Effects of Casual Attributions of Performance Outcome on Nature of Self-Statements and Self-Esteem

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EFFECTS OF CAUSAL ATTRIBUTIONS OF PERFORMANCE OUTCOME ON NATURE OF SELF-STATEMENTS AND SELF-ESTEEM

BY

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A THESIS
SUBMITTED TO THE GRADUATE FACULTY
OF THE UNIVERSITY OF RICHMOND
IN CANDIDACY
FOR THE DEGREE OF
MASTER OF ARTS
IN PSYCHOLOGY

AUGUST 1980
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Committee Chairperson

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Abstract

36 college students participated in a study to determine the role of causal attributions of success and failure on the modification of self-esteem. Although Brockner (1979) has suggested that the key to augmenting self-esteem is the increasing of positive self-evaluation that follows success, several studies suggest that it is not the positive self-evaluation after success but the negative self-evaluations after failure that are crucial in determining one's level of self-esteem. Thus it was hypothesized in the present study that if external attributions were made for failures while internal attributions for success were maintained, self-esteem would increase. Subjects high and low in self-esteem were given instructions designed to influence their attributions for the outcome of individual trials on a task in which they were led to believe that their overall performance had been superior. Cognitions following each trial were measured by a thought listing procedure. A no-instruction control group and a group which had been instructed to make internal attributions after success showed no change in self-esteem. However, both the high and low self-esteem subjects that had been instructed to attribute failure to external factors and success to internal factors showed such a change. The self-esteem of the high self-esteem group decreased while the self-esteem
of the low self-esteem group increased. These results were discussed in terms of a reconceptualization of the differences in performance outcome attributions by individuals high and low in self-esteem.
Effects of Causal Attributions of Performance Outcome on Nature of Self-Statements and Self-Esteem

Self-esteem has been conceptualized by many investigators (e.g., Coopersmith, 1967; Felker, 1974; Wylie, 1961) as constituting the evaluative portion of the self-concept. As such, it is viewed as a value judgment passed on oneself and one's activities. Although the nature of these self-evaluations can be considered from any of numerous theoretical standpoints, one of the currently most researched and perhaps the one with the greatest heuristic value is the cognitive behavioral perspective. From this point of view self-esteem is seen as being shaped by self-statements (Felker & Thomas, 1971; Marston, 1965). That is, the nature of the self-statements occurring concomitantly with a person's behavior and the consequences of the behavior are the crucial factor in determining self-esteem. In fact, an operational definition by some researchers (Hannun, Thoresen, & Hubbard, 1974) of self-esteem has been the ratio of positive to negative self-statements. A ratio of greater than one is considered to denote high self-esteem while a ratio of less than one indicates low self-esteem.

The importance of self-esteem was recognized by Brandon (1969) who saw it as a ubiquitous factor in human consciousness. Because it is a pervasive aspect of the self-concept, it is not surprising that one's level of self-
esteem has important consequences as far as behavior is concerned. Low self-esteem (SE), for example, has been associated with a wide variety of maladaptive behavior patterns, including high levels of anxiety (Coopersmith, 1967; Doris, 1959; Pilisuk, 1963; Rosenberg, 1963) alcoholism (Wahl, 1955), and drug use (Brehm & Back, 1968). Thus the treatment of low SE has long been a major target of therapeutic interventions. Unfortunately, however, its treatment has proven to be a most difficult task. Brockner (1979a, 1979b; Brockner & Hultin, 1978) has suggested that this difficulty stems from the vicious cycle of negativity in which the person with low SE is caught. This postulated cycle is one in which negative self-evaluations following poor performance impairs future performance. This cycle can be seen most clearly in situations which have evaluative consequences for the person involved. Perhaps the most common of these are academic settings where low self-concept has been associated with low academic achievement (Purkey, 1970; Gordon, 1977) underachievement (Bedelian, 1976), and low need for achievement (Fink, 1962). In these evaluation-laden situations it has been found that persons with low SE expect to do worse (Coopersmith, 1967; Kiesler & Beral, 1970) and as a consequence, do not perform as well (Hamachek 1971; Schauger, 1972) as do persons with high SE. This performance serves to further reduce their SE which will further impair their performance on subsequent academic
Brockner (1979a; 1979b) has suggested that much of the poor performance by the person with low SE can be explained by their "attentional focus". That is, persons with low SE tend to be self-focused while persons with high SE tend to be task focused in achievement situations. Evidence for greater self-focusing in persons with low SE comes from a study that found that dispositional self awareness (self-consciousness) is negatively correlated with self-esteem (Turner, Schier, Carver & Ickes, 1978) and from the finding that persons who were made self-aware (by a mirror) scored lower on a measure of self-esteem than those not made self-aware (Ickes, Wickland, & Ferris, 1973).

Self-focusing is thought to reduce performance in one of two ways (Brockner & Hulton, 1978): 1) by causing inadequate attention to be given to the task or 2) through the mediating variable of anxiety caused by focusing on the negative characteristics of the self.

Several studies (Brockner, 1979a; 1979b; Brockner & Hulton, 1978; Schauger, 1972) have investigated the effects of varying the focus of attention on task performance. Schauger (1972) found that persons with low SE performed more poorly than those with high SE on concept formation task in the presence of an audience but equally well in the no-audience condition. (An audience has been found (Carver & Scheier, 1978) to increase self awareness).
Brockner & Hulton (1978) more directly manipulated focus of attention by giving persons high and low in SE pre-performance instructions designed to either focus attention on the self or the task. A control condition received no attentional focus manipulation. As compared to persons with high SE, those with low SE performed poorer in the self-focusing condition, equally well in the control condition and, in a somewhat surprising result, better in the task focusing condition. A second study by Brockner (1979a, Study 2) replicated these results and also provided evidence that the results mentioned above were quite similar to those found using persons high and low in self-consciousness.

Brockner has suggested that the vicious cycle of self-esteem could be reversed by inducing persons with low SE to focus on the task, thereby increasing performance. This better performance would presumably reduce the person's feelings of negativity and increase self-esteem. However, research on the relationship between SE and locus of control (LOC) suggests that this may not be true. Although several studies (e.g., Ryckman, & Sherman, 1973) Fish & Karabenick, 1971) have found a negative correlation between SE and LOC (a high score indicates externality), a study by Fitch (1970) on causal attributions for perceived performance on a dot guessing task points out that this relationship is a complex one. In this study high and low self-esteem subjects differed in attributions following success and failure. As expected, following
Failure HSE persons made external attributions while LSE persons made internal attributions. However, the attributions made by these two groups following success was quite unexpected: both LSE and HSE persons made internal attributions. These results have been replicated with depressed and non-depressed subjects (Kuiper, 1978).

The "self-statements" conception of self-esteem can be applied quite easily to these findings. Presumably both persons with high and low self-esteem make positive self-evaluation or self-statements following success while following failure persons with low SE make negative self-statements and persons with high SE do not make any self-statements as the outcome is not seen as reflecting on them.

Support for this line of reasoning comes from a study by Diener and Dweck (1978) of "helpless" and "mastery-oriented" children, the definition and description of whom are quite similar to those suggested by Seligman (1975) as being operative in depression. In this study, the verbalization of these two groups of children following failure on a complex task were recorded. It was found that "helpless" children attributed their failure on a lack of ability (an internal attribution) while "mastery-oriented" made very few attributions of any kind, instead choosing to give themselves task related instructions. Helpless children, then,
made denigrating self-statements while mastery oriented children remained focused on the tasks.

The importance of this study is clear when viewed in the context of a study by Vasta and Brockner (1979) which found that self-esteem was negatively correlated with both self-reported covert negative self-evaluations and the proportion of negative self-evaluations to total self-evaluations. No significant correlation was found between positive self-evaluation and self-esteem. A study by Kanfer, Puerfeldt and Le. Page (1969) found a similar lack of relationship between these two variables. Thus it appears that negative self-evaluations are a more important determinant of self-esteem than are positive self-evaluations. If this is the case, the efficacy Brockner's treatment suggestion which involves merely increasing positive self-evaluation by increasing the rate of success would seem clearly in doubt. What the past research suggests is that to increase self-esteem it is necessary to reduce the number or the impact of negative self-evaluations made by the person. Since persons with low SE appear to be especially prone to failure, and failure frequently precedes negative self-evaluations it would seem that what is necessary to alleviate low SE is to change internal attributions following failure to external ones.
A study was conducted to test this hypothesis. Specifically, it was predicted that the experience of success while task-focusing would only result in an increase in self-esteem among those with low SE if the experience of failure on individual trials was attributed to external sources. In the present study all subjects were given instructions designed to lead them to see the task as having strong evaluative consequences. This was done to make their performance on the task as crucial as possible in terms of effecting SE. Although all subjects experienced "success" on the task (as compared with the stated norm) the absolute number of successes and failures on individual was kept equal across trials. Thus the number of positive and negative self-statements equal and no change in self-esteem could take place. In order to test Brockner's hypothesis as closely as possible all subjects were given task-focusing instructions.

In addition to measuring each subject's self-esteem preceding and following the trials, additional evidence concerning the relationship between self-statements and self-esteem was obtained by using a thought listing procedure. Since self-statements are thought to mirror self-esteem it was expected that the thought listing procedure would allow a determination of both differences in the nature of self-evaluation due to attributional differences and provide additional evidence regarding self-statement differences found in high and low self-esteem groups.
Method

Subjects

Subjects were 36 male and female college students obtained from the introductory psychology subject pool. These students received course credit as well as two dollars for their participation. Six subjects had completed their course research requirement and participated solely for the money. The Self-Esteem Scale (SES; Rosenberg, 1965; Appendix A) was administered to four sections of introductory psychology by the professor of that class during a regular class period. An examination of the resulting distribution revealed that the upper one-third of the students scored above 18 while the lower third scored below 16. (This is out of a possible range of zero to forty). Subjects that scored in the lower or upper one-third of this distribution were considered to be the high and low self-esteem groups respectively. Members of these two groups were informed that they were eligible to participate in an ostensibly separate experiment by placing their social security numbers on a prominent bulletin board. (These potential subjects were told that they had been selected on a random basis).

Method

Self-Esteem Scale. Self-esteem was measured by the SES. This scale consists of ten items, five positive, five negative measuring a global conception of one's self-esteem. A representative item is "on the whole, I am satisfied with myself." A person then responds that they "strongly agree"
"agree", "disagree", or "strongly disagree" with the statements. Using reverse scoring on negatively worded items, an additive scoring procedure was used with a high score indicated LSE. This scale appears to possess outstanding psychometric qualities. Evidence for its validity comes from a variety of sources including a study by Silber and Tippet (1965) in which the SES was administered to students from several different colleges. Significant correlations were found between the SES and the Difference Between Self and Ideal Self Scale (.67), the Difference Between Self and Social Self Scale (.83), and interview self-esteem (.56) as determined by two raters of an interview with a psychologist or psychiatrist. (See Rosenberg (1965) for several other studies providing further evidence of the validity of the SES). Silber and Tippet (1965) have also adduced evidence that the SES is reliable, .85 over a two weeks period. The unidimensionality of the SES was affirmed by Hensley and Roberts (1975) in a study involving 479 freshmen and sophomore college students. They also cited several studies that have used the SES as a measure of self-esteem including one that found the SES could successfully differentiate persons high and low self-esteem even when a median split procedure was used (see Tessler & Schwartz, 1972).

Experimental Task. A "social intelligence" test was used as the experimental task. It consists of two major materials: pictures of college students and "stimulus words".
The pictures (Appendix B) were obtained from the yearbook of a distant college while the stimulus words (Appendix C) were selected from word association norms (Russel & Jenkins, 1954). Stimulus words whose responses had a low rate of consensus (i.e., no one response to that word was predominant) were chosen.

Thought Listing Materials. A thought listing procedure (Cacioppo, Glass & Merluzzi, 1979) was used to assess the self-statements of the subjects. The thought listing form (Appendix D) consisted of 16 eight inch horizontal lines with each pair of lines approximately one inch from the following one. Each pair of lines was connected at its ends to form a box. Subjects were given a packet of 20 sheets as well as a cover sheet containing instructions.

Procedure

The procedure contained elements of that by Brockner (1979a), Diener & Dwek (1978), Kuiper (1978), and Cacioppo, Glass, and Merluzzi (1979). Subjects were tested individually with the experimenter unaware of the self-esteem score of the subjects. (This was accomplished by having a person unaware of the hypotheses assign subjects to the various conditions in such a way as to fill each treatment cell with an equal number of subjects). Upon their arrival subjects were seated at a table in an experimental room and asked to complete an informed consent form (Appendix E). On the table was a
large calculator used to allow the subject to see their score as the experiment progressed. It was initially set to 100. The experimenter sat to the side and slightly behind the subject which allowed the stimulus words and the key to be hidden from the subject's view.

Each subject was then given the following instructions designed to be "ego involving":

The task you will be working on is a test of a type of intelligence: social intelligence. Social intelligence is the ability to discover another person's personality, to "figure out what they're like." Persons that possess this type of intelligence have a high potential for interpersonal relationships and usually do better in their chosen profession than those that do not. You will be tested for this type of intelligence through the use of a "vicarious word association test." You will be given a picture of a person and a stimulus word. You are to study the picture carefully and attempt to determine how that person responded to the stimulus word when given it in an usual type of word association test. Do you have any question? You will be given a series of 20 of these pictures and words and you will be given four points for each correct answer and you will lose two points for each incorrect answer. Your score will be calculated after each trial on this "continuous intelligence register."

The subjects were then shown how to operate the calculator. They were told that they were initially given 100 points:
because that is the average score on an intelligence test. As you might guess this is a very difficult task and we have found in pretests that on the average a student at this university gets about one-quarter of the answers right. The actual average, then works out to be between 104 and 105. Because of the difficulty of this task, it will be necessary for you to concentrate as completely as possible to do well on it.

This preceding statement formed the task focus instruction. Subjects were then given the thought listing form and provided with the rationale for its use:

In order to understand how people solve these types of problems, we would like to know what people think while solving them. After each trial, you are to list your thoughts, one to a box on a separate sheet. List all your thoughts, whether they be about yourself, the task, or anything you happen to be thinking about. Use any case you wish and be unconcerned with grammar spelling, and punctuation. Remember your responses will be kept completely confidential.

The subject was then given the instructions for the group to which he or she had been previously assigned. In the positive self-evaluations only group (POS) subjects were that:

In past studies it has been found that people who praise themselves after a successful trial become more confident and do better on later trials, so as you're listing your thoughts you should make at least one positive statement after each success.
Subjects were then asked to give an example of such a statement to determine if they had understood the instructions. In the positive self-evaluation external failure attribution group (POS-EXT) the subjects were given the above instructions with the following addition:

Remember this is a difficult task. Whenever you miss a word you should remind yourself of this by placing a statement that points out the difficulty of the task on your thought listing form. Subjects were also asked to provide an example of the external attribution statement.

In the control condition (CON) no specific instructions were given. They were, however, told that:

Past research has shown that by listing thoughts a person gains confidence and does better on later trials.

Each subject was then given twenty trials on which they were told they had succeeded on 10. The order in which the bogus feedback was given was designed to concentrate failures in early trials and success in later trials. This was done to promote overall feelings of success. Each trial consisted of the presentation of a picture of person, a stimulus word, and the question "What one word association do you think this person had to the word?" After the subject's the experimenter glanced at a "key" and responded by either saying "that's right" or "that's wrong." The subject the adjusted the score in the appropriate direction and listed his or her thoughts for one minute. After the subject had completed writing his or her thoughts for the first trial, the "correct" response and a rationale from the appearance
of the person for that response was given. This was designed to reduce suspicion about the veracity of the feedback. For example, the subject was told that the response of a rather conservative female to the word "music" was "classical".

After the conclusion of the twenty trials, subjects were administered the post-test SES to "assess the cognitive and affective consequences of the testing procedure". After completing this form the subjects were administered manipulation checks and then thoroughly debriefed as to the true nature of the experiment (Appendix F).

Results

Scoring and Interrater Reliability of Self-statements

The scoring procedure (similar to that of Cacioppo, Glass, & Merluzzi, 1979) for the self-statements involved their placement into one of seven categories. In the Task/Useful Strategy category (TU) were statements that indicated that the subject had responded by examining the picture or by generating other possible responses (e.g., "[the person in the picture] looks happy and this suggested pleasure.") The Task/Non-useful Strategy category (TN) consisted of statements that dealt with irrelevant aspects of the tasks (e.g., the stop watch used by the experimenter to time the thought listing). In the Self/Positive category (SP) were statements that indicated pride or pleasure after a success (e.g., "another one right, very good"). The Self/Negative category (SN) consisted of self-denigrating statements made after a failure (e.g., "I feel pretty stupid, very unsure and tense.")
The Self/Neutral category (SM) consisted of statements concerning oneself that had no clear affective tone (e.g., "I hope he (the experimenter) can read my handwriting").

The Irrelevant Statements category (IRR) consisted of a diversity of statements not relevant to the task or the experimental situation (e.g., one's romantic affairs). The Task Difficulty category (TD) consisted of statements pointing out the difficulty of the task.

The statements were rated independently by two females who were unaware of the subject's group placement. Interrater reliability calculated using a method in which the ratio of agreements on individual statements to total judgments rendered is determined revealed a reliability of .83. Appendix G contains the instructions given to the raters. The two raters scores were combined by computing their average.

Manipulation Checks

To determine if the task instructions had indeed been followed the three groups were compared on the number of positive self-statements and the number of task difficulty statements they had made. A one-way ANOVA on the Self/Positive statements was significant, \( F(2, 33) = 18.60, p < .01 \). A priori t-tests revealed that the mean number of self/positive statements the POS group (\( M = 11.04, SD = 5.41 \)) and the POS/EXT group (\( M = 11.25, SD = 4.60 \)) made did not differ, \( t(33) < 1 \). There was, however, a significant differences between the POS/EXT group and the CON group (\( M = 1.71, SD = 3.32 \)), \( t(33) = 6.10, p < .01 \). A one-way ANOVA comparing the three groups on the number of task difficulty statements was also
significant, \((M = 1.71, SD = 3.32), t (33) = 6.10, p < .01\).

A one-way ANOVA comparing the three groups on the number of task difficulty statements was also significant, \(F (2, 33) = 5.93, p < .01\). A priori \(t\)-tests revealed that the POS/EXT group \((M = 6.42, SD = 6.93)\) had a greater mean number of task difficulty statements than did both the POS group \((M = 1.04, SD = 2.35), t(33) = 3.03, p < .01\) or the mean of CON group \((M = 1.21, SD = 1.76)\) and the POS group. This suggests that the instructions were effective in altering the number of each type of these statements. It should be noted that for each of these analyses the \(F_{\text{max}}\)'s as significant; \(F = 4.17, p < .05\) and \(F = 15.14, p < .05\) for the positive self-statements and the task difficulty statements respectively. That these \(F_{\text{max}}\)'s were significant is not surprising because of the low mean number of responses in these two categories by the groups that did not receive these instructions.

Two additional manipulation checks were performed to eliminate possible competing explanations of the results. First, to determine if the instructions had influenced the perception of success on the task subjects were asked, "How well do you think you did on this task?" Subjects were asked to respond on a ten point scale with 1 being "very poorly", 10 being "very well" and 5 being "average". A mean of 7.1 \((SD = 1.3)\) indicated that the subjects did indeed see themselves as successful on the task. A 2 (type of instruction) x 2(self-esteem level) ANOVA yielded no significant effects thus indicating that all groups had seen themselves performing
equally well on the task.

To determine if the instructions had influenced their perception of the task itself rather than having the desired effect of influencing the causal attributions made for their performance subjects were asked, "In general, what do you thing a person's performance on this task is dependent upon?" Subjects answerdd on a 10 point scale with one being luck, 10 being skill and five being a equal mixture of luck and skill. The mean of all groups was 5.4 (SD 1.4) which sug­­gest that skill was seen as a significant factor in perfor­­mance. A 2 (type of instruction) x 2 (self-esteem level) yielded no significant effects thus indicating that all groups perceived the task similarly.

Although it may be argued that the failure of the POS/EXT group to differ on this latter manipulation represents the failure of the task difficulty manipulation to influence the subjects view of the task, it should be noted that this manipulation was designed to influence their perception of their performance on the task, not the task itself.

Self-statements

Each of the seven categories of self-statements was sub­­jected to a 2 (type of instruction) x 2 (self-esteem level) analysis of variance. A significant main effect was found for the Self/Negative statements which indicated that the high self-esteem group (M = 1.14, SD = 1.49) made fewer nega­tive self-statements than did the low self-esteem group (M = 3.11, SD = 3.10). A significant interaction was found for
the Task/Not Useful strategy data, $F(2, 30) = 3.80$, $p<.05$. Analysis of simple effects revealed that this interaction was due to a difference between the high and low self-esteem group (Ms and SDs 8.25/4.77 and 17.00/6.65 respectively $F(1, 10) = 6.86$, $p<.05$, in the control group, while there were no significant differences due to self-esteem level in either the POS or POS/EXT group. Table 1 contains the means and standard deviations of all the self-statement data. Appendices H - P contains the ANOVA tables of these data, while in Appendices Q - W these data are presented graphically.

Insert Table 1 about here

$F_{max}$'s were computed for each of these five categories of self-statements. Of these only the ones for Self-Neutral statements and Irrelevant statements were significant $F = 36.80$, $p<.05$ and $F = 56.67$, $p<.05$ respectively.

Self-Esteem

The self-esteem data were subjected to a 2 (self-esteem level) x 2 (trials) x 3 (type of instruction) analysis of variance. These data are presented in Table 2. (A preliminary $F_{max}$ on these data was not significant, $F = 4.48$, $p>.05$). A significant three way interaction, $F(2,30) = 4.21$, $p<.02$, as well as a significant SE x trial interaction, $F(1, 30) = 9.35$, $p<.01$, as well as a main effect for SE was found. Appendix $X$ is the summary table of this analysis. Analysis of simple effects most germane to the hypothesis consisting of a series of one way ANOVA's comparing each of the six Self-Esteem/Type of Instruction
groups on pre- and post-test measures of self-esteem. There were no significant differences between the pre- and post-test for either self-esteem group in the control group ($F < 1$) or the POS group ($F < 1$). In the POS/EXT group both the high and low self-esteem group showed a change in self-esteem. The mean of the low self-esteem group ($M = 18.5$, $SD = 2.59$) was significantly lower on the post-test than on the pre-test ($M = 22.0$, $SD = 3.90$), $F(1,5) = 17.47$, $p < .05$. Thus the hypothesized increase in self-esteem occurred for this group.

Unexpectedly, the mean of the high self-esteem group was higher on the post-test ($M = 15.67$, $SD = 2.7$) than on the pre-test ($M = 13.88$, $SD = 1.17$), $F(1,5) = 5.36$, $p < .05$). Thus, for the high self-esteem group the POS/EXT manipulation decreased self-esteem.

Discussion

The main hypothesis of this study was that to increase self-esteem it was necessary not only to provide success but also to provide a method of coping with the inevitable failures that accompany success. This hypothesis received partial support. The results with regard to the low self-esteem group appear to be unequivocal. Although success was provided the control group and the POS group there was no increase in self-esteem. Although the number of positive
self-statements were increased dramatically in the POS group as compared to the control group there was no increase in self-esteem for that group. This fact and the fact that the number of Self/Positive statements was equal for the POS and POS/EXT groups suggests strongly that it is not positive self-evaluations but external attribution statements that are the key to raising low self-esteem. The much higher rate of negative statements for the low self-esteem group provides further evidence of this fact. The characteristic of the low SE individual to be both highly praising and punishing is illustrated by self-statements drawn from two consecutive trials, one successful, one unsuccessful. After a success a male subject writes, "Very confident, almost proud." After a failure on the next trial he writes, "I'm afraid I'm not going to lie between or at the average, that I'm less capable or intelligent than most people."

The decrease in self-esteem evinced by the high self-esteem group is at first glance rather baffling. It appears that the POS/EXT manipulation is merely simulating the attributional behavior of the high self-esteem individual. However, a further look at the work of Diener and Dweck (1978) may provide a clue. In their study the "mastery" children did not make external attributions for failure; rather, they simply concentrated on the task and prepared for the next trial.
In the present study persons with high self-esteem in the POS/EXT group were not allowed the option of simply focusing on the task after failure. Instead the external attribution manipulation may have forced them to concentrate on their unsuccessful performance, even if it was only to discount it. Support for this view comes from the Task/Not Useful self-statement data. In the control condition the high self-esteem group had a lower rate of Task/Not Useful strategies than did the low self-esteem group. This result, similar to that of the other studies, indicates that in the absence of task instructions the high self-esteem individual avoided getting involved with task-irrelevant stimuli. In the POS/EXT group this result was reversed. Although the difference was not significant, the high self-esteem group had greater numbers of Task/Not Useful self-statements than did the low self-esteem group. The task difficulty instructions may have had a deleterious effect on the high self-esteem subjects by focusing their attention on their failures and thereby vitiating the positive effects of success. The resulting negative view of themselves and the task may have resulted in lowered self-esteem and a greater frequency of Task/Not Useful self-statements.

In summary, it appears that the task difficulty manipulation served to focus the attention of the high self-esteem person on their failure while normally they
would simply have ignored it.

This study is one of the first of its kind in that it has attempted to test what has up to this point been theory about the relationship of self-esteem to success, failure, and the attributions one makes about them. As such its findings must be considered preliminary and await further research to be verified. It is hoped that in the future there will not only be replications and expansions of this work but that research into the mechanisms underlying the effects of attributional styles will be forthcoming.
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Table 1

Means and Standard Deviations of Self-Statements for All Groups

<table>
<thead>
<tr>
<th>Self-Statement Type</th>
<th>POS</th>
<th>POS/EXT</th>
<th>CON</th>
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<tbody>
<tr>
<td>Task/Useful</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>19.67</td>
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<tr>
<td>SD</td>
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<td>Task/Not Useful</td>
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<td></td>
</tr>
<tr>
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<td>15.00</td>
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<tr>
<td>SD</td>
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<td>3.03</td>
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<tr>
<td>Self/Positive</td>
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</tr>
<tr>
<td>M</td>
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<td>10.17</td>
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</tr>
<tr>
<td>SD</td>
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<td>Self/Neutral</td>
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<tr>
<td>M</td>
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</tr>
<tr>
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<td>9.26</td>
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</tr>
<tr>
<td>Self/Negative</td>
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<td></td>
</tr>
<tr>
<td>M</td>
<td>1.42</td>
<td>2.42</td>
<td>1.50</td>
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Appendix A

Personality Scale

Read each question carefully and answer it as honestly as possible. Please answer each question using a four point scale with "strongly agree" = 1, "agree = 2, "disagree" = 3, "strongly disagree" = 4.

1. I feel that I'm a person of worth, at least on an equal plane with others __
2. I feel I have a number of good qualities__
3. All in all, I am inclined to feel that I am a failure__
4. I am able to do things as well as most people__
5. I feel I do not have much to be proud of__
6. I take a positive attitude toward myself__
7. On the whole, I am satisfied with myself__
8. I wish I could have more respect for myself__
9. I certainly feel useless at times__
10. At times I feel I am no good at all__
Appendix B

Word Association Task Photographs
Appendix C

Word Association Task Words

Music
Comfort
Hand
Short
Butterfly
Wish
River
Earth
Trouble
Soldier
Stomach
Memory
Street
Cheese
Sheep
Blue
Head
Joy
Baby
Afraid
Appendix D

Thought Listing Form

Instructions: We are interested in anything that is going through your mind about the task on which you are working. Please list any thoughts, whether they are about yourself, the situation, and/or others; whether they are positive, neutral, and/or negative. Any case is fine, IGNORE SPELLING, GRAMMAR, AND PUNCTUATION. You will have one minute to write.

We have deliberately provided more space than we think people will need, to insure that everyone would have plenty of room. Please be completely honest. Your responses will be anonymous. The next page contains the form we have prepared for you to use to record your thoughts and ideas. Simply write down the first thought you had in the first box, the second, in the second box etc. Please put only one idea or thought in a box.
Causal Attributions

Appendix E

Informed Consent Agreement

This study entails the following:

1. You will be asked to complete two personality scales during the course of the experiment.

2. Your experimental task will involve twenty trials on which your social intuition will be measured.

3. After each of these trials you will be asked to list your thoughts.

4. Your identity and responses will be kept confidential.

5. You may terminate your participation in this experiment at any time.

6. A full explanation of this study will be given at its completion.

__________________________________________
Signature of Participant

____________________
Date
Appendix F

Debriefing Form

1. The personality scale you completed were used to measure self-esteem. A numerical coding system is being used so that your score will never be connected with your name.

2. The information that was given you about your performance was in actuality determined solely by chance.

3. The thought listing procedure was used to determine the nature of your "self-evaluations" regarding your performance on each trial.

4. You received only one of three instructions given to persons participating in this study. The other were...

5. However, the technique of concentrating or focusing on a task has been shown to improve performance.

6. Our hypothesis was that people with low self-esteem would show different reactions in terms of the personality measures and the self-evaluations based on the instructions that they were given.

7. I would be willing to answer any further questions that you might have about the experiment, its procedures, or hypotheses.
Appendix G

Instructions Given to Raters

Each statement should be assigned to one of the following categories:

1. Task Difficulty: Any statement that explicitly states that the subject perceives the task to be difficult.

2. Task/Useful Strategy: Any statement that indicates the subject is attempted to determine the rationale for a correct response or is developing a useful technique for responding.

3. Task/Not Useful: Any statement regarding the task that is irrelevant to the generation of successful responses.

4. Self/Positive: A self-directed statement of positive valence regarding success on the task.

5. Self/Neutral: A self-directed statement of neutral or uncertain valence regarding the task.


7. Irrelevant: All other statements.

If a sentence is incomplete or undecipherable you may delete it by placing a line through it.
### Appendix H

**Analysis of Variance:**

Self/Positive Statements

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### Appendix I

**Analysis of Variance**

Task Difficulty Statements

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### Appendix J

**Analysis of Variance**

Task/Useful Strategy Statements

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### Appendix K

**Analysis of Variance**

Task/Not Useful Strategy

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Appendix L

Analysis of Variance

Self/Neutral Statements

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Appendix M

Analysis of Variance

Self/Negative Statements

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Appendix N

Analysis of Variance

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Causal Attributions

Appendix O

Analysis of Variance

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Appendix Q
Mean Task/Useful Statements for All Groups

Appendix R
Mean Task/Not Useful Statements for All Groups
Appendix S

Mean Self/Positive Statements for All Groups

Type of Instruction

Appendix T

Mean Self/Neutral Statements for All Groups

Type of Instruction
Appendix U

Mean Self/Negative Statements for All Groups

Appendix V

Mean Irrelevant Statements for All Groups
Appendix W

Mean Task Difficulty Statements for All Groups

Type of Instruction

HSE

POS

POS/EXT

LSE

CON

Mean

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