Tabachnik et al. (1983), in that both studies demonstrate the lack of an ego-enhancing bias in depression. More specifically, in both studies, nondepressed subjects perceived themselves as being more similar to others when the basis for comparison was something positive (i.e., successful outcome or non-depression-relevant items) and less similar to others when the basis for comparison was something negative (i.e., failure outcome or depression-relevant items). Furthermore, in both studies it was found that depressives were relatively evenhanded in
their perceptions of similarity to others and thus did not make differential ratings according to the nature of the basis of comparison (i.e., positive or negative). However, it should be noted that Tabachnik et al. (1983) found that overall, depressed subjects perceived themselves as being less similar to others than nondepressed subjects and that the pattern of results for the depression-relevant and non-depression-relevant items for depressed and nondepressed subjects had to be interpreted accordingly. Nonetheless, Tabachnik et al. (1983) highlighted the significance of the lack of ego-enhancement in the way depressives compared themselves to others.

The results for the measure of attraction confirmed the hypothesis that depressed and nondepressed college students would be more attracted to actors who succeeded than to actors who failed. According to London (1967), people are highly attracted to others who are perceived and known to be of high intelligence because of a "unidirectional drive upward" for behaviors that are social desirable (Festinger, 1954). Because subjects in the current investigation were not asked to explain why they were more attracted to the actors who succeeded than to the actors who failed, it is difficult to determine the extent to which the attraction ratings of depressed
and nondepressed subjects reflected a unidirectional drive upward. However, the results do seem to be consistent with this speculation. It would be interesting to examine in future research whether this unidirectional drive upward is particularly disturbing for depressives because it reinforces an inferior self-image. More specifically, for nondepressed subjects, being attracted to a successful actor implies being attracted to a similar other. For depressed subjects, being attracted to a successful other implies being attracted to a superior other which may confirm the depressed person's suspicion that he/she compares unfavorably with others.

In accordance with the assumption that depressives would interpret social comparison information in accordance with their inferior self-image, it was hypothesized that depressed subjects in the current investigation would report that they generally compare themselves to more capable people (i.e., upward comparison. However, the results showed no significant differences between depressed and nondepressed subjects in their choice of a comparison other. Yet, it is interesting to note that for interpersonal situations there was a (nonsignificant) trend for depressed subjects to report comparing themselves to people with better
social skills. While these results do not provide sufficient support for the presence of upward social comparison in depression, they do seem to indicate that depressives do not search for ego-enhancing information when they compare themselves to others.

What about the significant results that emerged but had not been predicted at the outset? Clearly, one of the most pervasive unpredicted pattern of results in the current investigation was the effect of type of coping strategies on subjects' responses. It had been assumed, based on the results of the pilot study, that subjects would believe that the problem-focused coping strategies and emotion-focused coping strategies described in the case studies were equally appropriate for the target problem. However, the results of the main study indicated that overall, problem-focused coping was viewed more positively than emotion-focused coping. It may be that the questions that were included in the main study were more sensitive to the differences that subjects' perceived between problem-focused and emotion-focused coping than the question about appropriateness that was included in the pilot study. In addition, reading four case studies in the the main experiment in comparison to two case studies in the pilot study may have strengthened subjects' tendency to perceive differences between the
two types of coping strategies. Obviously, these are post hoc explanations and are speculative. Yet there were certain aspects of the differences between subjects' judgments about problem-focused coping and emotion-focused coping that deserved further discussion.

One of the ways in which subjects indicated their belief that problem-focused coping was a "better" strategy than emotion-focused coping was in their ratings of how effectively the actor had coped with the problem. More specifically, depressed and nondepressed subjects perceived the actors who used problem-focused strategies as more effective in coping with the situations than actors who used emotion-focused coping. Furthermore, depressed and nondepressed subjects were more attracted to actors who used problem-focused coping than to actors who used emotion-focused coping. Given these results, it is quite interesting to note that whereas nondepressives perceived themselves as being more similar to actors who used problem-focused coping than to actors who used emotion-focused coping, depressives were evenhanded in their similarity ratings for the two types of coping strategies. This, then, provides additional evidence for the idea that nondepressives tend to enhance themselves in comparison to others whereas depressives do not.
Another way in which subjects differed in their judgments about the two types of coping strategies was in their ratings of the actor's control and uncertainty over the problem. Depressed and nondepressed subjects in the present study believed that actors who used problem-focused coping had more control and experienced less uncertainty over the event than actors who used emotion-focused coping. These results could be interpreted as being consistent with a positivity bias toward problem-focused coping if it is assumed that it is positive to perceive the actor as having a high amount of control and a low amount of uncertainty over the event.

The effect of type of coping strategy on subjects' stability and globality ratings for the actor's outcome also seemed to suggest a positivity bias toward problem-focused coping. Depressed and nondepressed subjects in the current investigation believed that actors who used problem-focused coping strategies would be more capable of coping with similar and other types of problems than actors who used emotion-focused coping strategies. The results for the measures of internality and externality were more complex. Depressed and nondepressed subjects in the present study made more internal attributions when the actor succeeded than when the actor failed and more external attributions when the actor failed than when the
actor succeeded, but only when the actors used problem-focused coping. At this point, and with the current dataset, it is difficult to determine how to interpret the meaning of this particular interaction effect.

Another factor that affected the results of the present study in a way that had not been predicted at the outset was type of problem. Although it had not been expected that there would be differences in subjects' judgments about academic and interpersonal situations, the results showed that the nature of the situation was an important variable for subjects to consider when making causal attributions. For example, the outcomes of interpersonal situations were perceived as being due more to external causes than were the outcomes of academic situations. The results for the measures of stability and globality indicated that actors coping with interpersonal problems were perceived as being less capable of coping with similar and other types of problems than actors coping with academic problems. Based on the current dataset one can only speculate about possible reasons for this particular pattern of results. It may be that subjects were unable to be as optimistic about the actors' coping abilities when the actors previously had experienced interpersonal problems than when the actors previously had experienced academic
problems because the outcomes of interpersonal problems are attributed more to external causes. Interpersonal situations may be thought of as less predictable and thus less reliable as an indicator of whether the actor will be effective in coping with similar or other types of problems in the future. While speculative, these findings raise interesting questions for future research.

How do the results of the current investigation contribute to our understanding of social comparison and person perception in depression? To begin, it appears that nondepressives generally feel they compare favorably to others whereas depressives do not. These results are consistent with the conclusions of Tabachnik et al. (1983) and thus provide additional support for the hypothesis that depressives and nondepressives differ in their perceptions of how they compare with others. This seems to be an important finding because in certain instances, social comparison information may serve to reinforce a negative view of self, world, and future (Beck, 1967). Overall, these differences in perception of how one compares to others tend to be reflected in the presence of an ego-enhancing bias for nondepressives and the lack of an ego-enhancing bias (i.e., evenhandedness) for depressives. However, a tendency to depreciate one's self relative to others emerged when depressed subjects
were asked specifically to estimate their own ability to cope with a similar situation. In future research, it would be interesting to explore further how this negative view of one's own coping abilities relative to others contributes to lowered expectations for future success and decrements in actual performance.

Secondly, the results of the current investigation replicate those found by Sweeney et al. (1982) and thus provide additional support for Sweeney et al.'s conclusion that depressives and nondepressives make similar causal attributions for outcomes that are experienced by others. Furthermore, the results of the present study indicate that Sweeney et al.'s (1982) conclusion also may apply to certain non-causal attributions. In addition, an unexpected finding that seems relevant to research on stress and coping as well as to research on person perception is that type of coping strategy and type of problem experienced has an effect on judgments about other people. Moreover, given the positivity bias that emerged for subjects' perceptions of others who used problem-focused coping, it is interesting that depressed-nondepressed differences (i.e., responses of nondepressed subjects reflecting an ego-enhancing bias; responses of depressed subjects failing to reflect an ego-enhancing bias) were noted for
the measure of perceived similarity to the actor as a function of type of coping strategy used by the actor in the case study. However, these particular findings were not predicted at the outset and thus should be considered tentative pending replication.

In accordance with the explorative nature of certain aspects of the present study, several questions were raised as being worthy of further exploration. Most likely, many of these questions would require an integration of research and theory on depression, person perception, social comparison, and stress and coping. Needless to say, investigation along these lines could become quite complex. However, it may be that by systematically examining the relationships among these variables, valuable clues that will enhance our understanding of problems in these particular areas will emerge.
APPENDIX

SAMPLE TEST MATERIALS
Case Study

Justine is a college student who currently is feeling that she would like to become friendly with different types of people. Recently, Justine has become acquainted with another student in one of her classes. This acquaintance invited Justine to attend a party but Justine feels a bit hesitant about meeting a lot of new people at the same time. To cope with the situation Justine begins by talking to people who she recognizes from class and she introduces herself to new people who become part of the group. In the end, Justine has a good time at the party and becomes friendly with several of the people she meets there.

(Social-Interpersonal Problem)
(Problem-Focused Coping)
(Success Condition)
Case Study

Justine is a college student who currently is feeling that she would like to become friendly with different types of people. Recently, Justine has become acquainted with another student in one of her classes. This acquaintance invited Justine to attend a party but Justine feels a bit hesitant about meeting a lot of new people at the same time. To cope with the situation Justine begins by talking to people who she recognizes from class and she introduces herself to new people who become part of the group. In the end, Justine does not have a good time at the party and now feels even more lonely and isolated from her peers.

(Social-Interpersonal Problem)
(Problem-Focused Coping)
(Failure Condition)
Case Study

Justine is a college student who currently is feeling that she would like to become friendly with different types of people. Recently, Justine has become acquainted with another student in one of her classes. This acquaintance invited Justine to attend a party but Justine feels a bit hesitant about meeting a lot of new people at the same time. To cope with the situation Justine begins by talking to people who she recognizes from class and she introduces herself to new people who become part of the group.

(Social-Interpersonal Problem)
(Problem-Focused Coping)
(No Information-Control Condition)
Case Study

Christine is a college student who currently is enrolled in a course that is required for entry into her desired major area of study. Christine feels somewhat anxious about the upcoming exam in this course because a large amount of material has been covered and the concepts seem difficult. To cope with the situation Christine studies her lecture notes and reviews the assigned reading material. She decides to set up a study schedule and learn a certain amount of material each day. Christine takes the exam and receives the results two days later. Christine earned a grade of A on the exam.

(Academic Problem)
(Problem-Focused Coping)
(Success Outcome)
Case Study

Christine is a college student who currently is enrolled in a course that is required for entry into her desired major area of study. Christine feels somewhat anxious about the upcoming exam in this course because a large amount of material has been covered and the concepts seem difficult. To cope with the situation Christine studies her lecture notes and reviews the assigned reading material. She decides to set up a study schedule and learn a certain amount of material each day. Christine takes the exam and receives the results two days later. Christine earned a grade of D on the exam.

(Academic Problem)
(Problem-Focused Coping)
(Failure Condition)
Case Study

Christine is a college student who currently is enrolled in a course that is required for entry into her desired major area of study. Christine feels somewhat anxious about the upcoming exam in this course because a large amount of material has been covered and the concepts seem difficult. To cope with the situation Christine studies her lecture notes and reviews the assigned reading material. She decides to set up a study schedule and learn a certain amount of material each day.

(Academic Problem)
(Problem-Focused Coping)
(No Information-Control Condition)
Case Study

Andrea is a college student who currently is feeling that she would like to become friendly with different types of people. Recently, Andrea has become acquainted with another student in one of her classes. This acquaintance invited Andrea to attend a party but Andrea feels a bit hesitant about meeting a lot of new people at the same time. To cope with the situation Andrea tells herself that parties are fun and that she will have a good time. In the end, Andrea has a good time at the party and becomes friendly with several of the people she meets there.

(Social-Interpersonal Problem)  
(Emotion-Focused Coping)  
(Success Condition)
Case Study

Andrea is a college student who currently is feeling that she would like to become friendly with different types of people. Recently, Andrea has become acquainted with another student in one of her classes. This acquaintance invited Andrea to attend a party but Andrea feels a bit hesitant about meeting a lot of new people at the same time. To cope with the situation Andrea tells herself that parties are fun and that she will have a good time. In the end, Andrea does not have a good time at the party and now feels even more lonely and isolated from her peers.

(Social-Interpersonal Problem)
(Emotion-Focused Coping)
(Failure Condition)
Case Study

Andrea is a college student who currently is feeling that she would like to become friendly with different types of people. Recently, Andrea has become acquainted with another student in one of her classes. This acquaintance invited Andrea to attend a party but Andrea feels a bit hesitant about meeting a lot of new people at the same time. To cope with the situation Andrea tells herself that parties are fun and that she will have a good time.

(Social-Interpersonal Problem)
(Emotion-Focused Coping)
(No Information-Control Condition)
Case Study

Michelle is a college student who currently is enrolled in a course that is required for entry into her desired major area of study. Michelle feels somewhat anxious about the upcoming exam in this course because a large amount of material has been covered and the concepts seem difficult. To cope with the situation Michelle tells herself that she should avoid becoming overwhelmed with feelings of anxiety and that she will feel better when the exam is over. She continues to exercise regularly to reduce tension. Michelle takes the exam and receives the results two days later. Michelle earned a grade of A on the exam.

(Academic Problem)
(Emotion-Focused Coping)
(Success Condition)
Case Study

Michelle is a college student who currently is enrolled in a course that is required for entry into her desired major area of study. Michelle feels somewhat anxious about the upcoming exam in this course because a large amount of material has been covered and the concepts seem difficult. To cope with the situation Michelle tells herself that she should avoid becoming overwhelmed with feelings of anxiety and that she will feel better when the exam is over. She continues to exercise regularly to reduce tension. Michelle takes the exam and receives the results two days later. Michelle earned a grade of D on the exam.

(Academic Problem)
(Emotion-Focused Coping)
(Failure Condition)
Case Study

Michelle is a college student who currently is enrolled in a course that is required for entry into her desired major area of study. Michelle feels somewhat anxious about the upcoming exam in this course because a large amount of material has been covered and the concepts seem difficult. To cope with the situation Michelle tells herself that she should avoid becoming overwhelmed with feelings of anxiety and that she will feel better when the exam is over. She continues to exercise regularly to reduce tension.

(Academic Problem)
(Emotion-Focused Coping)
(No Information-Control Condition)
Questionnaire

1. How effective do you believe Christopher was in coping with this problem?

1  2  3  4  5  6  7  8  9
Not at all Entirely

2. Please rate Christopher on each of the characteristics listed below.

Open-minded

1  2  3  4  5  6  7  8  9
Not at all Entirely

Likeable

1  2  3  4  5  6  7  8  9
Not at all Entirely

Sincere

1  2  3  4  5  6  7  8  9
Not at all Entirely

Reasonable

1  2  3  4  5  6  7  8  9
Not at all Entirely

Competent

1  2  3  4  5  6  7  8  9
Not at all Entirely

3. To what extent do you believe Christopher's efforts to cope with the situation were focused on solving the problem?

1  2  3  4  5  6  7  8  9
Not at all Entirely
4. To what extent do you believe Christopher's efforts to cope with the situation were focused on controlling or reducing negative feelings toward the problem?

1 2 3 4 5 6 7 8 9
Not at all Entirely

5. How similar do you believe you are to Christopher?

1 2 3 4 5 6 7 8 9
Not at all Entirely

6. How effectively do you believe you would have coped with a similar situation?

1 2 3 4 5 6 7 8 9
Not at all Extremely

7. How much control do you believe Christopher had over this problem?

1 2 3 4 5 6 7 8 9
Not at all A great amount

8. How much uncertainty do you believe Christopher would have experienced as a result of this problem?

1 2 3 4 5 6 7 8 9
None A great amount

9. How upsetting do you believe this problem was for Christopher?

1 2 3 4 5 6 7 8 9
Not at all Extremely

10. To what extent was the outcome due to something about Christopher, as a person?

1 2 3 4 5 6 7 8 9
Not at all Entirely
11. To what extent was the outcome due to something about the nature of the situation or another person or persons?

1 2 3 4 5 6 7 8 9
Not at all Entirely

12. How effective do you believe Christopher will be in coping with future academic problems?

1 2 3 4 5 6 7 8 9
Not at all Extremely

13. How effective do you believe Christopher would be in coping with other types of problems?

1 2 3 4 5 6 7 8 9
Not at all Entirely

14. What do you think Christopher's cumulative grade point average is?
Questionnaire

1. How effective do you believe Justin was in coping with this problem?

Not at all 1 2 3 4 5 6 7 8 9 Entirely

2. Please rate Justin on each of the characteristics listed below.

Open-minded

Not at all 1 2 3 4 5 6 7 8 9 Entirely

Likeable

Not at all 1 2 3 4 5 6 7 8 9 Entirely

Sincere

Not at all 1 2 3 4 5 6 7 8 9 Entirely

Reasonable

Not at all 1 2 3 4 5 6 7 8 9 Entirely

Competent

Not at all 1 2 3 4 5 6 7 8 9 Entirely

3. To what extent do you believe Justin's efforts to cope with the situation were focused on solving the problem?

Not at all 1 2 3 4 5 6 7 8 9 Entirely
4. To what extent do you believe Justin's efforts to cope with the situation were focused on controlling or reducing negative feelings toward the problem?

1 2 3 4 5 6 7 8 9
Not at all Entirely

5. How similar do you believe you are to Justin?

1 2 3 4 5 6 7 8 9
Not at all Entirely

6. How effectively do you believe you would have coped with a similar situation?

1 2 3 4 5 6 7 8 9
Not at all Extremely

7. How much control do you believe Justin had over this problem?

1 2 3 4 5 6 7 8 9
Not at all A great amount

8. How much uncertainty do you believe Justin would have experienced as a result of this problem?

1 2 3 4 5 6 7 8 9
None A great amount

9. How upsetting do you believe this problem was for Justin?

1 2 3 4 5 6 7 8 9
Not at all Extremely

10. To what extent was the outcome due to something about Justin, as a person?

1 2 3 4 5 6 7 8 9
Not at all Entirely
11. To what extent was the outcome due to something about the nature of the situation or another person or persons?

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12. How effective do you believe Justin will be in coping with future social-interpersonal problems?

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13. How effective do you believe Justin would be in coping with other types of problems?

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14. How many close friends (that is, people he can confide in) do you think Justin has?

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Final Questionnaire

1. When estimating your academic abilities, who do you use most often as a basis for comparison? Put a check mark beside ONE of the following choices.
   ____ No one
   ____ People with a higher gpa
   ____ People with an equivalent gpa
   ____ People with a lower gpa
   ____ I use other characteristics instead of their gpa

2. When estimating your social-interpersonal abilities, who do you use most often as a basis for comparison? Put a check mark beside ONE of the following choices.
   ____ No one
   ____ People who have better social skills than me
   ____ People who have social skills that are equivalent to mine
   ____ People who have poorer social skills than me
   ____ I use other characteristics instead of their social skills

3. What is your college cumulative grade point average?
   __________________________

4. How many close friends (that is, people you can confide in) do you have?
   __________________________
LIST OF REFERENCES


FOOTNOTES

1. Beck's (1967, 1976) depth of depression cut-off points for the BDI are: 0-9 = no depression, 10-15 = mild depression, 16-23 = moderate depression, 24+ = severe depression.

2. An analysis of variance of the second BDI showed no effects for sex, $F(1, 54) = .38, p = .5382$; outcome, $F(2, 54) = .01, p = .9886$, or sex x outcome, $F(2, 54) = .22, p = .8068$.

3. The case studies for female subjects included female names (Christine, Michelle, Justine, Andrea) for the actors and the case studies for male subjects included male names (Christopher, Michael, Justin, Andrew) for the actors.

4. However, in an effort to highlight the differences between the case studies and maximize subjects' interest in the task, case studies involving the same area (i.e., academic or social-interpersonal) were never presented back-to-back.

5. Pilot study subjects (total $n = 37$) read about an actor using problem-focused coping for an academic problem.
and an actor using emotion-focused coping for an interpersonal problem (n=19) or an actor using emotion-focused coping for an academic problem and an actor using problem-focused coping for an interpersonal problem (n=18).

6. To check for the effect of gender on the experimental results, a 2 (Level of Depression) x 3 (Type of Outcome) x 2 (Gender) analysis of variance was performed on subjects' responses to the questionnaires that followed the case studies and to the final questionnaire. The two significant effects that emerged from this analysis will be addressed at a later time, within the context of the results for the particular dependent variable.

7. Exceptions to this 2 x 3 x 2 x 2 split-plot design are noted in the text.

8. A 2 (Mood) x 3 (Outcome) x 2 (Gender) ANOVA on this measure revealed a significant Mood x Outcome x Gender interaction effect, $F(2, 48) = 3.32, p<.0447$. However, an examination of the individual cell means indicated that the results reported in this section could be interpreted similarly for males and females.

9. A 2 (Mood) x 3 (Outcome) x 2 (Gender) ANOVA on this measure revealed a significant main effect of Gender, $F(1, 48) = 4.61, p<.0368$. However, an examination of
the individual cell means indicated that the result reported below could be interpreted similarly for males and females.