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RELATIONSHIPS AMONG GENDER,
CAUSAL ATTRIBUTION AND DEPRESSION

by
Joseph C. Yount

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

November

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VITA

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INTRODUCTION

Recent research (e.g., Abramson, Seligman, & Teasdale, 1978; Seligman, Abramson, Semmel, & vonBaeyer, 1979) concerning cognitive theories of depression has suggested that a person's causal attributions may be associated with the presence of depression. Specifically, it has been postulated that there is a "depressive attributional style" characterized by internal, stable and global attributions for bad outcomes and external, unstable and specific attributions for good outcomes. In addition, the greater incidence of depression in females as compared to males has been well-documented. Also, a number of studies have found significant differences between males and females in their causal attributions, with the suggestion that females adopt the more "depressive" pattern.

The present study sought to review the relevant research in these areas in order to develop hypotheses concerning the relationship among attributions, gender and depression. In general, it was predicted that differences in attributional style between males and females account for differences in the incidence of depression.

In addition, careful examination of the results of previous studies suggested that using instruments to assess attribution which present subjects with hypothetical outcomes may weaken their power

to detect a significant difference in attributional style. It was hypothesized that attributions made to a real-life event may more closely reflect differences in the degree of depression than do hypothetical event attributions.

These two major hypotheses were tested in an experiment in which subjects were asked to complete a measure of depression, a scale of attributional style using hypothetical outcomes and a questionnaire concerning attributions made to the outcome of a real-life academic examination. In addition, the usefulness of weighting attributional variables by the importance assigned to the event was investigated. A multiple regression format was used to analyze the data and evaluate the stated hypotheses.

REVIEW OF THE LITERATURE

In their reformulation of the learned helplessness model of depression, Abramson, Seligman and Teasdale (1978) proposed an application of attribution theory to account for several inadequacies in the original model. In general, the original model had proposed that "learning that outcomes are uncontrollable results in three deficits: motivational, cognitive, and emotional" (Abramson, et al., 1978, p. 50). These three areas of deficit were seen to parallel the types of behavioral symptoms often observed in human depression. However, Abramson et al. (1978) deemed it necessary to introduce a causal attributional process into the sequence of cognitive events resulting in helplessness depressions. Specifically, they proposed that a person who perceives a present and past noncontingency between responses and outcomes experiences helplessness. The reformulation "regards the attribution the individual makes for noncontingency between his acts and outcomes in the here and now as a determinant of his subsequent expectations for future noncontingency" (Abramson et al., 1978, p. 50). These attributions can be characterized along three dimensions: stable-unstable, global-specific, and internal-external. According to the reformulation, the relative stability of the attribution influences the chronicity of the expectation of future helplessness. The relative globality influences the extent to which helplessness will be experienced in varied

situations. Finally, the relative internality of the attribution should determine the extent to which self-esteem is lowered by the experience of helplessness.

One of the implications of this hypothesis is that there is an identifiable "depressive attributional style." As stated by Abramson et al. (1978):

Individual differences probably exist in attributional style. Those people who typically tend to attribute failure to global, stable and internal factors should be most prone to general and chronic helplessness depressions with low self-esteem. (p. 68)

In a test of this assertion, Seligman, Abramson, Semmel and von Baeyer (1979) had college student subjects complete the Beck Depression Inventory Short Form (BDI) and the Multiple Affect Adjective Check List (MAACL). Subjects also completed a measure called the Scale of Attributional Style (SAS). This device presented subjects with twelve hypothetical life situations, six with good outcomes and six with bad outcomes. Subjects were asked to write down a major cause for each hypothetical outcome and then asked to rate the internality, stability and globality of each cause on seven-point rating scales. Also requested was a rating of the importance of each event if it were to happen to the subject. This rating was also made on a seven-point scale.

To analyze results, Seligman et al. (1979) computed correlations between BDI and MAACL scores and various scores on the SAS. Results indicated significant positive correlations between BDI and

MAACL scores and ratings of the internality, stability and of causes chosen for bad outcomes. Significant negative correlations were found between BDI scores and ratings of the internality and stability of causes chosen for good outcomes. MAACL scores did not correlate significantly with SAS ratings for causes chosen for good outcomes. These results imply that, relative to nondepressed subjects, depressed subjects attributed bad outcomes to more internal, stable and global causes and good outcomes to more external and unstable causes. These authors also calculated composite attributional scores by summing ratings of internality, stability and globality for good outcomes alone, and then for bad outcomes alone. These composite scores for bad outcomes correlated significantly and positively with BDI scores, while composite scores for good outcomes correlated significantly and negatively with BDI scores. This implies that as the level of depression increased between subjects, the internality, stability and globality or attributions for bad outcomes increases, while the internality, stability and globality of attributions for good outcomes decreases.

In addition, Seligman et al. (1979) felt that it would be informative to compare subjects scoring at the upper and lower extremes on the BDI. Upper quartile subjects (depressed, $BDI \geq 6$) were significantly more internal, stable and global in their attributions for bad outcomes than were lower quartile subjects (nondepressed, $BDI < 1$). Also, upper quartile subjects were more unstable ($p < .017$) and somewhat more external ($p < .19$) than lower quartile subjects

in their attributions for good outcomes.

The results of the Seligman et al. (1979) study suggest the presence of an identifiable depressive attributional style in mild to moderately depressed college students. However, two major areas of concern were not addressed in this study. Both areas have relevance to the investigation of attributional bias in depression. The first of these concerns an hypothesized relationship between the over-representation of females in depressed populations and gender differences in the attribution of causality. Although this issue was tentatively addressed in the Abramson et al. (1978) reformulation, the authors' thinking on this matter has never been publicly developed. Secondly, there are serious issues concerning the validity of the SAS-style questionnaire as a measure of attributional style which need to be considered. One of the chief issues is the hypothetical nature of the responses generated by the SAS. There may be reason to believe that responses to hypothetical outcomes do not accurately reflect a person's actual attributional style, a point to be considered in detail later in this review. These two areas of concern will constitute the main focus of the present study. The remainder of this review will consider the relevant previous studies and develop more specific questions and hypotheses concerning these major issues.

Gender and Depression

Studies by Weissman and Klerman (1977), Winokur (1973), and Winokur and Morrison (1973) have documented a clear difference in

the incidence of depression, with depression being more common among women than men. Radloff (1975) administered an extensive questionnaire to a sample of over 2,500 subjects. This questionnaire included questions concerning depressive symptoms and detailed biographical questions, including ones about possible precipitating factors. In general, results of this study indicated that single marital status and disruption in the relationship to the head of the household interacted with gender to produce a higher incidence of depression among women.

Radloff and Rae (1979) made a more detailed analysis of Radloff's (1975) data in order to determine if the difference in incidence was due to differences in susceptibility or to different patterns of precipitating factors in men and women. They found that most of the simple precipitating factors associated with depression related similarly to the presence of depression in both men and women. However, when these precipitating factors were used as covariates with gender in an analysis of covariance, the results were of interest. No single covariate, or combination of covariates eliminated the gender differences in depression. These results imply that gender differences in the incidence of depression are the result of a greater susceptibility among women, rather than an increased exposure to various precipitating factors. In their discussion of results, Radloff and Rae (1979) suggest that "the cognitive dimension of depression is. . . seen as a learned susceptibility factor (p. 179)."

Gender and Attributional Style

It has frequently been proposed that the learned factor referred to by Radloff and Rae can, at least in part, be observed in differences between males and females in their causal attributional patterns. Dweck and her associates (e.g., Dweck, 1975, 1976; Dweck & Bush, 1976; Dweck & Repucci, 1973) have done extensive research on attributional differences with elementary school students. In one article, Dweck (1976) asserts that the evaluative behavior of elementary school teachers lays the groundwork for later attributional differences. She asserts that boys are criticized more frequently by teachers for negative behavior in the classroom than are girls. However, girls are more frequently criticized by teachers for poor academic performance. Conversely, boys are praised when they show specific academic competence, while girls are praised for good deportment in the classroom. Dweck feels that this differential treatment of boys and girls eventually results in different attributions made for their academic failure and success. She observed that teachers attributed academic failure in boys to lack of effort, while academic failure in girls is attributed more often to lack of ability. To the extent that these early evaluative experiences become increasingly internalized as children proceed through school, they can have a potentially crucial differential effect on the ability of males and females to deal with failure experiences. Specifically, in line with the reformulation of learned helplessness theory, attributions to a lack of ability are potentially more depressogenic than attributions to a lack of effort

because they are generally more stable and global. While effort and ability are both considered to be internal factors, the statement "I failed because I don't have the ability" seems to be much more insidious than "I failed because I didn't try hard enough."

Dweck and Repucci (1973) had two experimenters give academic problems to elementary school students. The "success experimenter" gave solvable problems to the subjects first, followed by the "failure experimenter," who gave unsolvable problems. Then the failure experimenter gave subjects a set of solvable problems. Those children who failed these solvable problems (or who showed a marked decrement in performance) were those who tended to attribute failure to task difficulty or to lack of ability. However, males were more likely to attribute their failures to lack of effort than were females. Also, females in general were more likely to show performance decrements in the face of previous failure. In addition, Dweck (1975) found that attribution retraining could alleviate the poor motivation reactions of children who had experienced failure. Specifically, re-attributing prior failure to a lack of effort resulted in subsequent improvements in performance. It appears that gender differences in attributions have their roots in the early achievement experiences of children and the differential attributions made by evaluative figures.

Additional evidence concerning gender differences in attribution is found in a series of studies involving either self-attribution for performance or observers' attributions for the performance

of others. The self-attribution studies will be considered first.

Crandall, Katkovsky and Preston (1962) found that there were gender differences in subjects' explanations of their own failures. First through third grade female subjects tended to internalize the blame for failure on an intellectual task, while males tended to externalize and project the blame on others.

Nicholls (1975) investigated attributional bias in fourth grade boys and girls. Subjects were given false success or failure feedback on an angle matching task. Attributions for task performance were elicited by means of a movable pie graph which allowed subjects to make relative attributions to task ease (or difficulty), effort, luck or ability. Measurements were made after both practice and test tasks. Results for attributions on the practice task indicated that girls attributed failure to low ability more than they attributed success to high ability, while boys did not show this pattern. No effects for sex-of-subject were found for effort attributions. Boys attributed failure to bad luck more than girls did, and boys, but not girls, showed more bad luck attributions after failure than good luck attributions after success. No gender differences in task difficulty attributions were observed. Nicholls (1975) concludes that boys in general adopt defensive attributions when they fail (attributions to bad luck), while girls adopt self-derogatory attributions when they fail (attributions to lack of ability). Nicholls stated:

One might also express concern over boys' defensive attributional bias. However, even if this defensiveness made for less rather than more positive achievement behavior, its implications would appear to be less serious than the bias found for girls. Girls' bias was evident for the stable personal dimension of ability, while boys' bias occurred only for the external factor of luck. (Nicholls, 1975, p. 388)

Halperin and Abrams (1978) had male and female college students rate the influence that ability, effort, task difficulty, and luck had on mid-term exam performance in an economics course. For successful students (exam grades above the median score) males and females used similar attributions to ability to explain their success. However, for unsuccessful students (exam grades below the median score), males tended to explain their outcomes by attributions to a lack of effort, while females attributed their failures to low ability or bad luck. Also, when making predictions for final exam grades, males attributed low anticipated performance on task difficulty, while females tended to blame low ability for predicted poor performance.

Deaux and Farris (1977) reported similar results. They elicited attributions for successful or unsuccessful anagram performance from male and female college students. Results showed that men attributed their performance to ability more than females did, while females tended to use luck to explain their performance. Also, these differences were stronger in response to failure as opposed to success, and on masculine as opposed to feminine-typed tasks.

Breen, Vulcano and Dyck (1979) reported the results of an experiment in which males and females were exposed to insoluble or soluble anagrams in a helplessness induction procedure. One finding of interest was that females tended to externalize their attributions for success and internalize their attributions for failure. Male subjects did not demonstrate this pattern.

Rosenfield and Stephan (1978) contend that males make more egotistical attributions than females. They also postulated that this difference is mediated by sex differences in the degree of ego-involvement in the task and in how well subjects expected to do on the task. To test these assertions, these authors had male and female college students participate in a geometric design matching task which was presented as either a masculine or a feminine task. False success or failure feedback was given to subjects who then completed an attribution questionnaire. Results indicated that males made more internal attributions for success and more external attributions for failure on the masculine task than did females. However, on the feminine task, females attributed success more to internal factors and failure to external factors than did the males. These results, plus results of a further analysis of covariance, led Rosenfield and Stephan to conclude that sex differences in attribution were mediated primarily by differences between males and females in their respective degrees of ego-involvement in the task. In addition, although the stable-unstable dimension was not of interest to these authors, analysis of reported means shows that

females tended to attribute failure to more stable factors (ability and task difficulty) and success to more unstable factors (effort and luck) than did males. This effect seemed to be more pronounced for failure on the masculine task and for success on the feminine task.

Studies which assess attributions made by observers concerning the performance of others also demonstrate gender differences. Deaux and Emswiller (1974) had male and female subjects evaluate the performance of either a male or female stimulus person who was presented as being moderately successful on either a male or female-related task. Results indicated that, for the male-related task, male success was attributed primarily to skill, while female success was attributed to chance. Also, there were no significant differences between attributions made by female and male subjects. On the female-related task, ratings of skill versus luck were equivalent for male and female stimulus persons. Results also confirmed the tendency for female subjects to anticipate poorer performance than male subjects should they attempt the sample tasks themselves.

Feldman-Summers and Kiesler (1974) had male and female subjects rate the causes for identical success or failure of male or female stimulus figures. Results indicated that subjects attributed greater motivation to successful females than to successful males. In addition, when the stimulus person was presented as a successful female physician, male subjects attributed her success more to the

ease of the task than to other factors. Female subjects perceived her as having greater motivation and a harder task than a similarly successful male physician. These results imply that stable attributions such as high ability are used to explain success in males, while unstable factors such as motivation or effort are used to explain female success in identical tasks. This implies that females are viewed as having to try harder to succeed in order to overcome the handicap of lower ability.

Feather and Simon (1975) had observer subjects rate the causal factors responsible for the success or failure of male and female actors presented as members of sex-linked occupations. Results indicated that subjects in general tended to view ability as a more important cause of male success than of female success. Conversely, lack of ability was viewed as a more important cause of female failure than of male failure. In addition, with regard to the sex linkage of occupations, Feather and Simon (1975) stated:

When the female character succeeded at medicine, subjects were more likely to explain her success in terms of an easy course of studies, whereas an easy task was seen as a less important cause when the male character succeeded at medicine. (p. 26)

These results again imply that people view female success as caused by external and unstable factors, while female failure is caused by internal and stable factors.

In a related area, literature on the "self-serving biases" in causal attribution suggests that normal subjects adopt causal attributions which reflect a motivational tendency toward self-enhancement

following success and toward self-protection following failure (e.g., Luginbuhl, Crowe, & Kahan, 1975; Miller, 1976; Sobel, 1974; Stevens & Jones, 1976). In effect, these studies suggest that normal subjects protect their self-esteem by externalizing failure and enhance their self-esteem by internalizing success. In a comprehensive review of these and other attributional studies, Zuckerman (1979) concluded that gender differences are also found in self-serving biases. He states that "Overall, it appears that females tend to make less self-serving attributions, and that this difference is either greater for masculine tasks or obtained only for masculine tasks (p. 264)." Seen in these terms, the depressive attributional style proposed by Seligman et al. (1979) represents a relative lack of self-serving attributional bias in depressed subjects.

In a test of this assertion, Kuiper (1978) separated female college students into depressed and nondepressed groups on the basis of their scores on the Costello-Comfrey Depression Scale. He then manipulated reinforcement levels for subjects as they participated in a bogus word association task. These levels were manipulated so that subjects would clearly perceive their performance as failure (20% "correct"). A subsequent check revealed that this manipulation was effective. An attribution measure was then administered to assess subjects' judgments concerning the contribution of ability, task difficulty, effort or luck to their experienced outcomes. Kuiper found that depressives who failed tended to make internal attributions, while failing nondepressives made external attributions.

However, the prediction that depressives would make more stable attributions than nondepressives for failure was not upheld.

In light of Kuiper's (1978) negative findings concerning the stability of attributions made by depressed females for failure, and the positive finding of Rosenfield and Stephan (1978) that females tended to attribute failure to more stable factors, an important theoretical point needs to be considered. Most of the studies reviewed so far have used the ability, effort, task difficulty and luck distinctions to define the dimensions of causal attributions. These distinctions have customarily been used to classify causal factors along two dimensions: internal-external and stable-unstable. The resulting 2 by 2 matrix classifies ability as an internal and stable factor, effort as internal and unstable, task difficulty as external and stable and luck as external and unstable. However, as pointed out by Seligman et al. (1978, Note 4), this scheme does not hold up. Actually, ability, effort, task difficulty and luck do not map directly onto orthogonal combinations of internality and stability. For example, effort is not necessarily an unstable factor. An internal and stable attribution may be made to high or low ability, but may also be made to chronic laziness or consistent hard work. As pointed out by Zuckerman (1979), task difficulty may also be seen as an unstable factor by subjects with no prior experience with an experimental task. For these reasons, research using this 2 by 2 matrix to classify attributions cannot lead to strong inferences about the actual stability of effort and task difficulty

attributions. Because stability (and also globality) dimensions of attribution are of central importance in the depressive attributional style hypothesis, the present study will employ instruments which assess subject's specific judgments of internality, stability and globality of chosen attributions. This strategy is preferable to trying to draw inferences about attribution dimensions from the customary four-dimension list. It is hoped that this strategy might help clear up some of the conflicting results already mentioned.

It is now possible to more explicitly state the hypotheses of the first segment of the present study. College student subjects were asked to complete the Scale of Attributional Style and the Beck Depression Inventory (Long Form). Two multiple regression analyses were performed on these data. In the first analysis, gender and the various attributional ratings from the SAS served as the independent predictor variables of the level of depression as measured by the BDI. It was predicted that gender is a meaningful predictor of level of depression. More specifically, it was predicted that the multiple regression coefficient associated with the gender variable is significantly greater than zero, and that this variable accounts for a significant proportion of the variance in BDI scores. It was then determined which attributional variables, when added to the prediction equation along with gender, most meaningfully account for the variance in BDI scores. It was predicted that the coefficients associated with the internality, stability and globality of good outcomes are significantly different from zero in the negative

direction, while the coefficients associated with the internality, stability and globality of bad outcomes are significantly different from zero in the positive direction. These variables were further investigated in a second multiple regression equation in which gender was the dependent variable. It was expected that the coefficients associated with internality, stability and globality of good outcomes are significantly negative while the coefficients for internality, stability and globality of bad outcomes are significantly positive, given that female gender is arbitrarily assigned a higher value as a variable than male gender. In other words, females should demonstrate a greater tendency than males toward the depressive attributional style.

Hypothetical Versus Real Attributions

The second major focus of the present investigation concerns the nature of the attributional process itself. Several studies (e.g., Blaney, Behar & Head, 1980; Kuiper, 1978; Rizley, 1978; Seligman et al., 1979) have shown that subjects do indeed endorse various causal attributions or dimensions of attribution when asked to do so. However, most of the studies which document differences in attribution between depressives and nondepressives for their failure or success have sought attributions for hypothetical events of varying subjective importance or for events involving false or manipulated performance feedback. As Gong-Guy and Hammen (1980) comment, "Only Barthe and Hammen (in press) have reported an attributional analysis of relatively depressed and nondepressed students'

responses to actual examination success and failure (p. 662)."

Obviously, there is a need for more studies which seek to investigate attributional patterns when causal explanations are sought for real-life events. Subjects in the present study will be asked to complete an attributional questionnaire closely following the form of the hypothetical SAS after discovering their grades on their first examination in introductory psychology.

This strategy has the advantage of allowing comparisons to be made between attributions made to hypothetical and to real-life events. It is possible that there are significant differences between these two types of attribution. The literature concerning this issue is relatively sparse, but there may be reason to suspect that attributions for real events do not reflect the same attributional patterns reported by Seligman et al. (1979) on the hypothetical SAS. Gong-Guy and Hammen (1980) discuss a study reported by Hammen, Krantz and Cochran (1978) in which the authors sought attributions for a variety of real events such as losses and failures. They report that depressed mood is often associated with feelings of uncontrollability, globality and external locus of control. This finding runs counter to the depressive attributional style hypothesis that states that depressives distort attributions for failure toward an internal locus.]

Gong-Guy and Hammen (1980) had depressed and nondepressed outpatients complete a BDI, a Life Events Inventory and an attributional questionnaire concerned with the five most stressful events

mentioned in the Life Events Inventory. This questionnaire sought information about the internality, stability and globality of causes mentioned, as well as their controllability, intentionality and expectancy. These investigators found that depressed subjects attributed the cause of the most upsetting event to internal, stable and global factors. However, no general differences between depressed and nondepressed subjects were found when all five events were compared. In addition, they found that subjects' questionnaire ratings of causal dimensions showed a reasonable correspondence with experimenter-rated causal explanations for stressful events elicited in the subjects' intake interviews. These results suggest that the patterns of attributions may be validly measured through questionnaires. However, the patterns may be quite variable among depressed subjects depending on the population, the nature of events under study and subjects' cognitions about the consequences of events.

In an earlier study (Yount, Note 1), the present author re-examined the results of the Seligman et al. (1979) study. To do so, an overall attributional style score was computed for subjects' SAS ratings. This score was computed as the ratio of summed ratings (Internality + Stability + Globality) for bad outcomes over composite ratings for good outcomes. Computed in this way, a score of 1.00 represents equal ratings of causes chosen for good and bad outcomes. Scores greater than 1.00 represent the extent of attributional distortion toward internal, stable and global causes for bad outcomes. When this computation was applied to means reported by Seligman et

al. (1979), the results were quite interesting. The most depressed subjects (upper quartile of the sample, BDI Short Form scores ≥ 6) showed an overall attributional style score of 0.98. The least depressed subjects (lower quartile of the sample, BDI scores ≤ 1) showed an overall score of 0.78. It is clear that the two groups differ in the extent of attributional bias shown. However, it is also clear that even the most depressed subjects in the sample do not exhibit a particularly insidious attributional bias toward internal, stable and global attributions for bad outcomes. One would expect this group to show overall scores significantly greater than 1.00. This analysis implies that the truly distorted attributions for bad outcomes postulated as the depressive attributional style are not as salient as expected. It is possible that this lack of a convincing demonstration of real depressive attributional style is a function of the hypothetical nature of the outcomes presented on the SAS. It might be hypothesized that the depressive attributional style might be more identifiable when attributions are sought for real-life events. Certainly, real events have a much greater potential for ego-involvement than hypothetical events, and subjects' affective reactions are apt to be stronger.

It is also possible that a different pattern of the three attributional dimensions is more closely associated with depression, as was found in the Hammen et al. (1978) study discussed earlier. Also, the literature on defensive or self-serving biases in attribution does not always demonstrate consistent patterns of defensive

distortion. Bradley (1978) and Zuckerman (1979) both point out that subjects may engage in counter-defensive attributions which do not fit the hypothesized self-serving pattern. This tendency appears to be especially salient in experiments involving interpersonal influence, or the subjects' anticipation of future evaluation. In these situations, nondepressed subjects may still internalize blame for negative events in order to avoid hurting another subject's feelings or to attempt to influence future evaluations. These points serve to complicate the potential patterns of attribution that may be demonstrated by subjects. These difficulties, along with possible real versus hypothetical differences make it imperative to attempt to discover what pattern(s) are actually most closely associated with moderate depression.

Another possible complication is introduced by Blaney, Behar and Head (1980). These authors administered the BDI (Short or Long Form), Krantz and Hammen's Cognitive Bias Questionnaire and Seligman's SAS to two different samples of college students. As was mentioned previously in this review, the perceived importance of the task, or the extent of ego-involvement may mediate the role of causal attributions. To investigate these possible effects, Blaney et al. (1980) multiplied each attributional rating on the SAS by the corresponding rating of the importance of each hypothetical event. This manipulation has the effect of magnifying the presence of attributional bias if it exists, based on the extent of ego-involvement in the event. Blaney et al. (1980) report that the use of such weighted

scores does not increase the strength of association between depression and attribution scores. Despite these unsupportive results, the effect of importance weighting of scores bears further investigation. The question of whether such weighting makes the hypothetical events of the SAS potentially more "realistic" can also be addressed through comparison of real event attributions and weighted SAS attributions.

In a narrow sense, the second focus of the present investigation can be construed as a test of the concurrent and construct validity of Seligman's SAS. Through comparison with attributions made by subjects for a real success or failure, the claim that the SAS reflects a real depressive attributional style can be more systematically evaluated. In a broader sense, the possibility of a disparity between hypothetical and real attributions will be investigated, and its relevance for cognitive theories of depression can be evaluated. If, as is contended by Hammen and Krantz (1979), the moderating effect of attributional variables is more complex than envisioned by Seligman et al. (1979), this complexity can be further understood through the results of the present study.

To test these assertions, subjects in the present study were asked to make causal attributions for their success or failure on their first psychology examination. If subjects rated their performance as generally poor, their real attributions were compared to hypothetical SAS attributions for bad outcomes. Correspondingly,

subjects who rated their exam performance as generally good were compared on the basis of their hypothetical SAS attributions for good outcomes. A multiple regression format was again employed. It was expected that attributions for real events more closely reflect the depressive attributional style than do attributions for hypothetical events. More explicitly, attributional variables served as the independent predictor variables in a multiple regression equation with BDI scores as the dependent variable. It was predicted that multiple regression coefficients associated with attributions for real outcomes account for significantly more variance in BDI scores than do coefficients associated with attributions for hypothetical events.

In addition, the relative impact of weighting the attributional ratings from the SAS as a function of the importance ratings given each outcome was assessed. This was done by using weighted attribution ratings as independent variables in the multiple regression equations generated in the gender analysis as well as the real versus hypothetical analysis. It was predicted that the use of the weighted variables adds significantly to the predictive value of using such variables to predict BDI scores. Specifically, it was predicted that coefficients associated with weighted variables are significantly larger in the expected directions than coefficients associated with unweighted variables. It should be noted that there should be substantial variance in importance ratings within and between subjects in both segments of the present study in order for weighting

attribution variables to contribute substantially more to the predictive value of such variables.

METHOD

Subjects

Subjects were drawn from a pool of undergraduate college students enrolled in introductory psychology courses at Loyola University of Chicago. The total subject pool consisted of students from three separate semesters of the course. During class time, approximately four weeks into the semester, students completed a battery of questionnaires which included the Scale of Attributional Style (SAS) and the Beck Depression Inventory (Long Form). Within a maximum of five days after completing the battery, subjects received a report of their grades on their first examination. At this time, they were asked to complete a separate questionnaire concerning their attributions for their exam performance. This questionnaire was called the SAS-2, and it is described below.

Subjects were selected for the present study from the general subject pool through the use of a stratified sampling procedure. The relative proportions of males and females present in the general subject pool at three levels of BDI score (BDI=0-5, BDI=6-9 and BDI=10 or above) were first determined. Subjects were then drawn at random to correspond to the proportions present at the three levels. Only subjects with complete SAS responses were included. This procedure yielded a total of 266 subjects, including 89 males and

177 females. Data from all 266 subjects were used in the analysis of gender effects. A breakdown of the number and nature of subjects present in this sample is presented in Table 1.

Of this total of 266 subjects, 165 subjects from only two of the semesters had complete data on the SAS-2 questionnaire. Of these 165 subjects, 54 were males and 111 were females. Only data from these 165 subjects were used in the hypothetical versus real attribution analysis.

Instrumentation

The Scale of Attributional Style was used to assess hypothetical attributional style. This device was introduced by Seligman et al. (1979). It consists of twelve hypothetical situations evenly divided into six situations with good outcomes and six situations with bad outcomes. For each situation, the subject is asked to write down a major cause for the outcome described. The subject is then asked to rate each cause on three separate seven-point scales which assess, respectively, the internality, stability, and globality of the chosen cause. Higher scale scores indicate ratings of greater internality, stability, and globality. In addition, the subject is asked to rate each situation on a seven-point scale according to how important the given situation would be if it were to actually happen. Higher importance ratings correspond to greater importance being given to that particular event. Copies of the SAS, including instructions given to subjects, are included in Appendix A.

Table 1
 Breakdown of Total Subjects According
 to BDI Score Levels and Gender

<u>BDI Scores</u>	<u>Males</u>		<u>Females</u>		<u>Total Per Level</u>
	<u>N</u>	<u>% Within Level</u>	<u>N</u>	<u>% Within Level</u>	
BDI = 0-5	35	39.8	53	60.2	88
BDI = 6-9	25	38.5	40	61.5	65
BDI = 10+	29	25.7	84	74.3	113
TOTALS	89	33.5	177	66.5	266

Psychometric data concerning the SAS form used are discussed in Note 1 of Seligman et al. (1979). Reliability coefficient alphas for the various subscales are reported as follows: bad outcome internality = .44, good outcome internality = .39, bad outcome stability = .63, good outcome stability = .58, bad outcome globality = .64, and good outcome globality = .58. While these reliabilities might be considered low, Seligman et al. report robust results for differences in attributional style between depressed and nondepressed college students. In addition, these authors report significant ($p < .001$) correlations with the Beck Depression Inventory, Short Form as follows: bad outcome internality: $r = .41$; bad outcome globality: $r = .35$; bad outcome stability: $r = .34$. Also reported are: good outcome internality: $r = .22$ ($p < .01$); good outcome stability: $r = -.28$ ($p < .002$), and good outcome globality: $r = -.04$ (non-significant).

Also used was an adaptation of the SAS called here the SAS-2. This device was used in order to gather attribution information concerning subjects' causal explanations for their real exam performance. Two questions were asked concerning 1) the letter grade received by the subject and 2) his or her subjective evaluation of the grade received in terms of his or her personal standards. This latter question asked subjects to rate their evaluation on a seven-point scale from "Excellent" (rating = 7) to "Terrible" (rating = 1). Subjects were then asked to write down a major cause for their performance, followed by ratings of the internality, stability and

globality of the chosen cause. These were seven-point scales which correspond exactly to the form of the SAS. Subjects were then asked to rate the importance of their specific exam performance and the importance of their general academic performance. Again, higher ratings on the SAS-2 correspond to greater internality, stability, globality, and importance ratings. A copy of the SAS-2 is contained in Appendix A.

RESULTS

Gender and Attributional Style

In order to evaluate the stated hypotheses concerning gender and attributional style, a standard multiple regression analysis was performed. In this analysis, BDI scores served as the dependent variable, and gender and the various attributional dimensions from the SAS scores served as the independent predictor variables. Results of this analysis are presented in Tables 2 and 3. Table 2 presents the results of the overall test of goodness of fit of the multiple regression equation. This test evaluates the null hypothesis that the multiple correlation of gender and SAS variables with BDI scores is zero. Results indicate that the null hypothesis is rejected, $F(7,258) = 3.04$, $p < .01$, implying that the overall multiple correlation is significantly different from zero. This overall multiple correlation coefficient is equal to 0.276, which, when squared, implies that the combination of gender and SAS variables accounts for 7.6% of the total variance in BDI scores.

To evaluate the relative contribution of individual predictor variables to the variance explained by the total equation, a series of F tests were then performed. Results of these tests are presented in Table 3. Because the contribution of the gender variable is of primary interest, initial attention will be focused on the F test

Table 2

Analysis of Variance Summary for Overall Multiple Regression
Equation with BDI Scores Dependent and Unweighted
Attributional Variables and Gender as Predictors

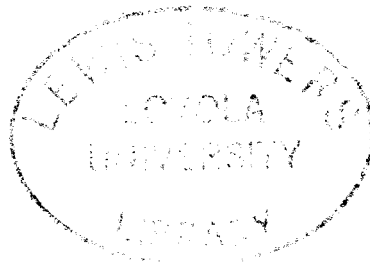
<u>Source</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>df</u>	<u>F</u>	<u>p</u>
Multiple Regression Equation	1032.49	147.50	7	3.04	<.01
Residual	12524.86	48.55	258		

Overall Multiple R = 0.276. R Square = 0.076

Table 3

Summary of the Multiple Regression Analysis of Gender and Attributional Variables
with BDI Scores Dependent (Unweighted Attribution Variables)

<u>Variable</u>	<u>Multiple R</u>	<u>R Squared</u>	<u>F</u> (df = 1,258)	<u>p</u>	<u>Simple R</u>
Positive Outcome Stability	0.138	0.019	4.34	<.05	-0.14
Negative Outcome Globality	0.208	0.043	9.23	<.01	0.12
Negative Outcome Stability	0.244	0.060	4.61	<.05	-0.08
Gender	0.272	0.074	3.53	<.10	0.11
Normative Outcome Internality	0.275	0.076	0.47	N.S.	0.07
Positive Outcome Internality	0.276	0.076	0.14	N.S.	-0.07
Positive Outcome Globality	0.276	0.076	0.06	N.S.	-0.03



for this variable. Results for the gender variable indicate that $F(1,258) = 3.53, p < .10$. This result approaches, but does not reach, statistical significance. From Table 3, it can be observed that the increment in the multiple R squared associated with the gender variable is 0.014, implying that gender accounts for only 1.4% of the total variance in BDI scores when the contribution of SAS variables is accounted for. In addition, an examination of means reported in Table 4 shows that the mean BDI score for males is 7.99, while for females it is 9.63. Standard t-test results show that this difference is significant, $t_{264} = 1.77, p < .05$, one tailed. These results confirm the hypothesis that females are generally more depressed. However, this difference is apparently not large enough to make gender a significant predictor of overall variance in BDI scores.

Another hypothesis tested concerns the usefulness of using weighted attribution variables as predictors of BDI scores along with the gender variable. In the present study, weighted attribution variables were calculated by multiplying ratings of the internality, stability and globality of chosen causes for each SAS outcome by the corresponding rating of the importance of each outcome and then summing these products across the six positive and the six negative outcome situations. Descriptive statistics for the resultant weighted variables for males and females are presented in Table 4.

Table 4
 Summary Statistics for Males vs. Females
 on BDI and Attributional (SAS) Scores

<u>Variable</u>	Males (N=89)		Females (N=177)	
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>
BDI	7.99	7.62	9.63	6.86
<u>UNWEIGHTED VARIABLES</u>				
<u>Positive Outcomes</u>				
Internality	27.24	4.32	26.81	3.98
Stability	32.21	4.52	33.11	5.09
Globality	29.67	4.54	30.37	5.40
<u>Negative Outcomes</u>				
Internality	25.77	6.75	26.59	5.29
Stability	27.98	5.63	27.66	5.68
Globality	25.16	6.34	24.99	6.36
<u>WEIGHTED VARIABLES</u>				
<u>Positive Outcomes</u>				
Internality	147.11	31.94	152.10	31.97
Stability	177.48	40.87	189.41	39.65
Globality	164.38	39.72	176.24	40.77
<u>Negative Outcomes</u>				
Internality	130.91	45.39	143.18	36.69
Stability	143.24	42.71	147.88	39.90
Globality	128.81	44.43	134.55	43.50

To investigate the impact of using such weighted variables, a second multiple regression equation analysis was performed, with gender and weighted SAS variables used as independent predictors with BDI scores dependent. Table 5 presents the summary of the test for goodness of fit for this regression equation, $F(6,259) = 2.93$, $p < .01$, implying that the overall multiple correlation with weighted SAS variables is also significantly different from zero. This multiple regression equation generated an overall multiple coefficient of 0.252, which implies that the use of weighted variables along with gender accounts for 6.4% of the total variance in BDI scores. Since the use of unweighted variables accounts for 7.6% of the variance in BDI scores, it can be concluded that the use of weighted variables does not add significantly to the predictive power of attribution variables.

Another hypothesis to be evaluated concerns the attribution variables which significantly account for variance in BDI scores. Results for unweighted variables are presented in Table 3. In addition to gender, three attribution variables have multiple regression coefficients significantly different from zero: Positive outcome stability, $F(1,258) = 4.34$, $p < .05$, Negative outcome globality, $F(1,258) = 9.23$, $p < .01$ and Negative outcome stability, $F(1,258) = 4.61$, $p < .05$. Results of F tests for other attribution variables are not significant. The signs and magnitudes of the simple regression coefficients associated with the significant variables are as follows: Positive outcome stability simple $r = -0.14$, Negative

Table 5

Analysis of Variance Summary for Overall Multiple Regression
Equation with BDI Scores Dependent, and Weighted
Attributional Variables and Gender as Predictors

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Multiple Regression Equation	863.31	6	143.88	2.93	<.01
Residual	12694.03	259	49.01		

outcome globality simple $r = +0.12$ and Negative outcome stability simple $r = -0.08$. These results imply that Positive outcome stability and Negative outcome stability ratings decrease as BDI scores increase. Negative outcome globality ratings increase as BDI scores increase. These results confirm the hypotheses of the present study for Positive outcome stability and Negative outcome globality because the relationship with BDI scores is significant and in the expected direction. Results for Negative outcome stability ratings are in the opposite direction than that hypothesized.

Results of a similar multiple regression analysis using weighted SAS variables are summarized in Table 6. With weighted variables, only the relationship between Negative outcome globality and BDI scores is significant and in the expected direction, $F(1, 258) = 8.70$, $p < .01$, simple $r = +0.13$.

In order to further probe the relationship between gender and attributional variables, further multiple regression analyses were performed with gender as the dependent variable and both weighted and unweighted SAS variables as independent predictors. Results of the analysis for unweighted variables are summarized in Table 7. Results indicate that it cannot be stated that there is a significant non-zero overall multiple regression coefficient, $F(6, 259) = 1.45$, n.s. Results of a similar analysis using weighted SAS variables as independent predictors are summarized in Tables 8 and 9. These results imply that the overall multiple regression coefficient of

Table 6

Summary of Multiple Regression Analysis of Gender
and Attributional Variables as Predictors with BDI
Scores Dependent (Weighted Attribution Variables)

<u>Variable</u>	<u>Multiple R</u>	<u>R Squared</u>	<u>F</u> (df=1,258)	<u>p</u>	<u>Simple R</u>
Negative Outcome Globality	0.126	0.016	8.70	<.01	0.13
Negative Outcome Stability	0.195	0.038	4.76	<.05	0.00
Gender	0.220	0.049	2.90	<.10	0.11
Positive Outcome Stability	0.237	0.056	2.17	N.S.	-0.05
Negative Outcome Internality	0.248	0.062	1.23	N.S.	0.11
Positive Outcome Internality	0.252	0.064	0.54	N.S.	-0.01

Table 7

Analysis of Variance Summary for Overall Multiple Regression
 Analysis with Gender Dependent and Attributional Variables
 as Predictors (Unweighted Attribution Variables)

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Multiple Regression Equation	1.927	6	0.321	1.45	(N.S.)
Residual	57.295	259	0.221		

Table 8

Analysis of Variance Summary for Overall Multiple Regression

Analysis with Gender Dependent and Weighted

Attributional Variables as Predictors

<u>Source</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>p</u>
Multiple Regression Equation	2.814	6	0.469	2.15	<.05
Residual	56.408	259	0.218		

Table 9
 Summary of Multiple Regression Analysis of
 Weighted Attributional Variables with Gender Dependent

<u>Variable</u>	<u>Multiple R</u>	<u>R Squared</u>	$\frac{F}{(df=1,259)}$	<u>p</u>	<u>Simple R</u>
Negative Outcome Internality	0.144	0.021	6.45	<.05	0.144
Positive Outcome Globality	0.184	0.034	1.09	N.S.	0.138
Negative Outcome Stability	0.197	0.039	0.96	N.S.	0.054
Positive Outcome Stability	0.206	0.042	1.70	N.S.	0.140
Positive Outcome Internality	0.216	0.047	1.31	N.S.	0.074
Negative Outcome Globality	0.218	0.048	0.24	N.S.	0.062

0.218 is significantly different from zero, and accounts for 4.8% of the total variance in gender. When the impact of the individual weighted SAS predictor variables is assessed (Table 9), only Negative outcome internality, $F(1,259) = 6.45$, $p < .05$, simple $r = +0.14$, proves to be significantly related to gender. Because female gender was arbitrarily assigned a higher variable value than male gender, this result implies that weighted Negative outcome internality ratings are higher for females than for males. This relationship is in the expected direction. All other weighted and unweighted SAS variables cannot be said to be significantly related to gender.

To summarize these rather complicated and varied results, it can be said that the general hypothesis concerning the relation between gender and depression is supported only by statistical trends. The use of weighted SAS variables does not appear to add to the predictive value of such variables. The only unweighted SAS variables which relate significantly to depression in the expected direction are Positive outcome stability and Negative outcome globality, while Negative outcome stability relates to depression in the opposite direction than was expected. The only weighted SAS variable significantly related to depression in the expected direction is Negative outcome globality. The only SAS variable which relates significantly to gender in the expected direction is weighted Negative outcome internality.

Real Versus Hypothetical Attributions

As mentioned previously, a subset of 165 out of the 266 total

subjects was used to analyze possible differences between real and hypothetical outcome attributions. Subjects were assigned to either a positive outcome or a negative outcome group based on their SAS-2 responses concerning their subjective evaluation of their exam performance. Subjects evaluating their exam performance as "Terrible" to "Poor" (Ratings = 1 to 3, respectively) were assigned to the negative outcome group. Their ratings of internality, stability and globality of causes chosen for exam performance were designated as attribution ratings for a negative real outcome in order to be compared to their hypothetical outcome ratings for negative outcomes. Subjects evaluating their exam performance as "Fair" to "Excellent" (Ratings = 4 to 7, respectively) were designated as experiencing a positive outcome, and SAS-2 ratings were only compared with SAS ratings of causes chosen for hypothetical positive outcomes. Summary statistics for these positive and negative groups are presented in Table 10.

In order to analyze possible differences between hypothetical and real outcome attributions, a series of hierarchical multiple regression equations were generated. This type of multiple regression analysis differs from the type used in the first section of the present study in that variables are now added into the equations in a specified order. This strategy allows F tests to be performed to determine if either of the hypothetical or real attribution variable groups (internality+stability+globality ratings) contributes significantly more to the explained variance in BDI scores when added last

Table 10

Summary Statistics for Real and Hypothetical Attribution Variables
for Subjects Experiencing Positive or Negative Exam Outcomes

	EXAM			
	<u>Outcome</u>			
	<u>Positive (N=96)</u>		<u>Negative (N=69)</u>	
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>
Subjective Evaluation	5.04	1.07	2.04	0.92
<hr/>				
<u>Hypothetical</u> <u>Attributions (SAS)</u>				
Internality	4.54	0.60	4.43	1.02
Stability	5.59	0.69	4.46	1.07
Globality	5.19	0.77	4.03	1.29
<u>Real Outcome</u> <u>Attributions (SAS-2)</u>				
Internality	5.71	1.35	5.61	1.65
Stability	5.69	1.33	4.75	1.98
Globality	4.53	1.89	3.77	1.78

to the equation. It should be noted that since a subject's subjective evaluation of his or her exam performance may be confounded by the presence or absence of depression, the subjective evaluation variable is allowed to enter the multiple regression equation first. This strategy in effect allows the proportion of explained variance in BDI scores attributable to this confounded variable to be removed from the consideration of the relative explanatory power of hypothetical and real attribution variables.

Results of the F tests applied to the proportions of explained variance attributable to hypothetical of real outcome attributions are summarized in Table 11. As can be observed, none of these F tests reaches significance. These results imply that neither real nor hypothetical outcome attributions add significantly more to the explained variance than the other when added last to the hierarchical equation. Thus, the hypothesis concerning the supposed predominance of real outcome attributions in accounting for level of depression was not confirmed. This effect is most likely the result of the relatively weak predictive value of all attribution variables, since the multiple Regression coefficient R equals only 0.27 for negative outcome subjects and only 0.26 for the positive outcome group. This means that only 7.1% of the variance in BDI scores is explained by all the variables considered. Inferences concerning the relative contribution of variable subsets to this relatively small proportion of explained variance must, of necessity, be quite tentative.

Table 11

Summary of F Tests When Hypothetical or Real Attribution
 Variables Are Added Last In a Hierarchical Multiple
 Regression Analysis (N = 165) (BDI Scores Dependent)

Negative Exam Outcome

<u>Variable</u>	Total R <u>Squared Change</u>	(df=3,157) <u>F</u>	<u>p</u>
Subjective Evaluation	.022	---	*
Real Attributions	.011	0.67	N.S.
Hypothetical Attributions	.035	2.00	N.S.
Multiple R = 0.27 $R^2 = 0.071$			

Positive Exam Outcome

<u>Variable</u>	Total R <u>Squared Change</u>	(df=3,157) <u>F</u>	<u>p</u>
Subjective Evaluation	.022	--	--
Real Attributions	.019	0.67	N.S.
Hypothetical Attributions	.027	1.78	N.S.
Multiple R = 0.26 $R^2 = 0.071$			

*Note: See text for explanation of F-test procedures

Also evaluated were hypotheses concerning the effects of weighting real outcome attribution variables by multiplying attribution ratings by the importance ratings elicited by the SAS-2. However, there was very little variance in importance ratings across subjects. For positive outcome subjects, the mean importance rating for exam performance was 6.33 (out of a possible 7 as "Extremely Important"), with variance equal to 0.58. For negative outcome subjects, the mean was also 6.33, with variance of 1.37. Since the variance of real outcome importance ratings is so small, the effects of weighting real outcome attribution variables are not likely to produce significant differences from the use of unweighted variables. For this reason, the hypothesis that weighting real outcome attribution variables might increase their explanatory power was not confirmed.

DISCUSSION

The basic premise surrounding the hypotheses generated in the first major segment of this study is that gender differences in the incidence and extent of depression can be accounted for by differences between males and females in their causal attributions. Although results do indicate a significant difference in depression scores between males and females in the expected direction, the basic hypothesis is supported only by statistical trends and mixed results. In general, significant differences in attributional style were not found between males and females, except in a few rather specific cases. Indeed, the combination of attribution variables and the gender variable used as predictors of BDI scores only accounts for 7.6% of the total variance in BDI scores. It is obvious that factors not measured in the present study are responsible for a large portion of the variance in depression scores between subjects. It must also be concluded that, at least for the present sample, differences in causal attribution do not strongly account for differences in the degree of depression.

However, in the context of these generally weak relationships between gender, attributional style and depression, some relatively minor trends found in the data may provide footholds for speculation and further inquiry. For example, in the overall regression equation with BDI scores dependent, three unweighted SAS attribution variables

account for small but statistically significant portions of total BDI variance. Both positive outcome stability and negative outcome stability ratings correlate significantly with BDI scores in the negative direction, implying that such ratings decrease as BDI scores increase. In terms of the actual wording of the SAS stability questions, this result means that the more depressed subjects believed that the causes chosen for both positive and negative outcomes would, relatively, not influence the outcome of similar situations. Seligman's reformulation of learned helplessness predicts that the more depressed subjects tend to view the causes of positive outcomes as unstable, which translates into an expectation that the causes of positive outcomes will not operate in similar situations in the future. The results of the present study tend to confirm this assertion.

However, Seligman's theory does not predict that the more depressed subjects will also rate the causes of negative outcomes as relatively unstable. According to the reformulation, the more depressed subjects should believe that the causes of bad outcomes will also influence the bad outcomes of similar situations in the future. The depressed subjects in the present study appear to believe more strongly than the nondepressed subjects that causes chosen for bad outcomes are not as likely to operate in the future, a result which conflicts with the reformulation.

There are several possible interpretations of this result. It is possible that the general belief in the instability of causes

represents a more general pessimism on the part of depressed subjects. However, this pessimism may not represent the simple expectation that future events will have bad outcomes. Rather, this pessimism may be of a more specific and subtle type. It must be remembered that the context of subjects' attribution ratings pertains to causes for certain outcomes. Seen in this way, the instability of causes for positive or negative outcomes may represent the belief that each new situation is unique, and that each new situation has its own unique pattern of causes. It is as if the depressed subject is saying, "I can't be sure that any causal explanation of my present outcomes will apply in the future." This posture implies that future events are unpredictable. Seen in this way, the depressive subject is in a chronic state of doubt about the outcome of future events. He or she shys away from making any sort of prediction because the causes of past events, either positive or negative, are seen as unstable. It is true that this doubt might be transformed into the hope that causes for negative events will not operate in the future. However, this rather tentative hopefulness occurs along with the belief that causes for past positive events will not operate in the future either. The distinction here is between a pessimism of causes as opposed to a pessimism of events.

This distinction may be extended as a possible explanation of the difference in the nature of the pessimism expressed by the more seriously depressed person as opposed to that expressed by the person who is only mildly depressed. It seems likely that the seriously

depressed person is more pessimistic about events. He or she expects things to turn out badly in the future. The less seriously depressed person, on the other hand, may have a chronic pessimism about causes. He or she may not feel that the future is necessarily bleak, but merely that the future is unpredictable. Positive events might take place, but the causes for past positive events may not apply. In clinical training, the present author has encountered a number of mildly depressed older adolescents. These people often communicate the attitude that the world is a generally uncertain place. They find it difficult to make positive or negative statements about specific events in the future because they are not sure that the causes of past good or bad outcomes will again operate. They appear to lack a stable basis for prediction. The subjects in the present study seem to exhibit a tendency toward this same pessimism of causes.

It may be possible to reconcile this concept with some of the more basic ideas proposed by Seligman's reformulation. In the Abramson et al. (1978) article, a causal sequence leading to the symptoms of helplessness depressions is proposed. In this sequence, people perceive a noncontingency between responses and outcomes in the present and past, and make attributions for this noncontingency. These attributions, in turn, lead to the expectation of future noncontingency. This concept of the expectation of future noncontingency is quite similar to what is being called here the pessimism of causes. The lack of any predictable relationship between responses and

outcomes in the future can take place in the context of unstable causes. When the person is uncertain about the causes of past and present outcomes, he or she cannot be sure that certain responses will be reliably followed by certain outcomes in the future. It is, of course, possible that this uncertainty is greater when the person assumes that there are external causes than it would be if internal causes are blamed. However, even internal attributions for outcomes can contribute to uncertainty about the future if these attributions are also seen as unstable. It is also still possible that internal and stable attributions for past negative outcomes will lead to the expectation of future negative outcomes. However, it is proposed that this latter attributional pattern is more characteristic of the pessimism of events associated with more severe depression. The pessimism of causes may be associated more with moderate depression. It is proposed that moderate depression may be associated with a greater variety of attributional patterns than is proposed by Seligman's reformulation. Given this new point of view, the instability of causes becomes an important factor in producing mild depression, regardless of the internal-external dimension or the positive or negative nature of the experienced outcome.

This speculation is supported by the discussion presented by Gong-Guy and Hammen (1980). They state:

. . . it is time for more differentiated and elaborated models of depression and cognition. The present study, as well as the recent ones noted, suggests that different patterns of attributions may be associated with depression, depending on the population sampled or the nature of the events studied. . .

Depression may be most likely to occur when the coping or self-efficacy perceptions are most bleak for the individual, but such perceptions may not always be directly predictable from knowledge of causal attributions. . . . Our studies lead to tentative conclusions that there are various cognitive pathways to depression . . . (pp. 667-668)

It is proposed that the bleakness of coping or self-efficacy perceptions can be greatly exacerbated by the instability of causes for both positive and negative outcomes.

The other attribution variable which tended to be associated with greater depression in the present study was unweighted negative outcome globality. This variable correlated positively with BDI scores, implying that the globality of causes chosen for bad outcomes increases as depression increases. In more basic terms, depressed subjects seem to believe that causes for particular negative events will also influence other events in their lives. This result is consistent with the results presented by Blaney et al. (1980), who found the correlation between SAS unweighted bad outcome globality and BDI scores to be the most robust of all the attribution-depression score correlations. When combined with the present study's findings of a general instability of causes for both positive and negative outcomes, bad outcome globality takes on a special meaning. While depressed subjects cannot be sure that causes for certain events will operate in similar situations in the future, they appear to be more certain that the causes of negative events will influence other areas of their lives in the future. The person who says that he or she failed at a task because he or she is generally lazy may not be

be certain that laziness will influence that task in the future. However, he or she can be more certain that laziness will crop up during other types of tasks. In this way, the pessimism of causes may be somewhat relieved, but uncertainty is reduced only through the assumption that other areas of life may fall prey to globally negative factors. While uncertainty is reduced, depression and general pessimism can only be increased through such a combination of causal assumptions. This more interactional approach to the relationship between causal attributions obviously makes this relationship a great deal more complicated than the Seligman reformulation would suggest.

Since this more complicated relationship is suggested by trends found in the present study, a further theoretical and methodological point must be considered. As stated by Blaney et al. (1980), ". . . it is clear that internality, stability and globality may interact with one another in important ways not captured by considering them one at a time or in a simple sum" (p. 682). And, as pointed out by Huesmann (1978), "Any reformulated model of depression should include a more careful delineation of the types of depression being explained" (p. 195). Given these two points of view, the results of the present study suggest that an unspecified number of attributional patterns could be associated with different types and levels of depression. If this were true, the lack of a statistically strong relationship between a single hypothesized pattern of attributions and relatively moderate reported depression in college students in

the present study is not too surprising. The design and analyses used in the present study are admittedly not precise or comprehensive enough to account for BDI score variance which may result from more complicated interactions of attributional dimensions. Future research should incorporate more precise hypotheses and design techniques to test for more varied attributional patterns.

The results of the analysis of gender effects and attributional style do not generally confirm the hypotheses of the present study. In the context of the above discussion, there is no reason to believe that separating gender effects would lead to any further simplification of the attributional model. If complicated interactions can take place between attributional dimensions to produce depression, the results of the present study suggest that such interactions could take place in males as well as females. In addition, the general differences in attributional style between males and females reported in previous studies do not appear in the results of the present study, with the exception of one special case to be considered shortly. Two major factors might account for this lack of significant differences between males and females.

The first of these possible factors is advanced tentatively, and is obviously in need of further investigation. It is possible, however, that attributional patterns demonstrated by females in the past studies have changed in the ensuing years. It is possible that today's female college students have shifted away from the depressive

attributional style toward a style which is more self-serving. In terms of attributions made for bad outcomes, the present sample of females may adopt less internal, stable and global attributions than previous samples. We may be observing the cognitive results of some fairly significant changes in the definition of women's roles in society and in the factors to which they attribute their successes and failures in a wide variety of tasks.

As Deaux and Farris (1977) have observed, "most of the significant differences between men and women occur on the masculine task. . . Differences between men and women also seem more apparent in the case of failure as opposed to success" (p. 69). It is possible that the distinction between "masculine" and "feminine" tasks has blurred considerably, especially in younger college-age populations. When the types of situations presented in the SAS are considered in this light, none of them can be clearly labeled as masculine or feminine tasks. It is not surprising, then, to find that attributions elicited from the SAS do not differ substantially between males and females. Further research might possibly substantiate these tentative claims by comparing women of different ages, and also by comparing college-student females with females of the same age in the general population.

The second major factor to be considered also has to do with the nature of the tasks presented on the SAS. These tasks can be separated into two distinct types: affiliation situations and achievement situations. Most of the studies considered in the review

of the literature for this study demonstrated male and female differences in attributions for achievement-type tasks. In a previous study by the present author (Yount, Note 1), it was found that subjects with nondepressive attributional styles for affiliation outcomes became more elated following a success than did those subjects with depressive affiliation outcome styles. This difference was not demonstrated for styles associated with achievement-type outcomes. In the light of these differing results for the two types of outcomes, it is possible that actual male and female differences are confounded in the present sample. Actual differences between males and females on one type of task may have been cancelled out by differences in the opposite direction on the other type of task. For example, the depressive attributional style may be more salient for females than for males on achievement tasks, consistent with previous results. However, the depressive style may be more salient in males on affiliation tasks. Thus, what appears to be an equivalence between males and females in the present sample may actually represent opposing differences based on the type of task involved. Future attempts to demonstrate attributional differences with the SAS should take this point into consideration.

One potentially meaningful difference between the attributions made by males and females was found. When weighted SAS variables were used as predictors with gender dependent, negative outcome internality was found to account for a small but statistically significant portion of the variance in gender. The direction of this

relationship implies that females adopted more internal attributions for bad outcomes than did males, a result which confirms the stated hypothesis. However, this is true for weighted attributions of internality. It must be remembered that weighted ratings were obtained by multiplying attribution ratings for a particular outcome by the importance rating for that outcome for each subject. Since negative outcome internality ratings did not differ between males and females for unweighted ratings, some aspect of the weighting process is implicated. To have produced this difference, it is most likely that females rated situations with negative outcomes as being more important than did males. Further statistical probing of this interaction between importance, outcome and gender is not possible given the present design, so we can only speculate about the source of the difference. It is possible that this difference may represent a greater sensitivity to failure among females in the sample. Given the pressures in today's society for females to demonstrate competence in situations and roles previously considered the province of males, it is not surprising that females might place more importance on failure. Becoming ego-involved in difficult situations with the potential for failure may represent an adaptive way to better one's performance on such tasks. However, consistent with the hypotheses of this study, overemphasizing the importance of situations with a negative outcome may also be potentially depressing.

The general lack of significant differences between the predictive power of weighted versus unweighted attributions is consistent

with the findings of Blaney et al. (1980). These researchers concluded that ". . . there was no indication that such weighting increased the association with level of depression" (p. 680). However, in the light of Rosenfield and Stephan's (1978) contention that ego-involvement mediates male and female differences in attributions, these results are somewhat puzzling. It may be possible that SAS importance ratings mediate the association between attribution, gender and depression in a more complicated fashion than a simple multiplicative manipulation would reveal. It is also possible that meaningful differences between weighted and unweighted variables are washed out through the complicated interactions of outcome and outcome type mentioned previously. The investigation of such possibilities may be fertile ground for more empirical research on the mathematical impact of importance ratings as a measure of ego-involvement.

In the second major portion of the present study, possible differences between attributions made to hypothetical versus real events were investigated. Results indicated that real event attributions are not significantly better predictors of level of depression than hypothetical event attributions. One possible reason for this lack of differences may be found in a factor already mentioned. The SAS is divided into achievement and affiliation situations, while the SAS-2 used here to assess real outcome attributions pertains strictly to an achievement situation (exam performance). Perhaps if SAS-2 responses had been compared only with SAS achievement-related

outcome responses, the expected differences would have emerged.

Another possible interpretation has also already been touched on. Perhaps neither hypothetical nor real attributions can be so simply related to the presence of depression. It is speculated that the possible relationships among attributions and depression are so complicated by the possibility of multiple attributional patterns that the relatively straightforward assessment of attributions with SAS-type devices, and their analysis with correlational designs just does not give a full enough picture. It would not be inconsistent with the speculations already presented to assume that the same complications which apply to hypothetical attributions might also apply to real attributions.

One other point needs to be considered also. The present design sought to show relationships between attributional patterns and the presence of depression. This point of view may be too narrow. Perhaps attributional style, either real or hypothetical, predisposes people to depression. It is obvious that the BDI seeks to assess the presence of and not the predisposition to depression. As Blaney et al. (1980) put it: ". . . a strong relationship between cognitive distortion and depression vulnerability would not necessarily result in a strong correlation between distortion and depression" (p. 682, italics theirs). Depression, especially mild or moderate depression is also a generally fluctuating phenomenon. The possibility exists that some subjects in the present sample who had

particularly depressive attributional styles did not endorse many BDI items because they were feeling better on that day. The cumulative effect would again be to wash out possible significant differences between subjects for both real and hypothetical attributions.

On another level, it is possible that the assessment of attributions with SAS-type questionnaires does not give full credit to the complexity of the attributional process as a whole. As Wortman and Dintzer (1978) mention, the attributional process may more clearly be viewed as an hypothesis-testing procedure. In this sense, causal attributions represent tentative and unstable guesses about causes which are then tested against future experiences. Seen in this way, SAS-type assessments only give us a look at variable stages of a dynamic process. This point of view is in some considerable conflict with the conception of the SAS as a measure of some concrete and stable feature of a person's cognitive life. Any research design which only samples a single temporal slice of fluctuating depression and ever-changing attributional hypotheses must necessarily be greatly weakened.

In addition, the process of developing causal attributions may be influenced by a variety of factors not measured in the present study. As Huesman (1978) implies, a one-time assessment of causal attributions does not take into account the various information-processing and expectancy judgment strategies engaged in by different people. In this sense, we must not only examine the causal attributions endorsed by subjects, but we must also examine the possible

distortions of information which can lead to variability in the formation of tentative attributions. SAS-type instruments simply cannot do this. Also, the possibility that the presence of depression may itself influence the endorsement of attributions cannot be accounted for by the SAS.

In summary, it can be said that the lack of confirming results in the present study is most likely the result of taking too narrow a look at a relatively complicated phenomenon. The possibility of multiple attributional patterns associated with depression, as well as the inadequacies of SAS-type assessment devices used in a correlational design make it difficult to demonstrate meaningful and significant differences in gender and attributional style. Further research should focus on the attempt to investigate these more complicated phenomena. Among these phenomena are the possible distinction between a pessimism of causes as opposed to a pessimism of events, possible historical changes in gender-specific attribution patterns, the fluctuating nature of moderate depression, and differences in the nature of mild versus severe depression. Also to be investigated are the more basic aspects of the attribution process itself. More precise and testable models, and the use of longitudinal designs in the context of variable patterns of attribution could go a long way in further specifying the relationships between cognition, gender, and depression.

REFERENCE NOTE

1. Yount, J. C. Relationships between affective reactions to winning and losing and causal attributional style. Unpublished Master's Thesis, Loyola University of Chicago, 1980.

REFERENCES

- Abramson, L., Seligman, M. E. P., & Teasdale, J. Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 1978, 87, 49-74.
- Bradley, G. W. Self-serving biases in the attribution process: A reexamination of the fact or fiction question. Journal of Personality and Social Psychology, 1978, 36, 56-71.
- Breen, L. J., Vulcano, B., & Dyck, D. G. Observational learning and sex roles in learned helplessness. Psychological Reports, 1979, 44, 135-144.
- Blaney, P. H., Behar, V., & Head, R. Two measures of depressive cognitions: Their association with depression and with each other. Journal of Abnormal Psychology, 1980, 89, 678-682.
- Crandall, V. J., Katkovsky, W., & Preston, A. Motivational and ability determinants of young children's intellectual achievement behaviors. Child Development, 1962, 33, 643-661.
- Deaux, K., & Emswiller, T. Explanations of successful performance on sex-linked tasks: What is skill for the male is luck for the female. Journal of Personality and Social Psychology, 1974, 29, 80-85.
- Deaux, K., & Farris, E. Attributing causes for one's own performance: The effects of sex, norms, and outcome. Journal of Research in Personality, 1977, 11, 59-72.
- Dweck, C. S. The role of expectations and attributions in the alleviation of learned helplessness. Journal of Personality and Social Psychology, 1975, 31, 674-685.
- Dweck, C. S. Children's interpretation of evaluative feedback: The effect of social cues on learned helplessness. Merrill-Palmer Quarterly, 1976, 22, 105-109.
- Dweck, C. S., & Bush, E. S. Sex differences in learned helplessness: I. Differential debilitation with peer and adult evaluators. Developmental Psychology, 1976, 12, 147-156.
- Dweck, C. S., & Repucci, N. D. Learned helplessness and reinforcement responsibility in children. Journal of Personality and Social Psychology, 1973, 25, 109-116.

- Feather, N. T., & Simon, J. G. Reactions to male and female success. Journal of Personality and Social Psychology, 1975, 31, 20-31.
- Feldman-Summers, S., & Kiesler, S. B. Those who are number two try harder: The effect of sex on attribution of causality. Journal of Personality and Social Psychology, 1974, 30, 846-855.
- Gong-Guy, E., & Hammen, C. Causal perceptions of stressful events in depressed and nondepressed outpatients. Journal of Abnormal Psychology, 1980, 89, 662-669.
- Halperin, M. S., & Abrams, D. L. Sex differences in predicting final exam grades: The influence of past performance, attributions, and achievement motivation. Journal of Educational Psychology, 1978, 70, 763-771.
- Hammen, C., Krantz, S., & Cochran, S. Relationships between depression and causal attributions about stressful life events. Paper presented at the meeting of the Association for the Advancement of Behavior Therapy, Chicago, November, 1978.
- Huesmann, L. R. Cognitive processes and models of depression. Journal of Abnormal Psychology, 1978, 87, 194-198.
- Kuiper, N. A. Depression and causal attribution for success and failure. Journal of Personality and Social Psychology, 1978, 36, 236-246.
- Luginbuhl, J. E. R., Crowe, H. D., & Kahan, J. P. Causal attribution for success and failure. Journal of Personality and Social Psychology, 1975, 31, 86-93.
- Miller, D. T. Ego-involvement and attributions for success and failure. Journal of Personality and Social Psychology, 1976, 34, 901-906.
- Nicholls, J. G. Causal attributions and other achievement related cognitions: Effects of task outcome, attainment value and sex. Journal of Personality and Social Psychology, 1975, 31, 379-389.
- Radloff, L. S. Sex differences in depression: The effects of occupation and marital status. Sex Roles, 1975, 1, 249-265.
- Radloff, L. S., & Rae, D. S. Susceptibility and precipitating factors in depression: Sex differences and similarities. Journal of Abnormal Psychology, 1979, 88, 174-181.

- Rizley, R. Depression and distortion in the attribution of causality. Journal of Abnormal Psychology, 1978, 87, 32-48.
- Rosenfield, D., & Stephan, W. G. Sex differences in attributions for sex-typed tasks. Journal of Personality, 1978, 46, 244-252.
- Seligman, M. E. P., Abramson, L. Y., Semmel, A., & von Baeyer, C. Depressive attributional style. Journal of Abnormal Psychology, 1979, 88, 242-247.
- Sobel, R. S. The effects of success, failure and locus of control on post-performance attribution of causality. Journal of General Psychology, 1974, 91, 29-34.
- Stevens, L., & Jones, E. E. Defensive attribution and the Kelley cube. Journal of Personality and Social Psychology, 1976, 34, 809-820.
- Weissman, M. M., & Klerman, G. L. Sex differences and the epidemiology of depression. Archives of General Psychiatry, 1977, 34, 98-111.
- Winokur, G. The types of affective disorders. Journal of Nervous and Mental Disease, 1973, 156, 82-96.
- Winokur, G., & Morrison, J. The Iowa 500: Follow-up of 225 depressives. British Journal of Psychiatry, 1973, 123, 543-548.
- Wortman, C. B., & Dintzer, L. Is an attributional analysis of the learned helplessness phenomenon viable?: A critique of the Abramson-Seligman-Teasdale reformulation. Journal of Abnormal Psychology, 1978, 87, 75-90.
- Zuckerman, M. Attribution of success and failure revisited, or: The motivational bias is alive and well in attribution theory. Journal of Personality, 1979, 47, 245-287.

APPENDIX A

SCALE OF ATTRIBUTIONAL STYLE

DIRECTIONS

Please try to vividly imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, we want you to pick only one--the major cause if this event happened to you. Please write this cause in the blank provided after each event. Next we want you to answer some questions about the cause and a final question about the situation. To summarize, we want you to:

- 1) Read each situation and vividly imagine it happening to you.
- 2) Decide what you feel would be the major cause of this situation if it happened to you.
- 3) Write one cause in the blank provided.
- 4) Answer three questions about the cause.
- 5) Answer one question about the situation.
- 6) Go on to the next situation.

YOU MEET A FRIEND WHO COMPLIMENTS YOU ON YOUR APPEARANCE

- 1) Write down the one major cause _____
- 2) Is the cause of your friend's compliment due to something about you or something about the other person or circumstances? (Circle one number)

Totally due to the other person or circumstances	1	2	3	4	5	6	7	Totally due to me
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- 3) In the future when you are with your friends, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
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- 4) Is the cause something that just affects interacting with friends or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
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- 5) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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YOU HAVE BEEN LOOKING FOR A JOB UNSUCCESSFULLY FOR SOME TIME

- 6) Write down one major cause _____
- 7) Is the cause of your unsuccessful job search due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	-------------------

- 8) In the future when looking for a job, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
---	---	---	---	---	---	---	---	--

- 9) Is the cause something that just influences looking for a job or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situa- tions in my life
--	---	---	---	---	---	---	---	---

- 10) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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YOU INVEST MONEY IN THE STOCK MARKET AND MAKE A PROFIT

- 11) Write down the one cause _____

- 12) Is the cause of your making a profit in the stock market due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

- 13) In the future when investing in the stock market, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
---	---	---	---	---	---	---	---	--

- 14) Is the cause something that just affects investing in stocks or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situa- tions in my life
---	---	---	---	---	---	---	---	---

- 15) How important would this situation be if it happened to you?
(Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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A FRIEND COMES TO YOU WITH A PROBLEM AND YOU DON'T TRY TO HELP THEM

- 16) Write down the one major cause _____

- 17) Is the cause of your not helping your friend due to something about you or something about other people or circumstances?
(Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

- 18) In the future when a friend comes to you with a problem, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
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- 19) Is the cause something that just affects what happens when a friend comes to you with a problem or does it also influence other areas of your life? (Circle one number)

Influences just this particu- lar situation	1	2	3	4	5	6	7	Influences all situa- tions in my life
---	---	---	---	---	---	---	---	---

- 20) How important would this situation be if it happened to you?
(Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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YOU GIVE AN IMPORTANT TALK IN FRONT OF A GROUP
AND THE AUDIENCE REACT NEGATIVELY

- 21) Write down the one major cause _____

- 22) Is the cause of the audience reacting negatively due to something about you or something about other people or circumstances?
(Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
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- 23) In the future when giving talks, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
---	---	---	---	---	---	---	---	--

- 24) Is this cause something that just influences giving talks or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situa- tions in my life
---	---	---	---	---	---	---	---	---

- 25) How important would this situation be if it happened to you?
(Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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YOU DO AN IMPORTANT PROJECT WITH A GROUP
AND FIND THAT THE PROJECT TURNS OUT WELL

- 26) Write down the one major cause _____

- 27) Is the cause of the group working well together due to something about you or something about the other people or circumstances?
(Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

- 28) In the future when working on a group project, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
---	---	---	---	---	---	---	---	--

- 29) Is this cause something that just affects group projects or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--------------------------------------

- 30) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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YOU MEET A FRIEND WHO ACTS HOSTILELY TO YOU

- 31) Write down the one major cause _____

- 32) Is the cause of your friend acting hostile due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
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- 33) In the future when interacting with friends, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
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- 34) Is the cause something that just influences interacting with friends or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
---	---	---	---	---	---	---	---	--------------------------------------

- 35) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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YOU CAN'T GET ALL THE WORK DONE THAT OTHERS EXPECT OF YOU

36) Write down the one major cause _____

37) Is the cause of your not getting the work done due to something about you or something about the other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

38) In the future when doing the work that others expect, will this again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
---	---	---	---	---	---	---	---	--

39) Is the cause something that just affects doing work that others expect you to do or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situa- tions in my life
---	---	---	---	---	---	---	---	---

40) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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YOU AND YOUR SPOUSE (BOYFRIEND/GIRLFRIEND) WERE HAVING PROBLEMS GETTING ALONG BUT YOU WERE ABLE TO RESOLVE THE DIFFERENCES

41) Write down the one major cause _____

42) Is the cause of the problems being resolve due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
--	---	---	---	---	---	---	---	----------------------

- 43) In the future when trying to resolve problems, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
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- 44) Is this cause something that just affects getting along with your spouse (boyfriend/girlfriend) or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situa- tions in my life
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- 45) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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YOU APPLY FOR A POSITION THAT YOU WANT VERY BADLY (e.g., IMPORTANT JOB, GRADUATE SCHOOL ADMISSION, etc.) AND YOU GET IT

- 46) Write down one major cause _____

- 47) Is the cause of your getting the position due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
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- 48) In the future when applying for a position, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
---	---	---	---	---	---	---	---	--

- 49) Is the cause something that just influences applying for a position or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situa- tions in my life
---	---	---	---	---	---	---	---	---

- 57) Is the cause of your household getting along well due to something about you or something about the other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
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- 58) In the future in your household, will this cause again influence what happens? (Circle one number)

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
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- 59) Is the cause something that just affects how your household gets along or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situa- tions in my life
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- 60) How important would this situation be if it happened to you? (Circle one number)

Not at all important	1	2	3	4	5	6	7	Extremely important
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SAS2

ID number: _____

1. What grade did you achieve on this test (Circle one letter):

A B C D F

Answer the following questions in terms of how you feel at this time. That is, your answers do not have to correspond with the earlier questionnaire that you took if such answers would not accurately reflect how you feel.

2. How do you evaluate this grade in terms of your own personal standards? (Circle one choice)

Excellent Very Good Good Fair Poor Very Poor
Terrible

3. Write down the one major cause of you performing as you did on this test:

4. Is the cause of your test performance due to something about you or something about other people or circumstances? (Circle one number)

Totally due to other people or circumstances	1	2	3	4	5	6	7	Totally due to me
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5. In the future when taking tests, will this cause again influence what happens?

Will never again influence what happens	1	2	3	4	5	6	7	Will always influence what happens
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6. Is this cause something that just influences academic test performance or does it also influence other areas of your life?

Influences just this particular situation	1	2	3	4	5	6	7	Influences all situations in my life
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7. How important to you is your performance on this particular test?

Not at all important	1	2	3	4	5	6	7	Extremely important
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8. How important to you is academic performance in general?

Not at all important	1	2	3	4	5	6	7	Extremely important
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9. How much time on this test did you spend thinking and/or wondering about how you were doing on the test?

Very little time	1	2	3	4	5	6	7	Very much time
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APPROVAL SHEET

The dissertation submitted by Joseph C. Yount has been read and approved by the following committee:

Dr. Thomas Petzel, Director
Associate Professor, Psychology, Loyola

Dr. James Johnson
Associate Professor, Psychology, Loyola

Dr. LeRoy Wauck
Professor, Psychology, Loyola

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

11/23/81
Date

Thomas P. Petzel
Director's Signature