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Cognitive construals of success and failure as a function of level of self-esteem and level of defensiveness.

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COGNITIVE CONSTRUALS OF SUCCESS AND FAILURE
AS A FUNCTION OF LEVEL OF SELF-ESTEEM
AND LEVEL OF DEFENSIVENESS

A Dissertation Presented
By
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COGNITIVE CONSTRUALS OF SUCCESS AND FAILURE

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AND LEVEL OF DEFENSIVENESS

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ABSTRACT

Cognitive Construals of Success and Failure as a Function of Level of Self-Esteem and Level of Defensiveness

(May 1981)

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The present study was concerned with how people construe and assimilate evaluative feedback in everyday life. Of particular interest was the issue of whether people tend to construe feedback in a manner that makes it consistent with their level of self-esteem or is self-esteem enhancing, and how these processes are affected by general level of self-esteem.

Three types of construals were selected for investigation, (1) the extent to which people generalize from particular success or failure experiences to global attributes; (2) the attributions of responsibility that people make for their successes and failures; and (3) the degree to which people desire to expend effort on similar tasks in the future.

The grade on the first laboratory report in a Methods in Psychology course served as the evaluative situation. Ninety-six subjects were assigned to "success" and "failure" groups based on a median split of the grades received. Within the "success" and "failure" groups, there were 8 subjects in each of 6 cells formed by three levels of self-esteem and two levels of defensiveness, as measured by self-report inventories.
Subjects responded to questionnaires measuring each type of construal at preevaluation, postevaluation, and follow-up.

Information concerning academic achievement, aspiration level, and actual performance scores was collected. Analyses of these variables revealed no significant effects associated with level of self-esteem, indicating that differences between the groups on these variables are not likely to account for differences in construals of success and failure.

The results concerning degree of generalization revealed that the negative construals of those who failed were more global for low than for moderate or high self-esteem subjects. The positive construals of those who succeeded were more global for high than for moderate or low self-esteem subjects. Thus, subjects generalized in a manner that helped maintain their overall view of themselves. It is unclear from the present study whether these results are best accounted for by the subjects' responding to actual feedback in a manner reflective of their level of self-esteem or by the subjects having prepared themselves in advance for an anticipated outcome. Subjects may anticipate their reactions to significant outcomes because a sudden change in self-esteem that is unanticipated is more difficult to assimilate than one that is anticipated.

Attributions for failure provided evidence for both the striving for consistency and for esteem-enhancement. With respect to the striving for consistency, subjects with low self-esteem attributed their failure to their lack of ability more than subjects with moderate or
high self-esteem. With respect to the striving for enhancement, subjects, regardless of level of self-esteem, reported they did not expend enough effort on the first laboratory report. Such attributions could lead to esteem-enhancement as greater effort would be expected to produce future success.

Attributions of success provided evidence for consistency. Subjects with high self-esteem reported that they accepted personal responsibility for their success and attributed it to their ability and effort more than subjects with moderate or low self-esteem. As self-esteem increased so did these subjects' beliefs that they had personal responsibility and control over their positive outcome.

The results concerning compensation revealed that subjects, regardless of level of self-esteem, reported that they intended to expend greater effort on future laboratory reports than they had on the first. Should these efforts lead to future success, self-esteem would be enhanced in the long run.

It may be concluded that subjects at each level of self-esteem construed evaluative feedback in a manner that helped maintain their level of self-esteem. Evidence for striving for enhancement was revealed by the adaptiveness of subjects' responses in committing themselves to achieve future successes which could enhance self-esteem.
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STATEMENT OF THE PROBLEM

Self-concept theorists agree that one major function of the self-concept is to assimilate and organize the data of experience (e.g., Combs and Snygg, 1959; Epstein, 1973, 1980; Rogers; 1959; Rosenberg, 1979). Given the unique organization of each person's self-concept (Combs and Snygg, 1959) the construal of the data of experience is subject to wide differences in individual interpretation. One subset of everyday experience that has received a great deal of theoretical and empirical investigation is the assimilation of evaluative feedback into the self-concept. The purpose of the present study is to examine the construals of success and failure of a relatively significant academic experience.

The construals or meanings that people derive from significant life experiences have important implications for their psychological well-being. Two people can experience the same event and yet draw entirely different conclusions about the meaning of that event. For example, two students may receive a failing grade on a test in an introductory Psychology course. Student A concludes from the failing grade that he is a total failure and should give up all aspirations in Psychology. Student B concludes from the failing grade that since he did poorly on this test he had better work harder to achieve passing grades on subsequent tests. Most people would agree that Student B's reaction is probably more adaptive than Student A's, especially considering that it was one test score in one course.
The importance of the meanings people derive from their everyday experiences is demonstrated in the evolution of several types of psychotherapy that have been developed to teach people to draw more realistic and adaptive conclusions from their experience. More specifically, therapies have been developed to teach people not to overgeneralize (Beck, 1967, 1976; Ellis and Harper, 1975), and to alter the attributions used to account for success and failure, thus enhancing the likelihood of realistically accepting success and not being unrealistically devastated by failure (Valins and Nisbett, 1971; Diener and Dweck, 1978).

Three types of construals were selected for investigation in the present study. The first is the extent to which subjects generalize from a specific success or failure to global self-attributes. In the example cited above, Student A generalized a great deal as he interpreted a low test grade as being indicative of total unworthiness whereas Student B did not. The second type of construal concerns the question of why subjects think they succeeded or failed. In an academic situation, students can attribute success or failure to ability, effort, or external factors, and they may also differ in the extent to which they accept personal responsibility. The third and final type of construal investigated is the degree to which subjects decide to expend more effort on future similar tasks (direct compensation) or to expend their effort in other areas (indirect compensation) as did Student A in the example above.
It is the thesis of the present investigation that level of self-esteem will be a major determinant of the type of construals subjects make in response to an academic success or failure. Of particular interest was the issue of whether global self-esteem influences the construal of evaluative information to make it consistent with existing self-appraisals (Combs and Snygg, 1959; Epstein, 1973; Lecky, 1945; Rogers, 1959 and Rosenberg, 1979) or to be self-enhancing (Rosenberg, 1979; Walster, 1965). Since level of defensiveness has also been shown to influence reactions to evaluative feedback it is included in the present study as an exploratory variable.
CHAPTER I
REVIEW OF THE LITERATURE

In the following section the theoretical and empirical literature concerning degree of generalization, type of attribution and compensation as reactions to evaluative feedback are critically reviewed. A special emphasis is given to research which examines how level of self-esteem influences each of these reactions to academic success and failure. As is elaborated in the following section, the available literature suggests that level of defensiveness may influence the degree of generalization observed in response to success and failure. However, the literature is less clear in predicting how level of defensiveness would affect type of attribution and compensation and therefore defensiveness is included as an exploratory variable.

Degree of Generalization

Degree of generalization refers to the process of drawing conclusions about one's self that are more global than the specific attribute that was evaluated. This definition of degree of generalization from specific to global self-concepts rests on the assumption that the self-concept is hierarchically organized with specific self-concepts at the periphery and global self-concepts at the core. Epstein (1980), for example, conceptualizes the self-concept as consisting of:

... a hierarchical arrangement of major and minor postulates. The lowest level of a postulate is a relatively narrow generalization derived directly from experience. Such lower order postulates are
organized into broader postulates, and these, in turn, into yet broader ones. An example of a lower order postulate is, 'I am a good ping-pong player.' An example of a higher order postulate is 'I am a good athlete.' A much higher order postulate is 'I am a worthy human being.' It is obvious that minor, or lower order, postulates can be invalidated without serious consequences to the self-system, as they encompass relatively little of the system, but that invalidation of a major postulate has serious consequences, as it affects a whole network of other postulates. Fortunately, as major postulates are broad generalizations, they are removed from the immediate test of experience, and are not easily invalidated. Moreover, major postulates exert an important influence on what experiences an individual seeks out and how he/she interprets the experiences. Thus, major postulates tend to function as self-fulfilling prophecies (p. 35).

Despite a great deal of theoretical interest in the degree to which evaluative feedback influences lower and higher order postulates, there has been very little empirical investigation of this issue (Shrauger, 1975; Shrauger and Shoeneman, 1979). Only three studies have examined the extent to which an evaluation of a specific self-concept generalizes to more global self-concepts.

In the first study, Videbeck (1960) predicted that if a person receives either a positive or a negative evaluation on a given attribute, the person will generalize to more global self-concepts "to the extent that the attributes . . . are functionally similar to the evaluated attribute" (p. 352). Videbeck selected subjects on the basis of teacher evaluations which indicated that these students were of superior ability in their capacity to give speeches. After subjects read six poems aloud they received either positive or negative feedback from a "visiting speech expert." This feedback was determined by random assignment and was not based on the subject's performance. Before and after the experimental procedure subjects rated themselves on three scales: a
Criticized scale, a Related scale and an Unrelated scale. The Criticized scale was comprised of items which were specifically evaluated by the "expert" and were concerned with specific self-concepts such as the ability to convey emotional tone while presenting the poems. The Related scale contained items which were "substantively similar to the items of the Criticized scale, but were not reacted to by the expert" (p. 353). The Unrelated scale was comprised of items which concerned general oral communication in social situations. Thus each subscale represented self-concepts concerning oral communication that varied from being very specific to very general. Unfortunately, the author did not provide examples of the items he utilized.

The results showed that subjects did change their self-ratings in the direction of the feedback received. Furthermore, the mean amount of change from prefeedback to postfeedback was greatest on the Criticized scale, next highest on the Related scale and least on the Unrelated scale. However, the amount of change was significant only on the Criticized scale in the disapproval treatment. Thus, receiving evaluative feedback, the author concluded, did have a generalized effect on self-ratings which diminished as the items became more general and removed from the attributes that were specifically evaluated.

It could be that the need to maintain consistency could account for this pattern of findings. More specifically, when contradictory information is introduced into the self-concept (as would be the case for superior students whose performance is disapproved of) more change occurs in the peripheral, specific concepts of self than in the more
global, encompassing concepts of self. In this way, as much of the existing organization of the self-concept as possible is retained. When evaluative feedback is consistent with the existing self-concept (as would be the case in the approval condition) little change is required at any level of generality. This could account for the nonsignificant changes that were observed in the approval condition.

In a study by Maehr, Mensing and Nafzger (1962), the results obtained by Videbeck were essentially replicated using physical ability as the evaluated attribute. The experimental task consisted of several simple tests such as dribbling a basketball, doing a deep knee bend, and walking a straight line. Subjects were assigned to approval and disapproval conditions without regard to their actual performance. The results were similar to those reported by Videbeck (1960). That is, as the subscale became more global the amount of change in self-ratings showed a corresponding decrease. Thus, the amount of change was greatest on the Criticized scale, next highest on the Related scale and least on the Unrelated scale.

Haas and Maehr (1965), using measuring instruments and procedures similar to Maehr et al. (1962), also investigated the extent to which evaluative feedback generalized from the specific attribute evaluated to more global self-attributes. Again, greater changes in self-ratings were found on the Criticized scale than on the Related and Unrelated scales. A unique aspect of the Haas and Maehr (1965) experiment is that changes on the Criticized, Related and Unrelated scales were not only measured immediately postfeedback but were also measured six weeks
later. Changes on the Criticized scale were still significant at the end of a six week period for both approval and disapproval conditions. However, the changes on the Related and Unrelated scales dissipated over time and returned to their initial levels.

Despite the overall consensus of findings of these three studies, they suffer from methodological shortcomings. One problem is that in none of these studies were independent judgments of the subscales made to determine the degree of generalization indicated by each subscale. Thus, there is no evidence that the subscales themselves represent points along a continuum of generalization. In fact, the description of the subscales suggests that the Criticized and the Related subscales are at similar levels of generality, while the Unrelated subscale is at a higher level of generality. For example, Videbeck described the Criticized and the Related subscales as being "substantively similar" whereas the Unrelated subscale concerned "oral communication in general." Without objective judgments of the subscales, there is no way of knowing whether an acceptable gradient of generalization was being measured. To overcome this problem in the present study, independent judgments were made to insure that an acceptable gradient of generalization was obtained.

A second factor which could have influenced the process of generalization is that the situations studied were not ego-involving enough to elicit changes in global self-concepts. In none of the above studies were measures taken of how much subjects cared about their performance on the experimental task. As Rosenberg (1979) points out:
If a particular quality is vital to one's feeling of worth, then negative attitudes concerning it may be personally devastating, but if the component is trivial or insignificant, then the individual may blithely acknowledge inadequacy in that regard with scarcely a twinge of discomfort (p. 74).

Thus a high level of ego-involvement in a task may be a necessary condition to produce generalization from specific to global self-attributes. In the present study an attempt was made to select a relatively ego-involving evaluative situation and measures were collected of subjects' ego-involvement.

A third factor which could have influenced the generalization process is that subjects were randomly assigned to approval and disapproval treatments without regard to their actual performance. Thus, global self-concepts may not have been affected because subjects maintained the belief that they did or did not possess communication skills and physical ability despite what the experimenter told them. Subjects may have been willing to change their ratings of specific self-concepts rather than disagree directly with a "visiting expert." As Shrauger and Shoeneman (1979) point out:

When the evaluator is present, subjects who do not change their self-perceptions directly discredit the evaluator's appraisal, which may be difficult, particularly if the evaluator is presented as an expert. Even when evaluators are absent, experimenters may be perceived as being likely to communicate with them (p. 546).

Thus, it could be that due to the demand characteristics of the situation subjects agreed with the expert on the items he specifically evaluated but privately maintained their opinion of themselves as evidenced by the relative lack of change on the Related and Unrelated scales. To overcome these problems in the present study, feedback was based on
actual performance on the task and subjects were assured that their responses would be kept entirely confidential. Furthermore, evaluators were not present at any time during the collection of data.

A fourth factor which could have affected the observed amount of generalization is that generalization was measured by changes in specific and global self-concepts. Whereas one might expect to find changes in specific attributes, it is much more unlikely for global self-concepts to be affected. Rather, it could be that when subjects are confronted with evaluative feedback the process of generalization may best be observed in the rapid or "fleeting thoughts" described by Beck (1976). While the person may generalize to a global self-concept upon being evaluated, this may or may not result in a lasting change in that self-concept. For example, a person who receives a failing grade on a paper may have the fleeting thought "I'm a total failure; how could I be so stupid." However, upon reflection, this person might dismiss the thought as unrealistic, thus leaving the global self-concept unchanged. The point remains, though, that for an instant, at least, the person generalized to a global self-concept on the basis of a single evaluation. In the present study, both fleeting thoughts as well as more enduring changes in self-conception were examined.

Finally, characteristics of the person which could influence the degree of generalization were not examined in the preceding studies. One important characteristic that could influence the extent to which a person generalizes from evaluative feedback is the person's overall level of self-esteem. Two motives have been found to mediate reactions
to positive and negative evaluations as a function of level of self-esteem. They are the striving for self-esteem enhancement and the striving for consistency. It has been reported that people with a high level of self-esteem tend to be more accepting of positive evaluations and less accepting of negative evaluations than people with a low level of self-esteem (Dittes, 1959; Jones, 1973; Losco, Note 1; Rosenberg, 1965; 1979; Walster, 1965). Losco (Note 1) interpreted this effect to mean that people assimilate positive and negative feedback in terms of their consequences for self-esteem enhancement as well as their consequences for maintaining internal consistency. More specifically, for individuals with high self-esteem positive evaluations are both esteem-enhancing and consistent with the existing self-concept, and therefore are reacted to favorably. Negative evaluations, on the other hand, are both inconsistent and esteem-deflating and are consequently related to unfavorably. For individuals with a low level of self-esteem, positive evaluations are esteem-enhancing and inconsistent with the existing self-concept, which could account for their weak, but favorable response to positive evaluations. Negative evaluations frustrate the need to enhance self-esteem but satisfy the need to maintain a consistent self-concept, which can account for their relatively weak negative reaction to negative evaluations.

Given this overall background the question of interest for the present study is how the strivings for self-esteem enhancement and the striving for internal consistency affect the degree of generalization which may result from evaluative feedback. First, let us consider the
striving for consistency. According to this principle, evaluations which are consistent with the existing self-concept should be readily assimilable. What would happen if the person were to receive an evaluation which is inconsistent? One possibility is that the person would not allow the evaluation into the system. This could occur by a variety of mechanisms including denial, discounting the evaluation, devaluing the source of evaluation, or making an external attribution for the success or failure which produced the evaluation. If the person cannot ignore or deny the evaluation then the operation of the motive to maintain consistency may insure that the new information is incorporated into the self-concept in such a way so as to produce the least amount of change. One way that this could be accomplished is to allow specific, peripheral self-concepts to be affected without affecting more global self-concepts. Thus, individuals with high self-esteem would not be expected to generalize from specific to global self-concepts following failure and individuals with low self-esteem would not be expected to generalize following success. In other words, it is expected that when the valence of the evaluative feedback is consistent with an individual's overall level of self-esteem the amount of generalization from the specific attribute which is evaluated to more global self-concepts is greater than when the valence of the evaluative feedback is inconsistent with an individual's overall level of self-esteem.

Unfortunately, no direct empirical evidence of this notion is available. Some indirect evidence is provided in the results of a study conducted by Beck (1967). In this study Beck interviewed a group of
fifty depressed patients and a group of thirty-one nondepressed patients. Low self-esteem was a prominent characteristic of the depressed patients. Beck found that the depressed patients overgeneralized more than the nondepressed patients. Beck (1967) reports the following:

Overgeneralization is the patients' pattern of drawing a general conclusion about their ability, their performance, or their worth on the basis of a single incident. A patient reported the following sequence of events occurring within a period of half an hour: His wife was upset because the children were slow in getting dressed. He thought, 'I'm a poor father because the children are not better disciplined.' He then noticed a leaky faucet, and thought that this showed he was also a poor husband. While driving to work, he thought, 'I must be a poor driver or other cars would not be passing me.' As he arrived at work, he noticed some other personnel had already arrived. He thought, 'I can't be very dedicated or I would have come earlier . . .' (pp. 234-235).

Thus, although Beck did not directly assess level of self-esteem, he does report that people who are depressed and who also have a low level of self-esteem have characteristic thought processes, including overgeneralization of negative attributes, which other groups of patients do not have. One purpose of the present study is to systematically assess the extent to which generalization is utilized by people with low, moderate and high self-esteem in reaction to success and failure.

Earlier it was pointed out that two motives mediate a person's reactions to evaluations. Besides the motive to maintain a consistent self-concept, people are also motivated to enhance their level of self-esteem. As to how the striving for esteem-enhancement affects the amount of generalization from specific to global self-concepts as a function of level of self-esteem, there is little in the way of theoretical or empirical guidelines. Some indirect proposals in this regard
have been made which suggest that individuals with a low level of self-esteem have a greater need to enhance their self-esteem than people with a high level of self-esteem, although the evidence is conflicting (Dittes, 1959; Jones, 1973; Shrauger, 1975). Whether this striving for enhancement would be manifested by people with low self-esteem reporting a greater degree of generalization following success than people with higher levels of self-esteem and less generalization following failure than people with higher levels of self-esteem is an empirical question which was addressed in the present study.

It should be recalled that the needs to maintain a consistent, integrated concept of self and to enhance self-esteem can both be operative in evaluative situations (Losco, Note 1). One purpose of the present study is to examine how these two needs can account for the amount of generalization following success and failure. It could be that if an evaluation is consistent and favorable that a great deal of generalization will occur because both needs are satisfied. However, when one need is satisfied at the expense of the other, the amount of generalization can be expected to decrease. Finally, when an evaluation is both inconsistent and esteem-deflating one would expect very little generalization to occur. Most likely, the evaluation would be refuted or denied due to the great amount of reorganization of the self-concept that would be required in order to assimilate the evaluation.

Several theorists have pointed out that when considering reactions to evaluative feedback it is not sufficient to only consider the overall level of self-esteem of the individual. Rather, one must also consider
whether this level of self-esteem is achieved and maintained defensively or realistically (Cohen, 1968; Horney, 1939, 1945; Silber and Tippett, 1965). These theorists point out that people who maintain their self-esteem defensively are prone to exaggerate the meaning of success experiences and to present an especially favorable self-image to others. Furthermore, highly defensive people tend to downplay the meaning of failure experiences and to deny shortcomings and personal limitations. Such reactions stand in contrast to those of people who are not defensive as they are more able to accept their successes and failures, their strengths and limitations, with equanimity. For example, Silber and Tipett (1965) describe people with high self-esteem which is nondefensively maintained as having:

... a high regard for themselves that did not seem exaggerated or unspontaneous or unrelated to other facets of the subject's personality. They regarded themselves in a favorable way and generally felt optimistic and expressed positive feelings about themselves. ... Their high self-esteem did not seem defensive because they could be comfortable in discussing areas of shortcomings and problems. While they might feel self-criticism, their overall attitude toward themselves was positive with a tolerant feeling toward their own limitations. The source of self-esteem is more centered in themselves and less focused on the attitudes of others toward them (p. 1029).

There is also some empirical evidence that people with high and low levels of defensiveness differ in their reactions to evaluative feedback. Schneider and Turkat (1975) predicted that people with defensive high self-esteem would be more approval-seeking following failure than success. They also predicted that people with genuinely high self-esteem would show little, if any, differences in approval-seeking following success and failure. Level of self-esteem was measured by the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and level of defensiveness
was measured by the Marlowe-Crowne Social Desirability Scale (Crowne and Marlowe, 1960). Approval-seeking was selected as the dependent variable because it was reasoned that people with a high level of defensiveness "ought to engage in active attempts to change their public definition after failure, to gain approval whenever possible, and to structure social situations to maximize self-enhancement possibilities" (p. 129).

Subjects completed a bogus social sensitivity test and were randomly given either a high score (success) or a low score (failure). Self-presentation was measured according to the extent subjects presented a positive view of themselves on the Schneider Self-Presentation Form and in a short, self-descriptive essay. The results showed that the high defensive subjects presented themselves more positively following failure than did the low defensive subjects. There were no differences between the groups following success. Thus, the results indicate that subjects with high and low defensiveness differ in the tendency of the former group to seek approval through positive self-presentation following failure. However, it is interesting to note that the high defensive subjects did not exaggerate their success more than the low defensive subjects. It could be that the nature of the dependent variable preempted the necessity for this reaction. That is, since subjects had already received approval from the experimenters in the success condition the need to obtain further approval may have been weakened.

The results of this study, as well as the theoretical assertions presented earlier, suggest that high defensive people exaggerate success and downplay failure in comparison to low defensive people. This
difference between high and low defensive people could be expected to result in different degrees of generalization following success and failure. More specifically, it is expected that following success, subjects with a high level of defensiveness will report a greater degree of generalization than subjects with a low level of defensiveness, as this would permit the former group to present an especially favorable self-image. Following failure, it is expected that high defensive subjects will report less generalization than subjects with low defensiveness, as this would enable them to downplay the failure.

Attribution of Responsibility

The impact that receiving evaluative information may have on a person's self-concept may depend on how the person attributes responsibility for success and failure. One early dimensional classification of causality concerned whether the person attributed the performance outcome to his/her own attributes or to factors existing outside himself/herself (Rotter, 1966). Whether a person makes an internal or an external attribution has been construed as an important mechanism in self-esteem regulation (Rosenberg, 1979; Shrauger, 1975; Weiner, 1979). Rosenberg (1979) argues that through selectively attributing responsibility for events, people protect and enhance their self-esteem. This is accomplished by people attributing their success to internal factors and their failure to external factors.

Others have argued (see Shrauger, 1975) that people achieve and maintain a consistent view of themselves by attributing outcomes that
are consistent with their expectancies to internal factors and outcomes that are inconsistent with their expectancies to external factors. In the empirical literature, expectancy levels have been ascertained in two ways. One way is to determine specific expectancy levels. This is done either by asking subjects how confident they are that they will succeed at the experimental task (Feather, 1969; Feather and Simon, 1971a; Simon and Feather, 1973), or by experimentally manipulating expectancy levels through previous experiences of failure and success (Feather and Simon, 1971b). The typical pattern of results supports the hypothesis that outcomes that are consistent with specific expectancy levels are attributed to internal factors (such as ability) whereas outcomes that are inconsistent with specific expectancy levels are attributed to external factors (such as luck).

The other method by which expectancy levels have been ascertained has been by the examination of more general levels of expectancy such as global level of self-esteem. The results obtained by this method have not been as coherent as when specific expectancy levels were obtained. Feather (1969) and Epstein and Komorita (1971) found no relationship between measures of global level of self-esteem and attributions of responsibility for outcome. Fitch (1970) found that subjects with low self-esteem who failed on a dot-estimation task attributed their failure to internal sources more than subjects with high self-esteem. However, the reverse was not found following success.

Shrauger (1975) points out that the greater consistency among the results found when specific rather than general expectancy levels were
ascertained may be due to the similarity of methodology among the studies using specific expectancy level. An alternative explanation is suggested by the work of Fishbein and Azjen (1975) who provide evidence that suggests that in order to predict behavior in a specific situation one needs a specific rather than a general measure related to that behavior. The reason for this is simple. Whereas only a few circumscribed behaviors are related to the specific expectancy level, e.g., the upcoming task, very many diverse behaviors can underlie global level of self-esteem. Consider the number of characteristics that could underlie a person's general level of self-esteem. O'Brien and Epstein (1974; Note 2) have identified several important factors including competence, likeability, loveability, power, morality, appearance and self-control. And these are still quite general and could be broken down into more specific attributes. Looked at in this manner, it is not surprising that general self-esteem was not strongly related to attributions on a dot-estimation task.

The question arises as to when one could expect general level of self-esteem to be related to attributions of responsibility for success and failure when performance on a specific task is evaluated. One factor is how much performance on the task is related to an important source of self-esteem for the individual. If performance on the task is deemed important by the subject, then the need to enhance self-esteem and the need to maintain the existing level of self-esteem will determine how the subjects attribute responsibility. According to the need to enhance self-esteem, one would expect success on an important task to
be attributed to internal factors so that the person assumes credit for the success, thereby enhancing self-esteem. Further, one would expect failure on an important task to be attributed to external factors as this would relieve the person of accepting responsibility for failing. According to the need to maintain the existing level of self-esteem, one would expect subjects with a high level of self-esteem to internalize success and externalize failure on an important task, whereas subjects with a low level of self-esteem would be expected to do the reverse.

In more recent work, the wide variety of attributions that can be made to account for achievement have been examined (see Weiner, 1979). Following a review of this literature, Weiner (1979) concluded that in achievement situations:

... ability and effort appear to be the most salient and general of the causes. That is, outcomes frequently depend upon what we can do and how hard we try to do it (p. 5).

Weiner further points out that attributions of ability and effort vary along two dimensions of causality, (1) a stable-variable dimension, and (2) a controllable-uncontrollable dimension. Ascribing a success or failure to ability represents a stable, uncontrollable attribution since one's ability level is perceived to be relatively fixed and not under one's volitional control. Ascribing an outcome to the amount of effort expended on a particular task would represent a variable, controllable attribution since immediate effort is perceived to vary from occasion to occasion and to be under one's volitional control.

Of particular interest in the present study is that whether one attributes a success or failure to ability (stable, uncontrollable
characteristic) or effort (unstable, controllable characteristic) has implications for self-esteem regulation. Weiner (1979) reports that people with high self-esteem have been shown to attribute success to stable characteristics (such as ability) and failure to variable characteristics (such as luck or mood). Such attributions would tend to preserve their high level of self-esteem. Conversely, subjects with low self-esteem ascribe success to variable characteristics and failure to stable characteristics. Again, such attributions would tend to maintain their low level of self-esteem. Accordingly, it is expected in the present research that subjects with high self-esteem will be more likely to attribute their success to stable characteristics of themselves than subjects with low self-esteem who will be more likely to attribute their success to variable characteristics. It is also expected that subjects with high self-esteem will be more likely to attribute their failure to variable characteristics than subjects with low self-esteem who will be more likely to attribute their failure to stable characteristics of themselves.

Whether one ascribes an outcome to stable-uncontrollable characteristics or to variable-controllable characteristics has been shown to have behavioral implications which can serve to maintain or enhance level of self-esteem. Dweck (1975) identified children who exhibited performance decrements following failure. These children were trained to attribute failure to lack of effort expended rather than to lack of ability. Following training, the children showed either performance increments or no decrements following subsequent failures. Such
training and improved performance provides a realistic basis for self-esteem enhancement.

In a later study, Diener and Dweck (1978) identified "mastery-oriented" and "helpless" children. Mastery-oriented children emphasize the role of effort in accounting for their failures, whereas helpless children do not. As the children worked on a series of discrimination tasks followed by induced failure the children verbally reported what they were thinking. Striking differences were observed in the thoughts of the two groups. The helpless children searched for a cause for their failure, usually attributing it to a lack of ability. In contrast, the mastery-oriented children made very few attributions, but rather searched for a strategy to solve the problems more effectively. The authors concluded that:

While most current attribution theories emphasize individual differences in the NATURE of the attributions, the present findings suggest that when or whether attributions occur spontaneously may of itself be a critical difference (p. 460).

Thus, in the present study, subjects were asked to indicate whether or not thoughts reflective of external, stable, and variable attributions occurred to them as they received feedback. Subjects were also asked to indicate if they accepted personal responsibility for their success or failure. Besides indicating what thoughts occurred to them, subjects also indicated whether each type of attribution accounted for his/her outcome from a more objective standpoint. For example, the thought may occur to a subject who failed: "The instructor is too picky," but from a more objective standpoint the subject may feel that this statement is false and does not account for his/her failure.
Compensation

Another important conclusion subjects can draw from a significant success or failure experience is to determine what implications, if any, it has for their future behavior. In the case of failure, one decision a person can make is to try to undo the failure by working harder on similar tasks in the future—direct compensation. Another decision is to try to undo the damage done to one area of self-esteem by demonstrating, or resolving to demonstrate, mastery in another area of self-esteem—indirect compensation. Although in the case of success there is nothing to compensate for, a comparable decision would be a desire to strive for continued mastery in the evaluated area. A decision comparable to indirect compensation to success was considered to be a very unlikely response and was not examined in the present study.

To the author's knowledge, no one has explicitly set out to measure the extent to which subjects with high and low self-esteem utilize direct compensation in response to success and failure. Some indirect evidence is provided by the classic Aronson and Carlsmith (1962) experiment, which was designed to test the hypothesis that subjects are primarily motivated by a need for consistency in responding to evaluative feedback. The authors predicted that subjects whose performance was consistent with their level of self-esteem (as measured by level of expectancy) would change fewer answers on a task when given the opportunity to do so than subjects whose performance was inconsistent with their level of self-esteem. Subjects were allowed to change their answers after they were informed of their "success" or "failure" and
this served as the dependent variable. The number of changed answers in
the failure condition could also be taken as a measure of the degree to
which subjects were dissatisfied with their performance and therefore
changed their answers to achieve a higher score. When given the oppor-
tunity to re-take part of a test it was found that subjects with high
level of self-esteem who obtained a low score changed more answers on
the re-take than subjects who had a low level of self-esteem. This sug-
gests that people with a high level of self-esteem may utilize direct
compensation when confronted with failure more than people with a low
level of self-esteem. However, since level of self-esteem was measured
by expectations of success on a specific task it is difficult to know
whether this effect will be replicated when a more global level of self-
esteeem is used. At any rate, one purpose of the present study is to
determine the extent to which people with low, moderate, and high levels
of self-esteem utilize direct compensation as a means of coping with
failure and success.

Although indirect compensation is a frequently cited theoretical
concept (Combs and Snygg, 1959; Combs, Richards and Richards, 1976;
Rosenberg, 1979), there is no empirical test of its occurrence in evalu-
avative situations as a function of level of self-esteem. Combs and Snygg
(1959) suggest that it is people who feel basically inadequate who are
especially likely to utilize indirect compensation to deal with threat-
ening evaluative feedback in such a way so as to enhance self-esteem.
They state:
He [the person with low self-esteem] attempts to rehabilitate his damaged concept of self by 'snowing under' the threatening perception with a series of other enhancing perceptions. The girl who is homely may find solace and comfort in extraordinary achievements as a student, as an athlete, as a comic, or in any of a thousand other ways (p. 281).

Combs and Snygg (1959) go on to suggest that people with truly high self-esteem can accept praise and criticism objectively without denying or distorting threatening evaluations (p. 257).

Thus, in the present study it is expected that people with low self-esteem will show more evidence of indirect compensation than people with high self-esteem when confronted with failure.

**Rationale for Selecting the Evaluative Situation**

The present study was designed to determine the effects of level of self-esteem and level of defensiveness on the assimilation of success and failure feedback into the self-concept. The process of assimilation was assessed according to three major dependent variables: degree of generalization, type of attribution and compensation. The situation in which these assessments were made was in a class, Methods in Psychology, at the University of Massachusetts. The evaluation consisted of students' grades on the first laboratory report they wrote for this course.

There were four criteria for selecting the situation in which to study the effects of success and failure on the self-concept. First, the situation had to be a naturally-occurring one so that there would be no need for either deception or for giving fake feedback. Second, the situation had to be one in which the subjects would be highly
ego-involved so that the evaluation would be of enough significance to the subjects to elicit generalization, compensation and attribution processes. Third, the situation had to be one in which both success and failure could be observed. Fourth, the situation had to be one in which the probabilities for success and failure would be equally ambiguous for all subjects. That is, the task on which the evaluation was to be based had to be a novel one for all subjects to control for prior experience.

Taking these criteria into account the class, Methods in Psychology, was selected as the situation. This course meets the above criteria in several respects. First, the class, Methods in Psychology, is a core requirement for all psychology majors. This tends to produce a high level of ego-involvement among the students. Another factor which produces a high level of ego-involvement is that the course is presented to the students as one of the few in which they will gain realistic experience doing what psychologists actually spend their time doing—writing up the results of experimental investigations. Moreover, many students believe that their performance in this course can influence whether or not they will get into graduate school. Second, the Methods course represents one of the more difficult courses in the Psychology Department, thus creating a naturally-occurring situation in which success and failure can be expected to occur. In fact, the distribution of scores on the first laboratory report during the Fall semester, 1979, ranged from twenty to fifty points. Fifty points was the maximum possible score.
The third factor which determined the selection of the Methods class as the experimental situation is that the Methods class is one in which all Psychology majors learn, for the first time in course work, how to write a laboratory report according to the American Psychological Association (APA) format. Thus, the first laboratory report represented a relatively novel task for all students taking the class.

A fourth factor contributing to the decision to utilize the Methods class concerns the fact that unlike an experiment in which success and failure are artifically manipulated, the students' grades are based on their actual performance rather than on random assignment.

A detailed description of the method used in the present study is provided in the following chapter.
CHAPTER II

METHOD

Subjects

One hundred students, sixty-nine females and thirty-one males, enrolled in Methods in Psychology at the University of Massachusetts participated in the study. Subjects received experimental credit, which fulfilled a course requirement to participate in a psychological experiment during the semester.

Measuring Instruments

Self-esteem. Level of global self-esteem was measured by the O'Brien-Esptein Self-Report Inventory (O'Brien, Note 2). This inventory is comprised of twelve subscales including global self-esteem, likeability, loveability, competence, self-control, morality, personal power, defensiveness, body appearance, body functioning, behavioral organization and identity. (See Appendix A for a copy of the items and scoring key.) Subjects were grouped according to their scores on the global self-esteem subscale as described in the Subject Selection section which follows.

Defensiveness. Level of defensiveness was measured by the Marlowe-Crowne Social Desirability Scale (1960). This 33-item inventory is designed to assess the tendency to deny common foibles and to endorse socially acceptable behaviors that have a low probability of occurrence.
(See Appendix B for a copy of this scale.) Subjects were divided into high and low defensiveness groups on the basis of whether they scored above or below the median, respectively, within each level of self-esteem (see Subject Selection section).

Assessment of the dependent variables. Each of the three major dependent variables, degree of generalization, compensation, and type of attribution, was assessed in two ways. For this purpose, two specially constructed questionnaires were developed: The Fleeting Thoughts Questionnaire and the Self-Concept Questionnaire.

The Fleeting Thoughts Questionnaire consisted of items unanimously rated by four judges as representing one, and only one, of the dependent variables. Subjects indicated whether the thought described in the item occurred to them immediately after learning of their performance and again at follow-up. The generalization items included four levels: "none," "slight," "intermediate," and "extreme" generalization. Items were assigned to each of these generalization categories based on unanimous ratings of the four judges. There were separate versions of this questionnaire for the success and failure groups. The only difference between these two versions involved words directly related to success or failure. Finally, it should be noted that indirect compensation items were eliminated from the questionnaire for the success group because indirect compensation was considered to be an extremely unlikely response to success.

The Self-Concept Questionnaire included the same items as the Fleeting Thoughts Questionnaire. The main distinction between the two
questionnaires was that in the Self-Concept Questionnaire subjects indicated how accurate each item was from a more objective standpoint, rather than whether or not the thought occurred to them. There were two versions of the Self-Concept Questionnaire, one which was administered at prefeedback and one which was administered at postfeedback and at follow-up. The prefeedback version included items pertaining to both success and failure. A copy of this questionnaire as administered and with the items grouped according to each dependent variable are presented in Appendix C. In the postfeedback and follow-up version, separate forms for success and failure were administered. Since the items were the same, the Fleeting Thoughts Questionnaire and the Self-Concept Questionnaire were combined with these two types of ratings made on the same form. Copies of the postfeedback and follow-up questionnaires can be seen in Appendix D.

The behavioral measures of direct compensation were collected from the course instructors. The first consisted of whether subjects made and kept an appointment with the instructor to discuss the returned laboratory report. The second measure consisted of whether subjects rewrote the laboratory report.

On the final questionnaire, the Narrative Description Form, subjects described in their own words their reactions to the feedback and indicated whether the feedback caused them to alter their opinions of themselves. This questionnaire is presented in Appendix E.

Assessment of validity information and extraneous variables. Several measures were obtained to validate the criterion used to assign subjects
to success and failure conditions (e.g., satisfaction ratings regarding the feedback, mood ratings). Measures of extraneous variables included past academic achievement, expectancy levels, ego-involvement, preparation time and mood. Most of these measures were obtained on the day that subjects turned in their laboratory reports (see Lab Report Questionnaire I, Appendix F).

Past academic achievement was measured by self-reports of scores on the Scholastic Aptitude Test (SAT), cumulative grade point average and grade received in a statistics course which is a prerequisite for the Methods class. Other measures of achievement were obtained from the instructors: scores on three quizzes and one exam taken in the Methods class prior to feedback on the first laboratory report.

Two measures of expectancy level were collected concerning the first laboratory report: (1) expected score and (2) the minimum number of points that subjects would be pleased with receiving. A final expectancy measure concerned the minimum grade that subjects would be satisfied with receiving in the Methods class.

Ego-involvement was measured by asking subjects to rate how much their performance on the first laboratory report and in the course mattered to them. Subjects rated both questions on a 5-point, graphic rating scale ranging from "1" (not at all) to "5" (a great deal).

Preparation time was assessed by asking subjects to indicate the number of hours they spent preparing their first laboratory reports.

Mood was assessed by asking subjects to indicate how the work they did on their laboratory reports made them feel on six dimensions of
emotions. Ratings were made on 9-point bi-polar scales which were anchored on each end by three adjectives describing various feeling states. For example, one dimension included the adjectives "proud, self-satisfied and pleased-with-self" versus "ashamed, inadequate and displeased-with-self."

Two measures, mood and satisfaction level, were obtained following feedback. Both of these measures were obtained on Lab Report Questionnaire II which is presented in Appendix G. Mood was assessed by having subjects rate how their feedback made them feel using the same dimensions rated at prefeedback. Satisfaction level was measured by subjects' ratings of their satisfaction with their grades. These ratings were made on a 4-point graphic rating scale ranging from "1" (extremely displeased) to "4" (extremely pleased).

Procedure

The Methods class was divided into five laboratory sections of approximately twenty students each. The identical procedure was followed in each section. The study was conducted in class time during six separate class sessions. At no time in the study were instructors present in the classroom.

During the first class session, subjects were recruited to participate in the study. Potential subjects were informed that the two purposes of the study involved examining people's reactions to success and failure along with examining why people differ in their reactions. Subjects were further informed that their responses would not affect their
grades in any way, and that their instructors would not see their responses. The importance of responding honestly and of participating in the entire study was stressed.

During the second session, two weeks into the semester, subjects completed the O'Brien-Epstein Self-Report Inventory and the Marlowe-Crowne Social Desirability Scale.

During the third session, subjects turned in their first laboratory report. Subjects were again assured that their responses would be entirely confidential. They were informed that the distribution of points and corresponding letter grades was as follows: 45 points or more=A; 40-44=B; 35-39=C; 30-34=D and 29 or less=F. Following this, the Lab Report Questionnaire I and the prefeedback version of the Self-Concept Questionnaire were administered.

Three weeks later, during the fourth session, the laboratory reports were returned by the experimenter. Subjects were reminded of the distribution of points and the corresponding letter grades. Subjects were presented with their graded laboratory reports and were given five minutes to read the instructors' comments. Subjects then completed the Narrative Description Form, the Fleeting Thoughts and Self-Concept Questionnaires and the Lab Report Questionnaire II.

During the fifth session, two weeks after the laboratory report was returned, the Fleeting Thoughts and Self-Concept Questionnaires were re-administered.
During the sixth session, at the end of the semester, the experimenter presented a lecture to the class in which she discussed the preliminary results of the data analyses.

A summary of when the questionnaires were administered during the study is presented in Table 1.

**Data Reduction**

**Fleeting Thoughts Questionnaire.** Each category of attribution and compensation was assessed by six to eight items per category. The subject's score was the number of items that was checked for each category divided by the total number of items in that category. Thus the possible range of scores for each dependent variable was zero (no items checked) to one (all items checked).

For the remaining major dependent variable, degree of generalization, each item was weighted from one to four according to whether the item was in the "no," "slight," "intermediate," or "extreme" generalization category, respectively. Scores consisted of the sum of the weighted item scores. Since there were six items per level of generalization, the possible range of scores was between zero (no items checked) to sixty (all items checked).

**Self-Concept Questionnaire.** In this questionnaire, subjects indicated the extent to which items were true or false on a five-point scale. As in the Fleeting Thoughts Questionnaire, the items measured degree of generalization, compensation and type of attribution. Each subject's score for the attribution and compensation categories was the mean


<table>
<thead>
<tr>
<th>Prefeedback</th>
<th>Postfeedback</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lab Report Questionnaire I</td>
<td>1. Narrative Description Form</td>
<td>1. Fleeting Thoughts Questionnaire</td>
</tr>
<tr>
<td>(past achievement, aspiration level, ego-involvement, preparation time, mood)</td>
<td>2. Fleeting Thoughts Questionnaire</td>
<td>2. Self-concept Questionnaire (postfeedback version, i.e., separate forms for success and failure groups)</td>
</tr>
<tr>
<td>2. Self-concept Questionnaire</td>
<td>3. Self-concept Questionnaire (postfeedback version, i.e., separate forms for success and failure groups)</td>
<td></td>
</tr>
<tr>
<td>(prefeedback version, i.e., both success and failure items included for all subjects)</td>
<td>4. Lab Report Questionnaire II (mood and satisfaction level)</td>
<td></td>
</tr>
</tbody>
</table>
rating of the items in each category. For the degree of generalization items, the mean for each category was weighted from one to four depending on the level of generalization (no generalization=1, slight=2, moderate=3, and extreme=4). Thus, the possible range of generalization scores was from 10 (all items rated completely false) to 50 (all items rated completely true).

Subject Selection and Design of Analyses

Subjects were divided into success and failure groups on the basis of a median split of the number of points received on the first laboratory report. The median score was 40 out of a maximum possible score of 50. Subjects who received a grade of 40 or higher were assigned to the success group and subjects with scores of 39.5 or lower were assigned to the failure group. Subjects had previously been informed that letter grades would be assigned as follows: 45 points or more=A; 40-44=B; 35-39=C; 30-34=D and 29 points or less=F. Following the above criterion resulted in 49 subjects being placed in the success group and 51 subjects in the failure group.

Within the success and failure groups, subjects were further subdivided according to their scores on the global self-esteem subscale and their scores on the Marlowe-Crowne Social Desirability scale. In each group, the sixteen subjects with the highest, lowest, and middlemost scores on the global self-esteem subscale were selected. In order to achieve an equal number of subjects in each group, subjects were eliminated if their grade was on the borderline of the criterion for success
and failure. A second consideration was to achieve as little overlap as possible in self-esteem scores between groups. Once the self-esteem groups were established, subjects were assigned to high and low defensiveness groups based on a median split of defensiveness scores within each level of self-esteem. The ranges of scores on the self-esteem and defensiveness scales for each of the cells in the design are presented in Tables 2 and 3.

Sex of subjects and section of the Methods class were considered as possible between-subjects variables in the data analyses. Considering sex of the subject while collapsing over class section resulted in the cell sizes reported in Table 4. As can be seen in this table, cell sizes ranged from 1 to 7 for failure and from 0 to 8 for success. These cell sizes were too small to justify the use of sex as a factor in the present design. However, it should be kept in mind that females comprised 68 percent of the total sample while males comprised only 32 percent.

### TABLE 2

RANGES OF SCORES ON THE GLOBAL SELF-ESTEEM SCALE
BY OUTCOME AND BY LEVEL OF SELF-ESTEEM

<table>
<thead>
<tr>
<th>Level of Self-Esteem</th>
<th>Success</th>
<th>Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>1.70-3.00</td>
<td>1.20-2.90</td>
</tr>
<tr>
<td>Moderate</td>
<td>3.00-3.50</td>
<td>3.00-3.70</td>
</tr>
<tr>
<td>High</td>
<td>3.60-4.50</td>
<td>3.80-5.00</td>
</tr>
</tbody>
</table>
### TABLE 3
RANGES OF SCORES ON THE SOCIAL DESIRABILITY SCALE
BY OUTCOME AND BY LEVEL OF SELF-ESTEEM

<table>
<thead>
<tr>
<th>Level of Self-Esteem</th>
<th>Low (Range)</th>
<th>High (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Failure Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>6 - 13</td>
<td>14 - 24</td>
</tr>
<tr>
<td>Moderate</td>
<td>8 - 13</td>
<td>15 - 29</td>
</tr>
<tr>
<td>High</td>
<td>14 - 16</td>
<td>17 - 27</td>
</tr>
<tr>
<td><strong>Success Group</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>7 - 13</td>
<td>14 - 21</td>
</tr>
<tr>
<td>Moderate</td>
<td>8 - 13</td>
<td>15 - 29</td>
</tr>
<tr>
<td>High</td>
<td>14 - 16</td>
<td>17 - 27</td>
</tr>
</tbody>
</table>

### TABLE 4
FREQUENCY DISTRIBUTION OF SUBJECTS PER CELL AS A FUNCTION
OF OUTCOME, LEVEL OF SELF-ESTEEM, LEVEL OF DEFENSIVENESS AND SEX OF THE SUBJECT

<table>
<thead>
<tr>
<th>Level of Self-Esteem</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Failure Group</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Moderate</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>High</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Success Group</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Moderate</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>High</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>
The inclusion of class section as a between-subjects variable in the analysis design, while collapsing across sex, produced cell sizes even smaller than those reported above for sex. The average cell size when class section was included was less than two subjects per cell. Such a low average frequency and the numerous empty cells precluded the use of class section in the analysis design.

The final design of the analyses of variance included two between-subjects variables and one repeated measures variable. Between-subjects variables included level of self-esteem (low, moderate, high) and level of defensiveness (low, high). This design resulted in eight subjects per cell. The repeated measures variable, time, included three levels for some analyses (prefeedback, postfeedback and follow-up) and two levels for other analyses (postfeedback and follow-up). Separate analyses of variance were also done for each time period. Since the results of these analyses usually duplicated the results of the overall analyses, the results of the separate analyses will only be presented when they provide additional information. Since the Fleeting Thoughts and Self-Concept Questionnaires were worded differently for success and failure, most analyses were done separately for each outcome.
Evidence for Validity and Examination of Extraneous Variables

It should be recalled that information concerning past academic achievement, aspiration level, ego-involvement, preparation time, mood and satisfaction level was collected to provide validity information and to determine whether the self-esteem and defensiveness groups differed on these variables in such a way that could account for the manner in which they assimilated success or failure. Also pertinent is whether the self-esteem and defensiveness groups differed in their actual performance on the laboratory report. Unless specified otherwise a three-way analysis of variance was done for each variable which included two levels for outcome (success or failure); three levels for self-esteem (low, moderate and high) and two levels for defensiveness (low and high).

Past academic achievement. An index of past academic achievement was created which was comprised of eight scores. These included the subjects' reported verbal and math SAT scores, their cumulative grade point averages, their grades in a required statistics course, and the grades of three quizzes and one exam which the students had taken prior to writing their first lab reports for the Methods course. Raw scores were transformed to z-scores and the mean was computed for each subject. The alpha coefficient for this index was .67.
The results of the analysis of variance revealed that the main effect for outcome was significant, $F(1,84) = 10.53$, $p < .002$. Not surprisingly, subjects who eventually failed scored lower on the past achievement index ($M = -.16$) than subjects who eventually succeeded ($M = .22$). Thus, subjects received feedback in the present study which was consistent with their prior experience in several academic endeavors. There were no significant effects ($p > .05$) due to level of self-esteem or to level of defensiveness on the past achievement index.

**Aspiration level.** An index of aspiration level prior to feedback included three items: (1) minimum grade subjects reported they would be pleased with receiving in the course, (2) minimum grade subjects reported they would be pleased with on their first laboratory report, and (3) their expected grade on the first laboratory report. Raw scores were transformed to $z$-scores and the mean was computed for each subject. The alpha coefficient for this index was .79.

The results of the analysis of variance revealed a main effect for outcome, $F(1,84) = 11.81$, $p < .001$. Subjects who eventually failed scored lower ($M = -.27$) on the aspiration level index than subjects who eventually succeeded ($M = .27$). There were no effects ($p > .05$) due to level of self-esteem and level of defensiveness on the aspiration level index.

**Ego-involvement.** The ego-involvement index included two items: (1) the degree to which subjects reported that their performance on the laboratory report mattered to them, and (2) the degree to which their performance in the course mattered to them. Raw scores were transformed
to z-scores and a mean was computed for each subject. The alpha coefficient for the ego-involvement index was .64.

The results of the analysis of variance revealed that there were no significant effects. However, three trends emerged which are worthy of note. First, there was a trend for outcome, $F(1, 84) = 3.26, p < .08$ such that subjects who later succeeded tended to report that their performance was more important to them ($M = .15$) than subjects who later failed ($M = -.15$). Subjects with a high level of defensiveness showed a trend to give higher ratings of importance ($M = .14$) than subjects with a low level of defensiveness ($M = -.14$), $F(1, 84) = 2.78, p < .10$. Finally, there was a trend, $F(2, 84) = 2.85, p < .07$, for subjects with high self-esteem to consider their performance to be most important ($M = .24$), followed by the moderate self-esteem ($M = .01$) and the low self-esteem group ($M = -.25$).

**Preparation time.** Subjects were asked to indicate the number of hours they spent preparing their laboratory reports. The results of the analysis of variance revealed that there were no significant effects associated with outcome, level of self-esteem, or level of defensiveness.

**Mood.** Separate analyses of variance were done on the prefeedback, postfeedback, and change scores from prefeedback to postfeedback, because each measure provided different information. By examining the prefeedback scores the baseline level of each emotional state could be established. Furthermore, whether this baseline varied as a function of outcome, level of self-esteem or level of defensiveness could also be
determined. By examining the postfeedback scores evidence concerning the validity of the criterion used to assign subjects to success and failure groups could be obtained. It could also be determined whether the emotions subjects reported upon learning of their success or failure varied as a function of level of self-esteem and defensiveness. By examining the degree of change in mood from prefeedback to postfeedback it could be determined whether success or failure had a greater emotional impact and whether this impact varied as a function of level of self-esteem and defensiveness.

**Prefeedback.** Analyses of variance of each emotion revealed no main effect for outcome or level of defensiveness. There was, however, a main effect for level of self-esteem for each emotional category. In general, as the level of self-esteem increased so did reports of a positive emotional state. The means and F-ratios are presented in Table 5.

The means in Table 5 can be taken as corroboration of the validity of the self-esteem inventory in that high self-esteem subjects reported more positive feelings and felt more integrated than both moderate and low self-esteem subjects at prefeedback. It should also be noted that all subjects tended to report a baseline level of emotion that was positive or near the neutral point of each dimension.

The only other significant effects at prefeedback were due to the level of self-esteem x outcome interaction. This interaction was significant for four out of the six categories of emotional response. The means and F-ratios are presented in Table 6.
TABLE 5
MEAN EMOTION RATINGS AT PREFEEDBACK AS A FUNCTION OF LEVEL OF SELF-ESTEEM

<table>
<thead>
<tr>
<th>Emotion Category</th>
<th>F-ratio&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Level of Self-Esteem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Happy vs. Unhappy</td>
<td>3.35*</td>
<td>5.50</td>
</tr>
<tr>
<td>Kindly vs. Angry</td>
<td>7.12**</td>
<td>4.28</td>
</tr>
<tr>
<td>Warm-toward-self vs.</td>
<td>5.16**</td>
<td>4.56</td>
</tr>
<tr>
<td>Angry-at-self</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proud vs. Ashamed</td>
<td>10.34***</td>
<td>5.00</td>
</tr>
<tr>
<td>Clearminded vs. Confused</td>
<td>3.46*</td>
<td>4.97</td>
</tr>
<tr>
<td>Calm vs. Anxious</td>
<td>7.19***</td>
<td>4.28</td>
</tr>
</tbody>
</table>

<sup>a</sup>df=2/84 in all cases.

<sup>b</sup>A rating lower than 5.0 indicates a rating on the negative pole of the dimension. A rating greater than 5.0 indicates a rating on the positive pole of the dimension.

*=p<.05

**=p<.01

***=p<.001
TABLE 6
MEAN EMOTION RATINGS PRIOR TO SUCCESS AND FAILURE AS A FUNCTION OF LEVEL OF SELF-ESTEEM

<table>
<thead>
<tr>
<th>Emotion Category</th>
<th>F-ratio&lt;sup&gt;a,b&lt;/sup&gt;</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Failure</td>
<td>Success</td>
<td>Failure</td>
</tr>
<tr>
<td>Happy vs. Unhappy</td>
<td>9.66&lt;sup&gt;*&lt;/sup&gt;</td>
<td>5.06&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5.94</td>
<td>6.24</td>
</tr>
<tr>
<td>Kindly vs. Angry</td>
<td>2.64&lt;sup&gt;T&lt;/sup&gt;</td>
<td>3.88</td>
<td>4.99</td>
<td>5.38</td>
</tr>
<tr>
<td>Warm-toward-self vs. Angry-at-self</td>
<td>4.75&lt;sup&gt;*&lt;/sup&gt;</td>
<td>4.19</td>
<td>4.94</td>
<td>5.81</td>
</tr>
<tr>
<td>Proud vs. Ashamed</td>
<td>3.95&lt;sup&gt;*&lt;/sup&gt;</td>
<td>4.44</td>
<td>5.56</td>
<td>6.56</td>
</tr>
<tr>
<td>Clearminded vs. Confused</td>
<td>3.14&lt;sup&gt;*&lt;/sup&gt;</td>
<td>4.63</td>
<td>5.31</td>
<td>6.00</td>
</tr>
<tr>
<td>Calm vs. Anxious</td>
<td>1.11&lt;sup&gt;ns&lt;/sup&gt;</td>
<td>3.94</td>
<td>4.63</td>
<td>6.00</td>
</tr>
</tbody>
</table>

<sup>a</sup>F-ratios are presented for the level of self-esteem x Outcome interaction.

<sup>b</sup>df=2/84 in all cases.

<sup>c</sup>A mean less than 5.00 indicates a rating on the negative pole of the dimension. A mean rating greater than 5.00 indicates a rating on the positive pole of the dimension.

<sup>ns</sup>=not significant

<sup>T</sup>=p<.10
<sup>*</sup>=p<.05
Referring to the mean scores it can be seen that the same general pattern of response was obtained for each category. Subjects with low and high self-esteem reported less positive emotional states prior to failure than prior to success. Consistent with their overall level of self-esteem, low self-esteem subjects reported more negative feelings than did high self-esteem subjects prior to failure and less positive feelings prior to success. Subjects with moderate self-esteem, on the other hand, reported more favorable emotions prior to failure than was reported prior to success.

This overall pattern of results suggests that low and high self-esteem subjects viewed their laboratory reports at prefeedback in a way that produced emotional reactions which corresponded with their eventual outcomes as well as to their level of self-esteem. Subjects with moderate self-esteem, however, reported emotions opposite to their eventual outcome but consistent with their level of self-esteem. Since the self-esteem groups did not differ in terms of aspiration level, performance level, or past achievement it is difficult to determine why subjects with moderate self-esteem who failed reported feeling especially positive feelings at prefeedback. At any rate, with the exception of this one group, subjects reported feelings that were not only consistent with their level of self-esteem but also with their eventual outcome.

Postfeedback. Analyses of variance of the postfeedback emotion ratings provided evidence that the criterion used to assign subjects to success and failure groups was valid since subjects reported positive emotions following success and negative emotions following failure.
means and F-ratios are presented in Table 7. (Note: The data were converted so that a score above 5.00 indicated a rating in the expected direction, i.e., positive emotions following success and negative emotions following failure. A score below 5.00 would indicate ratings in the unexpected direction.)

Since the data were converted so that the means reflected ratings in the expected direction it became possible to directly compare the

<table>
<thead>
<tr>
<th>TABLE 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEANS AND F-RATIOS FOR EACH EMOTIONAL RESPONSE CATEGORY AT POSTFEEDBACK AS A FUNCTION OF OUTCOME</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotion Category</th>
<th>Failure Group Mean</th>
<th>Success Group Mean</th>
<th>F-ratio for Outcome Main Effect&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy vs. Unhappy</td>
<td>7.02&lt;sup&gt;b&lt;/sup&gt;</td>
<td>7.04</td>
<td>0.01&lt;sup&gt;n.s.&lt;/sup&gt;</td>
</tr>
<tr>
<td>Kindly vs. Angry</td>
<td>7.00</td>
<td>5.96</td>
<td>7.45**</td>
</tr>
<tr>
<td>Warm-toward-self vs. Angry-at-self</td>
<td>6.92</td>
<td>6.31</td>
<td>2.48&lt;sup&gt;n.s.&lt;/sup&gt;</td>
</tr>
<tr>
<td>Proud vs. Ashamed</td>
<td>6.75</td>
<td>7.02</td>
<td>0.59&lt;sup&gt;n.s.&lt;/sup&gt;</td>
</tr>
<tr>
<td>Clear-minded vs. Confused</td>
<td>6.31</td>
<td>6.46</td>
<td>0.15&lt;sup&gt;n.s.&lt;/sup&gt;</td>
</tr>
<tr>
<td>Calm vs. Anxious</td>
<td>6.23</td>
<td>6.54</td>
<td>0.74&lt;sup&gt;n.s.&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup>Degrees of freedom equal 1/84 in all cases.

<sup>b</sup>The data were transformed so that a high score (above 5.00) indicates a rating in the expected direction (i.e., positive emotions following success and negative emotions following failure). Scores below 5.00 would indicate ratings in the unexpected direction.

n.s. = Not significant

**p < .01
relative intensity of emotions produced by success and failure. As shown in Table 7, for five out of six dimensions, subjects reported feeling positive emotions following success as intensely as subjects reported feeling negative emotions following failure. The single exception to this pattern of results is the kindly versus angry dimension for which there was a significant difference between subjects who failed and subjects who succeeded. Apparently, in the present study, knowledge of a failure stimulated strong feelings of antipathy toward others whereas knowledge of a success tended to produce only slight feelings of magnanimity toward others. Thus, with one exception, analyses of the postfeedback scores alone suggest that failure produced emotions as intense as success although, of course, in opposite directions.

The only other significant effect found at postfeedback was the outcome x level of self-esteem interaction which was significant for four out of the six dimensions. The means and F-ratios are presented in Table 8.

As can be seen in Table 8, the same general pattern was exhibited for each emotional response. Among subjects who failed, as self-esteem increased the intensity of negative emotional feelings decreased. Among subjects who succeeded, as self-esteem increased so did the intensity of positive emotions. For example, the high self-esteem group was the most proud following success and least ashamed following failure. The low self-esteem group was the least proud following success and the most ashamed following failure. Thus, following feedback, subjects reported
TABLE 8
MEANS AND F-RATIOS FOR EACH EMOTION AT POSTFEEDBACK AS A FUNCTION OF OUTCOME AND LEVEL OF SELF-ESTEEM

<table>
<thead>
<tr>
<th>Emotion Category</th>
<th>F-ratio(^a)</th>
<th>Failure Low Self-esteem</th>
<th>Failure Moderate Self-esteem</th>
<th>Failure High Self-esteem</th>
<th>Success Low Self-esteem</th>
<th>Success Moderate Self-esteem</th>
<th>Success High Self-esteem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy vs. Unhappy</td>
<td>1.00</td>
<td>7.25</td>
<td>7.44</td>
<td>6.38</td>
<td>6.88</td>
<td>7.06</td>
<td>7.19</td>
</tr>
<tr>
<td>Kindly vs. Angry</td>
<td>2.60</td>
<td>7.31</td>
<td>7.13</td>
<td>6.56</td>
<td>5.69</td>
<td>5.44</td>
<td>6.75</td>
</tr>
<tr>
<td>Warm-toward-self vs. Angry at self</td>
<td>3.91(^a)</td>
<td>7.56</td>
<td>6.63</td>
<td>6.56</td>
<td>5.69</td>
<td>5.94</td>
<td>7.31</td>
</tr>
<tr>
<td>Proud vs. Ashamed</td>
<td>4.86(^a)</td>
<td>7.19</td>
<td>6.75</td>
<td>6.31</td>
<td>6.06</td>
<td>7.13</td>
<td>7.88</td>
</tr>
<tr>
<td>Clearminded vs. Confused</td>
<td>5.36(^a)</td>
<td>7.13</td>
<td>6.13</td>
<td>5.69</td>
<td>5.75</td>
<td>6.25</td>
<td>7.38</td>
</tr>
<tr>
<td>Calm vs. Anxious</td>
<td>3.67</td>
<td>6.75</td>
<td>5.94</td>
<td>6.00</td>
<td>5.75</td>
<td>6.50</td>
<td>7.38</td>
</tr>
</tbody>
</table>

\(^a\)df=2/84 in all cases.

\(^b\)The data were transformed so that a high score (above 5) indicates a rating in the expected direction (i.e., positive emotions following success and negative emotions following failure). Scores below 5 would indicate ratings in the unexpected direction.

n.s. - not significant

T=p<.10

\(^*\)=p<.05
emotions which were consistent with their outcome and with their overall level of self-esteem.

**Change from prefeedback to postfeedback.** Analyses of variance on the difference scores revealed that failure produced a greater amount of change than success. There was a significant outcome main effect for four of the emotion categories and one of the remaining categories showed a trend in this direction. The means and F-ratios are presented in Table 9.

The finding that failure had a greater emotional impact than success as revealed by the change scores stands in contrast to the finding that success and failure produced emotions of equal intensity as revealed by the postfeedback scores. This difference attests to the importance of obtaining prefeedback measures of emotions. The finding that failure had a greater emotional impact than success appears to be due to the initial level of feeling. That is, since all subjects reported a generally positive mood prior to both success and failure, to go from a positive mood to a negative one as a consequence of failure produces more of an impact as it involves both a qualitative and quantitative change, than to increase an already positive mood as it involves only a quantitative change. Such an interpretation is consistent with previous research on the assimilation of favorable and unfavorable evaluations (Losco, Note 1).

It could also be argued that failure produced a greater amount of change than success because subjects reported a positive mood at pre-feedback leaving more room for change in a negative direction than in a
### TABLE 9

**MEANS AND F-RATIOS FOR CHANGE SCORES IN EMOTION RATINGS AS A FUNCTION OF OUTCOME**

<table>
<thead>
<tr>
<th>Emotion Category</th>
<th>Failure Group Mean</th>
<th>Success Group Mean</th>
<th>F-ratio for Outcome Main Effect&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happy vs. Unhappy</td>
<td>2.77&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.85</td>
<td>12.09***</td>
</tr>
<tr>
<td>Kindly vs. Angry</td>
<td>1.94</td>
<td>0.75</td>
<td>5.03&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Warm-toward-self vs. Angry-at-self</td>
<td>1.94</td>
<td>0.67</td>
<td>5.72&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Proud vs. Ashamed</td>
<td>2.56</td>
<td>0.88</td>
<td>11.41***</td>
</tr>
<tr>
<td>Clear-minded vs. Confused</td>
<td>1.75</td>
<td>0.79</td>
<td>3.52&lt;sup&gt;T&lt;/sup&gt;</td>
</tr>
<tr>
<td>Calm vs. Anxious</td>
<td>1.46</td>
<td>0.98</td>
<td>0.91&lt;sup&gt;n.s.&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup>Degrees of freedom equal 1/84 in all cases.

<sup>b</sup>Scores indicate the degree of change in the expected direction, i.e., an increase in positive affect following success and an increase in negative affect following failure.

n.s. = Not significant

T = Trend, p<.10

*<sup>p</sup><.05

**<sup>p</sup><.001

Positive direction. Examination of the means in Table 5, however, shows that for both the success and failure groups the means tended to be near the neutral point or slightly on the positive pole of the dimension indicating the data were not "pressing the ceiling." Examination of the standard deviations (which ranged from 1.85 to 2.27 for the
failure group and from 1.67 to 2.17 for the success group on a 9-point scale) revealed that the means for each emotion at prefeedback are approximately two standard deviations below the ceiling. This suggests that the greater impact of failure compared to success was not due to a ceiling effect.

There were no significant effects associated with level of self-esteem or to level of defensiveness on the change scores in emotions from prefeedback to postfeedback (p>.05).

**Satisfaction level.** Analysis of variance revealed that subjects who failed were very displeased with their grades (M=1.38) and subjects who succeeded were very pleased with their grades (M=3.36), F(1,83)=134.75, p<.001. This result also provides evidence of the validity of the criterion used to assign subjects to success and failure groups. There were no significant effects (p>.05) due to level of self-esteem or to level of defensiveness with regard to subjects' reported satisfaction level.

**Performance level.** Four measures of performance level were obtained in the present study. They were: (1) actual performance—the number of points received on the laboratory report; (2) objective performance—the discrepancy between the cutoff point for group assignment and the actual grade; (3) subjective performance—the discrepancy between the minimum score subjects reported they would be pleased with receiving and the actual grade; and (4) the discrepancy between the grade subjects expected to receive and the actual grade. For three out of these four measures
there was a significant main effect for outcome. The means and F-ratios are presented in Table 10.

Upon examination of the means in Table 10, it can be seen that in terms of objective performance subjects who failed had a larger

TABLE 10
MEANS AND F-RATIOS FOR PERFORMANCE LEVEL AS A FUNCTION OF OUTCOME

<table>
<thead>
<tr>
<th>Performance Level Measure</th>
<th>F-ratio(^a)</th>
<th>Success</th>
<th>Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Performance</td>
<td>80.71***</td>
<td>44.79</td>
<td>29.28</td>
</tr>
<tr>
<td>Objective Performance(^b)</td>
<td>12.03***</td>
<td>4.77</td>
<td>10.33</td>
</tr>
<tr>
<td>Subjective Performance(^c)</td>
<td>2.87(^T)</td>
<td>5.29</td>
<td>7.94</td>
</tr>
<tr>
<td>Actual vs. Expected Grade(^d)</td>
<td>11.26**</td>
<td>2.75</td>
<td>8.71</td>
</tr>
</tbody>
</table>

\(^a\)df equals 1/84 in all cases.

\(^b\)For success, the mean reflects the average number of points above the criterion. For failure it represents the number of points below the criterion.

\(^c\)For success, the mean presented is the number of points above the minimum grade subjects reported they would be pleased with. For failure, it is the mean number of points below the minimum grade they would be pleased with.

\(^d\)For success, the mean presented is the number of points above the expected grade. For failure, it is the number of points below the expected grade.

\(T = p<.10\)

\(**p<.01\)

\(***p<.001\)
discrepancy from the cutoff point than subjects who succeeded. In terms of subjective performance, subjects who failed received a grade that was well below the minimum grade they reported they would be pleased with receiving and subjects who succeeded received a grade above the minimum grade they reported they would be pleased with receiving. Finally, subjects who failed received a grade that was much lower than the grade they expected to receive and subjects who succeeded received a grade that was slightly higher than the grade they expected to receive.

It is noteworthy that there were no significant effects due to level of self-esteem or to level of defensiveness on any of the performance level measures.

Summary. Taken together, the findings in this section suggest that in the present study a valid criterion was used to assign subjects to success and failure groups. Subjects in the failure group reported negative emotions and that they were very displeased with the grades they received on their lab reports. The scores they actually received were below, on the average, the minimum grade they reported they would be pleased with, and violated their own performance expectancies. Subjects in the success group reported positive emotions and that they were pleased with the grade they received on their laboratory reports. The scores they received were, on the average, above the minimum grade they said they would be pleased with receiving and exceeded their own expectations of performance.

Subjects' outcomes in the present study were consistent with their history of achievement and their aspirations. That is, subjects who
succeeded, in comparison to subjects who failed, had histories of greater achievement in academic endeavors, set higher aspiration levels, and tended to deem achieving in this particular course as more important. However, there were no differences in the amount of time they reported spending on their laboratory reports.

It was surprising that level of self-esteem and level of defensiveness did not produce significant effects on these measures of past achievement, aspirations and actual performance. One might have reasoned that subjects have high self-esteem because they have a history of success or that they actually outperform subjects with lower levels of self-esteem (Shrauger, 1972). Moreover, it might be assumed that because of their history of success they can realistically set higher aspiration levels, and, to protect their source of high self-esteem, it would be expected that they would deem important those sources of self-esteem that produce success (Rosenberg, 1979). However, this line of reasoning was not supported by the present study. Any differences in the assimilation of success and failure as a function of level of self-esteem and level of defensiveness are not likely to be due to differences in past achievement, aspiration level, the amount of time put into the lab report, or to actual performance differences.

Since it has been established that the criterion used to assign subjects to success and failure groups was valid and that several extraneous variables cannot account for differences in the assimilation of success and failure as a function of level of self-esteem and
defensiveness, the manner in which the subjects actually assimilated the success or failure can be examined.

Three ways of assimilating success and failure will be discussed in the remainder of this chapter. They are, in order of their presentation, degree of generalization from specific to global characteristics, attributions for success or failure, and compensation for failure along with tendencies to demonstrate mastery following success. Each will be presented in a separate section. Results for success and failure groups are presented separately.

**Degree of Generalization**

**Failure.** It was expected that since failure is an outcome which is consistent with low self-esteem and inconsistent with high self-esteem, subjects with low self-esteem would generalize more than subjects with high self-esteem.

It was also expected that the need for enhancement would limit this tendency to generalize. It has been suggested that people with low self-esteem have a greater need for esteem-enhancement than people with high self-esteem. Therefore, this tendency toward enhancement may decrease the amount of generalization observed following failure more for low than for high self-esteem subjects.

Should both the strivings for esteem-enhancement and consistency be operating one would expect more generalization among subjects with low than with high self-esteem. This would be the case since for subjects with high self-esteem both strivings would be thwarted whereas for
subjects with low self-esteem only the striving for esteem-enhancement would be thwarted.

It was also expected that people with a high level of defensiveness would report less generalization than people with a low level of defensiveness in order to downplay the failure.

**Fleeting thoughts questionnaire.** The results of the analysis of variance for the Fleeting Thoughts Questionnaire generalization index revealed a significant main effect for level of self-esteem, F(2,42)=4.27, p<.02. As expected, subjects with low self-esteem drew the most severe and broad negative conclusions about themselves (M=30.50), followed by subjects with moderate self-esteem (M=23.47), and by subjects with high self-esteem (M=16.03). Thus, subjects reported fleeting thoughts that would serve to maintain their level of self-esteem. The fact that there was no effect due to time suggests that the degree of generalization was stable over time. There were no effects associated with level of defensiveness on the degree of generalization reported.

**Self-concept questionnaire.** The results of the analysis of variance on the Self-Concept Questionnaire generalization index also revealed only one significant effect. Self-concept generalizations varied as a function of level of self-esteem, F(2,42)=6.71, p<.003. Subjects with low self-esteem generalized more (M=26.33) than either subjects with moderate or high self-esteem (M=20.93 and 20.30, respectively).

**Success.** According to the striving for consistency one would expect subjects with high self-esteem to generalize from specific to global
self-attributes more than subjects with low self-esteem, as success is an outcome consistent with their overall level of self-esteem. According to the striving for enhancement one would expect subjects with low self-esteem to generalize more than subjects with high self-esteem as the former group has a greater need to enhance self-esteem. Considering the two strivings together one would expect subjects with a high level of self-esteem to generalize more than subjects with a low level of self-esteem since, for the former group, both strivings would be fulfilled whereas, for the latter group, the striving for consistency might inhibit the striving for enhancement.

As to level of defensiveness, one would expect high defensive subjects to report more generalization than low defensive subjects following success since by doing so they would present a favorable self-image.

**Fleeting thoughts questionnaire.** Contrary to expectations, the results of the analysis of variance on the Fleeting Thoughts Questionnaire generalization index revealed only one significant effect, the level of self-esteem x level of defensiveness interaction, F(2,41)=4.25, p<.03. The means for this interaction are presented in Table 11.

Upon examining the means in Table 11 it can be seen that, as expected, subjects with high self-esteem and high defensiveness showed the greatest degree of generalization of any group, and that subjects with high self-esteem and low defensiveness showed very little generalization. Subjects with a moderate level of self-esteem reported an intermediate degree of generalization with the high defensive subjects
TABLE 11
MEANS FOR GENERALIZATION INDEX FOLLOWING SUCCESS AS A FUNCTION OF LEVEL OF SELF-ESTEEM AND LEVEL OF DEFENSIVENESS--FLEETING THOUGHTS QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Level of Defensiveness</th>
<th>Level of Self-Esteem</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td>31.44</td>
<td>23.57</td>
<td>17.13</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>16.25</td>
<td>26.56</td>
<td>34.50</td>
</tr>
</tbody>
</table>

reporting slightly more generalization than the low defensive subjects. Contrary to expectation, subjects with low self-esteem and low defensiveness reported a greater degree of generalization than subjects with low self-esteem and high defensiveness.

It could be argued that differences among subjects that existed prior to feedback could account for these postfeedback results. To test this possibility an analysis of covariance was done on the Fleeting Thoughts Questionnaire generalization index using the prefeedback ratings on the Self-Concept Questionnaire generalization index as the covariate. The results of the analysis of covariance revealed that the pattern of results of the level of self-esteem x level of defensiveness interaction remained the same when the prefeedback scores were taken into account although at a lower level of reliability, $F(2,41)=3.28$, $p<.05$.

Thus, the results for subjects with moderate and high self-esteem supported the expectation that high defensive subjects would present a
more favorable self-image following success than low defensive subjects. Subjects with low self-esteem reversed this trend as the high defensive subjects reported less generalization than low defensive subjects. Perhaps this unanticipated result can be explained by two alternative interpretations of high scores on the Marlowe-Crowne Social Desirability Scale. On the one hand, high scores on the scale have been taken as an indication of the degree to which people wish to present a favorable self-image to others (Strickland, 1977). On the other hand, high scores on the Marlowe-Crowne Scale have also been taken as an indication of the degree to which people protect themselves from disapproval by being cautious in their expectations of themselves (Breger, 1966; Crowne and Marlowe, 1964; Efran and Boylin, 1967; Kopfstein, 1960; Petzel, 1972).

It could be that among people with low self-esteem a high level of defensiveness is expressed by a cautiousness which inhibits the tendency to generalize a lot from a single success. In this way, people with low self-esteem are protected from drawing conclusions about themselves that may not be warranted and from setting up expectations for future success that are too high for them to meet. It may be less adaptive for people with low self-esteem to have a low level of defensiveness. By drawing broad conclusions about themselves from a single success experience they may set their expectations too high only to have this new level of self-satisfaction dashed by future failures should they occur.

Among people with moderate and high self-esteem, on the other hand, it appears that a high level of defensiveness is expressed by drawing conclusions extending beyond the single success experience
whereas a low level of defensiveness does not. Such conclusions may not be so threatening for people with moderate and high self-esteem as they are for people with low self-esteem since the former group would have a reservoir of positive self-feelings to fall back on should they fail. The results suggest that the moderate and high self-esteem subjects who failed tended to not generalize much beyond the specific failure.

**Self-concept questionnaire.** The results of the analysis of variance on the Self-Concept Questionnaire generalization index revealed that there was a significant effect due to level of self-esteem, $F(2,41)=17.32$, $p<.001$. As expected, subjects with high self-esteem showed the greatest degree of generalization ($M=39.30$) followed by subjects with moderate ($M=34.45$) and low ($M=30.62$) self-esteem. The only other significant effect was the main effect for time, $F(2,82)=4.52$, $p<.02$. There was an increase in the degree of generalization from pre-feedback ($M=33.99$) to postfeedback ($M=35.39$) which was maintained at follow-up ($M=35.12$). This indicates that success led subjects to report more favorable global sentiments about themselves than they held prior to feedback.

**Summary of results concerning degree of generalization.** As expected, level of self-esteem influenced the degree of generalization subjects reported from success and failure. In the failure group, subjects with low self-esteem reported a greater degree of generalization than subjects with moderate or high self-esteem on both the Fleeting Thoughts Questionnaire and on the Self-Concept Questionnaire. In the success group, subjects with high self-esteem reported a greater degree of
generalization than subjects with moderate and low self-esteem, but only on the Self-Concept Questionnaire.

Taking the results from the subjects who failed and succeeded together it appears that within each level of self-esteem, upper and lower limits are set on the degree of generalization that subjects will report that depends on their typical view of themselves. That is, one's overall level of self-esteem can be viewed as an anchoring point which determines the meaning of particular success and failure experiences. Subjects with moderate and high self-esteem reported little generalization from failure and a lot from success. Subjects with low self-esteem reported a great deal of generalization from failure but little generalization from success. In each case, level of self-esteem is protected by deriving meanings that would not be greatly higher or lower than habitual self-evaluation.

Although this pattern of responding may be very adaptive for subjects with moderate and high self-esteem, for subjects with low self-esteem it may not be. After all, subjects with low self-esteem performed no worse than other subjects who failed and performed as well as other subjects who succeeded. Perhaps subjects with low self-esteem would benefit from learning to draw less severe conclusions from their failures and more positive conclusions following their real successes. Dweck (1975) has had promising results teaching children who show extreme deterioration in performance following failure to alter their interpretations of failure so that they either maintained or improved their performance following subsequent failures. Perhaps such
procedures could be adopted to help people with low self-esteem to benefit from their successes and to be less harsh on themselves following failure.

It is noteworthy that there was no interaction between level of self-esteem and time for either the success or failure groups on the Self-Concept Questionnaire generalization index. If it was the failure or the success that caused subjects to generalize to varying degrees as a function of level of self-esteem then there should have been little generalization at prefeedback with the differences between the self-esteem groups emerging at postfeedback. However, the differences that were found following failure were already present at prefeedback.

This raises an interesting question. Namely, why were there differences in the degree of generalization as a function of level of self-esteem even prior to feedback? To put it another way, how did subjects know at prefeedback what conclusions they would draw about themselves from a failure or success that had not yet occurred? One explanation for the prefeedback differences is that they reflect the different ways that subjects at each level of self-esteem habitually evaluate themselves. That is, subjects at each level of self-esteem may be predisposed to evaluate themselves in certain ways that they brought to this situation.

It could also be argued that the differences between the self-esteem groups occurred because of the high weight given to the extreme generalization items in forming the generalization index. Whether the items at the extreme degree of generalization were responsible for the
differences observed among the self-esteem groups is especially important to establish since the items used to measure "extreme generalization" and global self-esteem were similar. In order to evaluate this possibility, separate analyses of variance were done for each level of generalization. The results of these analyses of variance revealed that the differences observed as a function of level of self-esteem cannot be solely accounted for by differences at the extreme level of generalization as, with one exception, there were significant main effects for level of self-esteem in the expected direction at each level of generalization. The means and F-ratios for each level of generalization for the success and failure groups as a function of level of self-esteem are presented in Appendix H. These findings indicate that even at levels of generalization that were specific to this particular situation the self-esteem groups differed in a manner consistent with that observed using the generalization index.

An alternative explanation for the lack of a self-esteem x time interaction is that subjects who were to eventually fail or succeed recognized this at some level and began to assimilate the outcome in a way that would serve to protect their level of self-esteem. More specifically, subjects with low self-esteem, in anticipation of the failure, drew broad negative conclusions about themselves before the failure was verified so that when it actually happened their self-esteem was not further damaged. Subjects with moderate and high self-esteem, on the other hand, anticipated their failure by drawing specific negative conclusions about themselves, so that when the failure occurred they were
prepared for it and their self-esteem would not be so vulnerable to external evaluation. Similarly, in anticipation of success, subjects with low self-esteem drew more specific conclusions than either subjects with moderate or high levels of self-esteem. In each case, subjects anticipated their outcome in such a way that would be characteristic of their level of self-esteem.

There is other evidence that subjects began to prepare themselves for their eventual outcome prior to receiving feedback. It should be recalled that the prefeedback measures were collected on the day subjects turned in their papers to their instructors. Therefore, students probably had some knowledge of the quality of their papers at that time. It should be recalled that subjects who eventually failed scored significantly lower on the aspiration level index than subjects who eventually succeeded ($p<.001$). Thus, it appears that subjects had formed an opinion of the quality of their laboratory reports at prefeedback. It should also be noted that the main effect for level of self-esteem was not significant on the aspiration level index. Therefore, the differences that were found in the degree of generalization as a function of level of self-esteem cannot be accounted for by differences in aspiration level among the self-esteem groups.

Other suggestive information that subjects began to psychologically prepare themselves to fail or succeed before the actual outcome was known is provided by the following excerpts from narrative descriptions of subjects' reactions to their failure or success. Subjects were
asked: "Did the grade you received on your lab report make you revise your opinion of yourself downwards (upwards)? Why or why not?"

(S#80-Failure-Moderate self-esteem-High defensive) No, because I had already felt badly of myself when I handed in the paper.

(S#08-Failure-Low self-esteem-Low defensive) No, I usually convince myself that I didn't do well enough after I hand an assignment in--that I could have done better. This way I don't get as disappointed. I suppose this is a bad attitude but it helps.

(S#61-Success-Moderate self-esteem-Low defensive) The grade I received reinforced my expectations--it pleased me that I seemed to be able to judge my ability on this assignment well in respect to the time I put into it.

(S#40-Success-Low self-esteem-Low defensive) I don't think that I've revised my opinion of myself, because I knew that I was capable of doing the work that I did. Naturally I'm pleased that I received such a good grade. But I reiterate, I knew when I passed in the lab report that I was capable of getting a good grade.

Thus, there is some evidence, albeit tentative, that subjects prepared themselves for the eventual outcome at the time the prefeedback measures were taken. Although this result was not anticipated, in retrospect, it makes some sense. Consider, for a moment, the situation subjects in each group were facing at prefeedback. They were about to turn in a laboratory report and they had some knowledge of its quality. Should they wait three weeks to consider what it would mean for them should the failure or success actually occur? Or, should they begin coping with this possible event well beforehand? The results suggest that the latter interpretation is correct and this has provocative implications, theoretically as well as methodologically.

Theoretically, the results are suggestive of how people maintain their level of self-esteem. In the present study subjects reported a degree of generalization that would be consistent with their overall
level of self-esteem. The question at the moment, though, is why subjects should anticipate this three weeks before feedback. As Epstein (1973) has suggested, people have good reason to anticipate when a marked change in self-esteem may occur. Although Epstein dealt mainly with coping with anticipated decreases in self-esteem the results of the present study suggest that similar processes are also at work for anticipated increases in self-esteem. According to Epstein, people are motivated to avoid sudden decreases in self-esteem because they are especially painful. It appears that subjects are also motivated to avoid sudden increases in self-esteem. Perhaps this is the case because by generalizing too far beyond the specific success, expectations may be set too high which, in turn, would set the person up for a sudden decrease in self-esteem.

In terms of methodological issues, the results of the present study suggest that in order to study how self-esteem is affected by success and failure it is necessary to obtain a base level well before subjects have any inkling of how they will perform on a given task. Once subjects anticipate what the outcome will be, psychological processes are apt to already be underway to protect their self-esteem.

A second methodological issue concerns the fact that almost all studies which examine the effects of success and failure on self-esteem have been conducted in single laboratory situations. These studies rely on deceptive procedures to influence subjects' expectancy levels and/or provide false feedback regarding their performance. Because of these procedures, these studies do not allow subjects to anticipate success or
failure in the way that they apparently do in everyday life. The results of such studies may therefore be of dubious external validity in terms of more natural situations. The results of the present study suggest that three weeks prior to feedback subjects had drawn conclusions about their performance and its implications that would tend to be maintained after they received feedback.

**Attributions of Responsibility**

**Failure.** Four types of attributions were assessed in the present study: (1) making an internal attribution by accepting personal responsibility; (2) making an internal attribution about stable characteristics (e.g., ability); (3) making an internal attribution about variable characteristics (e.g., immediate effort); and (4) making an external attribution (e.g., blaming the instructor).

It was expected that attributions made to account for failure would serve to maintain one's level of self-esteem. Thus, it was expected that subjects with low self-esteem would more often respond positively to items in the "accepts responsibility" and "stable attributions" categories than would subjects with high self-esteem. This would happen because in each case such attributions for failure would be consistent with subjects' overall level of self-esteem. It was also expected that high self-esteem subjects would more often endorse items in the "variable attributions" and "external attributions" categories than would low self-esteem subjects.
Fleeting thoughts questionnaire. For the most part, the above expectations were not confirmed. The results of the analyses of variance revealed that there were no significant effects due to level of self-esteem, level of defensiveness or time for external attributions, variable attributions or accepting responsibility for the failure.

For stable attributions there was a significant main effect for time indicating that over time thoughts relating to stable attributions increased from postfeedback (M=.35) to follow-up (M=.44), F(1,42)=5.30, p<.03. Of greater interest, the time x level of self-esteem interaction was also significant, F(2,42)=3.62, p<.04. The means for this interaction are presented in Table 12.

As can be seen in Table 12, as expected, subjects with low self-esteem reported that stable characteristics accounted for their failure more than subjects with moderate and high self-esteem. At follow-up, subjects with moderate self-esteem reported that stable attributions

<table>
<thead>
<tr>
<th>Time</th>
<th>Level of Self-Esteem</th>
<th>Postfeedback</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>.48</td>
<td>.44</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>.34</td>
<td>.53</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>.28</td>
<td>.34</td>
</tr>
</tbody>
</table>
accounted for their failure more than subjects with low self-esteem, but both groups still reported a greater frequency of thoughts than subjects with high self-esteem. Overall, subjects tended to account for their failure by using stable attributions in a manner consistent with their level of self-esteem.

**Self-concept questionnaire.** Contrary to expectation, the results of the analyses of variance revealed that there were no main effects due to level of self-esteem for any type of attribution. For accepting responsibility, variable, and external attributions the only significant effect was the main effect for time. The means and F-ratios for each type of attribution are presented in Table 13 for each time period.

As can be seen in Table 13, the degree to which subjects accepted responsibility for their failure decreased from prefeedback to postfeedback and remained stable until follow-up. As for variable and external attributions, subjects reported an increase in the degree to which variable and external attributions accounted for their failure from prefeedback to postfeedback, which was maintained at follow-up.

For stable attributions, there was no main effect for time or for level of self-esteem. There was, however, an interaction between the two variables, $F(4,84)=3.60$, $p<.009$. The means for this interaction are presented in Table 14.

As can be seen in Table 14, all three groups reported similar ratings at prefeedback. At postfeedback, subjects with low self-esteem showed a sharp increase indicating that they felt stable attributions accounted for their failure more than the other two groups. At
## TABLE 13
MEANS AND F-RATIOS FOR ATTRIBUTIONS FOR FAILURE AS A FUNCTION OF TIME—SELF-CONCEPT QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Type of Attribution</th>
<th>Prefeedback</th>
<th>Postfeedback</th>
<th>Follow-up</th>
<th>F-ratio&lt;sup&gt;a,b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept Responsibility</td>
<td>3.66</td>
<td>3.14</td>
<td>3.14</td>
<td>10.50***</td>
</tr>
<tr>
<td>Stable Characteristics</td>
<td>2.20</td>
<td>2.34</td>
<td>2.24</td>
<td>1.24&lt;sup&gt;ns.&lt;/sup&gt;</td>
</tr>
<tr>
<td>Variable Characteristics</td>
<td>2.72</td>
<td>3.19</td>
<td>3.12</td>
<td>11.47***</td>
</tr>
<tr>
<td>External Factors</td>
<td>2.19</td>
<td>2.47</td>
<td>2.45</td>
<td>4.57*</td>
</tr>
</tbody>
</table>

<sup>a</sup>F-ratios are presented for the time main effect.

<sup>b</sup>Degrees of freedom equal 2/84 in all cases.

n.s. = not significant

*=p<.05

***=p<.001.

## TABLE 14
MEANS FOR STABLE ATTRIBUTIONS FOR FAILURE AS A FUNCTION OF LEVEL OF SELF-ESTEEM AND TIME—SELF-CONCEPT QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Level of Self-Esteem</th>
<th>Prefeedback</th>
<th>Postfeedback</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>2.30</td>
<td>2.86</td>
<td>2.45</td>
</tr>
<tr>
<td>Moderate</td>
<td>2.31</td>
<td>2.08</td>
<td>2.09</td>
</tr>
<tr>
<td>High</td>
<td>2.00</td>
<td>2.23</td>
<td>2.17</td>
</tr>
</tbody>
</table>
follow-up, subjects with low self-esteem showed a decrease in the degree to which they felt stable attributions accounted for their failure. This group continued to be higher than the other two groups. Thus, only for stable attributions were the results consistent with expectations in that subjects with low self-esteem were more willing than subjects with higher self-esteem to attribute their failure to stable characteristics of themselves.

Success. It was expected that subjects would attribute causality for success in a manner that would maintain their level of self-esteem. Therefore, it was expected that subjects with high self-esteem would accept responsibility for success to a greater extent than subjects with lower levels of self-esteem, who would be more likely to attribute the success to external factors. According to the need to enhance self-esteem, it was expected that subjects would accept responsibility for success, but that subjects with high self-esteem would attribute the success to stable factors, and that subjects with low self-esteem would attribute the success to variable characteristics.

Since the results of the analyses of variance revealed no significant main effects for level of defensiveness and only one significant interaction including level of defensiveness, defensiveness is omitted from the following discussion with that one exception.

Fleeting Thoughts Questionnaire. The results of the analyses of variance revealed no significant effects for any type of attribution on the Fleeting Thoughts Questionnaire.
Self-Concept Questionnaire. The analyses of variance revealed that for accepting responsibility, stable and variable attributions there was a significant main effect for level of self-esteem. The means and F-ratios for each type of attribution are presented in Table 15.

TABLE 15

MEANS AND F-RATIOS FOR EACH TYPE OF ATTRIBUTION FOLLOWING SUCCESS AS A FUNCTION OF LEVEL OF SELF-ESTEEM—SELF-CONCEPT QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Type of Attribution</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accepts Responsibility</td>
<td>Stable Attributions</td>
<td>Variable Attributions</td>
</tr>
<tr>
<td>Low</td>
<td>3.67</td>
<td>3.24</td>
<td>3.44</td>
</tr>
<tr>
<td>Moderate</td>
<td>3.79</td>
<td>3.51</td>
<td>3.13</td>
</tr>
<tr>
<td>High</td>
<td>4.23</td>
<td>3.86</td>
<td>3.93</td>
</tr>
</tbody>
</table>

F ratios

|                      | 6.32** | 4.85** | 7.47** | 2.64T |

*df=2,41 in all cases

T=p<.10

**=p<.01

Examination of the means in Table 15 shows that, as expected, subjects with high self-esteem accepted responsibility for their success and attributed it to stable characteristics to a greater extent than subjects with moderate or low self-esteem. Contrary to expectation, subjects with high self-esteem also reported that variable characteristics accounted for their success more than subjects with low
self-esteem. Also, contrary to expectation, level of self-esteem did not significantly influence the extent to which subjects made external attributions to account for their success.

For two types of attribution there was also a main effect for time. Prior to feedback subjects felt that stable characteristics would account for their success to a moderate extent (M=3.41), which increased at postfeedback (M=3.63), and remained relatively stable at follow-up (M=3.57), F(2,82)=4.85, p<.01. A similar result was obtained for variable attributions. Prior to feedback, subjects reported that variable attributions would account for their success to a moderate extent (M=3.35) which increased at postfeedback (M=3.57) and was maintained at follow-up (M=3.60), F(2,82)=3.34, p<.05.

For no type of attribution was there an interaction between level of self-esteem and time. In fact the only significant interaction was the level of self esteem x level of defensiveness x time interaction for external attributions, F(4,80)=3.33, p<.02. The means for this interaction are presented in Table 16.

Examination of the means in Table 16 presents no readily interpretable pattern of this result.

Summary of results concerning attributions. The attributions that subjects made to account for their failure mainly did not conform to expectations. In the present study, level of self-esteem did not influence three of the four types of attributions subjects made to account for their failure. Level of self-esteem did influence stable
TABLE 16
MEANS FOR EXTERNAL ATtributions FOR SUCCESS AS A FUNCTION OF LEVEL OF SELF-ESTEEM, LEVEL OF DEFENSIVENESS AND TIME—SELF-CONCEPT QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Level of Self-Esteem</th>
<th>Level of Defensiveness</th>
<th>Prefeedback</th>
<th>Postfeedback</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low</td>
<td>3.17</td>
<td>2.88</td>
<td>2.96</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.73</td>
<td>3.00</td>
<td>2.90</td>
</tr>
<tr>
<td>Moderate</td>
<td>Low</td>
<td>2.57</td>
<td>2.91</td>
<td>3.02</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.02</td>
<td>2.96</td>
<td>3.04</td>
</tr>
<tr>
<td>High</td>
<td>Low</td>
<td>3.10</td>
<td>2.90</td>
<td>2.98</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.19</td>
<td>3.31</td>
<td>3.48</td>
</tr>
</tbody>
</table>

attributions in the expected fashion. Level of defensiveness did not influence the type of attributions subjects made.

Although the results of the present study, for the most part, do not support the notion that subjects attribute causality for outcomes in a way that is consistent with their overall level of self-esteem (Weiner, 1979), there is some evidence that subjects responded in a way that enhances self-esteem. At first glance, one might expect failure to be totally rejected since it can only deflate self-esteem. However, in the present study failure produced an increase in subjects' willingness to explain their failure by using variable and external attributions and these increases were still apparent two weeks later at follow-up. Only
accepting responsibility for the failure decreased upon learning of the failure, and this postfeedback level also remained stable. Taken together, these findings suggest that subjects may have used an attributional strategy that could enhance self-esteem in the long run. Namely, by lowering the degree of personal responsibility and simultaneously increasing the degree to which they attribute their failure to external and variable factors, subjects avail themselves of the opportunity to work harder on future papers and to appease their instructors. If subjects actually do work harder on future papers their likelihood of succeeding could increase which, in turn, could enhance self-esteem.

Taken as a whole, the manner in which subjects attributed responsibility for success provides evidence of both consistency and enhancement strivings. Compatible with predictions based on consistency theory, subjects with high self-esteem were more likely to accept personal responsibility for their success than were subjects with lower levels of self-esteem. Furthermore, subjects with a high level of self-esteem were more likely to attribute success to stable characteristics of themselves than were subjects with moderate and low levels of self-esteem. However, incompatible with predictions based on consistency theory, subjects with high self-esteem were also more likely to attribute their success to variable factors than were subjects with low self-esteem.

Evidence of the striving for esteem-enhancement was also observed in the types of attributions subjects made for success. The results of
the Fleeting Thoughts Questionnaire revealed that all subjects, regardless of level of self-esteem, accepted personal responsibility for their success and attributed it to stable and variable characteristics. Also relevant to the striving for enhancement is that internal attributions (accepting personal responsibility, stable and variable attributions) were regarded as being accurate by all three groups as revealed by the mean ratings on the Self-Concept Questionnaire.

With the single exception of stable attributions by the failure group, the level of self-esteem x time interaction was not significant. The differences in attributional style that were found as a function of level of self-esteem were already present at prefeedback. There are two explanations for this result. It could be that since the prefeedback measure was taken on the day that subjects turned in their papers they had some knowledge concerning the quality of their papers and therefore began assimilating the outcome at that point. In future work it would be well to get prefeedback measures that are uncontaminated by partial knowledge of the eventual outcome.

A second explanation of the results would suggest that the effects due to level of self-esteem represent well-learned attributional styles which predispose subjects to assimilate success and failure in certain ways. Thus, subjects may come into evaluative situations very well prepared to deal with various outcomes.
Compensation

Direct compensation following failure. It was expected that subjects with high self-esteem would be especially motivated to utilize direct compensation as a means of coping with failure. However, since so little empirical work has been done using direct compensation as a dependent variable, the results of the present study are exploratory in nature.

Since the results of the analyses of variance revealed no significant effects due to level of defensiveness for any measure of direct compensation it will be omitted from the following discussion.

Fleeting thoughts questionnaire. The results of the analysis of variance for direct compensation revealed that there was no effect due to level of self-esteem. Contrary to expectation, all subjects, regardless of level of self-esteem, reported that they wanted to directly compensate for their failure. The means at postfeedback for the low, moderate and high self-esteem groups were .84, .80 and .84, respectively. The maximum possible score was 1.00. This suggests that a very adaptive coping procedure was used by most subjects.

The only significant effect was the main effect for time, F(1,42)=8.27, p<.006. Fleeting thoughts pertaining to direct compensation were very frequent immediately following failure (M=.83) and were more frequent at follow-up (M=.88). The fact that subjects were beginning to work on their second laboratory report for the course at follow-up may have facilitated this effect.
**Self-concept questionnaire.** Consistent with the findings on the Fleeting Thoughts Questionnaire the results of the analysis of variance revealed that the only significant effect was the main effect for time, $F(2,84)=4.84$, $p<.01$. At prefeedback, subjects felt they would directly compensate for their failure should it occur ($M=3.74$). This feeling increased at postfeedback ($M=4.09$) and was maintained at follow-up ($M=3.99$).

**Behavioral measures.** Analysis by Chi Square revealed that level of self-esteem did not influence the frequency with which subjects rewrote their laboratory reports ($X^2=1.99$, $p>.05$) or made and kept an appointment with their instructors ($X^2=.71$, $p>.05$). It should be pointed out that few subjects rewrote their laboratory reports ($N=12$) or made and kept an appointment with their instructors ($N=20$). Thus, it appears that subjects planned to directly compensate for this initial failure by working harder on future papers rather than by redoing the first one. Therefore, rewriting the laboratory report and meeting with the instructor were probably not very valid indicators of direct compensation.

**Indirect compensation following failure.** Based on the theoretical writings of Combs and Snygg (1959) it was expected that subjects with low self-esteem would use indirect compensation as a means of coping with failure more than subjects with high self-esteem.

Since the results of the analyses of variance revealed no significant effects due to level of defensiveness it will be omitted from the following discussion.
_Fleeting thoughts questionnaire._ As to the results for indirect compensation, analysis of variance revealed no main effect for level of self-esteem. There was, however, a main effect for time which showed that thoughts pertaining to indirect compensation tended to increase from postfeedback (M=.30) to follow-up (M=.41), F(1,42)=11.27, p<.002. There was no significant interaction between level of self-esteem and time.

_Self-concept questionnaire._ The results of the analysis of variance on indirect compensation revealed no significant effects. There was, however, a marginally significant trend for self-esteem, F(2,42)=3.21, p<.06. As expected, subjects with low self-esteem reported the greatest degree of indirect compensation (M=2.67) followed by subjects with moderate (M=2.56) and high (M=2.17) self-esteem. This finding tends to support the idea that people who feel less worthy are more prone to seek alternative areas of success after failing than are people who feel more worthy. However, the finding is only a trend and should be interpreted with caution.

Direct compensation following success. The results of the analysis of variance for direct compensation revealed no main effects due to level of self-esteem, level of defensiveness or time. The only significant interaction was between level of self-esteem and level of defensiveness, F(2,41)=3.67, p<.04. The means for this interaction are presented in Table 17.
# TABLE 17

MEANS FOR DIRECT COMPENSATION FOLLOWING SUCCESS AS A FUNCTION OF LEVEL OF SELF-ESTEEM AND LEVEL OF DEFENSIVENESS--FLEETING THOUGHTS QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Level of Defensiveness</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>.78</td>
<td>.66</td>
<td>.39</td>
</tr>
<tr>
<td>High</td>
<td>.64</td>
<td>.44</td>
<td>.68</td>
</tr>
</tbody>
</table>

As can be seen in Table 17, subjects with high self-esteem and high defensiveness reported more thoughts pertaining to direct compensation than low defensive subjects. Subjects with low and moderate self-esteem reversed this pattern.

Especially interesting is the very high frequency of thoughts pertaining to direct compensation reported by subjects with low self-esteem and low defensiveness. It appears that this group, in particular, was highly motivated by this single success experience to work especially hard on future papers to achieve future successes in the course. This finding is consistent with the unexpectedly high degree of generalization that this group reported immediately following success feedback. It should be recalled that this group of subjects reported the second highest degree of generalization of any group, indicating that they inferred more from this experience than a single success warrants. Taking the direct compensation and degree of generalization findings together suggests that the low self-esteem subjects with low defensiveness were
especially affected by this single success experience, propelling them to draw conclusions that exceeded the specific success and motivating them to strive hard for future successes in the course.

**Self-concept questionnaire.** Analysis of variance of direct compensation revealed that there were no significant effects. However, there was a trend for the interaction between level of self-esteem and level of defensiveness, \( F(2,41)=2.58, p<.09 \). The means for this interaction are presented in Table 18.

<table>
<thead>
<tr>
<th>TABLE 18</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEANS FOR DIRECT COMPENSATION FOLLOWING SUCCESS AS A FUNCTION OF LEVEL OF SELF-ESTEEM AND LEVEL OF DEFENSIVENESS—SELF-CONCEPT QUESTIONNAIRE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of Self-Esteem</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>3.66</td>
<td>3.61</td>
<td>3.23</td>
</tr>
<tr>
<td>High</td>
<td>3.58</td>
<td>3.34</td>
<td>3.97</td>
</tr>
</tbody>
</table>

As can be seen in Table 18, the means reported on the Self-Concept Questionnaire for direct compensation mirrored the pattern of means found for the same interaction on the Fleeting Thoughts Questionnaire. This suggests that subjects believed they would actually carry out their motivation to expend more effort on future papers.

**Behavioral measures.** Since only two subjects rewrote their laboratory reports, and only nine subjects made an appointment to
discuss their laboratory reports with their instructors, no analyses were done on these variables.

**Summary of results concerning compensation.** Taken together, the results concerning direct compensation as a response to failure suggest that it is a frequent reaction which subjects intend to carry out. Furthermore, this motivation tends to increase over time. These findings are quite consistent with the interpretation made earlier concerning subjects' attributions for failure. It should be recalled that subjects accounted for their failure by lowering their personal responsibility for the failure and by increasing the degree to which they felt external and variable attributions accounted for their failure. It was suggested that this strategy could enhance self-esteem in the long-run by allowing subjects to undo the failure by working harder on future papers. The results concerning direct compensation certainly support this interpretation. At postfeedback, subjects strongly felt the need to work harder on future papers and this motivation was still present at follow-up. Clearly, this is an adaptive strategy for coping with failure, especially if one considers that this was the first of five laboratory reports students would be writing.

It is striking, however, that neither level of self-esteem nor level of defensiveness influenced the degree to which subjects utilized direct compensation. Perhaps because this was the first paper in the course, and there still remained opportunities for success, all subjects adopted the strategy of putting more effort into the course.
Another explanation as to why the results of the present study do not conform to the results of previous studies is that in the present study the stakes were higher. For example, in Aronson and Carlsmith's (1962) study, subjects performed in a laboratory experiment in which their bogus task was to select the "schizophrenic" from pictures of Harvard undergraduates. This was presented as a measure of social sensitivity. If they did not undo their "failure" during the experiment the worst that could happen is that they would leave the experimental room with a low score on the task. In the present study, however, unless subjects improved their performance they might fail a course which was required for their major. Perhaps there was enough at stake to induce all subjects to try harder on future laboratory reports.

For success, as measured by both the Fleeting Thoughts and Self-Concept Questionnaires, there were no main effects due to level of self-esteem, level of defensiveness or time. On the Fleeting Thoughts Questionnaire there was a significant level of self-esteem x defensiveness interaction. Only subjects with high self-esteem and high defensiveness reported more thoughts pertaining to direct compensation than low defensive subjects. Subjects with low and moderate self-esteem reversed this pattern.

Subjects with low self-esteem and low defensiveness reported an especially high degree of thoughts relating to direct compensation following success. Since this group also generalized a lot it appears that they were especially affected by the success experience, propelling them to draw broad conclusions and motivating them to achieve future
successes in the course. The long-term adaptiveness of such responses would, of course, depend on subjects' future achievements in the course.
CHAPTER IV

CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The purpose of the present study was to examine the assimilation of success and failure as a function of level of self-esteem and level of defensiveness. Three types of assimilation processes were investigated; the degree of generalization from the specific performance to more global aspects of self, the attributions that subjects employed to account for their success or failure, and the subjects' motivation to achieve success on similar and different tasks in the future. It was expected that two strivings would influence the manner in which subjects utilized these responses to assimilate success or failure. One is the striving for consistency and the other is the striving for enhancement. According to the striving for consistency, it was expected that subjects would be especially likely to assimilate feedback that was consistent with their overall view of themselves. If confronted with inconsistent feedback this tendency toward consistency would motivate subjects to interpret the inconsistent feedback in such a way as to protect their current view of themselves as much as realistically possible. According to the striving for esteem-enhancement it was expected that subjects would be motivated to assimilate success rather than failure as this would enhance self-esteem. Moreover, if confronted with negative feedback, the tendency toward enhancement would motivate subjects to interpret the feedback in such a way as to protect self-esteem as much as realistically possible.
There were also two ancillary purposes for conducting the present study. One was to examine the extent to which subjects' fleeting thoughts following success or failure corresponded to more stable views of themselves. Thus, for each dependent variable subjects indicated the frequency with which thoughts pertaining to each dependent variable occurred to them regardless of their accuracy. Subjects also indicated the accuracy of each of these thoughts.

The second ancillary purpose was to determine the stability over time of reactions to success and failure. Thus, a follow-up measure was taken two weeks after subjects learned how they had performed on their first laboratory report.

Before examining the manner in which subjects assimilated the success or failure, it was necessary to ascertain whether the criterion used to assign subjects to success and failure groups was valid. The results indicated that the criterion used was indeed valid and, further, that failure had a more potent impact than success. Subjects who failed reported a greater change in affect in a negative direction than subjects who succeeded reported a change in a positive direction. Furthermore, subjects who failed had their expectancies violated to a greater extent than subjects who succeeded. Finally, subjects who failed reported being displeased with their grade whereas subjects who succeeded reported being pleased with their grade.

Given that the criterion used to assign subjects to success and failure groups was valid, it was then necessary to determine whether the self-esteem and defensiveness groups differed on extraneous variables
that could account for how they assimilated success or failure. The results of these analyses revealed that level of self-esteem and level of defensiveness did not significantly influence subjects' ratings of any of the following variables: past achievement; aspiration level; ego-involvement; preparation time; and, performance level on the first laboratory report. Therefore, any differences in the assimilation of success and failure as a function of level of self-esteem and level of defensiveness are not likely to be due to differences between the groups on any of these variables.

With the knowledge that the self-esteem and defensiveness groups did not differ on these variables it was possible to examine how subjects assimilated success and failure as a function of level of self-esteem and level of defensiveness. One of the more striking and consistent findings across all of the major dependent variables was that level of defensiveness only rarely influenced subjects' responses to success or failure. For the failure group, there were no significant effects due to level of defensiveness. For the success group, there were no main effects and only three interactions which included level of defensiveness. The question arises as to why level of defensiveness failed, for the most part, to predict how subjects would assimilate success or failure. As with any negative finding a variety of explanations are possible. Some possibilities will be discussed here because of their implications for future research.

Perhaps the most compelling explanation for the general lack of findings due to level of defensiveness can be derived from the
limitations imposed by conducting research in a naturally-occurring situation. First, due to the limited number of students enrolled in the Methods in Psychology class (N=105) and since participation in the present study was entirely voluntary, the final number of subjects at each level of defensiveness was small (N=8). Small sample sizes make it difficult to obtain significant results.

Also due to the limited sample of subjects available for inclusion in the present study, the range of scores on the Marlowe-Crowne Scale may have been relatively restricted. As can be seen in Table 2, for both the failure and success groups, it was especially difficult to find subjects who had high self-esteem and also low scores on the Marlowe-Crowne Scale. In fact, the lowest score obtained by this group was higher than the highest score obtained by the low and moderate self-esteem groups who were also assigned to the low-defensiveness group. Thus, in the present study, there may not have been enough discrimination between low and high defensiveness subjects for differences between the groups to emerge.

This situation may not be unique to the present sample of subjects, as scores on the Marlowe-Crowne Scale have been found to be significantly positively correlated with the global self-esteem scores on the O'Brien-Epstein Self-Report Inventory (O'Brien, Note 2). In the future, it may be well to select naturally-occurring situations which include larger samples of subjects so that wider ranges of defensiveness can be examined.
It could also be that the type of defensiveness measured in the present study is not the most appropriate type considering the dependent variables under investigation. In fact, many investigators use the Marlowe-Crowne Scale to measure the degree of favorable presentation of self to others (Schneider and Turkat, 1975; Strickland, 1977), whereas in the present study the primary interest was in the favorable presentation of self to self. Perhaps measures of defensiveness which assess the degree to which subjects are prone to distort evaluative information in a favorable direction would be more appropriate in future work.

For the most part, the findings of major interest involved how level of self-esteem influenced the assimilation of failure and success. Although the self-esteem groups did not differ in their actual performance or in their aspiration level they did differ in their interpretations of success and failure.

**Degree of generalization.** Subjects in the failure group, as revealed both by responses to the Fleeting Thoughts Questionnaire and the Self-Concept Questionnaire, generalized in a manner consistent with their overall level of self-esteem. Subjects with low self-esteem drew more global negative generalizations about themselves than subjects with either moderate or high self-esteem. These reactions were stable over time.

Subjects in the success group, as revealed only by responses to the Self-Concept Questionnaire, tended to generalize from specific to global self-attributes in a way that was consistent with their overall
level of self-esteem. Subjects with high self-esteem drew more global favorable generalizations than subjects with moderate or low self-esteem. This reaction was stable over time.

Thus, one major expectation was confirmed in the present study. Namely, a single evaluative experience can have repercussions throughout the self-concept. Especially interesting was the finding that level of self-esteem appeared to determine the range of generalizations that were drawn from a single experience. More specifically, it was found that within each level of self-esteem there were upper and lower limits in the degree of generalizations subjects made. Subjects with moderate and high self-esteem reported little generalization from failure and a lot from success. Subjects with low self-esteem reported a great deal of generalization to failure but only a little to success. In each case, level of self-esteem appears to determine the range of meaning that will be inferred from a single experience. In this manner subjects are protected from drawing conclusions that are too inconsistent with their typical views of themselves. It is unclear from the present study whether these results concerning degree of generalization are best accounted for by the subjects' habitual ways of responding or by the subjects anticipating the eventual outcome.

The degree of generalization reported by subjects with moderate and high self-esteem may be very adaptive. That is, subjects of moderate and high self-esteem were able to remain relatively unscathed by failure and to feel especially good about themselves following success. Subjects with low self-esteem on the other hand, although they performed
as well as, or no worse than, the other two groups were prone to draw
global conclusions concerning failure and narrow conclusions concerning
success. An interesting study for future research would be to identify
people with low self-esteem who generalize in this manner and determine
if training them to monitor and alter the scope of their generalizations
following success and failure would help them to view themselves and
their real accomplishments more favorably.

One provocative and unanticipated finding, albeit tentative, was
that subjects appeared to anticipate well before feedback what meaning a
success or a failure would have for them. This finding suggests that in
future work, baseline measures should be taken well in advance of sub-
jects having any knowledge of what their eventual outcome will be. It
also suggests that the ubiquitous use of false feedback does not permit
investigators to examine the processes by which subjects prepare them-
selves psychologically for feedback in the way they apparently do in
everyday life. Furthermore, in many studies subjects are allowed very
little time to anticipate or react to success and failure. The fact
that subjects in the present study began coping with their eventual out-
come three weeks prior to feedback suggests that in real life subjects
have more time to cope with their successes and failures than is allowed
in a typical Psychology experiment. In everyday life, people can be
very explicit about how they prepare themselves for an upcoming event as
evidenced by such common expressions as "I am preparing myself for the
worst" or "I don't want to get my hopes up." Such coping processes may
be short-circuited in very brief experimental studies.
Besides these methodological considerations, the findings concerning subjects' anticipation of success and failure have theoretical implications as well. In the present study subjects anticipated the degree to which they would generalize from success or failure at pre-feedback and maintained a comparable level of generalization at post-feedback and at follow-up. As previously noted, subjects within each level of self-esteem drew conclusions that were consistent with their overall level of self-esteem. The question at the moment though is why subjects should anticipate this three weeks before feedback. As Epstein (1973, 1980) has suggested, people have good reason to anticipate when a marked change in self-esteem may occur. Although Epstein dealt mainly with coping with a decrease in self-esteem the results of the present study suggest that similar processes are at work for both anticipated increases and decreases in self-esteem. According to Epstein, people are motivated to avoid sudden decreases in self-esteem which are especially painful. It appears that subjects are also motivated to avoid sudden increases in self-esteem. Perhaps this occurs because by generalizing too far beyond the specific success, expectations may be set too high which, in turn, would set the person up for a sudden decrease in self-esteem. In future work, it would be of interest to determine the extent to which subjects with different levels of self-esteem anticipate success and failure and what processes they use to cope with anticipated increases and decreases in self-esteem.

Attribution of responsibility. Although subjects tended to use all four types of attribution to account for their failure, only one type of
attribution was differentially used by subjects as a function of level of self-esteem. As expected, subjects with low self-esteem tended to use stable attributions to account for their failure more than subjects with moderate or high self-esteem. This was the case for the Fleeting Thoughts Questionnaire and the Self-Concept Questionnaire.

Although it was contrary to expectation, it is of interest that subjects, regardless of level of self-esteem, accepted responsibility for their failure and attributed it to variable characteristics of themselves. Such attributions may be adaptive and serve to enhance self-esteem in the long run. That is, by accepting responsibility and by attributing the failure to variable and controllable characteristics, subjects left open the opportunity to expend more effort on future papers, thereby increasing the probability of future success. Considering that this was the first of five laboratory reports it appears that subjects, at each level of self-esteem, utilized an adaptive attributational style to account for their failure. It should also be noted that attributions that were present at postfeedback tended to be maintained at follow-up.

These results stand in contrast to other studies in which it has been found that subjects with low self-esteem attribute their failure to stable, internal factors whereas subjects with high self-esteem attribute their failure to variable or external factors (see Shrauger, 1975; Weiner, 1979). However, in most of these studies the consequences for the attributions subjects made had less important ramifications for the future than was the case in the present study. In past research the failure situation studied was usually a final outcome that could not be
altered. For example, investigators have used failure on a final exam in a course (Simon and Feather, 1973) or failure on a one-time dot-estimation task (Fitch, 1970) as the experimental task. In studies such as these, the attributions subjects make can have no influence on future performance because the final outcome is already determined. However, in the present study the type of attributions subjects made could influence their final performance in the course. That is, if subjects had given up and not accepted personal responsibility for their failure they might not work as hard on future papers. Since the final verdict was not in, subjects may have chosen very adaptive attributions to account for the failure. In future work it would be interesting to compare the attributions of subjects with high and low self-esteem when the outcome has ramifications for the future and when it does not.

The results for the type of attributions subjects made following success were more in line with expectation than they were for failure. As revealed by the results of the Self-Concept Questionnaire (but not on the Fleeting Thoughts Questionnaire), subjects with high self-esteem accepted personal responsibility for success and attributed it to stable and variable attributes more than subjects with moderate self-esteem, who made these attributions more than subjects with low self-esteem. This pattern of attributions suggests that subjects attribute causality for positive outcomes in a way that is consistent with their overall level of self-esteem. In other words, as self-esteem increases so do subjects' beliefs that they have personal responsibility and control over their positive outcomes.
It is worthy of note that subjects with low self-esteem accepted personal responsibility for their success and attributed it to stable and variable characteristics of themselves, albeit to a lesser extent than subjects with moderate and high self-esteem. At any rate, it does provide evidence that the striving for enhancement was operating and that subjects with low self-esteem, to some extent, can accept success.

It should be pointed out that the types of attributions observed at postfeedback tended to be maintained at follow-up.

Compensation. Following failure, direct compensation was a frequent response, as revealed by subjects' reactions to both the Fleeting Thoughts and Self-Concept Questionnaires. Of special interest is the finding that subjects of all levels of self-esteem intended to work harder on future papers. This result is not surprising in light of the degree to which all subjects felt that variable attributions accounted for their failure. Since subjects felt that lack of effort was a major factor that produced their failure it would be adaptive to work harder on future papers than they had on the first. Also, considering that this was their first laboratory report, direct compensation represents a very adaptive response, regardless of level of self-esteem.

It should also be noted that the frequency of fleeting thoughts pertaining to direct compensation increased from postfeedback to follow-up. However, the accuracy ratings of these same items as measured by the Self-Concept Questionnaire remained stable from postfeedback to follow-up.
For success, as measured by the Fleeting Thoughts and Self-Concept Questionnaires, there were no main effects due to level of self-esteem, level of defensiveness or time for direct compensation. There was a level of self-esteem x level of defensiveness interaction on the Fleeting Thoughts Questionnaire following success. Subjects with high self-esteem and high defensiveness reported more thoughts pertaining to direct compensation than low defensive subjects. Subjects with low and moderate self-esteem reversed this pattern. Especially interesting were the low self-esteem subjects with low defensiveness who reported the greatest frequency of thoughts pertaining to direct compensation of any group. This was consistent with their great degree of generalization following success. It appears that this group was especially affected by the single success in that they were propelled to draw global conclusions and were especially hopeful of future success in the course. It is unclear whether this was adaptive, as subjects may either be propelling themselves to future successes or setting themselves up for an especially painful drop in self-esteem.

Taking the results of all of the major dependent variables together, evidence was found both for striving for consistency and for enhancement. The striving for consistency was most clearly manifested in terms of the degree of generalization as a function of level of self-esteem. That is, subjects tended to generalize from success or failure in a way that was consistent with their overall level of self-esteem. Further evidence of the striving for consistency was found when low self-esteem subjects attributed their failure to stable characteristics
more than subjects with moderate or high self-esteem. Thus, each group
cognitively reacted in a manner that was consistent with their level of
self-esteem. Similarly, subjects of high self-esteem following success
accepted personal responsibility for the success and attributed it to
stable and variable characteristics of themselves more than subjects
with moderate and low self-esteem. Again, each group responded in a way
that was consistent with its overall level of self-esteem.

The striving for enhancement was most clearly manifested in the
adaptiveness of subjects' responses. Subjects, regardless of level of
self-esteem, accepted responsibility for their failure and attributed it
to variable characteristics over which they have control. Furthermore,
all subjects, regardless of level of self-esteem, tended to directly
compensate for their initial failure. Such patterns of responding to
failure could serve to enhance self-esteem in the long run.

Other evidence of the striving for enhancement was found following
success. Even subjects with low self-esteem accepted personal responsi-
bility for their success and attributed it to stable as well as to
variable characteristics of themselves, albeit to a lesser extent than
subjects with moderate and high self-esteem. Furthermore, subjects with
low self-esteem resolved to work harder (direct compensation) to the
same extent as subjects with moderate and high self-esteem. Such
responses should lead to esteem-enhancement in the future.

As to the degree to which subjects' fleeting thoughts corresponded
to their more objective self-ratings, the results of the present study
are, at best, mixed. Sometimes the results of the Fleeting Thoughts
Questionnaire were mirrored in the results of the Self-Concept Questionnaire and sometimes not. Since there was not clear-cut pattern to the discrepancies between the two it is difficult to ascertain what produced them. In future work it may be well to separate the two types of ratings. That is, it may have been too difficult for subjects to switch back and forth between indicating what thoughts were fleeting through their minds and to step back and indicate how accurate each thought was. Dweck (1978) has investigated fleeting thoughts by having subjects say out loud what thoughts are going through their minds. She was able to accomplish this because she trained each subject and ran each subject individually. With group testing, however, it may be better to have some subjects record their fleeting thoughts while other subjects report more stable self-concept changes.

The third purpose of the study was to determine the stability of reactions from postfeedback to follow-up. By and large, the results indicated that the responses that were obtained at post-feedback were maintained at follow-up. This was true for both the Fleeting Thoughts and Self-Concept Questionnaires. Although this suggests that responses were stable over time, it should also be kept in mind that at follow-up subjects had begun writing their second laboratory reports. Thus, subjects were probably preparing themselves psychologically for success or failure on their second laboratory report in a way that would be consistent with their reactions to the first one.

As a final note, the results of the present study are encouraging in that subjects differed in the degree of generalization following
success and failure as a function of level of self-esteem. In future work it would be interesting to investigate other sources of self-esteem besides academic achievement. Although the results of the present study indicated that performance on the first paper was ego-involving, it is, after all, one paper in one course. There are other events, reflective of other sources of self-esteem, that might be much more ego-involving. Such events may make the generalization process more salient. Examples of such ego-involving events might be the formation or termination of an intimate relationship, being fired or hired for an important job, climbing a mountain or parachuting for the first time.

It would also be of interest to determine the extent to which a success or failure generalizes from one source of self-esteem to another. For example, one subject in the present study reported, "Right now I feel much better about myself in general—intelligent and competent. I feel like I can do anything—even lose 10 pounds." It may be that highly ego-involving events lead subjects not only to generalize from specific to global self-attributes but from one source of self-esteem to another. Such research would contribute to our understanding of the effects of evaluative feedback on the structure of the self-concept, a subject matter often theorized about but seldom subjected to direct empirical investigation.
FOOTNOTES

1In addition to myself, Seymour Esptein, Bram Fridhandler and Edward O'Brien served as judges.

2Although following success there really is nothing to "compensate" for, it is labelled compensation to relate it to the corresponding category used for failure.
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APPENDICES
APPENDIX A

SCORING KEY FOR THE O'BRIEN-EFSTEIN SELF-REPORT INVENTORY

EOB: 7/14/80

Scoring Key for Self-Report Inventory

General or Global Self-esteem

POSITIVE
76. All in all, I would evaluate myself as a relatively successful person at this stage in my life.
82. I nearly always have a highly positive opinion of myself.
96. How often do you feel that you are a very important and significant person?
111. How often do you feel really good about yourself?
123. How often do you feel highly satisfied with the future you see for yourself?

NEGATIVE
20. I occasionally have doubts about whether I will succeed in life.
39. I sometimes have a poor opinion of myself.
65. I put myself down too much.
90. How often do you feel dissatisfied with yourself?
127. How often do you feel lacking in self-confidence?

Competence versus incompetence

POSITIVE
22. I am usually able to demonstrate my competence when I am being evaluated.
34. I feel that I possess superior skills or abilities in at least some areas.
57. I am usually able to learn new things very quickly.
85. How often do you expect to perform well in situations that require a lot of ability?
112. How often do you feel that you are a highly competent and resourceful person?
115. How often do you feel that you can do well at almost anything you try?

NEGATIVE
99. How often do you have trouble learning difficult new tasks?
136. Have you ever felt that you lack the intelligence needed to succeed in certain types of interesting work?
142. How often do you feel that you are not as intelligent as you would like to be?
146. How often do you approach new tasks or jobs with pessimism, with the expectation that you will fail?
Scoring Key for Self-Report Inventory

Lovability versus Unlovability

**POSITIVE**

45. In times of uncertainty and self doubt, I have always been able to turn to my family for encouragement and support.

86. How often do you feel confident that you have (or someday will have) a lasting love relationship?

118. How often do you feel able to openly express warm and loving feelings toward others?

141. How often do people whom you love go out of their way to let you know how much they care for you?

**NEGATIVE**

33. I have trouble letting others know how much I care for and love them.

36. There are times when I have doubts about my capacity for maintaining a close love relationship.

72. There have been times when I have felt rejected by my family.

74. I occasionally feel that no one really loves me and accepts me for the person I am.

89. How often do members of your family have difficulty expressing their love for you?

128. Have you ever felt alone and unloved?

Scoring Key for Self-Report Inventory

Likability versus Unlikability

**POSITIVE**

4. I am very well liked and popular.

51. My friends almost always make sure to include me in their plans.

69. People nearly always enjoy spending time with me.

129. How often do you feel certain that people you meet will like you?

134. When you go out with someone for the first time, how often do you feel that you are well-liked?

138. How often do you feel that you are one of the more popular and likable members of your social group?

**NEGATIVE**

25. I sometimes feel disappointed or rejected because my friends haven't included me in their plans.

56. On occasion I have avoided dating situations because I feared rejection.

100. When you are meeting a person for the first time, do you ever think that the person might not like you?

132. Does it ever seem to you that some people dislike you intensely, that they "can't stand" you?
Scoring Key for Self-Report Inventory

Self-Control

POSITIVE

93. How often do you feel proud of the way that you stay with a task until you complete it?

101. How often are you pleased with yourself because of the amount of self-discipline and will power that you have?

104. How often do you feel that you are more successful than most people at controlling your eating and drinking behavior?

114. How often are you able to exercise more self-control than most of the people you know?

140. How often are you able to resist temptations and distractions in order to complete tasks you are working on?

NEGATIVE

35. I occasionally worry that in the future I may have a problem with controlling my eating or drinking habits.

48. I feel that I don't have enough self-discipline.

61. I am sometimes concerned over my lack of self-control.

81. I often give in to temptation and put off work on difficult tasks.

83. I have difficulty maintaining my self-control when I am under pressure.

Personal Power versus Powerlessness

POSITIVE

8. I am not easily intimidated by others.

31. I have no problem with asserting myself.

40. I feel that I have a lot of potential as a leader.

130. When you are involved in group discussions, how often do you feel that your ideas have a strong influence on others?

133. How often are you able to be assertive and forceful in situations where others are trying to take advantage of you?

137. How often do you have a strong influence on the attitudes and opinions of others?

147. Do you enjoy it when you are in a position of leadership?

NEGATIVE

12. I am usually a lot more comfortable being a follower than a leader.

122. How often do you lose when you get into arguments or disagreements with others?

144. How often do you feel uneasy when you are in a position of leadership?
Scoring Key for Self-Report Inventory

Moral Self-Approval versus Guilt

**POSITIVE**

24. I usually do the decent and moral thing, no matter what the temptation to do otherwise.

26. I almost always have a clear conscience concerning my sexual behavior.

126. How often do you (by your behavior) set a good moral example for others younger than yourself?

131. How often are you pleased with your sense of moral values?

150. How often do you feel highly satisfied with the way you live up to your moral values?

**NEGATIVE**

3. I often fail to live up to my moral standards.

42. I often feel guilty about my sexual behavior.

60. I occasionally have had the feeling that I have "gone astray," and that I am leading a sinful or immoral life.

67. I have often acted in ways that went against my moral values.

110. How often do you feel uncertain of your moral values?

---

Scoring Key for Self-Report Inventory

Body Appearance

**POSITIVE**

2. I nearly always feel that I am physically attractive.

52. I usually feel that I am better looking than most people.

62. I am usually very pleased and satisfied with the way I look.

88. How often do you feel that others are attracted to you because of the way you look?

103. How often do you complimented on your physical appearance?

**NEGATIVE**

28. There are times when I doubt my sexual attractiveness.

30. There have been times when I felt ashamed of my physical appearance.

58. I have occasionally felt that others were repelled or "put off" by my physical appearance.

91. How often do you wish that you were more physically attractive?

135. How often do you feel unattractive when you see yourself naked?
Scoring Key for Self-Report Inventory

Body Functioning

**POSITIVE**

6. I nearly always feel that I am physically fit and healthy.

29. I nearly always feel that I am better physically coordinated than most people (of my own age and sex).

95. How often do you feel a sense of vitality and pleasure over the way your body functions in physical activities?

108. How often does your body perform exceptionally well in physical activities, such as dancing or sports?

119. How often do you feel in top physical condition?

148. How often do you enjoy having others watch you while you are engaged in physical activities such as dancing or sports?

**NEGATIVE**

80. Most of the people I know are in better physical condition than I am.

103. How often do you feel self-conscious or awkward while you are engaged in physical activities?

120. How often do you feel clumsy when you are involved in physical activities?

124. How often does your body feel "out of sorts" or sluggish?

Defensive Self-Enhancement

**POSITIVE**

9. No matter what the pressure, no one could ever force me to hurt another human being.

47. The thought of shoplifting has never crossed my mind.

53. I have never felt that I was punished unfairly.

68. It hardly ever matters to me whether I win or lose in a game.

75. I have almost never felt the urge to tell someone off.

125. How often do you gladly accept criticism when it is deserved?

**NEGATIVE**

16. On occasion, I have tried to find a way to avoid unpleasant responsibilities.

38. There have been times when I have felt like getting even with somebody for something they had done to me.

64. There have been times when I intensely disliked someone.

71. There have been times when I have lied in order to get out of something.

77. There have been occasions when I took advantage of someone.

98. Do you ever "stretch the truth" and say things that aren't completely true?

116. Do you ever gossip?

139. Have you ever felt irritated when someone asked you for a favor?

145. Have you ever felt jealous of the good fortune of others?

149. How often is it hard for you to admit it when you have made a mistake?
Scoring Key for Self-Report Inventory

Behavioral Organization versus Disorganization

**POSITIVE**

13. I am almost always careful and neat in my work.
19. People who know me would describe me as an orderly, neat and well-organized person.
41. I am very good about keeping track of what needs to be done on a day-to-day basis.
50. I am more organized and efficient than most people.
79. I would describe myself as a very orderly and well-organized person.

**NEGATIVE**

46. I am the type of person who is always losing or misplacing things.
66. I am frequently late for appointments (or forget about them entirely).
70. I make a lot of careless mistakes.
78. I tend to be careless and "error prone."

---

Identity and Integration versus Identity Diffusion and Inner Conflict

**POSITIVE**

5. In general, I know who I am and where I am headed in my life.
17. I have a clear sense of purpose and meaning in my life.
44. Once I have considered an important decision thoroughly, I have little difficulty making a final decision.
59. I seldom experience much conflict between the different sides of my personality.

**NEGATIVE**

1. It is often hard for me to make up my mind about things because I don't really know what I want.
11. I often feel that I lack direction in my life--i.e., that I have no long-range goals or plans.
32. I sometimes worry about the amount of inner conflict that I experience.
43. Sometimes it's hard for me to believe that the different aspects of my personality can be part of the same person.
55. I am very confused about what I want out of life.
63. I often feel torn in different directions and unable to decide which way to go.
APPENDIX B
MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE

Personal Reactions Inventory

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is **true** or **false** as it pertains to you personally.

Mark all of your answers on the opscan sheet provided, do not make any marks on this form. Fill in the spaces for your name and sex. To make your ratings darken the one (1) to indicate that a statement is true and darken the two (2) to indicate that a statement is false. Use only a soft lead pencil (#2 or less).

1. Before voting I thoroughly investigate the qualifications of the candidates.
2. I never hesitate to go out of my way to help someone in trouble.
3. It is sometimes hard for me to go on with my work if I am not encouraged.
4. I have never intensely disliked anyone.
5. On occasion I have had doubts about my ability to succeed in life.
6. I sometimes feel resentful when I don't get my way.
7. I am always careful about my manner of dress.
8. My table manners at home are as good as when I eat out in a restaurant.
9. If I could get into a movie without paying and be sure I was not seen I would probably do it.
10. On a few occasions, I have given up doing something because I thought too little of my ability.
11. I like to gossip at times.
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.
13. No matter who I'm talking to, I'm always a good listener.
14. I can remember "playing sick" to get out of something.
15. There have been occasions when I took advantage of someone.
16. I'm always willing to admit it when I make a mistake.
17. I always try to practice what I preach.
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
19. I sometimes try to get even rather than forgive and forget.
20. When I don't know something I don't at all mind admitting it.
21. I am always courteous, even to people who are disagreeable.
22. At times I have really insisted on having things my own way.
23. There have been occasions when I felt like smashing things.
24. I would never think of letting someone be punished for my wrongdoings.
25. I never resent being asked to return a favor.
26. I have never been irked when people expressed ideas very different from my own.
27. I never make a long trip without checking the safety of my car.
28. There have been times when I was quite jealous of the good fortune of others.
29. I have almost never felt the urge to tell someone off.
30. I am sometimes irritated by people who ask favors of me.
31. I have never felt that I was punished without cause.
32. I sometimes think when people have a misfortune they only got what they deserved.
33. I have never deliberately said something that hurt someone's feelings.
APPENDIX C

SELF-CONCEPT QUESTIONNAIRE (PREFEEDBACK VERSION)

Self-Concept Questionnaire

Instructions: Indicate the extent to which you believe the following statements are true and false. Read each item carefully as some items are worded similarly but convey very different ideas. It is best to rely on first impressions in answering each item.

YOUR ANSWERS ARE COMPLETELY CONFIDENTIAL. NEITHER YOUR T. A. NOR THE INSTRUCTOR OF THE COURSE WILL SEE YOUR RESPONSES.

Use the following scale to make your responses. Do not mark this form. Darken the appropriate number on the opscan sheet provided. Be sure to indicate your name and sex on the opscan.

<table>
<thead>
<tr>
<th></th>
<th>Completely False</th>
<th>Mainly False</th>
<th>Partly True and Partly False</th>
<th>Mainly True</th>
<th>Completely True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I had some trouble using the APA format on this lab report.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>I would like to re-write this lab report and try for a higher grade.</td>
<td></td>
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<tr>
<td>3</td>
<td>I feel I'll achieve something worthwhile in life.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>I didn't put as much effort as I should have into writing this paper.</td>
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<tr>
<td>5</td>
<td>The T.A. will recognize good ideas when he/she sees them and this may determine my grade.</td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>I have the ability to make it academically.</td>
<td></td>
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<tr>
<td>7</td>
<td>Due to my experience with this paper I may rather study some subject other than Psychology.</td>
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<tr>
<td>8</td>
<td>I have trouble communicating my ideas.</td>
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<tr>
<td>9</td>
<td>I feel like I won't succeed in life.</td>
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<tr>
<td></td>
<td>Completely False</td>
<td>Mainly False</td>
<td>Partly True and Partly False</td>
<td>Mainly True</td>
<td>Completely True</td>
</tr>
<tr>
<td>10.</td>
<td>I'm sure I'll be able to succeed in this course.</td>
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<tr>
<td>11.</td>
<td>The instructor didn't prepare us well enough to write an adequate lab report.</td>
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<tr>
<td>12.</td>
<td>I have what it takes to communicate my ideas on these lab reports.</td>
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<tr>
<td>13.</td>
<td>Technical writing doesn't come easily to me.</td>
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<tr>
<td>14.</td>
<td>I have the ability to organize my ideas in writing these lab reports.</td>
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<tr>
<td>15.</td>
<td>The T. A. grades too easy.</td>
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<tr>
<td>16.</td>
<td>I feel like everything I do turns out right.</td>
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<td>17.</td>
<td>In terms of grades, I think I'll do as well in this course as I had hoped.</td>
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<td>18.</td>
<td>The T. A. will be too picky.</td>
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<tr>
<td>19.</td>
<td>I have some problems expressing my ideas logically and convincingly.</td>
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<tr>
<td>20.</td>
<td>I feel totally competent.</td>
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<tr>
<td>21.</td>
<td>I don't have trouble communicating my ideas.</td>
<td></td>
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<tr>
<td>22.</td>
<td>I feel totally incompetent.</td>
<td></td>
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<td>23.</td>
<td>Technical writing comes easily to me.</td>
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<tr>
<td>24.</td>
<td>I doubt I'll have trouble making it as a psychologist.</td>
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<tr>
<td>25.</td>
<td>I put just the right amount of effort into writing this paper.</td>
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<tr>
<td>26.</td>
<td>I plan to talk to the T. A. so that I can get an even higher grade on my next paper.</td>
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<tr>
<td>27.</td>
<td>I didn't work hard enough on this paper.</td>
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</table>
118

28. I feel that the grades on this lab report will be arbitrarily assigned.

29. Doing well in this course really isn't as important as other interests I have.

30. I will have trouble making it as a Psych major.

31. I didn't know how to write according to the APA format when I wrote this paper.

32. I feel like everything I do turns out wrong.

33. My grade on this paper will accurately reflect my ability to write scientific reports.

34. I plan to talk to the T. A. in order to get a higher grade on my next paper.

35. I don't have difficulty writing lab reports.

36. I'm not sure I'll be able to succeed in this course.

37. I seem to have difficulty learning to write scientific reports.

38. I think I did poorly on this lab report.

39. I had little trouble putting together my ideas for this lab report.

40. If writing lab reports like this is how psychologists spend their time I'd rather do something else.

41. I don't have the ability to organize my ideas in writing these lab reports.

42. I feel like I can't do anything well.

43. The T. A. has valid criteria on which to grade my paper.

44. I expressed myself well on this lab report.
<table>
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<tbody>
<tr>
<td></td>
<td>Completely False</td>
<td>Mainly False</td>
<td>Partly True and Partly False</td>
<td>Mainly True</td>
<td>Completely True</td>
</tr>
</tbody>
</table>

45. I had trouble putting together my ideas for this lab report.
46. I am not going to have much difficulty doing well in this course.
47. It will be my own fault if I do poorly on this paper.
48. The next time I write a lab report I plan to apply myself even more so I can get a higher grade.
49. It will be to my own credit if I do well on this paper.
50. I am going to have a lot of difficulty doing well in this course.
51. I had trouble writing this lab report.
52. I plan to work harder on my next paper for this course.
53. The lab report will be graded unfairly.
54. The T. A. has no valid criteria on which to grade my paper.
55. I seem to have more trouble with school work than most people.
56. In terms of grades, I may not do as well in this course as I had hoped.
57. I didn't express myself well on this lab report.
58. I don't think I did as well as I would have liked on this lab report.
59. I don't seem to have difficulty learning to write scientific reports.
60. I have the writing skills required to do well on these reports.

61. I have difficulty writing lab reports.
62. I worked hard enough on this paper.
63. I feel like a complete success.
64. I'll deserve the grade I receive on this paper.
65. I feel that I will succeed in life.
66. I knew how to write according to the APA format when I wrote my paper.
67. Due to my experience with this paper I may want to change my major.
68. The T. A. doesn't like me and this will determine my grade.
69. I will have only myself to credit if I do well on this paper.
70. Experience with this paper has convinced me to become (remain) a Psych major.
71. The instructor prepared us well enough to write an adequate lab report.
72. I think I did well on this lab report.
73. I feel like I can do anything well.
74. I won't have trouble making it as a Psych major.
75. The T. A. likes me and this may determine my grade.
76. I had no trouble using the APA format on this lab report.
77. I lack the writing skills required to do well on these lab reports.
78. The T. A. won't recognize good ideas when he/she sees them and this may determine my grade.
79. I spent enough time preparing this paper.
80. I seem to have less trouble with school work than most people.
1. Completely False
2. Mainly False
3. Partly True and Partly False
4. Mainly True
5. Completely True

81. The lab report will be graded fairly.
82. I express my ideas logically and convincingly.
83. I feel like a complete failure.
84. I don't have the ability to make it academically.
85. I had little trouble writing this lab report.
86. If doing well in this course seems hopeless, I plan to direct my energy into other courses.
87. I feel like I'll never achieve anything worthwhile in life.
88. I will have only myself to thank for my grade on this paper.
89. I don't have the ability to communicate my ideas on these lab reports.
90. My grade on this paper will be fair and accurate, even though it may not be as high as I hope it will be.
91. I will have nobody but myself to blame for my grade on this paper.
92. I plan to put more effort into my next paper for this course.
93. I didn't spend enough time preparing this paper.
94. I think I did as well as I wanted to on this lab report.
95. I may have trouble making it as a psychologist.
APPENDIX C

SELF-CONCEPT QUESTIONNAIRE (PREFEEDBACK VERSION)

Items below are grouped according to dependent variable category and Outcome (success or failure).

**External Attribution**

**Success**

5. The T.A. will recognize good ideas when he/she sees them and this may determine my grade.

15. The T.A. grades too easy.

43. The T.A. has valid criteria on which to grade my paper.

71. The instructor prepared us well enough to write an adequate lab report.

75. The T.A. likes me and this may determine my grade.

81. The lab report will be graded fairly.

**Failure**

11. The instructor didn't prepare us well enough to write an adequate lab report.

18. The T.A. will be too picky.

28. I feel that the grades on this lab report will be arbitrarily assigned.

53. The lab report will be graded unfairly.

54. The T.A. has no valid criteria on which to grade my paper.

68. The T.A. doesn't like me and this will determine my grade.

78. The T.A. won't recognize good ideas when he/she sees them and this may determine my grade.
Internal Attribution—Stable

Success

12. I have what it takes to communicate my ideas on these lab reports.

14. I have the ability to organize my ideas in writing these lab reports.

33. My grade on this paper will accurately reflect my ability to write scientific reports.

60. I have the writing skills required to do well on these reports.

Failure

33. My grade on this paper will accurately reflect my ability to write scientific reports.

41. I don't have the ability to organize my ideas in writing these lab reports.

77. I lack the writing skills required to do well on these lab reports.

89. I don't have the ability to communicate my ideas on these lab reports.

Internal Attribution—Variable

Success

25. I put just the right amount of effort into writing this paper.

62. I worked hard enough on this paper.

66. I knew how to write according to the APA format when I wrote this paper.

79. I spent enough time preparing this paper.
Internal Attribution—Variable (cont.)

Failure

4. I didn't put as much effort as I should have into writing this paper.
27. I didn't work hard enough on this paper.
31. I didn't know how to write according to the APA format when I wrote this paper.
93. I didn't spend enough time preparing this paper.

Internal Attribution—Accept Responsibility

Success

49. It will be to my own credit if I do well on this paper.
64. I'll deserve the grade I receive on this paper.
69. I will have only myself to credit if I do well on this paper.
88. I will have only myself to thank for my grade on this paper.

Failure

47. It will be my own fault if I do poorly on this paper.
64. I'll deserve the grade I receive on this paper.
90. My grade on this paper will be fair and accurate, even though it may not be as high as I hope it will be.
91. I will have nobody but myself to blame for my grade on this paper.

Direct Compensation

Success

26. I plan to talk to the T.A. so that I can get an even higher grade on my next paper.
Direct Compensation (cont.)

Success (cont.)

48. The next time I write a lab report I plan to apply myself even more so I can get a higher grade.

52. I plan to work harder on my next paper for this course.

70. Experience with this paper has convinced me to become (remain) a Psych major.

92. I plan to put more effort into my next paper for this course.

Failure

2. I would like to re-write this lab report and try for a higher grade.

34. I plan to talk to the T.A. in order to get a higher grade on my next paper.

48. The next time I write a lab report I plan to apply myself even more so I can get a higher grade.

52. I plan to work harder on my next paper for this course.

92. I plan to put more effort into my next paper for this course.

Indirect Compensation

Failure (only)

7. Due to my experience with this paper I may rather study some subject other than Psychology.

29. Doing well in this course really isn't as important as other interests I have.

40. If writing lab reports like this is how psychologists spend their time I'd rather do something else.

67. Due to my experience with this paper I may want to change my major.

86. If doing well in this course seems hopeless, I plan to direct my energy into other courses.
Generalization

No Generalization

Success

39. I had little trouble putting together my ideas for this lab report.
44. I expressed myself well on this lab report.
72. I think I did well on this lab report.
76. I had no trouble using the APA format on this lab report.
85. I had little trouble writing this lab report.
94. I think I did as well as I wanted to on this lab report.

Failure

1. I had some trouble using the APA format on this lab report.
38. I think I did poorly on this lab report.
45. I had trouble putting together my ideas for this lab report.
51. I had trouble writing this lab report.
57. I didn't express myself well on this lab report.
58. I don't think I did as well as I would have liked on this lab report.

Slight Generalization

Success

10. I'm sure I'll be able to succeed in this course.
17. In terms of grades, I think I'll do as well in this course as I had hoped.
23. Technical writing comes easily to me.
35. I don't have difficulty writing lab reports.
46. I am not going to have much difficulty doing well in this course.
Slight Generalization (cont.)

Success

59. I don't seem to have difficulty learning to write scientific reports.

Failure

13. Technical writing doesn't come easily to me.
36. I'm not sure I'll be able to succeed in this course.
37. I seem to have difficulty learning to write scientific reports.
50. I am going to have a lot of difficulty doing well in this course.
56. In terms of grades, I may not do as well in this course as I had hoped.
61. I have difficulty writing lab reports.

Intermediate Generalization

Success

6. I have the ability to make it academically.
21. I don't have trouble communicating my ideas.
24. I doubt I'll have trouble making it as a psychologist.
74. I won't have trouble making it as a Psych major.
80. I seem to have less trouble with school work than most people.
82. I express my ideas logically and convincingly.

Failure

8. I have trouble communicating my ideas.
19. I have some problems expressing my ideas logically and convincingly.
30. I will have trouble making it as a Psych major.
Intermediate Generalization (cont.)

Failure (cont.)

55. I seem to have more trouble with school work than most people.

84. I don't have the ability to make it academically.

95. I may have trouble making it as a psychologist.

Extreme Generalization

Success

3. I feel I'll achieve something worthwhile in life.

16. I feel like everything I do turns out right.

20. I feel totally competent.

63. I feel like a complete success.

65. I feel that I will succeed in life.

73. I feel like I can do anything well.

Failure

9. I feel like I won't succeed in life.

22. I feel totally incompetent.

32. I feel like everything I do turns out wrong.

42. I feel like I can't do anything well.

83. I feel like a complete failure.

87. I feel like I'll never achieve anything worthwhile in life.
APPENDIX D

FLEETING THOUGHTS AND SELF-CONCEPT QUESTIONNAIRE
(POSTFEEDBACK VERSION) - FAILURE GROUP

Name: ___________________________ Major: ___________________________
Graduating Class: _____________________________

SELF-CONCEPT QUESTIONNAIRE

Instructions: please rate each of the following items in two ways. For the first rating indicate whether the thought expressed by the item, or one similar to it, occurred to you when you received your grade on your lab report. In making this first set of ratings, it is important to keep in mind that these thoughts are usually very fleeting and may not reflect how you generally feel about yourself. In fact, some thoughts that occur to you may be quite unrealistic and you may quickly dismiss them. To make your ratings place a check mark in the appropriate column to indicate whether the thought occurred to you or not.

For the second rating indicate the extent to which you feel each item is more generally true or false for you. Use the scale below to make your ratings for "accuracy of item."

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely False</td>
<td>Mainly False</td>
<td>Partly True and Partly False</td>
<td>Mainly True</td>
<td>Completely True</td>
</tr>
</tbody>
</table>

Read each item carefully as some items are worded similarly but convey very different ideas. It is best to rely on first impressions in responding to each item. YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL. NEITHER YOUR T.A. NOR THE INSTRUCTOR OF THE COURSE WILL SEE YOUR RESPONSES.

occurred | did not occur | accuracy of item
----- | ------ | -------

1. I had some trouble using the APA format on this lab report.

2. I would like to re-write this lab report and try for a higher grade.

3. I didn't put as much effort as I should have into writing this paper.
<table>
<thead>
<tr>
<th></th>
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<th>Mainly False</th>
<th>Partly True and Partly False</th>
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<td>5.</td>
<td>I have trouble communicating my ideas.</td>
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<td>6.</td>
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<td>7.</td>
<td>The instructor didn't prepare us well enough to write an adequate lab report</td>
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<td>9.</td>
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<td>11.</td>
<td>I feel totally incompetent.</td>
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<td>12.</td>
<td>I plan to talk to the T.A. so that I can get a higher grade on my next paper.</td>
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<td>14.</td>
<td>I feel that the grades on this lab report were arbitrarily assigned.</td>
<td></td>
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<td>15.</td>
<td>Doing well in this course isn't really as important as other others I have.</td>
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<td>16.</td>
<td>I will have trouble &quot;making it&quot; as a Psych major.</td>
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<td>I didn't know how to write according to the APA format when I wrote this paper.</td>
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<td>18. I feel like everything I do turns out wrong.</td>
<td>False</td>
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<td>True</td>
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<tr>
<td>19. My grade on this paper accurately reflects my ability to write scientific reports.</td>
<td>False</td>
<td>False</td>
<td>True</td>
<td>True</td>
<td>True</td>
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<td>20. I'm not sure I'll be able to succeed in this course.</td>
<td>False</td>
<td>False</td>
<td>True</td>
<td>True</td>
<td>True</td>
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<tr>
<td>21. I seem to have difficulty learning to write scientific reports.</td>
<td>False</td>
<td>False</td>
<td>True</td>
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<td>True</td>
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<tr>
<td>22. I did poorly on this lab report.</td>
<td>False</td>
<td>False</td>
<td>True</td>
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<tr>
<td>23. If writing lab reports like this is how psychologists spend their time I'd rather do something else.</td>
<td>False</td>
<td>False</td>
<td>True</td>
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<td>24. I don't have the ability to organize my ideas in writing these lab reports.</td>
<td>False</td>
<td>False</td>
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<td>25. I feel like I can't do anything well.</td>
<td>False</td>
<td>False</td>
<td>True</td>
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</tr>
<tr>
<td>26. I had trouble putting together my ideas for this lab report.</td>
<td>False</td>
<td>False</td>
<td>True</td>
<td>True</td>
<td>True</td>
</tr>
<tr>
<td>27. It is my own fault that I did so poorly on this paper.</td>
<td>False</td>
<td>False</td>
<td>True</td>
<td>True</td>
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</tr>
<tr>
<td>28. The next time I write a lab report I plan to apply myself more so I can get a higher grade.</td>
<td>False</td>
<td>False</td>
<td>True</td>
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<td>True</td>
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<tr>
<td>29. I am going to have a lot of difficulty doing well in this course.</td>
<td>False</td>
<td>False</td>
<td>True</td>
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<td>True</td>
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<tr>
<td>30. I had trouble writing this lab report.</td>
<td>False</td>
<td>False</td>
<td>True</td>
<td>True</td>
<td>True</td>
</tr>
<tr>
<td>31. I plan to work harder on my next paper for this course.</td>
<td>False</td>
<td>False</td>
<td>True</td>
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<td>1</td>
<td>Completely False</td>
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<td>occurred</td>
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<td>accuracy of item</td>
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<tr>
<td>32. The lab report was graded unfairly.</td>
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<tr>
<td>33. The T.A. had no valid criteria on which to grade my paper.</td>
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<tr>
<td>34. I seem to have more trouble with school work than most people.</td>
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<tr>
<td>35. In terms of grades, it looks like I'm not going to do as well in this course as I had hoped.</td>
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<td>36. I didn't express myself well on this lab report.</td>
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<tr>
<td>37. I didn't do as well as I would have liked on this lab report.</td>
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<td>38. I have difficulty writing lab reports.</td>
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<tr>
<td>39. I deserve the grade I received on this paper.</td>
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<tr>
<td>40. The grade I got on this lab report makes me want to change my major.</td>
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<tr>
<td>41. The T.A. doesn't like me and that's why I received the grade I did.</td>
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<tr>
<td>42. I lack the writing skills required to do well on these lab reports.</td>
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<tr>
<td>43. The T.A. doesn't recognize good ideas when he/she sees them and that's why I received the grade I did.</td>
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<td>44. I feel like a complete failure.</td>
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<td>45. I don't have the ability to &quot;make it&quot; academically.</td>
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<td>46.</td>
<td></td>
<td></td>
<td></td>
<td>Because doing well in this course seems hopeless, I plan to direct my energy into other courses.</td>
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<tr>
<td>47.</td>
<td></td>
<td></td>
<td></td>
<td>I feel I'll never achieve anything worthwhile in life.</td>
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<td>48.</td>
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<td></td>
<td>I don't have the ability to communicate my ideas on these lab reports.</td>
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<tr>
<td>49.</td>
<td></td>
<td></td>
<td></td>
<td>My grade on this paper seems fair and accurate, even though it is not as high as I had hoped.</td>
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<tr>
<td>50.</td>
<td></td>
<td></td>
<td></td>
<td>I have nobody but myself to blame for my grade on this paper.</td>
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<tr>
<td>51.</td>
<td></td>
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<td></td>
<td>I plan to put more effort into my next paper for this course.</td>
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<tr>
<td>52.</td>
<td></td>
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<td></td>
<td>I didn't spend enough time preparing this paper.</td>
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<tr>
<td>53.</td>
<td></td>
<td></td>
<td></td>
<td>I may have trouble making it as a psychologist.</td>
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</table>
APPENDIX D

FLEETING THOUGHTS AND SELF-CONCEPT QUESTIONNAIRE: POSTFEEDBACK AND FOLLOW-UP VERSION--FAILURE GROUP

Items below are grouped according to dependent variable category.

External Attribution

7. The instructor didn't prepare us well enough to write an adequate lab report.
9. The T.A. is too picky.
14. I feel that the grades on this lab report were arbitrarily assigned.
32. The lab report was graded unfairly.
33. The T.A. had no valid criteria on which to grade my paper.
41. The T.A. doesn't like me and that's why I received the grade I did.
43. The T.A. doesn't recognize good ideas when he/she sees them and that's why I received the grade I did.

Internal Attribution--Stable

19. My grade on this paper accurately reflects my ability to write scientific reports.
24. I don't have the ability to organize my ideas in writing these lab reports.
42. I lack the writing skills required to do well on these lab reports.
48. I don't have the ability to communicate my ideas on these lab reports.
Internal Attribution—Variable

3. I didn't put as much effort as I should have into writing this paper.

13. I didn't work hard enough on this paper.

17. I didn't know how to write according to the APA format when I wrote this paper.

52. I didn't spend enough time preparing this paper.

Internal Attribution—Accept Responsibility

27. It is my own fault that I did so poorly on this paper.

39. I deserve the grade I received on this paper.

49. My grade on this paper seems fair and accurate, even though it is not as high as I had hoped.

50. I have nobody but myself to blame for my grade on this paper.

Direct Compensation

2. I would like to re-write this lab report and try for a higher grade.

12. I plan to talk to the T.A. so that I can get a higher grade on my next paper.

28. The next time I write a lab report I plan to apply myself more so I can get a higher grade.

31. I plan to work harder on my next paper for this course.

51. I plan to put more effort into my next paper for this course.
Indirect Compensation

4. My grade on this paper convinces me that I would rather study some subject other than Psychology.

15. Doing well in this course isn't really as important as other interests I have.

23. If writing lab reports like this is how psychologists spend their time I'd rather do something else.

40. The grade I got on this lab report makes me want to change my major.

46. Because doing well in this course seems hopeless, I plan to direct my energy into other courses.

Generalization

No Generalization

1. I had some trouble using the APA format on this lab report.

30. I had trouble writing this lab report.

37. I didn't do as well as I would have liked on this lab report.

22. I did poorly on this lab report.

26. I had trouble putting together my ideas for this lab report.

36. I didn't express myself well on this lab report.

Slight Generalization

8. Technical writing doesn't come easily to me.

20. I'm not sure I'll be able to succeed in this course.

21. I seem to have difficulty learning to write scientific reports.

29. I am going to have a lot of difficulty doing well in this course.

35. In terms of grades, it looks like I'm not going to do as well in this course as I had hoped.

38. I have difficulty writing lab reports.
Intermediate Generalization

5. I have trouble communicating my ideas.

10. I have some problems expressing my ideas logically and convincingly.

16. I will have trouble "making it" as a Psych major.

34. I seem to have more trouble with school work than most people.

45. I don't have the ability to "make it" academically.

53. I may have trouble making it as a psychologist.

Extreme Generalization

6. I feel like I won't succeed in life.

11. I feel totally incompetent.

18. I feel like everything I do turns out wrong.

25. I feel like I can't do anything well.

44. I feel like a complete failure.

47. I feel like I'll never achieve anything worthwhile in life.
FLEETING THOUGHTS AND SELF-CONCEPT QUESTIONNAIRE
(POSTFEEDBACK VERSION) - SUCCESS GROUP

Name: ___________________________ Major: __________
Graduating Class: __________

SELF-CONCEPT QUESTIONNAIRE

Instructions: Please rate each of the following items in two ways. For the first rating indicate whether the thought expressed by the item, or one similar to it, occurred to you when you received your grade on your lab report. In making this first set of ratings, it is important to keep in mind that these thoughts are usually very fleeting and may not reflect how you generally feel about yourself. In fact, some thoughts that occur to you may be quite unrealistic and you may quickly dismiss them. To make your ratings place a check mark in the appropriate column to indicate whether the thought occurred to you or not.

For the second rating indicate the extent to which you feel each item is more generally true or false for you. Use the scale below to make your ratings for "accuracy of item."

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Read each item carefully as some items are worded similarly but convey very different ideas. It is best to rely on first impressions in responding to each item. YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL. NEITHER YOUR T.A. NOR THE INSTRUCTOR OF THE COURSE WILL SEE YOUR RESPONSES.

occurred did not accuracy of item
occur

1. I have the ability to organize my ideas in writing these lab reports.

2. The T.A. recognizes good ideas when he/she sees them and that's why I received the grade I did.

3. I have the ability to make it academically.
<table>
<thead>
<tr>
<th></th>
<th>1 Completely False</th>
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<tr>
<td>4.</td>
<td>I'm sure I'll be able to succeed in this course.</td>
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<td>5.</td>
<td>I have what it takes to communicate my ideas on these lab reports.</td>
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<td>6.</td>
<td>I feel I'll achieve something worthwhile in life.</td>
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<tr>
<td>7.</td>
<td>The T.A. grades too easy.</td>
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<td>8.</td>
<td>The next time I write a lab report I plan to apply myself even more so I can get a higher grade (or just as high).</td>
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<tr>
<td>9.</td>
<td>In terms of grades, it looks like I'm going to do as well in this course as I had hoped.</td>
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<tr>
<td>10.</td>
<td>I feel totally competent.</td>
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<td></td>
</tr>
<tr>
<td>11.</td>
<td>I don't have trouble communicating my ideas.</td>
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<tr>
<td>12.</td>
<td>Technical writing comes easily to me.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>13.</td>
<td>I doubt I'll have trouble making it as a psychologist.</td>
<td></td>
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<tr>
<td>14.</td>
<td>I put just the right amount of effort into writing this paper.</td>
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<tr>
<td>15.</td>
<td>I don't have difficulty writing lab reports.</td>
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<tr>
<td>16.</td>
<td>I had little trouble putting together my ideas for this lab report.</td>
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<tr>
<td>17.</td>
<td>The T.A. had valid criteria on which to grade my paper.</td>
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<tr>
<td>18</td>
<td>I expressed myself well on this lab report.</td>
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<tr>
<td>19</td>
<td>I am not going to have much difficulty doing well in this course.</td>
<td></td>
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<tr>
<td>20</td>
<td>It is to my own credit that I did so well on this paper.</td>
<td></td>
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</tr>
<tr>
<td>21</td>
<td>I don't seem to have difficulty learning to write scientific reports.</td>
<td></td>
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</tr>
<tr>
<td>22</td>
<td>I have the writing skills required to do well on these papers.</td>
<td></td>
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<tr>
<td>23</td>
<td>I plan to work harder on my next paper for this course.</td>
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<tr>
<td>24</td>
<td>I feel like a complete success.</td>
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<tr>
<td>25</td>
<td>I deserve the grade I received on this paper.</td>
<td></td>
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<tr>
<td>26</td>
<td>I knew how to write according to the APA format when I wrote this paper.</td>
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<tr>
<td>27</td>
<td>The grade I received on this paper convinces me that I want to become (remain) a Psych major.</td>
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<tr>
<td>28</td>
<td>The instructor prepared us well enough to write an adequate lab report.</td>
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<td>29</td>
<td>I did well on this lab report.</td>
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<td>30</td>
<td>I feel like I can do anything well.</td>
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<td>31</td>
<td>I won't have trouble making it as a Psych major.</td>
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<tr>
<td>Completely False</td>
<td>Mainly False</td>
<td>Partly True and Partly False</td>
<td>Mainly True</td>
<td>Completely True</td>
<td></td>
</tr>
<tr>
<td>occurred</td>
<td>did not occur</td>
<td>accuracy of item</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>32. The T.A. likes me and that's why I received the grade I did.</td>
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<td></td>
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<td></td>
<td>33. I had no trouble using the APA format on this lab report.</td>
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<td>34. I spent enough time preparing this paper.</td>
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<td>35. I seem to have less trouble with school work than most people.</td>
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<td>36. The lab report was graded fairly.</td>
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<td>37. I express my ideas logically and convincingly.</td>
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<td>38. I had little trouble writing this lab report.</td>
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<td>39. I have only myself to thank for my grade on this paper.</td>
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<td>40. I did as well as I wanted to on this lab report.</td>
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<td>41. I plan to talk to the T.A. so that I can get an even higher grade (or just as high) on my next paper.</td>
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<td>42. I feel that I will succeed in life.</td>
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<td>43. I have nobody but myself to credit for my grade on this paper.</td>
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<td>44. I feel like everything I do turns out right.</td>
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<td>45. I worked hard enough on this paper.</td>
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<td></td>
<td>Completely False</td>
<td>Mainly False</td>
<td>Partly True and Partly False</td>
<td>Mainly True</td>
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<td>1</td>
<td>occurred</td>
<td>did not occur</td>
<td>accuracy of item</td>
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<td>5</td>
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</table>

46. My grade on this paper accurately reflects my ability to write scientific reports.

47. I plan to put more effort into my next paper for this course.
External Attribution

2. The T.A. recognizes good ideas when he/she sees them and that's why I received the grade I did.

7. The T.A. grades too easy.

17. The T.A. had valid criteria on which to grade my paper.

28. The instructor prepared us well enough to write an adequate lab report.

32. The T.A. likes me and that's why I received the grade I did.

36. The lab report was graded fairly.

Internal Attribution—Stable

1. I have the ability to organize my ideas in writing these lab reports.

5. I have what it takes to communicate my ideas on these lab reports.

22. I have the writing skills required to do well on these papers.

46. My grade on this paper accurately reflects my ability to write scientific reports.

Internal Attribution—Variable

14. I put just the right amount of effort into writing this paper.

26. I knew how to write according to the APA format when I wrote this paper.

34. I spent enough time preparing this paper.

45. I worked hard enough on this paper.
Internal Attribution--Accept Responsibility

20. It is to my own credit that I did so well on this paper.
25. I deserve the grade I received on this paper.
39. I have only myself to thank for my grade on this paper.
43. I have nobody but myself to credit for my grade on this paper.

Direct Compensation

8. The next time I write a lab report I plan to apply myself even more so I can get a higher grade (or just as high).
23. I plan to work harder on my next paper for this course.
27. The grade I received on this paper convinces me that I want to become (remain) a Psych major.
41. I plan to talk to the T.A. so that I can get an even higher grade (or just as high) on my next paper.
47. I plan to put more effort into my next paper for this course.

Generalization

No Generalization

16. I had little trouble putting together my ideas for this lab report.
18. I expressed myself well on this lab report.
29. I did well on this lab report.
33. I had no trouble using the APA format on this lab report.
38. I had little trouble writing this lab report.
40. I did as well as I wanted to on this lab report.
Generalization (cont.)

Slight Generalization

4. I'm sure I'll be able to succeed in this course.

9. In terms of grades, it looks like I'm going to do as well in this course as I had hoped.

12. Technical writing comes easily to me.

15. I don't have difficulty writing lab reports.

19. I am not going to have much difficulty doing well in this course.

21. I don't seem to have difficulty learning to write scientific reports.

Intermediate Generalization

3. I have the ability to make it academically.

11. I don't have trouble communicating my ideas.

13. I doubt I'll have trouble making it as a psychologist.

31. I won't have trouble making it as a Psych major.

35. I seem to have less trouble with school work than most people.

37. I express my ideas logically and convincingly.

Extreme Generalization

6. I feel I'll achieve something worthwhile in life.

10. I feel totally competent.

24. I feel like a complete success.

30. I feel like I can do anything well.

42. I feel that I will succeed in life.

44. I feel like everything I do turns out right.
APPENDIX E

NARRATIVE DESCRIPTION FORM

Name: ___________________________ Major: __________________

Graduating Class: __________________

REACTIONS TO LAB REPORT GRADE

I. Now that you have seen your grade and the T.A.'s comments on your lab report describe what reactions you are having about receiving the grade you did. What thoughts are going through your mind?

II. Did the grade you received on your lab report make you revise your opinion of yourself upwards? Why or why not?

III. Did the grade you received on your lab report make you revise your opinion of yourself downwards? Why or why not?
APPENDIX F
LAB REPORT QUESTIONNAIRE I

Name ________________________________ Sex: ___Male ___Female

Lab Report Questionnaire

Instructions: Take a moment to think about the work you did on your lab report. Keeping these thoughts in mind use the following scales to describe how these thoughts make you feel right now. Circle the number that best describes your feelings. If neither end of the scale describes your feeling state, circle the five (5) for that item.

YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL. NEITHER YOUR T.A. NOR THE INSTRUCTOR OF THE COURSE WILL SEE YOUR RESPONSES. YOUR ANSWERS WILL NOT AFFECT YOUR GRADE ON THE LAB REPORT.

1 happy, cheerful, joyous
    very not at all very
    1 2 3 4 5 6 7 8 9
    unhappy, sad, depressed

2 angry-at-someone, irritated, annoyed-with-someone
    very not at all very
    1 2 3 4 5 6 7 8 9
    warm-hearted, kindly, affectionate

3 angry-at-yourself, annoyed-with-yourself
    very not at all very
    1 2 3 4 5 6 7 8 9
    warm-toward-yourself, kindly-toward-yourself

4 proud, self-satisfied, pleased-with-self
    very not at all very
    1 2 3 4 5 6 7 8 9
    ashamed, inadequate, displeased-with-self

5 confused, disorganized, conflicted
    very not at all very
    1 2 3 4 5 6 7 8 9
    clear-minded, integrated, all-together

6 anxious, nervous, scared
    very not at all very
    1 2 3 4 5 6 7 8 9
    calm, relaxed, at-ease
7. Out of a total of 50 possible points, what number of points do you expect to receive on this lab report? _____

8. What is the lowest number of points you would be pleased with receiving on this lab report? _____

9. How many hours did you spend writing this lab report? _____

10. What is the minimum grade that you would be pleased with receiving in this course? _____

11. How much does your performance on this lab report matter to you? (Circle the appropriate number.)

    1  2  3  4  5
    not at all  a moderate  a great deal
               amount

12. How much does your performance in this course matter to you? (Circle the appropriate number.)

    1  2  3  4  5
    not at all  a moderate  a great deal
               amount

13. What is your overall GPA? _____

14. What was your SAT score on the verbal test? _____

15. What was your SAT score on the math test? _____

16. What was your course grade in statistics? _____
APPENDIX G

LAB REPORT QUESTIONNAIRE II

Name ___________________________  Sex:  _Male   _Female

Lab Report Questionnaire

Instructions: Describe how receiving the grade you did made you feel by circling the appropriate number on the following rating scales. If neither end of the scale describes your feeling state, circle the five (5) for that item.

YOUR ANSWERS WILL BE COMPLETELY CONFIDENTIAL. NEITHER YOUR T.A. NOR THE INSTRUCTOR OF THE COURSE WILL SEE YOUR RESPONSES.

1 happy, cheerful, joyous
   .1 2 3 4 5 6 7 8 9. unhappy, sad, depressed

2 angry-at-someone, irritated, annoyed-with-someone
   .1 2 3 4 5 6 7 8 9. warm-hearted, kindly, affectionate

3 angry-at-yourself, annoyed-with-yourself
   .1 2 3 4 5 6 7 8 9. warm-toward-yourself, kindly-toward yourself

4 proud, self-satisfied, pleased-with-self
   .1 2 3 4 5 6 7 8 9. ashamed, inadequate, displeased-with-self

5 confused, disorganized, conflicted
   .1 2 3 4 5 6 7 8 9. clear-minded, integrated, all-together

6 anxious, nervous, scared
   .1 2 3 4 5 6 7 8 9. calm, relaxed, at-ease
7. What number of points did you receive on your lab report? _____

8. Circle the number below that best describes how satisfied you are with the grade you received on your lab report.

1. 2. 3. 4.
   extremely somewhat somewhat extremely
displeased displeased pleased pleased

9. What is the minimum grade you would be pleased with receiving on your second lab report? _____

10. What grade do you expect to receive on your second lab report? _____
APPENDIX H

MEANS AND F-RATIOS FOR THE SELF-ESTEEM MAIN EFFECT FOR THE "NO," "SLIGHT," "INTERMEDIATE," AND "EXTREME" DEGREES OF GENERALIZATION FOLLOWING SUCCESS AND FAILURE--SELF-CONCEPT QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Level of Generalization</th>
<th>F-ratio&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Success Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>9.69***</td>
<td>2.97</td>
<td>3.14</td>
<td>3.77</td>
</tr>
<tr>
<td>Slight</td>
<td>5.00*</td>
<td>2.90</td>
<td>3.23</td>
<td>3.59</td>
</tr>
<tr>
<td>Intermediate</td>
<td>11.77***</td>
<td>3.24</td>
<td>3.61</td>
<td>4.01</td>
</tr>
<tr>
<td>Extreme</td>
<td>25.18***</td>
<td>3.04</td>
<td>3.50</td>
<td>4.08</td>
</tr>
<tr>
<td><strong>Failure Group</strong></td>
<td></td>
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<tr>
<td>None</td>
<td>2.84&lt;sup&gt;T&lt;/sup&gt;</td>
<td>3.82</td>
<td>3.36</td>
<td>3.22</td>
</tr>
<tr>
<td>Slight</td>
<td>4.69*</td>
<td>3.31</td>
<td>2.83</td>
<td>2.61</td>
</tr>
<tr>
<td>Intermediate</td>
<td>4.85*</td>
<td>2.52</td>
<td>2.07</td>
<td>1.92</td>
</tr>
<tr>
<td>Extreme</td>
<td>7.40**</td>
<td>2.08</td>
<td>1.42</td>
<td>1.52</td>
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</table>

<sup>a</sup>ADF=2/42 in all cases.

<sup>T</sup>=p<.10

<sup>*</sup>=p<.05

<sup>**</sup>=p<.01

<sup>***</sup>=p<.001