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## Future Task Difficulty Expectations and Strategic Failure in Depression: A Test of Depressive Self-Presentation Theory

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LOYOLA UNIVERSITY OF CHICAGO

FUTURE TASK DIFFICULTY EXPECTATIONS AND STRATEGIC FAILURE IN  
DEPRESSION: A TEST OF DEPRESSIVE SELF-PRESENTATION THEORY

A THESIS SUBMITTED TO  
THE FACULTY OF THE GRADUATE SCHOOL  
IN CANDIDACY FOR THE DEGREE OF  
MASTER OF THE ARTS

DEPARTMENT OF PSYCHOLOGY

BY

EVAN FINER

CHICAGO, ILLINOIS

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## ACKNOWLEDGMENTS

This work is dedicated to my grandparents. Each came to this country while about my age, and made a fine life for their families, and ultimately me. Their spirit is with me always. I would like also to express my appreciation for the support of my family. Tina, my wife, deserves special thanks, for living a challenging life with a highly occupied graduate student; her encouragement has been invaluable. Finally, I would like to thank Dr. Jeanne Albright, my thesis director, and Dr. Thomas Petzel, my reader, for their assistance and support with this project.

## TABLE OF CONTENTS

ACKNOWLEDGMENTS . . . . .	iii
LIST OF TABLES . . . . .	v
Chapter	
I. INTRODUCTION AND REVIEW OF RELATED LITERATURE . . . . .	1
II. EXPERIMENT OVERVIEW AND MAIN HYPOTHESES . . . . .	20
III. ADDITIONAL VARIABLES AND HYPOTHESES . . . . .	27
IV. METHOD . . . . .	30
V. RESULTS . . . . .	40
VI. DISCUSSION . . . . .	58
Appendix	
A. ANAGRAM TASK . . . . .	67
B. MULTIPLE AFFECT ADJECTIVE CHECKLISTS . . . . .	69
C. PERFORMANCE ATTRIBUTIONS QUESTIONNAIRE . . . . .	71
D. WORD FLUENCY TASK . . . . .	73
E. WRITING SPEED TASK . . . . .	74
F. PRE-MANIPULATION CHECK QUESTIONNAIRE . . . . .	75
G. POST-PERFORMANCE MANIPULATION CHECK QUESTIONNAIRE . . . . .	76
H. EXPERIMENTER SCRIPTS . . . . .	77
I. CONSENT AND DEBRIEF FORMS . . . . .	90
REFERENCES . . . . .	92
FOOTNOTES . . . . .	97
VITA . . . . .	101

LIST OF TABLES

Table	Page
1. BDI Means and Standard Deviations per Group . . .	31
2. Number of Missing Responses to PPMC Item 5, Per Condition . . . . .	41
3. Writing Speed Means and Standard Deviations Across Mood and Future Performance Variables .	44
4. Observed Failures Across Mood, Future Performance, and Difficulty Expectancy Conditions . . . . .	47
5. Logistic Regression of Mood, Future Performance, and Difficulty Expectancy on Success/Failure .	48
6. Mood, Future Performance, and Difficulty Expectancy ANOVA with Number of Incorrect Anagrams as Dependent Variable . . . . .	49
7. Mean Number of Incorrect Anagrams and Standard Deviations Across Mood, Future Performance, and Difficulty Expectancy Conditions . . . . .	50
8. Adjusted Mean Time 2 Distress Across Future Performance and Difficulty Expectancy Conditions . . . . .	55
9. Self-evaluation (Rosenberg Self-esteem) Means and Standard Deviations Across Mood and Future Performance Variables . . . . .	57

## CHAPTER I

### INTRODUCTION AND REVIEW OF RELATED LITERATURE

Etiological explanations of depression have been proposed by a number of theorists, representing medical (see Akiskal & McKinney, 1975), intrapsychic (e.g., Freud, 1957), cognitive (e.g., Abramson, Seligman, & Teasdale, 1978; Beck, 1967; Seligman, 1975), and interpersonal (e.g., Coyne, 1976a; Lewinsohn, 1974) perspectives. Despite the various causal propositions, there is general agreement on the most common symptoms of depression: Mental health professionals and lay people easily recognize dejected mood, negative self-concept, self-reproach, and feelings of worthlessness. This transparent or obvious nature of the depressive person has stimulated a new focus in depression research, namely, depressive self-presentation (Hill, Weary, & Williams, 1986). Such an approach considers socially observable depressive symptoms to be, at least in part, intentional ploys designed to manage or control interpersonal relationships.

This theoretical position is not recent. Depressed people have been characterized as blackmailing others for attention (Fenichel, 1945), as construing others as objects capable of providing sympathy (Cohen, 1954), and more recently as providing "... a set of messages demanding

reassurance of the person's place in the interactions he is still able to maintain..." (Coyne, 1976a, p. 33). Despite the history of recognition by theorists of the intentional, and/or goal-directed nature of depressives' social actions, research has primarily focused on testing the more mechanistic theories of Beck (1967), Seligman (1975; also see Abramson, Seligman, & Teasdale, 1978), and Lewinsohn (1974), which do not incorporate concepts like intentions or goals.

The purpose of this thesis is to extend the empirical literature related to the depressive self-presentation perspective. Chapter I continues with an explication of the most recent depressive self-presentation theory (i.e., Hill et al., 1986). This is followed by an examination of research that can be used to evaluate this perspective. Chapter II then provides an overview of the thesis experiment, and delineates the hypotheses for the main dependent variable. Additional variables are introduced in Chapter III, and corresponding hypotheses are presented. The method and results are the topics of Chapters IV and V, respectively. Finally, the results are discussed in Chapter VI.

### Depressive Self-Presentation

Strategic self-presentation has been defined as "the more or less intentional control of appearances in order to guide and control the responses made by others to us" (Weary & Arkin, 1981, p. 225). Arkin (1981) added a distinction between a protective self-presentation style and the gener-



ally recognized acquisitive (to acquire or gain social approval) self-presentation style. The protective self-presentation style is conceptualized as a conservative orientation toward social interactions associated with a preoccupation with what can be lost through interactions rather than what can be gained.

Recently, Hill, Weary, and Williams (1986) proposed a self-presentation formulation of depression that claims depressives typically employ a protective self-presentation style. To rationalize this view, these authors propose that self-doubt, low self-confidence, and social anxiety increase the probability that a depressed individual, within a social interaction context, will experience elevated concern over social evaluations. This evaluation apprehension, in turn, leads him or her to employ a protective self-presentation style across a variety of social interaction settings. For depressives, the common manifestations of this interpersonal style are expected to be highly modest descriptions of accomplishments, social reticence, and in extreme cases, social avoidance or withdrawal (Hill et al., 1986). Despite the suggestion that social avoidance is an extreme expression of depressive self-presentation, Hill et al. argue that "the underlying motive is likely to be avoidance of future performance demands and potential further losses in self-esteem" (1986, p. 214). Moreover, they claim that depressives may endure short-term discomfort to achieve this goal

(1986, p. 234).

Before reviewing empirical evidence related to the Hill et al. (1986) formulation, a few theoretical and meta-theoretical issues are addressed. First, the Hill et al. (1986) theory does not attempt to explain the etiology of depression. In fact, in the current explication, it is not clear whether a protective self-presentation style could exist prior to the onset of depression as, perhaps, a predisposing factor. At best then, Hill et al.'s (1986) theory concerns itself with the maintenance and exacerbation of depression. Second, the hypothesized chain of events that leads to the adoption of a protective self-presentation style is quite mechanistic and thus fundamentally at variance with an intentional formulation. Typically, theories incorporating intentions do not juxtapose these intentions with efficient causation (i.e., "billiard ball causation;" one event leads to another event that leads to another event ..., in a time-ordered relationship), as does the suggestion that social anxiety and self-doubt lead to evaluation apprehension and then the intentional adoption of a protective self-presentation style. Moreover, Hill et al.'s (1986) formulation is weak insofar as the theoretical perspective shifts between what Rychlak (1990) would term an extraspective orientation (e.g., social anxiety) and an introspective orientation (e.g., self-doubt, evaluation apprehension, intention). Briefly, an extraspective orien-

tation tends to ignore the conscious experiences of the subject, while an introspective orientation considers conscious experiences. Thus, to use both extraspective and introspective concepts begs the question of which concepts are primary. For example, does self-doubt cause social anxiety or vice versa? It would be metatheoretically more consistent to use either the extraspective or the introspective orientation, but not both.

### Review of Empirical Evidence

Only one study has attempted to test Hill et al.'s (1986) main contention that depressives' primary goal in self-presentation is the avoidance of future performance demands and potential self-esteem loss. This study, conducted by Weary and Williams (1990), employed a strategic failure paradigm, and will be presented last because it is most relevant to the thesis experiment. First, several studies that were conducted to test other theories, but indirectly test the depressive self-presentation formulation, will be reviewed.

### Public-private Manipulations

One method employed to assess self-presentation motives in depression is a manipulation of publicity. Four such studies will be reviewed. Although none of these experiments was designed specifically to test the Hill et al. (1986) formulation, the public-private manipulation can assess its premise. A finding that depressives exhibit more

pathological behaviors and verbalizations in public than in private would be supportive of the idea that depressives intentionally modify their behaviors and verbalizations when in a social context.

Sacco and Hokanson (1978; 1982) conducted two studies that incorporated a public-private manipulation. In both, the public condition was defined as having an experimenter present, and the private condition was defined as having no experimenter present. In the 1978 study, Sacco and Hokanson measured subjects' performance expectation change before each trial of a 15-trial perceptual task, while randomly administering success and failure feedback after each trial (50% success, 50% failure). A total expectancy change score was computed such that higher scores indicated expectations for better performance on the upcoming task. The researchers found a significant mood x publicity interaction indicating that depressed subjects reported more positive expectancy change in private than in public conditions, while nondepressed subjects reported more positive expectancy change in public than in private conditions. Only the depressed-private versus nondepressed-private comparison was statistically significant; however, given that the group size was 8 (resulting in low statistical power), the large effect sizes of the study, in this particular pattern, can arguably be considered supportive of the Hill et al. (1986) depressive self-presentation theory.<sup>1</sup>

In the 1982 study, Sacco and Hokanson measured depressed and nondepressed subjects' self-reinforcement for prior task performance on a 22-trial skill task, while controlling the success rate such that subjects received either a high rate of success followed by a low rate of success (high-low), or vice versa (low-high). Analysis of average self-reinforcement revealed a significant mood x publicity x success rate interaction. To investigate this further, Sacco and Hokanson conducted separate mood x publicity analyses for successful and unsuccessful trials. Only the analysis for successful trials yielded a statistically significant result, namely a mood x publicity interaction. Although no group comparisons were statistically significant, depressed subjects self-reinforced numerically more often in private than in public, whereas nondepressed subjects self-reinforced numerically more often in public than in private. Unfortunately, no standard deviations were provided, which render an estimate of effect sizes impossible. However, given the small average group size of 9, and the resulting low statistical power (see footnote 1), this pattern of results arguably supports the Hill et al. depressive self-presentation theory.

Silven and Hokanson (1987) extended the work of Sacco and Hokanson (1978; 1982) by investigating the self-evaluations of depressed and nondepressed subjects in an interpersonal task. They reasoned that the tasks employed in the

work of Sacco and Hokanson (1978; 1982) were innocuous, nonsocial laboratory tasks and that the findings were therefore limited in generalizability. In their study, depressed and nondepressed subjects were asked to speak extemporaneously to a "fellow subject" (confederate) on 12 topics, for 90 seconds per topic. Half of the subjects performed this task in the presence of an experimenter (public setting) and the remaining subjects performed this task with the experimenter absent (private setting). After each speech, subjects rated their own performance. Results indicate a significant mood x publicity interaction such that depressed subjects in the private condition rated their performance significantly more favorably than depressed subjects in the public condition, whereas nondepressed-public subjects did not differ from nondepressed-private subjects. So, with an interpersonal task, Silven and Hokanson replicated the supportive findings of previous public-private experiments. It is interesting to note that the effect sizes (see Footnote 1) of this study were comparable to those of Sacco and Hokanson (1978; 1982), yet this study yielded significant findings and Sacco and Hokanson's did not. The likely reason is that Silven and Hokanson (1987) had more statistical power with a group size of 24 (see Footnote 1).

Finally, Layne, Lefton, Walters, and Merry (1983) employed a different type of public-private manipulation and

found no mood x publicity interaction. These researchers defined "public" as a condition in which subjects were told that an experimenter would meet with them at a later date to discuss their responses to various questionnaires. "Private" was defined as a condition in which subjects were told that their responses to questionnaires would remain confidential. In contrast to the previously mentioned public-private manipulations (Sacco & Hokanson, 1978, 1982; Silven & Hokanson, 1987), the experimenter was always present. Results revealed only main effects, with depressives exhibiting more pathology than nondepressives. On the one hand, this finding seems at odds with Hill et al.'s (1986) depressive self-presentation theory; regardless of publicity level, depressives displayed more pathology than nondepressives, suggesting this display was not for the sake of social goals. On the other hand, if the efficacy of Layne et al.'s public-private manipulation is questioned, and one considers all experimental conditions to be public because the experimenter was always present, this finding is supportive of Hill et al.'s (1986) formulation; that is, depressives reported more pathology than nondepressives in a public setting.

In sum, these public-private experiments may be interpreted as bolstering the position that depressives tend to exhibit different, usually more modest, behaviors and verbalizations in public than in private conditions, which

supports Hill et al.'s (1986) depressive self-presentation formulation. It is important to underscore, however, that the effects of these studies often did not achieve statistical significance (e.g., Sacco & Hokanson, 1978, 1982). This was likely due to low statistical power, but may also have been due to weaknesses inherent in the manipulation of publicity. Indeed, several authors have questioned the strength of this manipulation (e.g., Arkin & Baumgardner, 1986; Tetlock & Manstead, 1985). One concern is that some self-presentations are intended for the self or imagined audiences; thus, the presence or absence of an experimenter may not produce different behaviors (Tetlock & Manstead, 1985). A second related concern is that public behaviors are not orthogonal to private behaviors; that is, behaviors exhibited in public may affect one's private behaviors and vice versa (Tetlock & Manstead, 1985). Finally, a social context or setting may not be directly related to self-presentations (Arkin & Baumgardner, 1986).

#### Self-handicapping

Self-handicapping has been described as a self-presentation strategy whereby a person presents some impediment that could interfere with his or her ability to perform future tasks; in essence, an excuse for poor future performance is provided (cf. Baumgardner, Lake, & Arkin, 1985). Although this strategy may result in acquisition of self-esteem if one is successful in future performances, the main



goal of this strategy is considered protective (see Arkin & Baumgardner, 1986). Thus, finding that depressives self-handicap would be supportive of Hill et al.'s (1986) depressive self-presentation theory insofar as depressives would have employed a protective self-presentation style. Unfortunately, despite the fact that self-handicapping has received much empirical attention (e.g., Baumgardner, Lake, & Arkin, 1985; Berglas & Jones, 1978; Jones & Berglas, 1978; Smith, Snyder, & Handelsman, 1982; Snyder, Smith, Augelli, & Ingram, 1985), assessment of whether depressives employ self-handicapping strategies has largely been ignored. Two exceptions were an experiment conducted by Baumgardner, Lake, and Arkin (1985), which did not incorporate a depression-nondepression subject variable, but which indirectly tested the feasibility of this notion, and a subsequent study conducted by Baumgardner (1991), which did incorporate a mood subject variable, and thus provided a more direct test.

Baumgardner, Lake, and Arkin (1985) investigated whether subjects (no mood subject variable was employed) would implicate depressed mood as a handicap for a future performance. Participants first completed a "social accuracy" test, which was described as a measure of ability to make judgments about other peoples' personalities and motivations. Subjects then received false feedback indicating that they had failed. Half of the subjects were told that the experimenter was aware of their performance ("pub-

lic"), while the remaining subjects were told that the experimenter was not aware of their performance ("private").<sup>2</sup> A second task, ostensibly a separate experiment assessing memory, was then described. Half of the subjects were led to believe that poor mood would inhibit performance on this second task, while the other half received no handicapping information. All subjects then completed a mood questionnaire and were led to believe that the experimenter would be aware of the affective state that it revealed. Results indicated that subjects who believed that the experimenter was unaware of their previous failure, and that negative mood would inhibit performance on the upcoming task, were more likely to report disturbed affect than when they believed that the experimenter had knowledge of their previous failure.

The investigators concluded that subjects with "a spoiled public identity" had no reason to protect their public image from damage and thus did not need to handicap their future performance, while subjects who had privately failed could still protect their untainted public image by employing the handicap of poor mood. Baumgardner et al. (1985) confronted the possible alternative explanation that the negative affect expressed by subjects may have been due to "failure." The researchers claimed that this was doubtful because a public failure seems more likely to produce negative affect than a private failure, and their findings

displayed the opposite pattern.

Although Baumgardner, Lake, and Arkin (1985) did not assess whether depressives would implicate their mood as a handicap, the finding that subjects in general present poor mood as a handicap suggests the likelihood that depressives present their legitimate affective disturbance as a handicap. Empirical support for this inference is provided in a subsequent study by Baumgardner (1991), which incorporated a depression-nondepression subject variable and roughly the same methodology as Baumgardner et al. (1985). Subjects first completed a "social accuracy" test and were led to believe that either the experimenter would be aware of how well they performed ("public") or not aware ("private;" see footnote 2). In contrast to the Baumgardner et al. (1985) study, in which all subjects were given failure feedback, half of the subjects were given success feedback and half were given failure feedback for the initial task. Then, half of the subjects were told that a negative mood would handicap their performance on an upcoming "memory task." Finally, the mood measure was administered and subjects were led to believe that the experimenter would be aware of the affective state that it revealed.

When subjects believed poor mood would handicap their performance, results indicated the following: (a) after publicly succeeding and after publicly failing, depressed subjects reported more negative mood than nondepressed

subjects; (b) after private failure, depressed subjects reported more negative mood than nondepressed subjects; (c) after private success, depressed and nondepressed subjects did not differ in their presentation of mood symptoms.<sup>3</sup> No differences in the presentation of mood were observed when subjects did not receive handicapping information. With only one exception, Baumgardner (1991) considered these results supportive of her protective self-presentation predictions. The exception was that depressed subjects reported more negative mood than nondepressed subjects when they publicly failed. This was interpreted by Baumgardner as opposing a protective self-presentation viewpoint because these depressed-public-failure subjects had already "spoiled" their public self-image and should have had no reason to self-handicap. However, in contrast to this interpretation, one can view this presentation of depressive symptoms after public failure as a "damage control" maneuver. These subjects failed but still had another task to perform. Why not provide a handicap for that task to minimize further damage to their public self-image? It seems that Baumgardner's interpretation is inappropriately assuming that depressed subjects should claim affective disturbance as a handicap in the same manner that all subjects have (as in Baumgardner et al., 1985). What is interpreted by Baumgardner as opposing a protective self-presentation perspective seems rather to indicate

uniqueness in depressive self-presentation; that is, depressed subjects, in contrast to nondepressed subjects, may employ protective self-handicaps, despite a "spoiled public identity," to protect what remains of their public image.

To sum up, these self-handicapping studies supported the idea that depressed subjects are more likely than nondepressed subjects to adopt an available handicap for future performances. Moreover, this handicap may be a presentation of depressive symptomatology. Interestingly, in contrast to nondepressives, depressives were found to persist with such protective self-presentations even when they had what Baumgardner referred to as a "spoiled public identity" (Baumgardner, 1991; Baumgardner et al., 1985). These findings support the Hill et al. (1986) depressive self-presentation formulation.

#### Consequences of Depressive Self-presentation

Hill et al. (1986) claimed that depressives may endure short-term discomfort to achieve their protective self-presentation goals. It is important, therefore, to assess the consequences of depressive self-presentation. Two predictions follow from the depressive self-presentation theory: (1) depressives' pathological or symptomatic self-presentations may result in negative or unpleasant short-term consequences; yet, (2) such self-presentations may ultimately protect them or provide a more comfortable

situation. Once again, data collected for purposes other than specifically testing Hill et al.'s (1986) theory can be considered.

The first prediction, that short-term negative consequences follow depressive presentations, has been addressed by several studies of the interpersonal consequences of the presentation of depressive symptomatology (e.g., Coyne, 1976b; Hammen & Peters, 1978; Howes & Hokanson, 1978). The typical procedure involves the establishment of communication between a nondepressed subject and either a depressed or nondepressed individual. Following this communication, interpersonal reactions are measured. In all but a few studies, results indicate that people who present depressive symptomatology experience social rejection and devaluation (cf. Gurtman, Martin, & Hintzman, 1990). These findings support Hill et al.'s (1986) contention that depressives endure negative consequences after symptomatic presentations; whether consequences are short-term awaits empirical investigation.

The second prediction, that depressive presentations protect depressives or ultimately provide a more comfortable situation, was indirectly tested by Schouten and Handelsman (1987). These researchers investigated whether presented depressive symptoms reduce the amount of personal responsibility people attribute to depressives for their socially undesirable behaviors. Since it is probable that reduction

of responsibility protects depressives or provides a more comfortable situation, this tests the second prediction. Schouten and Handelsman (1987) asked subjects to respond to vignettes that portrayed protagonists in either a domestic violence situation or a poor job performance situation. The protagonists were described as (a) experiencing no symptoms of depression, (b) experiencing symptoms of depression, or (c) experiencing symptoms of depression and having a history of depressive episodes. Findings indicated that, across situations, depressive symptoms significantly reduced subjects' attributions of the protagonist's personal responsibility. Thus, as Hill et al. (1986) suggested, a depressed person may benefit from the presentation of depressive symptomatology, insofar as people decrease their attributions of responsibility for the depressive's actions.

#### The Strategic Failure Paradigm

Strategic failure methodology represents a novel approach to the investigation of self-presentation. The general procedure involves the creation of a situation in which failure is a possible means for a subject to achieve hypothesized self-presentation goals, yet success is attainable by virtually all subjects. With this design, when a subject fails, it is likely that he or she did so intentionally.

Weary and Williams (1990) designed a strategic failure

experiment specifically to test Hill et al.'s (1986) claim that the main goal of depressive self-presentation is the avoidance of future performance demands and potential losses in self-esteem. Depressed and nondepressed subjects performed a simple visual-motor task. Half the depressed and nondepressed subjects were told that if they were successful on the task, they would perform a second similar task, while the remaining subjects were not given this expectation of a conditional future performance. Results indicated that, compared to all other subjects, depressed-future-performance subjects were more likely to fail. In addition, these depressed-future-performance subjects experienced more negative affect as a result of their poor performance. The authors concluded that these results support the Hill et al. (1986) formulation of depressive self-presentation. Depressives seemed to fail intentionally in order to avoid a future performance, and they endured negative affect as a result.

#### Summary and Conclusions

The literature offers a good deal of converging support for Hill et al.'s (1986) formulation of depressive self-presentation. Depressed subjects exhibited more pathological behaviors and verbalizations in public than in private (Sacco & Hokanson, 1978, 1982; Silven & Hokanson, 1987), and they tended to present depressive symptoms most when doing so would serve as a handicap to protect their public self-



image (Baumgardner, 1991). In addition, there was evidence suggesting that presentations of depressive symptoms indeed serve a protective function in society (Schouten and Handelsman, 1987), yet result in negative consequences, particularly social rejection (e.g., Coyne, 1976b; Hammen & Peters, 1978; Howes & Hokanson, 1979; Weary & Williams, 1990). Finally, the proposed depressive self-presentation primary goal of avoiding future performance demands was supported (Weary & Williams, 1990).

Despite substantial indirect evidence, Hill et al.'s (1986) depressive self-presentation theory has received very little attention from researchers. Weary and Williams (1990), with their strategic failure experiment, provided the only direct test of this formulation. It is because of this dearth of direct evidence, and the striking findings of the Weary and Williams (1990) study, that a replication and extension of the strategic failure methodology was employed in the current study.

## CHAPTER II

### EXPERIMENT OVERVIEW AND MAIN HYPOTHESES

The Weary and Williams (1990) study yielded a large effect suggesting that depressives will strategically fail, as a self-presentation strategy, in order to avoid a future performance. For the sake of replicating this meaningful finding, the previously described strategic failure methodology was employed in the current study, but with important modifications. These methodological extensions addressed two weaknesses in the Weary and Williams (1990) study. By way of an elaboration on these weaknesses and the present experiment's methodological means of confronting them, the first section of this chapter provides an overview of the current experiment and the main dependent variable. The remainder of the chapter delineates hypotheses for the main dependent variable, as derived from depressive self-presentation theory (i.e., Hill et al., 1986).

#### Experiment Overview

The first problem with the Weary and Williams (1990) experiment was that the task employed (pushing pins into a corkboard) may have been unimportant to subjects. Depressed subjects might have failed because they were not motivated to perform a second similar task, rather than because of a

desire to avoid a future performance and the potential self-esteem loss associated with such a performance. It is also difficult to imagine a task in the "real world" that would parallel the task employed in the Weary and Williams (1990) study. Even if such trivial tasks exist in the environment, it seems questionable that failure on these tasks would have important consequences. The implications of intentional failure on an important task would certainly be more significant. If depressives also intentionally fail important tasks, it would suggest that they are willing to debase others' current perceptions of them, along important dimensions, merely to avoid the possibility of future negative evaluations. This would be a highly dysfunctional characteristic and seems more likely to result in maintenance and/or exacerbation of depression than intentional failure on trivial tasks. Thus, an investigation of strategic failure using an important task, rather than a trivial task, would contribute significantly to the depression literature.

To overcome this potential motivation or task importance problem, a 5-letter anagram task, described as a measure of intelligence and a predictor of college grades and aptitude test scores, was employed in the current experiment. To insure that all subjects were capable of passing the task--a requirement of the strategic failure methodology--the anagrams were constructed using words that were "judged by subjects as being reasonably familiar and

concrete," and that have single-solution anagrams (Gilhooly & Hay, 1977, p.12). The task was also subjected to pilot testing and the criteria for success were selected such that all pilot subjects passed. It is noteworthy too that no significant difference in performance between depressed and nondepressed subjects was observed on this task during pilot testing.

The second problem with the Weary and Williams (1991) study was that the experiment did not directly assess whether the reason for failure is avoidance of self-esteem loss. Recall that the major goals of depressive self-presentation (Hill et al., 1986) are avoidance of future performance demands and the potential loss of self-esteem associated with such future performance demands. Indeed, Weary and Williams (1990) assessed whether depressed subjects fail in order to avoid a future performance, but they provided no means of determining whether avoidance of potential self-esteem loss is a goal of strategic failure.

To examine the notion that depressives strategically fail in order to avoid self-esteem loss, a three-level variable, which manipulated the expected difficulty of the second task compared to the first, was added to the Weary and Williams (1990) design. The difficulty of the second task was described as "easier," "similar," or "harder" than the first; in addition, the second task was defined in terms of the number of letters per anagram (3, 5, and 13 letters,

respectively). The rationale for the inclusion of this manipulation was that depressed subjects led to expect an easier future task should be less concerned about future loss of self-esteem than depressed subjects who expected a harder future task. If avoidance of self-esteem loss is the goal of intentional failure, then failure should be less likely to occur when the avoidable task is described as easier than the first, and more likely to occur when the avoidable task is described as harder than the first.

In brief, the current experiment was a 2 (mood: depressed, nondepressed) x 2 (future performance: no future performance, future performance) x 3 (difficulty expectancy: easier, similar, harder) between-subjects factorial design.

#### Main Hypotheses

Based on the foregoing reasoning, two sets of hypotheses were derived from the Hill et al. (1986) theory. The first set of hypotheses predicted performance on the anagram task in terms of success and failure. The second set of hypotheses predicted the pattern of performance scores (varying continuously) across conditions that would be supportive of a self-presentation perspective. Hypotheses for the dichotomous (success v. failure) analysis of performance scores are presented in the following subsection, and the final subsection of this chapter delineates hypotheses for the analysis of performance scores coded as a continuous variable.

### Hypotheses for Success/Failure Performance Analysis

Among the no-future-performance conditions, failure was predicted to be no more likely for depressed subjects than for nondepressed subjects, across each of the levels of difficulty expectancy. Moreover, little or no failure was predicted for these groups. On the other hand, among the future-performance conditions, depressed subjects were expected to fail more often in the harder condition than the similar condition, and more often in the similar condition than the easier condition. In contrast, it was hypothesized that nondepressed subjects would not fail in any of the future-performance conditions--that is, regardless of the expected difficulty of the second task. Thus, a 3-way interaction was predicted.

### Hypotheses for Performance Score Analysis

This study employed a more important task than Weary and Williams (1990) to challenge and/or extend the finding of depressive strategic failure. The aim was to better determine the conditions under which a depressed person will or will not intentionally fail. Indeed, little or no failure, particularly in all but the depressed-future-performance-harder condition, was considered a distinct possibility, because of the importance of the first task and the potential loss of self-esteem related to intentional failure on that task. What must not be forgotten, however, is that the critical concern, of both

the Weary and Williams (1990) study and the current study, is testing depressive self-presentation theory. Strategic failure is one of many potential empirical observations sufficient to support depressive self-presentation theory; however, strategic failure is not necessary for the theory to be supported. Thus, if no intentional failure is found in the current study, Hill et al.'s (1986) theory could remain intact. Moreover, performance scores, coded as a continuous variable, may nonetheless be supportive of depressive self-presentation theory. Let us consider how this might be so.

If, as theoretically expected, subjects vary across conditions in terms of their desire to avoid the future task (theoretically due to differential probability of loss to self-esteem across conditions), performance scores should be appropriately affected, insofar as toying (mentally and/or behaviorally) with failure on the first task will likely decrease first task performance. For example, a depressed subject expecting a harder second task will likely entertain the possibility of intentional failure more than a depressed subject expecting a similar task or an easier task. It follows that performance scores should be lower for a depressed subject expecting a harder second task than for a depressed subject expecting an easier second task, regardless of whether any subjects decided to fail the task.

More formally and fully, it was predicted that among

the no-future-performance conditions, no differences in performance will emerge for depressed subjects, nor for nondepressed subjects, across the levels of difficulty expectancy. On the other hand, among the future-performance conditions, depressed subjects were expected to perform more poorly in the harder condition than the similar condition, and more poorly in the similar condition than the easier condition. In contrast, it was hypothesized that no performance differences would emerge for nondepressed subjects, in any of the future-performance conditions--that is, regardless of the expected difficulty of the second task. Thus, a 3-way interaction was predicted.



## CHAPTER III

### ADDITIONAL VARIABLES AND HYPOTHESES

In addition to measurement of task performance, this study, like Weary and Williams (1990), includes measures of other theoretically relevant constructs, namely, affective distress, causal attributions, and self-evaluation. While elaborate descriptions of all measurements employed will follow (see chapter IV), this chapter shall briefly discuss the a priori predictions for affective distress, causal attributions, and self-evaluation.

#### Affective Distress

There were two main reasons for the measurement of affective distress. One reason was to assess changes in distress associated with the future performance and difficulty manipulations. Another reason was to assess the impact of subjects' performance on their affective distress. Each aim shall be dealt with in turn.

First, the impact of the future performance and difficulty expectation manipulations on distress will be investigated to determine whether, as Hill et al. (1986) claimed, depressed subjects experience more distress than non-depressed subjects when confronted with performance demands. Specifically, based on Hill et al., it was expected that

depressed subjects expecting a future performance will be more distressed than all other subjects (depressed and nondepressed). Furthermore, if self-esteem loss is a concern, depressed subjects expecting a harder second task should exhibit more distress than depressed subjects expecting a similar task, and depressed subjects expecting a similar task should exhibit more distress than depressed subjects expecting an easier second task.

Regarding the second aim, affective distress was expected to be greater for depressed subjects who fail than for all other subjects. This prediction was theoretically derived from Hill et al. (1986), but was also based on Weary and Williams's (1990) empirical finding of relatively more negative affect among depressed subjects who failed their initial task, than among other depressed subjects who did not fail, and all nondepressed subjects.

#### Causal Attributions

According to Hill et al.'s (1986) depressive self-presentation theory, depressives report depressogenic attributions for negative events not because they truly possess a "depressogenic attributional style," as cognitive theorists claim (e.g., Abramson, Seligman, & Teasdale, 1978), but rather as a self-presentation strategy. In this study, as in Weary and Williams (1990), performance attributions were measured after subjects had performed the anagram task; hence, depressed-failure subjects would not need to

present depressogenic attributions for self-presentation purposes because the hypothesized main goal of avoidance would have been achieved through failure. Accordingly, it was predicted that no significant differences in attributions among depressed-failure, depressed-success, and nondepressed subjects would be observed, as was the case in Weary and Williams (1990).

#### Self-evaluation

A measure of self-evaluation was given to subjects prior to any experimental manipulations. Following Weary and Williams (1990), the purpose of the administration was to assess whether the current sample of depressed subjects have "shaky self-confidence and numerous self-doubts" (p. 895) like most depressives. This was important to determine because Hill et al.'s (1986) theory suggests that poor self-evaluation (confidence, etc.) are important antecedents of a protective self-presentation style.

## CHAPTER IV

### METHOD

#### Subjects

Subjects were 309 undergraduates from the introductory psychology subject pool of Loyola University of Chicago. Eighty-seven subjects were male (28.2%), and 222 subjects were female (71.8%). Scores of 10 or greater on the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) placed 112 subjects (26 males; 86 females) in the depressed group ( $\underline{M}$  = 16.41,  $\underline{SD}$  = 5.80), and scores of 9 or lower placed 197 subjects (61 males; 136 females) in the non-depressed group ( $\underline{M}$  = 4.84,  $\underline{SD}$  = 2.61). A block randomization procedure was employed, by four investigators, to place each depressed and nondepressed subject in one of the six experimental conditions. No blocking for gender was employed because no gender differences were expected.

Table 1 displays the mean BDI score, the BDI standard deviation, and the number of subjects, per group. To assess whether there were differences in level of depression associated with the future performance and/or difficulty expectancy conditions, simple effects and interactions of these variables were investigated for the depressed and nondepressed groups. Only for depressed subjects did an

Table 1

BDI Means and Standard Deviations per Group.

	Difficulty Expectancy		
	Easier	Similar	Harder
Depressed			
Future Task	<u>M</u> 17.21 <sup>a</sup>	14.11 <sup>a</sup>	15.06 <sup>a</sup>
Expected	<u>SD</u> 7.25	3.23	4.39
	<u>n</u> 19	18	18
No Future Task	<u>M</u> 17.84 <sup>a</sup>	17.65 <sup>a</sup>	16.33 <sup>a</sup>
Expected	<u>SD</u> 8.04	5.65	4.27
	<u>n</u> 19	20	18
Nondepressed			
Future Task	<u>M</u> 4.84 <sup>b</sup>	4.33 <sup>b</sup>	4.78 <sup>b</sup>
Expected	<u>SD</u> 2.95	2.55	2.80
	<u>n</u> 31	33	32
No Future Task	<u>M</u> 5.24 <sup>b</sup>	4.71 <sup>b</sup>	5.12 <sup>b</sup>
Expected	<u>SD</u> 2.48	2.58	2.42
	<u>n</u> 33	35	33

Note: Different superscripts denote a significant difference, at  $p < .05$ , according to Tukey (HSD) computations.

effect emerge: a simple future-performance main effect ( $F(1,297) = 5.24, p < .05$ ), which indicated that depressed subjects expecting a future performance ( $\underline{M} = 15.49, \underline{SD} = 5.35$ ) were slightly less depressed (effect size of roughly .3; see Cohen, 1988) than depressed-no-future-performance subjects ( $\underline{M} = 17.30, \underline{SD} = 6.12$ ). This finding was considered important to keep in mind for the interpretation of the results; however, Tukey's "honestly significant difference" (HSD) contrasts among BDI means revealed no significant differences ( $ps > .05$ ) across the depressed conditions,

which suggested that the simple effect may have been due to chance alone (see Table 1).

### Materials

(Note: Appendices contain all materials except the BDI and the Rosenberg Inventory, which were omitted due to copyrights.)

### Primary Measures

#### Anagram Task

The anagram task (Appendix A) contained 30 5-letter, single solution anagrams. The words used were selected from the Gilhooly and Hay (1977) list. Words were "not plurals, were not proper names, could be used as nouns, and were judged by subjects as being reasonably familiar and concrete" (Gilhooly & Hay, 1977, p.12). Anagrams were created by randomly scrambling word letters. Based on pilot data, success was defined as 13 or more items correct in 12 minutes or less. All pilot subjects ( $N = 39$ ; 15 depressed and 24 nondepressed, using same BDI criteria as the current study) succeeded based on these criteria. Moreover, no significant performance difference between depressed and nondepressed subjects was observed on this task ( $t(37) = 1.25, p > .05$ ).

#### Beck Depression Inventory (BDI)

The BDI (Beck et al., 1979) is frequently employed in psychological research as a measure of depressive symptomatology. The instrument has demonstrated acceptable inter-

nal consistency (coefficient alpha range of .73 to .92 in non-psychiatric samples; see Beck, Steer, & Garbin, 1988), and adequate evidence of content, construct, and concurrent validity in student samples has been reported (see Beck et al., 1988; Bumberry, Oliver, & McClure, 1978). The discriminant validity of the BDI is still at issue, however (see Beck et al., 1988 vs. Gotlib, 1984). A cut-off score of 10 or greater as indicative of depression is consistent with Kovacs and Beck's (1977) classification of subjects as at least mildly depressed.

#### Multiple Affect Adjective Check List (MAACL)

The MAACL (Zuckerman & Lubin, 1965) is a list of mood-related adjectives. For the "state" version, which was used in the current study, subjects place a check mark next to the adjectives that describe their current mood. Three scores are typically derived: a depression score, a hostility score, and an anxiety score. For the present experiment, the MAACL was randomly divided into two short forms with an equal number of depression, hostility, and anxiety items on each (Appendix B). One form was administered prior to the experimental manipulations (Time 1), and the other was administered after subjects completed the anagram task (Time 2). To control for possible form differences, the order of administration was counterbalanced.

Although the MAACL (complete form) has displayed adequate internal reliability (coefficient alpha range of

.74 to .83; Lubin, Zuckerman, Hanson, Armstrong, Rinck, & Seever, 1986), evidence has suggested that the subscales of the MAACL poorly discriminate among specific affective states (see Clark & Watson, 1991). Based on this evidence, and for the sake of the increased reliability inherent in a longer form, a composite "distress" score was used in analyses.

#### Performance Attributions Questionnaire (PAQ)

After the anagram task and the post-performance manipulation check questionnaire (PPMC; to be described), subjects completed a 2-page performance attributions questionnaire (Appendix C). The first page requested that subjects rate, on 11-point Likert-type scales, the extent to which their success or failure on the experimental task was due to task difficulty, their effort, and their ability. Also, subjects rated the extent to which their performance was under their own control. These four questions were based on the ideas of Heider (1958; see also Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum, 1972), and were similar to those used in Weary and Williams (1990).

The second page of the PAQ requested that subjects rate whether the cause of their success or failure on the experimental task was due to them or something else, will be present in the future when doing similar tasks, and will influence performance on other types of tasks. Also, subjects rated the importance of their success or failure on



the experimental task. These four questions were modeled after the frequently used Attributional Style Questionnaire (ASQ; Peterson, Semmel, von Baeyer, Abramson, Metalsky, Seligman, 1982).

#### Rosenberg Self-esteem Inventory

The Rosenberg Inventory (Rosenberg, 1969) consists of 10 Likert-type, face-valid self-evaluation questions. This measure is frequently employed in psychological research as a measure of self-esteem and it has demonstrated adequate internal consistency (coefficient alpha range of .72 to .87; cf. Wylie, 1974) and test-retest reliability ( $\underline{r} = .85$ ; cf. Wylie, 1974). There is some debate, however, based on factor analytic studies, about whether the questionnaire measures a unidimensional construct (Wylie, 1974). For example, some authors have argued (e.g., Kaplin & Pokorny, 1969) that two dimensions are being measured: self-derogation and defense of self-worth.

#### Control Variables

##### Word fluency

As a measure of the speed and ease with which words are used, the Word Fluency component of the Schaie-Thurstone Adult Mental Abilities Test (Schaie, 1985) was administered prior to any experimental manipulations. The task requires that subjects write as many words as possible that begin with the letter "S" during a five-minute period (see Appendix D for the form used). If subjects differ on this

measure across conditions, it will be entered into statistical computations as a covariate to insure that differences in performance on the anagram task are not due to verbal ability. Although little empirical evidence exists to assess the validity of this task as a measure of verbal ability, adequate test-retest reliability has been demonstrated ( $\underline{r}$  range of .70 to .78; cf. Schaie, 1985).

#### Writing Speed

As a measure of motor speed, subjects were asked to write as many numbers as possible, from 100 backward, during a one-minute period (see Appendix E for the form used). This task was administered at Time 1 and Time 2. If differences on this measure are observed across conditions at Time 1, the Time 1 scores will be entered as a covariate in statistical computations to insure that performance on the anagram task was not influenced by motor speed. This face valid measure has not been empirically validated but has been similarly employed in depression research because psychomotor retardation often accompanies depression (Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revision [DSM-III-R]; American Psychiatric Association, 1987).

#### Pre-Manipulation Questionnaire (Pre-MC)

Immediately before the anagram task, subjects completed the Pre-MC (Appendix F), which consists of two items on 11-point Likert-type scales: (a) "Please rate how important it

is for you to do well on this task," and (b) "Please rate how much experience you have with this type of task." This questionnaire was included for two reasons. One reason was to assess whether subjects considered the task to be important, as this was considered a significant difference between the current task and the task employed in Weary and Williams (1990). The other reason was to control, if differences exist across conditions, for the effects of perceived task importance and prior experience on anagram performance by including the items as covariates in statistical analyses.

### Manipulation Checks

#### Post-performance Manipulation Check Questionnaire (PPMC)

Immediately following the anagram task, subjects completed a questionnaire (Appendix G) that assessed perceptions of performance and the efficacy of the manipulations. Subjects were asked if their performance was a success or failure, and if they expected a second task given success on the first task. Then, subjects were asked to rate, on an 11-point Likert-type scale, how difficult they expected the second task to be compared to the first task.<sup>4</sup> Also on 11-point Likert-type scales, subjects were asked to rate how well they performed and their beliefs regarding how well they performed compared to other participants in the study.

#### Procedure

(Note: see Appendix H for the scripts read by experiment-

ers.)

To increase the atmosphere of evaluation, as in Weary and Williams (1990), subjects were run one at a time. Upon arrival at the laboratory, subjects read and signed a consent form (Appendix I), which indicated that data would remain confidential and that subjects could withdraw at any time without prejudice. Subjects then completed the Word Fluency task, the BDI, the Rosenberg Inventory, the MAACL-Time 1, and the writing speed task.

Next, to increase the perceived importance of the anagram task, subjects were told that they were going to solve some anagrams designed to measure intelligence. Also, performance on the anagram task was described as a good predictor of college grades and aptitude test performance. An example anagram (Appendix A) was presented and the criterion for success was described as 13 or more items correct in 12 minutes or less.

Subjects then completed the Pre-MC questionnaire. At this point, half of the depressed and nondepressed subjects were told that, if and only if they successfully completed the anagram task, they would perform a second anagram task (future-performance condition). The remaining subjects were told that a second anagram task is normally required if the first task is successfully completed, but due to time constraints, no second task performance would be required (no-future-performance condition). In addition, one-third

of the depressed and nondepressed subjects were told that the second anagram task is very difficult compared to the first (harder expectancy condition); another third were told that the second anagram task is similar to the first (similar expectancy condition); the remaining third were told that the second anagram task is very easy compared to the first (easier expectancy condition). A stopwatch was then placed in front of the subjects and they were reminded of the criteria for success.

The anagram task was then administered. The experimenter was present while subjects worked, and to heighten further the atmosphere of evaluation, as in Weary and Williams (1990), the experimenter frequently recorded bogus notes. After the maximum time (12 minutes) had elapsed, subjects completed the PPMC questionnaire. The experimenter then scored the anagram task and told subjects whether their performance was a success or failure. Immediately after hearing this, subjects completed the writing speed task, the MAACL-Time 2, and the PAQ. Finally, subjects were debriefed (Appendix I) and dismissed.

## CHAPTER V

### RESULTS

Because this study was not designed to assess the role of gender in depressive self-presentation, and because the number of males in each cell was very low, all analyses were collapsed across gender. Due to missing responses for some questions/tasks, degrees of freedom varied across analyses.

#### Manipulation Checks

##### Future Performance Manipulation

To assess the efficacy of the future performance manipulation, item 4 from the PPMC was analyzed. The question asked if subjects expected a second task upon successful completion of the first task ("yes" or "no"). An inspection of the frequencies of "yes" and "no" responses per group indicated that all subjects responded in the appropriate manner.

##### Difficulty Expectancy Manipulation

Item 5 from the PPMC, which asked subjects how difficult the second task would be compared to the first, was analyzed to assess the effectiveness of the difficulty expectancy manipulation. Fourteen subjects were omitted from the final sample because they failed to answer this question (see note 4). Table 2 presents the number of

Table 2

Number of Missing Responses to PPMC Item 5, Per Condition.

	Difficulty Expectancy		
	Easier	Similar	Harder
Depressed			
Future Task Expected	0	0	0
No Future Task Expected	1	2	1
Nondepressed			
Future Task Expected	0	0	0
No Future Task Expected	2	4	4

subjects with a missing response, per condition.

As can be seen, all such subjects were in the no-future performance condition.

Concerns over whether inclusion of these subjects would have altered the results of computations were attenuated because there was no strong cause to believe that these subjects experienced the manipulation of difficulty expectancy differently than other subjects since a "mechanical"/non-systematic problem (other than selecting no-future-performance subjects) led to their omitting a response. Indeed, Chi-square goodness of fit tests revealed no evidence of a non-random distribution of the number of subjects missing a response across the difficulty expectancy conditions, in both depressed ( $\chi^2(2) = .50, p > .05$ ) and non-

depressed ( $\chi^2(2) = .80, p > .05$ ) groups.

PPMC, item 5, was a Likert-type question, bounded by 0 ("much easier") and 10 ("much harder"), and was thus analyzed with a 3-way (mood x future performance x difficulty expectancy) analysis of variance (ANOVA). As expected, only a difficulty expectancy main effect was found ( $F(2,283) = 486.21, p < .0001$ ). Follow-up contrasts indicated that the manipulation of difficulty expectancy was effective. Subjects in the harder condition ( $M = 8.54, SD = 1.58$ ) rated the second task as harder than subjects in the similar condition ( $M = 5.46, SD = 1.17; t(194) = 15.56, p < .001$ ), and subjects in the similar condition rated the second task as harder than subjects in the easier condition ( $M = 1.64, SD = 1.69; t(194) = 18.56, p < .001$ ).

### Control Variables

#### Word Fluency

To determine whether groups differed at time 1 in terms of subjects' facility with words, a mood x future performance x difficulty expectancy ANOVA was conducted with word fluency scores as the dependent variable. No effects emerged, although there was a trend for the future performance variable ( $F(1,297) = 3.77, p = .053$ ). Subjects in the future-performance condition tended to perform better ( $M = 47.46, SD = 10.51$ ) than subjects in the no-future-performance condition ( $M = 45.20, SD = 11.89$ ). Given that this difference was small (effect size of roughly .2; see Cohen,



1988), and nonsignificant, no statistical control for this variable was attempted in subsequent analyses. It is noteworthy also that, if subjects in the future-performance condition fail more than subjects in the no-future performance conditions, this would not be attributable to poorer verbal ability, as measured by the word fluency task.

#### Writing Speed

To assess whether groups differed in motor speed at time 1, a 3-way (mood x future performance x difficulty expectancy) ANOVA was conducted with time 1 writing speed as the dependent variable.<sup>5</sup> Only a mood x future performance interaction was uncovered ( $F(1,295) = 6.79, p < .01$ ). As can be seen in Table 3, follow-up Tukey (HSD) contrasts indicated that groups were not significantly different from each other ( $ps > .05$ ), despite the apparent disordinal interaction. Accordingly, no attempt was made, in subsequent analyses, to control for motor speed differences.

#### Pre-MC Questionnaire

##### Importance ratings (item 1)

There were two reasons for obtaining ratings of the importance of the first task. One reason was to assess whether statistical control for differences in importance ratings would be required; another reason was to determine whether subjects considered the experimental task to be important. A 3-way (mood x future performance x difficulty expectancy) ANOVA with item 1 of the Pre-MC as the dependent

Table 3

Writing Speed Means and Standard Deviations Across Mood and Future Performance Variables.

	Future Performance	
	Expected	Not Expected
Depressed		
	<u>M</u> 58.78 <sup>a</sup>	55.37 <sup>a</sup>
	<u>SD</u> 7.95	10.26
	<u>n</u> 55	96
Nondepressed		
	<u>M</u> 55.28 <sup>a</sup>	57.71 <sup>a</sup>
	<u>SD</u> 9.10	10.20
	<u>n</u> 55	101

Note: Different superscripts denote a significant difference, at  $p < .05$ , according to Tukey (HSD) computations.

variable found no effects ( $ps > .05$ ), which indicated that no control for importance ratings would be necessary. The overall mean of 6.23 (SD = 2.43) out of 10 indicated that subjects rated the first task as reasonably important (0 = "not at all important" and 10 = "very important").

Experience with anagram tasks (item 2)

To assess whether differences in anagram experience existed across conditions, item 2 of the Pre-MC was submitted to a 3-way (mood x future performance x difficulty expectancy) ANOVA. Because this analysis did not yield any effects ( $ps > .05$ ), no statistical control for anagram experience was attempted in subsequent analyses. On the 0 ("no experience at all") to 10 ("a lot of experience") scale, subjects' ratings averaged 3.63 (SD = 2.20), suggest-

ing that most subjects had some experience doing anagrams.

### Anagram Performance

#### Success/Failure Analysis

Whether subjects would fail (i.e., answer less than 13 anagrams correctly in the allotted 12 minutes) was predicted to depend on subjects' mood, whether they expected a future task, and whether the future task would be easier, similar, or harder than the first. Specifically, among the no-future-performance conditions, failure was predicted to be no more likely for depressed subjects than for nondepressed subjects, across the levels of difficulty expectancy. Moreover, little or no failure was predicted for these groups. On the other hand, among the future-performance conditions, depressed subjects were expected to fail more often in the harder condition than the control condition, and more often in the control condition than the easier condition. In contrast, it was hypothesized that non-depressed subjects would not fail in any of the future-performance conditions, regardless of the expected difficulty of the second task.

To test these predictions, the mood, future performance, and difficulty expectancy variables were effect coded (see, for example, Cohen & Cohen, 1983, pp. 198-204) and submitted to a logistic regression analysis. Main effects were entered first, followed by 2-way then 3-way interactions. For the omnibus test, a 3-way interaction was

expected. Moreover, following this omnibus test, simple effects analyses and planned comparisons were expected to support the specific hypotheses for this study. Table 4 displays the number of failures observed for each condition; Table 5 shows the results of the omnibus logistic regression analysis.

As can be seen in Table 4, only 9 subjects failed (3% of N); one was depressed. Despite this, the logistic regression analysis (see Table 5) was conducted, and, not surprisingly, no effects ( $p_s > .9$ ) were found. To investigate why some subjects failed the task--given that it was not due to mood, future performance, nor difficulty expectancy--Word Fluency scores were compared between subjects who failed and subjects who passed. This analysis revealed a significant mean difference ( $t(307) = 2.72, p < .01$ ), suggesting that failure in this study was due to poor verbal ability ( $M_{pass} = 46.61, SD = 11.11; M_{fail} = 36.33, SD = 12.86$ ).

#### Performance Score Analysis

As was the case with the success/failure measure, subjects' scores on the anagram task were predicted to depend on subjects' mood, whether they expected a future task, and whether the future task was easier, similar, or harder than the first. It was predicted that among the no-future-performance conditions, no differences in performance would emerge for depressed subjects, nor for

Table 4

Observed Failures Across Mood, Future Performance, and Difficulty Expectancy Conditions.

	Difficulty Expectancy		
	Easier	Similar	Harder
Depressed			
Future Task Expected	0 (19)	0 (18)	0 (18)
No Future Task Expected	0 (19)	1 (20)	0 (18)
Nondepressed			
Future Task Expected	1 (31)	2 (33)	0 (32)
No Future Task Expected	0 (33)	2 (35)	3 (33)

Note: Values in parentheses are cell sizes.

nondepressed subjects, across the levels of difficulty expectancy. However, among the future-performance conditions, depressed subjects were expected to perform more poorly in the harder condition than the similar condition, and more poorly in the similar condition than the easier condition. In contrast, it was hypothesized that no performance differences would emerge for nondepressed subjects in any of the future-performance conditions.

To test these predictions, a 3-way (mood x future performance x difficulty expectancy) ANOVA was conducted with the number of incorrect (blanks were coded as incorrect) anagrams as the dependent variable. Because

Table 5

Logistic Regression of Mood, Future Performance, and Difficulty Expectancy on Success/Failure.

Variable	B	S.E.	Wald	df	Sig
M	-2.3588	21.4878	.0120	1	.9126
FP	-.8579	21.4878	.0016	1	.9682
EXP			.0142	2	.9929
Term 1	-1.7014	32.0127	.0028	1	.9576
Term 2	3.1282	26.3157	.0141	1	.9054
M x FP	-.6852	21.4878	.0010	1	.9746
M x EXP			.0000	2	1.0000
Term 1	.1583	32.0127	.0000	1	.9961
Term 2	-.0420	26.3157	.0000	1	.9987
FP x EXP			.0095	2	.9953
Term 1	3.0583	32.0127	.0091	1	.9239
Term 2	-1.4411	26.3157	.0030	1	.9563
M x FP x EXP			.0100	2	.9950
Term 1	-1.5152	32.0127	.0022	1	.9622
Term 2	-1.6450	26.3157	.0039	1	.9502

Note: M = Mood; FP = Future Performance; EXP = Difficulty Expectancy. "Term" refers to an effect coded interaction variable.

subjects who failed the first task had lower verbal ability than other subjects, and because their performance scores were extreme within their groups, subjects who failed were omitted from all performance score analyses (remaining  $N = 300$ ).<sup>6</sup> Table 6 presents the results of the omnibus ANOVA; Table 7 displays the mean anagram score and standard deviation per condition.

As can be seen in Table 6, although the results revealed no reliable effects ( $ps > .05$ ), there was a trend for the predicted 3-way interaction among the mood, future performance, and difficulty expectancy variables ( $F(2, 288)$

Table 6

Mood, Future Performance, and Difficulty Expectancy ANOVA  
with Number of Incorrect Anagrams as Dependent Variable .

Source	Sum of Squares	df	Mean Square	F	p
M	65.24	1	65.24	2.55	0.111
FP	0.29	1	0.29	0.01	0.916
EXP	88.34	2	44.17	1.73	0.179
M x FP	37.46	1	37.46	1.47	0.227
M x EXP	61.69	2	30.84	1.21	0.301
F x EXP	1.25	2	0.63	0.02	0.975
M x FP x EXP	128.15	2	64.08	2.51	0.083
ERROR	7357.65	288	25.55		

Note: M = Mood; FP = Future Performance; EXP = Difficulty Expectancy.

= 2.51,  $p < .10$ )<sup>7</sup>. Given this, a simple effects ANOVA was conducted to determine if, as predicted, there was a mood x difficulty expectancy interaction for future-performance subjects but not the no-future-performance subjects.

Indeed, while there was no mood x difficulty expectancy interaction for no-future-performance subjects ( $F(2, 288) = .75, p > .05$ ), a trend was observed for the simple interaction among the future-performance subjects ( $F(2, 288) = 2.95, p = .054$ ).

To investigate further the simple mood x difficulty expectancy interaction trend for future-performance subjects, follow-up simple effect ANOVAs were conducted. Results indicated that, in contrast to predictions, there was no effect of difficulty expectancy for depressed-future-performance subjects ( $F(2, 288) = 1.02, p > .05$ ). There

Table 7

Mean Number of Incorrect Anagrams and Standard Deviations Across Mood, Future Performance, and Difficulty Expectancy Conditions.

		Difficulty Expectancy		
		Easier	Similar	Harder
Depressed				
Future Task Expected	<u>M</u>	6.47 <sup>a</sup>	4.50 <sup>a</sup>	6.67 <sup>a</sup>
	<u>SD</u>	5.64	5.24	5.69
	<u>n</u>	19	18	18
No Future Task Expected	<u>M</u>	8.05 <sup>a</sup>	6.42 <sup>a</sup>	5.56 <sup>a</sup>
	<u>SD</u>	6.02	4.79	5.74
	<u>n</u>	19	19	18
Nondepressed				
Future Task Expected	<u>M</u>	6.73 <sup>a1</sup>	6.55 <sup>a</sup>	3.66 <sup>a2</sup>
	<u>SD</u>	4.92	5.38	4.11
	<u>n</u>	30	31	32
No Future Task Expected	<u>M</u>	4.94 <sup>a</sup>	5.06 <sup>a</sup>	4.93 <sup>a</sup>
	<u>SD</u>	4.81	4.58	4.69
	<u>n</u>	33	33	30

Note: Different lettered superscripts indicate a significant ( $p < .05$ ) difference according to exploratory (all cells) Tukey (HSD) contrasts. Different number superscripts indicate a significant difference for a posteriori Tukey (HSD) follow-up contrasts. Higher scores indicate worse performance.

was, however, an unexpected effect of difficulty expectancy for nondepressed-future-performance subjects ( $F(2,288) = 3.67$ ,  $p < .05$ ). According to the follow-up Tukey (HSD) contrasts (see Table 7), this was due to nondepressed-future-performance-harder subjects ( $\underline{M} = 3.66$ ,  $\underline{SD} = 4.11$ ) performing better than nondepressed-future-performance-easier subjects ( $\underline{M} = 6.73$ ,  $\underline{SD} = 4.92$ ;  $p < .05$ ).



Finally, as an exploratory analysis, a comparison of the means across all conditions was conducted. Tukey (HSD) contrasts indicated that no observed group differences could be attributed to more than chance variation ( $\alpha = .05$ ; see Table 7).<sup>8</sup>

#### Affective Distress

One purpose of measuring affective distress was to determine whether depressed subjects who failed experienced subsequent distress, as predicted. Unfortunately, a test of this prediction was not possible, given that only one depressed subject failed. However, a comparison between the Time 2 affective distress of subjects who passed and subjects who failed was conducted to determine whether subjects who failed should be omitted from subsequent distress analyses. The concern was that subjects who failed might be considerably more distressed than the majority of their group (i.e., because of these subjects, group means might be distorted from skewness). To address this concern, a 1-way analysis of covariance (ANCOVA) was conducted for the success and failure groups, with MAACL-T2 as the dependent variable and MAACL-T1 as the covariate. The data were suitable for this analysis insofar as the assumption of parallelism (homogeneity of regression) was supported ( $F(1, 305) = .27, p = .60$ ; see Engelman for a description of the statistical computation, 1990), and a linear relationship was established between the dependent variable (MAACL-T2)

and the covariate (MAACL-T1), for each group ( $F(1, 306) = 248.45, p < .001$ ; see Engelman, 1990). Results indicated no difference in Time-2 affective distress between subjects who passed ( $M = 13.81, SD = 6.97$ ) and subjects who failed ( $M = 15.44, SD = 6.11; F(1, 306) = .07, p = .79$ ). Thus, there was no need to omit subjects who failed from remaining distress analyses.

Another purpose of measuring distress was to assess the impact of the future performance and difficulty expectancy manipulations on depressed and nondepressed subjects. An omnibus 3-way (mood x future performance x difficulty expectancy) interaction was expected to surface because of a simple interaction for depressed but not nondepressed subjects. Specifically, depressed subjects were expected to experience more distress from the future-performance-harder condition than from the future-performance-similar condition, and more distress from the future-performance-similar condition than from the future-performance-harder condition. On the other hand, in the no-future-performance conditions, no effect of difficulty expectancy was predicted for depressed subjects. Finally, nondepressed subjects were not expected to evidence (statistically) an impact of the future performance variable nor the difficulty expectancy variable.

To test these predictions, a 3-way (mood x future performance x difficulty expectancy) ANCOVA was conducted,

with MAACL-T2 as the dependent variable, and with MAACL-T1 and the number of incorrect anagrams (to control for the effects of performance on affective distress) as covariates.<sup>9</sup> The assumption of parallelism (homogeneity of regression) was supported ( $F_{\text{anagrams}}(11, 285) = 1.01, p = .44$ ;  $F_{\text{MAACL-T1}}(11, 285) = .39, p = .96$ ; see Engelman, 1990), and a linear relationship was established between the dependent variable (MAACL-T2) and the covariates for each group ( $F_{\text{anagrams}}(1, 296) = 9.58, p < .003$ ;  $F_{\text{MAACL-T1}}(1, 296) = 222.26, p < .001$ ; see Engelman, 1990). However, the Levene statistic ( $F(11, 297) = 2.05, p = .02$ ) indicated that the homogeneity of variance assumption for the MAACL-T2 scores was not supported. Thus, a square-root transformation (indicated by the slope of a spread-level plot; see Norusis, 1990, pp. 99-101) of the MAACL-T2 scores was performed, successfully (Levene's  $F(11, 297) = 1.85, p = .054$ ), prior to the ANCOVA.

Results revealed a significant main effect of mood ( $F(1, 295) = 5.32, p < .05$ ), which was due to depressed subjects experiencing less distress (adjusted  $M = 3.43$ ) than nondepressed subjects (adjusted  $M = 3.67$ ), and a trend for the future performance x difficulty expectancy interaction ( $F(2, 295) = 2.83, p = .06$ ). To follow-up the interaction trend, simple effects ANCOVAs were conducted. Results indicated no simple effect of difficulty expectancy at the future-performance level, nor at the no-future-performance

level. To investigate, then, why the future performance x difficulty expectancy trend was observed, the adjusted means were inspected. As can be seen in Table 8, the interaction was likely due to lower distress among subjects who were not expecting a harder future task than among subjects who were expecting the harder second task ( $F(1,295) = 7.62, p < .01$ ). No simple future-performance effect was found at the similar-expectancy condition nor the easier-expectancy condition ( $ps > .05$ ).

Finally, an exploratory analysis of all remaining group comparisons was performed. Engelman's (1990) procedure for conducting  $t$ -tests on adjusted means was used to perform all possible  $t$ -tests ( $df = 301$ ). With a Bonferroni-adjustment of the  $p$ -value (.004, representing .05 divided by the 12 new contrasts), results indicated that no group differences could be attributed to more than chance variation ( $ps > .05$ ).

#### Causal Attributions

In brief, the prediction for causal attributions was simple but bold: no differences in attributions among conditions. The most theoretically important null finding was predicted for a comparison between depressed subjects who failed and depressed subjects who did not fail. Of course, this test could not be conducted because only one depressed subject failed. Nonetheless, to investigate whether any unexpected effects transpired, a 3-way (mood x

Table 8

Adjusted Mean Time 2 Distress Across Future Performance and Difficulty Expectancy Conditions.

		Difficulty Expectancy		
		Easier	Similar	Harder
Future Task Expected	AdjM	3.50 <sup>a</sup>	3.58 <sup>a</sup>	3.86 <sup>a1</sup>
	n	50	51	50
No Future Task Expected	AdjM	3.64 <sup>a</sup>	3.45 <sup>a</sup>	3.46 <sup>a2</sup>
	n	52	55	51

Note: Covariates were the number of incorrect anagrams and Time 1 Distress (MAACL-T1). MAACL-T2 scores were transformed (power = .5) prior to their adjustment. Different number superscripts denote a significant difference ( $p < .05$ ); different letter superscripts denote a significant difference ( $p < .05$ ) according to Bonferroni criteria. Higher scores indicate greater distress.

future performance x difficulty expectancy) ANOVA was conducted for each one of the attribution variables (Task difficulty, Effort, Ability, Luck, Control, Internality-Externality, Stability-Instability, Global-Specific, Importance).<sup>10</sup> Because this analysis involved 63 tests (i.e., the probability of a Type I error was very high, predicting 3.15 spurious effects), a Bonferroni adjustment of the critical  $p$ -value for each test was necessary (see Stevens, 1992, pp. 6-9). The Bonferroni critical  $p$ -value was set to .001 (.05 divided by 63 tests).

None of the 3-way ANOVAs yielded an effect that could be associated with more than chance variation ( $ps > .05$ ).

In fact, none of the effects reached the trend level of significance ( $p_s > .10$ ). The strongest effect was found for the Internality-Externality analysis. The mood variable reached an adjusted significance level of .25.<sup>11</sup> Although it was questionable to follow-up an effect with a  $p$ -value of .25, the depressed and nondepressed means were nonetheless compared on the Internality-Externality ratings. Depressed subjects ( $\underline{M} = 2.72$ ,  $\underline{SD} = 1.37$ ,  $\underline{N} = 112$ ) tended to attribute the cause of their performance to external causes more than nondepressed subjects ( $\underline{M} = 2.26$ ,  $\underline{SD} = 1.26$ ,  $\underline{N} = 197$ ).

#### Self-Evaluation

Depressed subjects were expected to have lower self-evaluation scores (i.e., Rosenberg scores) than nondepressed subjects, while no effects were expected for the difficulty expectancy nor the future performance variables, nor their interaction(s) with mood, because these manipulations were implemented after the administration of the Rosenberg questionnaire. To test these predictions, a 3-way ANOVA was conducted with Rosenberg scores as the dependent measure. Results revealed an unexpected significant main effect of future performance ( $\underline{F}(1, 297) = 6.23$ ,  $p < .05$ ), which indicated that future-performance subjects ( $\underline{M} = 32.40$ ,  $\underline{SD} = 4.99$ ,  $\underline{N} = 151$ ) had slightly higher self-evaluations than no-future-performance subjects ( $\underline{M} = 31.52$ ,  $\underline{SD} = 5.52$ ,  $\underline{N} = 158$ ). This effect was qualified, however, by a significant mood by future performance interaction ( $\underline{F}(1, 297) = 6.66$ ,  $p < .05$ ).

To explore the mood x future performance interaction, inspections of the cell means and follow-up Tukey (HSD) contrasts (see Table 9) were executed. Both procedures suggested that the interaction was due to higher self-evaluations for depressed-future-performance subjects than for depressed-no-future-performance subjects (effect size of roughly .6, which is considered to be of medium magnitude; Cohen, 1988). This unexpected finding was deemed important to keep in mind during the discussion of results.<sup>12</sup> The remaining differences across the four conditions were in line with predictions: Both depressed-future-performance subjects and depressed-no-future-performance subjects had lower self-esteem than either of the nondepressed groups (future-performance and no-future-performance;  $p_s < .05$ ).

Table 9

Self-evaluation (Rosenberg Self-esteem) Means and Standard Deviations Across Mood and Future Performance Variables.

	Future Performance	
	Expected	Not Expected
Depressed		
	$\bar{M}$ 29.29 <sup>a</sup>	26.70 <sup>bc</sup>
	$\bar{SD}$ 3.94	5.17
	$n$ 55	57
Nondepressed		
	$\bar{M}$ 34.19 <sup>b</sup>	34.24 <sup>b</sup>
	$\bar{SD}$ 4.66	3.50
	$n$ 96	101

Note: Different superscripts denote a significant difference, at  $p < .05$ , according to Tukey (HSD) computations.

## CHAPTER VI

### DISCUSSION

The purpose of this study was to test Hill et al.'s (1986) theory of depressive self-presentation. The main theses of this perspective are that depressed individuals intentionally employ protective (conservative) social strategies, and that avoidance of performance demands and potential loss to self-esteem are primary goals of these strategies. In addition, Hill et al. claimed that depressives would be willing to endure short-term negative consequences to achieve these goals. This chapter discusses the results of this study in terms of their implications for depressive self-presentation theory. First, a weakness (methodological/statistical) of the current study is presented. Second, the results for the secondary variables (causal attributions, self-evaluations, and affective distress) are discussed. Third, subjects' actual performance (success/failure, incorrect anagrams), the main dependent variable, is discussed. Finally, a summary and conclusions are presented.

#### Methodological/Statistical Considerations

The major weakness of the current experiment was low statistical power. This problem, which runs rampant in many



areas of research (see Cohen, 1988), was unavoidable because of time and resource constraints. The main danger in the current study was that legitimate effects might have failed to reach statistical significance. To help combat this danger, powerful statistical tests were used for the a priori analyses (e.g., simple effects analyses instead of standard group contrasts).

### Discussion of Results

#### Secondary Variables

##### Affective distress

Hill et al. (1986) predicted that a future performance would be particularly disturbing to depressed subjects. Also, based on Hill et al.'s theory, it was expected that, for depressed-future-performance subjects, distress would increase as the expected difficulty of the second task increased. The results were at odds with the predictions. First, depressed subjects were less distressed than non-depressed subjects overall, and second, depressed and nondepressed subjects were affected similarly by the future performance and difficulty expectancy manipulations. The only significant group difference indicated that all subjects (depressed and nondepressed) expecting a harder future task experienced more distress than subjects (depressed and nondepressed) not expecting a harder future task.

Hill et al. (1986) should address these findings if they wish to maintain that depressed subjects experience

more social anxiety than nondepressed subjects when confronted with future performances. In addition, these researchers should answer the following question: Why did depressed subjects in the future-performance-harder condition not evidence more depressive self-presentations (via performance scores) than depressed subjects in the no-future-performance-harder condition? Depressed-future-performance-harder subjects were more distressed than depressed-no-future-performance-harder subjects, yet this distress did not lead, as hypothesized, to an increase in depressive self-presentations.

Surely, more powerful future research is needed to address these issues. It is also possible that social anxiety was not well assessed with the current measure of distress (the MAACL), or that the composite distress score concealed or modified effects. At the least, however, these findings underscore the dangers of imposing mechanistic constraints on an intention-based theoretical formulation. Recall (see Chapter I, pp. 4-5) that Hill et al.'s (1986) theory was considered metatheoretically inconsistent, proposing a mechanistic cause of depressives' intentional presentations. If Hill et al. (1986) used only intentions as explanatory concepts, a subject could behave in accordance with the mechanistic laws relating social anxiety and performance, or not (see Rychlak, 1990). Because Hill et al. proposed that depressives' intentional self-presenta-

tions result from increased social anxiety, they must now explain how subjects managed to "break" the mechanistic laws related to social anxiety in order to succeed.

### Causal attributions

No effects of mood, future performance, nor difficulty expectancy were found for causal attributions. Whether there were truly no effects is plainly an open question because of the low power of the current study. Future research should investigate further, perhaps as the primary purpose of the investigation, whether verbalized (or written) attributions are best understood as self-presentations. In the meantime, it does not seem safe to conclude that these results support Hill et al.'s theory, or not.

### Self-evaluations

As Hill et al. (1986) suggested, depressed subjects maintained lower self-evaluations than nondepressed subjects. What was not assessed with the current design was whether lower self-evaluations increase the likelihood of the adoption of depressive self-presentations. However, such a test would be difficult precisely because of the close relationship between depression and self-esteem. That is, if one were to remove self-esteem variability from depression, or vice versa, a highly contrived, virtually meaningless construct would remain. Or, put another way, there are likely very few high-self-esteem depressed subjects to examine vis-a-vis low-self-esteem depressed sub-

jects. Certainly, this is an issue requiring additional theoretical and empirical work.

### Anagram Performance

#### Strategic failure

Weary and Williams (1990) claimed that, by failing, depressed subjects went "beyond self-handicapping," to a more pathological form of self-presentation (p. 896). Further, these authors suggested that depressed people might regularly behave this way, resulting in the maintenance of their "shaky self-confidence," and in turn their depression (pp. 897-898). These strong conclusions were challenged by the current experimental design. Most relevant to the challenge was the use of an important task, rather than a trivial task (as in Weary and Williams, 1990). The goal was to determine whether depressives strategically fail when it matters most, when failure will have longer-term consequences (i.e., self-esteem loss; or reduction of "self-confidence"). Interestingly, the present results displayed no evidence of strategic failure among subjects, regardless of the expected difficulty of the second task.

Two conclusions are worthy of discussion. One is that Weary and Williams (1990) were victims of an experimental fluke, that their finding was not reliable, and depressives do not strategically fail. This view is not favored, however, precisely because the current study employed a very different task than Weary and Williams (1990). The pre-

ferred conclusion is that there are boundaries to strategic failure. Depressed subjects might fail trivial tasks (Weary and Williams, 1990), yet try to pass/succeed on important tasks (as in the current study). Why would depressed subjects fail a trivial task yet not fail an important task? Perhaps the self-esteem cost (a long-term consequence) of poor current task performance is carefully considered before intentional failure is invoked. This would explain the disparate findings: When the self-esteem cost of failure was high for a current task (the current study), depressed subjects did not strategically fail, but when the self-esteem cost of failure was low (as in Weary and Williams, 1990), failure was chosen as a means of avoidance.

In brief, the suggestion is that depressives are primarily protective of their self-esteem. Avoidance of performance demands is one potential way to protect self-esteem, but it is only used if avoidance itself will not jeopardize self-esteem. This contrasts with Hill et al. (1986) because they did not assign top priority to the goal of self-esteem protection. On the other hand, insofar as depressives might still intentionally fail when short-term consequences result (as in Weary and Williams, 1990), this explanation is in accord with Hill et al.'s (1986) theory. The important point is that the short-term consequences of failure must not endanger self-esteem. Thus, unlike the conclusions of Weary and Williams (1990), depressives are

not hypothesized to maintain their "shaky self-confidence," and in turn their depression, from strategic failures, because this strategy is only used when there is little threat to self-esteem ("self-confidence") from current performances.

Unfortunately, this speculation is based on the validity of comparing Weary and Williams's (1990) findings with those of the current study. Future strategic failure research should experimentally assess whether current task importance (self-esteem cost) is associated with a depressed person's decision about whether to fail.

#### Performance scores

Performance scores indicated no statistical evidence of depressive self-presentation, despite the omnibus 3-way interaction trend, and the significant simple mood x difficulty expectancy interaction for future performance subjects. Regardless of how difficult the second task was described to be, and regardless of whether the second task was expected, there were no reliable differences among depressed groups. Although it is tempting to suggest that Hill et al.'s (1986) theory is now invalidated, to do so would be inappropriate and premature, largely because of the low statistical power of the current study. Certainly, more powerful research should attempt to replicate the current design, or a similar design, before one "accepts" the null hypothesis of no group differences.

## Discussion Summary and Conclusions

The most striking finding was that depressed subjects did not intentionally fail an important task. This was true even when a very difficult future task was contingent upon successful completion of the first task, and when increased distress accompanied the expectation of a very difficult future task. It seems that self-esteem protection is primary. Avoidance of performance demands might be a significant goal of depressive self-presentation; however, when avoidance itself endangers self-esteem, it seems depressed people will put forth effort in order to perform well. So why then do depressed people frequently perform poorly on tasks requiring concentration, memory, and so on (see Gotlib & Hammen, 1992, pp. 113-139)?

Based on the current study, one might expect that, with important tasks, the only role intentional performance plays is in the exacerbation of poor performance--maybe something akin to giving up. Perhaps depressed people assess how well they are doing, accurately determine that they are experiencing difficulty, and then "throw in the towel." If this is the case, failure may indeed assist in the maintenance and exacerbation of depression; however, this would not be intentional failure, per se (i.e., the sort of failure discussed in Weary & Williams, 1990).

Consider also that depressed subjects in the current study were less distressed overall than nondepressed sub-

jects. Who would expect that, under public conditions, depressed subjects would report less distress than non-depressed subjects? What protective goal would be served by reporting less distress? From a self-presentation perspective, this presentation of affect was anything but conservative or protective. So what were depressed subjects doing? Given that this experiment was a rare opportunity for depressed subjects to succeed on an important task (by design), it seems probable that they were capitalizing on an opportunity to gain self-esteem, and that they perhaps enjoyed some comfort as a result. This is absolutely contrary to Hill et al., who made clear their belief in the protective orientation of depressives.

The foregoing analysis underscores the potential complexity of depressive self-presentation. It seems that depressives might intentionally perform poorly on trivial tasks for the sake of avoidance; yet, on important tasks, depressed people might perform poorly because of some type of deficits (e.g., see Gotlib & Hammen, 1992), combined possibly with a variant of giving up (intentional component). However, depressed individuals seem to notice when they are capable of performing well on an important task, and at these times, they might shift to an acquisitive self-presentation style, whereby, like nondepressed individuals, they are interested in gaining self-esteem. Future research should substantiate these interesting speculations.



APPENDIX A  
ANAGRAM TASK

TLNPA \_\_\_\_\_  
OLBKC \_\_\_\_\_  
TYHUO \_\_\_\_\_  
LCWON \_\_\_\_\_  
MWNOA \_\_\_\_\_  
MUCBR \_\_\_\_\_  
LVOGE \_\_\_\_\_  
THGIF \_\_\_\_\_  
ETRDN \_\_\_\_\_  
YORLG \_\_\_\_\_  
NDRIK \_\_\_\_\_  
ULTQI \_\_\_\_\_  
OUPRG \_\_\_\_\_  
HTMOU \_\_\_\_\_  
CEUJI \_\_\_\_\_  
ITGLH \_\_\_\_\_  
AHTMC \_\_\_\_\_  
ESHUO \_\_\_\_\_  
NPLAK \_\_\_\_\_  
BHNCE \_\_\_\_\_  
HOPRC \_\_\_\_\_  
PKANR \_\_\_\_\_  
TNRGA \_\_\_\_\_  
NHACR \_\_\_\_\_  
WROFN \_\_\_\_\_  
CUTKR \_\_\_\_\_  
WAEHT \_\_\_\_\_  
UHOCG \_\_\_\_\_  
ODWRL \_\_\_\_\_  
CPHIM \_\_\_\_\_

## EXAMPLE ANAGRAM

LAMBU

Answer = ALBUM

APPENDIX B  
MULTIPLE AFFECT ADJECTIVE CHECKLISTS

I.D.# \_\_\_\_\_

MAACL-A

On this sheet you will find words which describe different kinds of moods and feelings. Place a check in the space beside the words which describe the way you are feeling right now, not the way you felt five minutes ago or when you got up, but right now. Some of the words may be alike, but check all of the words that describe your feelings right now.

- |                      |                       |
|----------------------|-----------------------|
| 1. ___ active        | 24. ___ irritated     |
| 2. ___ afraid        | 25. ___ joyful        |
| 3. ___ agreeable     | 26. ___ lonely        |
| 4. ___ alone         | 27. ___ low           |
| 5. ___ angry         | 28. ___ mean          |
| 6. ___ blue          | 29. ___ merry         |
| 7. ___ calm          | 30. ___ nervous       |
| 8. ___ clean         | 31. ___ outraged      |
| 9. ___ contented     | 32. ___ pleasant      |
| 10. ___ cooperative  | 33. ___ polite        |
| 11. ___ cruel        | 34. ___ rejected      |
| 12. ___ devoted      | 35. ___ safe          |
| 13. ___ discontented | 36. ___ shaky         |
| 14. ___ discouraged  | 37. ___ steady        |
| 15. ___ enraged      | 38. ___ suffering     |
| 16. ___ fearful      | 39. ___ tame          |
| 17. ___ fine         | 40. ___ terrible      |
| 18. ___ free         | 41. ___ understanding |
| 19. ___ glad         | 42. ___ unhappy       |
| 20. ___ gloomy       | 43. ___ unsociable    |
| 21. ___ good-natured | 44. ___ upset         |
| 22. ___ healthy      | 45. ___ whole         |
| 23. ___ interested   |                       |

I.D.# \_\_\_\_\_

## MAACL-B

On this sheet you will find words which describe different kinds of moods and feelings. Place a check in the space beside the words which describe the way you are feeling right now, not the way you felt five minutes ago or when you got up, but right now. Some of the words may be alike, but check all of the words that describe your feelings right now.

- |                              |              |                              |             |
|------------------------------|--------------|------------------------------|-------------|
| 1. <input type="checkbox"/>  | alive        | 24. <input type="checkbox"/> | lucky       |
| 2. <input type="checkbox"/>  | amiable      | 25. <input type="checkbox"/> | mad         |
| 3. <input type="checkbox"/>  | awful        | 26. <input type="checkbox"/> | miserable   |
| 4. <input type="checkbox"/>  | bitter       | 27. <input type="checkbox"/> | offended    |
| 5. <input type="checkbox"/>  | cheerful     | 28. <input type="checkbox"/> | panicky     |
| 6. <input type="checkbox"/>  | desperate    | 29. <input type="checkbox"/> | peaceful    |
| 7. <input type="checkbox"/>  | destroyed    | 30. <input type="checkbox"/> | sad         |
| 8. <input type="checkbox"/>  | disagreeable | 31. <input type="checkbox"/> | secure      |
| 9. <input type="checkbox"/>  | disgusted    | 32. <input type="checkbox"/> | stormy      |
| 10. <input type="checkbox"/> | enthusiastic | 33. <input type="checkbox"/> | strong      |
| 11. <input type="checkbox"/> | fit          | 34. <input type="checkbox"/> | sunk        |
| 12. <input type="checkbox"/> | forlorn      | 35. <input type="checkbox"/> | sympathetic |
| 13. <input type="checkbox"/> | friendly     | 36. <input type="checkbox"/> | tender      |
| 14. <input type="checkbox"/> | frightened   | 37. <input type="checkbox"/> | tense       |
| 15. <input type="checkbox"/> | furious      | 38. <input type="checkbox"/> | thoughtful  |
| 16. <input type="checkbox"/> | gay          | 39. <input type="checkbox"/> | tormented   |
| 17. <input type="checkbox"/> | good         | 40. <input type="checkbox"/> | vexed       |
| 18. <input type="checkbox"/> | happy        | 41. <input type="checkbox"/> | warm        |
| 19. <input type="checkbox"/> | hopeless     | 42. <input type="checkbox"/> | willful     |
| 20. <input type="checkbox"/> | inspired     | 43. <input type="checkbox"/> | wilted      |
| 21. <input type="checkbox"/> | kindly       | 44. <input type="checkbox"/> | worrying    |
| 22. <input type="checkbox"/> | lost         | 45. <input type="checkbox"/> | young       |
| 23. <input type="checkbox"/> | loving       |                              |             |

APPENDIX C  
PERFORMANCE ATTRIBUTIONS QUESTIONNAIRE

I.D.# \_\_\_\_\_

Performance Attributions

1. To what extent was your success or failure on the task due to how easy or difficult the task was:

0----1----2----3----4----5----6----7----8----9----10  
not very  
at all much

2. To what extent was your success or failure due to how much effort you put into doing the task:

0----1----2----3----4----5----6----7----8----9----10  
not very  
at all much

3. To what extent was your success or failure due to your ability?

0----1----2----3----4----5----6----7----8----9----10  
not very  
at all much

4. To what extent was your success or failure due to luck?

0----1----2----3----4----5----6----7----8----9----10  
not very  
at all much

5. To what extent was your success or failure under your control?

0----1----2----3----4----5----6----7----8----9----10  
not very  
at all much

(over)

Write in the space provided one major cause for your success or failure on the task:

6. Was the cause of your success or failure due to something about you (internal) or something about other people or circumstances (external)?

internal 1----2----3----4----5----6 external

7. In the future when doing a task like this, to what extent will this cause be present?

never 1----2----3----4----5----6 always

8. Is this cause something that just affects doing this kind of task, or does it also influence other areas of your life?

this type 1----2----3----4----5----6 other areas

9. How important to you is success or failure on this task?

not at all 1----2----3----4----5----6 extremely

APPENDIX D  
WORD FLUENCY TASK

APPENDIX E  
WRITING SPEED TASK





APPENDIX G  
POST-PERFORMANCE MANIPULATION CHECK QUESTIONNAIRE

I.D.# \_\_\_\_\_

PPMC

1. Please rate how you think you did on the anagram task:

0----1----2----3----4----5----6----7----8----9----10  
 very very  
 poorly well

2. Please rate how you think you did on the anagram task compared to other people in the study:

0----1----2----3----4----5----6----7----8----9----10  
 much same much  
 worse better

3. Was your performance on the anagram task a success or failure, according to the '13 or more correct' rule? (please circle your choice)

success                      failure

4. Did the experimenter tell you to expect a second anagram task if you succeed on the first anagram task? (please circle yes or no)

yes                      no

Please rate how easy or difficult you were told the second anagram task will be compared to the first task.

0----1----2----3----4----5----6----7----8----9----10  
 much much  
 easier harder

APPENDIX H  
EXPERIMENTER SCRIPTS

BEGINNING SCRIPT

Hello. My name is \_\_\_\_\_. I'm the experimenter for this study. First of all, thank you for participating. This will take roughly 40 minutes and, as you probably know, you will receive extra credit for your psychology class.

In this experiment, we are interested in gathering normative data on various questionnaires and tasks. Before we begin, let me assure you that all data collected will remain completely confidential and will be used only for the purposes of this research. All data will be coded, so your name won't be associated with it.

Here is a consent form. Please read it carefully. If you consent to participate, sign it and give it back to me.

(TAKE CONSENT FORM)

Next, on this paper, I'd like you to write as many words as possible that begin with the letter 'S'. You will have 5 minutes. Ready..... Go.

Now I'd like you to fill out these questionnaires. Some have instructions at the top of the page. Please be sure you read them carefully. After you're finished, put the packet of questionnaires in this envelope and give it back to me. I'll be \_\_\_\_\_  
(LOCATION).

(TAKE ENVELOPE AND RETURN TO EXPERIMENT LOCATION)

Next, on this paper, write as many numbers as you can, from 100 backwards. You will have 60 seconds. Ready..... Go.

(SCORE THE BDI AND SELECT CONDITION FROM THE 'DEP' OR 'NDEP' LIST.)

Condition 1--Future Performance/Harder Expectancy

Next I'd like you to solve some anagrams. As you probably know, anagrams are words with the letters scrambled. The problem for you is to unscramble the letters so they form a word. Here's an example... (DO SAMPLE PROBLEM) .... The anagrams you will do are part of an intelligence test that we're developing. Your score on this test will be a good predictor of college grades and aptitude test performance--like the GRE. So far, college students have successfully completed this task in 12 minutes. Success is 13 or more correct. While your working, I'll be present to time and observe you.

Now that you understand the task, please fill out this questionnaire; place it in this envelope when your done.  
(TAKE ENVELOPE)

O.K. If, and only if, you successfully complete this task, you will perform a second anagram task. The second task is harder than the first. The words are 14 letters long, as compared to the first task, which has 5-letter anagrams; the second task contains words we plan to incorporate into an intelligence test for graduate students.

Do you have any questions? (BRIEFLY ANSWER QUESTIONS THAT ARE RELEVANT TO INFORMATION PREVIOUSLY CONVEYED)

O.K. Let me just reiterate that if you get 13 or more correct in 12 minutes or less, you will perform the second task as well. Here's the first task. Work in any order, and you may write in the margins of the page. I'll put this stopwatch in front of you so you can keep track of the time that has elapsed.

Ready.....go.

(SIT OPPOSITE S, TIME & MONITOR A STOPWATCH, RECORD BOGUS NOTES)  
(STOP SUBJECT AFTER 12 MINUTES)

O.K. Now fill out this questionnaire (GIVE PPMC). Thank you. Now, I will score your test. (SCORE TEST AND GIVE FEEDBACK--'you passed' OR 'you did not pass'.) So now you (will/will not) be taking the second task.

Before you (leave/do the second task), I would like you to fill out some additional questionnaires and also--we'll do this first--on this paper, write as many numbers as you can, from 100 backwards. You will have 60 seconds.

Ready..... Go.

O.K. Now I'd like you to fill out these questionnaires. Again, when you're finished place them in this envelope and give it back to me. I'll  
be \_\_\_\_\_ (LOCATION).

(TAKE ENVELOPE, TELL SUBJECT THAT THERE IS NO SECOND TASK--IT WAS AN EXPERIMENTAL MANIPULATION. GIVE A DEBRIEFING SHEET, GO OVER IT BRIEFLY, AND THANK SUBJECT)

Condition 2--Future Performance/Similar Expectancy

Next I'd like you to solve some anagrams. As you probably know, anagrams are words with the letters scrambled. The problem for you is to unscramble the letters so they form a word. Here's an example... (DO SAMPLE PROBLEM) .... The anagrams you will do are part of an intelligence test that we're developing. Your score on this test will be a good predictor of college grades and aptitude test performance--like the GRE. So far, college students have successfully completed this task in 12 minutes. Success is 13 or more correct. While your working, I'll be present to time and observe you.

Now that you understand the task, please fill out this questionnaire; place it in this envelope when your done.

(TAKE ENVELOPE)

O.K. If, and only if, you successfully complete this task, you will perform a second task. The second task is similar to the first.

Do you have any questions? (BRIEFLY ANSWER QUESTIONS THAT ARE RELEVANT TO INFORMATION PREVIOUSLY CONVEYED)

O.K. Let me just reiterate that if you get 13 or more correct in 12 minutes or less, you will perform a second task as well. Here's the first task. Work in any order, and you may write in the margins of the page. I'll put this stopwatch in front of you so you can keep track of the time that has elapsed.

Ready.....go.

(SIT OPPOSITE S, TIME & MONITOR A STOPWATCH, RECORD BOGUS NOTES)

(STOP SUBJECT AFTER 12 MINUTES)

O.K. Now fill out this questionnaire (GIVE PPMC).

Thank you. Now, I will score your test. (SCORE TEST AND GIVE FEEDBACK--'you passed' OR 'you did not pass'.) So now you (will/will not) be taking the second task.

Before you (leave/do the second task), I would like you to fill out some questionnaires and also--we'll do this first--on this paper, write as many numbers as you can, from 100 backwards. You will have 60 seconds. Ready..... Go.

O.K. Now I'd like you to fill out these questionnaires. Again, when you're finished place them in this envelope and give it back to me. I'll

be \_\_\_\_\_ (LOCATION).

(TAKE ENVELOPE, TELL SUBJECT THAT THERE IS NO SECOND  
TASK--IT WAS AN EXPERIMENTAL MANIPULATION. GIVE A  
DEBRIEFING SHEET, GO OVER IT BRIEFLY, AND THANK SUBJECT)

Condition 3--Future Performance/Easier Expectancy

Next I'd like you to solve some anagrams. As you probably know, anagrams are words with the letters scrambled. The problem for you is to unscramble the letters so they form a word. Here's an example... (DO SAMPLE PROBLEM) .... The anagrams you will do are part of an intelligence test that we're developing. Your score on this test will be a good predictor of college grades and aptitude test performance--like the GRE. So far, college students have successfully completed this task in 12 minutes. Success is 13 or more correct. While your working, I'll be present to time and observe you.

Now that you understand the task, please fill out this questionnaire; place it in this envelope when your done.  
(TAKE ENVELOPE)

O.K. If, and only if, you successfully complete this task, you will perform a second anagram task. The second task is much easier than the first. The words are 3 letters long, as compared to the first task, which has 5-letter anagrams; the second task contains words we plan to incorporate into an intelligence test for junior high school students.

Do you have any questions? (BRIEFLY ANSWER QUESTIONS THAT ARE RELEVANT TO INFORMATION PREVIOUSLY CONVEYED)

O.K. Let me just reiterate that if you get 13 or more correct in 12 minutes or less, you will perform the second task as well. Here's the first task. Work in any order, and you may write in the margins of the page. I'll put this stopwatch in front of you so you can keep track of the time that has elapsed.

Ready.....go.

(SIT OPPOSITE S, TIME & MONITOR A STOPWATCH, RECORD BOGUS NOTES)  
(STOP SUBJECT AFTER 12 MINUTES)

O.K. Now fill out this questionnaire (GIVE PPMC).

Thank you. Now, I will score your test. (SCORE TEST AND GIVE FEEDBACK--'you passed' OR 'you did not pass'.) So now you (will/will not) be taking the second task.

Before you (leave/do the second task), I would like you to fill out some questionnaires and also--we'll do this first--on this paper, write as many numbers as you can, from 100 backwards. You will have 60 seconds. Ready..... Go.



O.K. Now I'd like you to fill out these questionnaires. Again, when you're finished place them in this envelope and give it back to me. I'll  
be \_\_\_\_\_ (LOCATION).

(TAKE ENVELOPE, TELL SUBJECT THAT THERE IS NO SECOND  
TASK--IT WAS AN EXPERIMENTAL MANIPULATION. GIVE A  
DEBRIEFING SHEET, GO OVER IT BRIEFLY, AND THANK SUBJECT)

Condition 4--No Future Performance/Harder Expectancy

Next I'd like you to solve some anagrams. As you probably know, anagrams are words with the letters scrambled. The problem for you is to unscramble the letters so they form a word. Here's an example... (DO SAMPLE PROBLEM) .... The anagrams you will do are part of an intelligence test that we're developing. Your score on this test will be a good predictor of college grades and aptitude test performance--like the GRE. So far, college students have successfully completed this task in 12 minutes. Success is 13 or more correct. While your working, I'll be present to time and observe you.

Now that you understand the task, please fill out this questionnaire; place it in this envelope when your done.

(TAKE ENVELOPE)

O.K. Normally, if a subject successfully completes this task, he or she would perform a second anagram task. The second task is harder than the first. The words are 13 letters long, as compared to the first task, which has 5-letter anagrams. However, you won't be performing the second task because I don't have enough time to administer it. You will still get full credit though.

Do you have any questions? (BRIEFLY ANSWER QUESTIONS THAT ARE RELEVANT TO INFORMATION PREVIOUSLY CONVEYED)

O.K. Here's the task. Work in any order, and you may write in the margins of the page. I'll put this stopwatch in front of you so you can keep track of the time that has elapsed.

Ready.....go.

(SIT OPPOSITE S, TIME & MONITOR A STOPWATCH, RECORD BOGUS NOTES)

(STOP SUBJECT AFTER 12 MINUTES)

O.K. Now fill out this questionnaire (GIVE PPMC).

Thank you. Now, I will score your test. (SCORE TEST AND GIVE FEEDBACK--'you passed' OR 'you did not pass'.) Again, you will not take a second anagram task.

But before you leave, I would like you to fill out some questionnaires and also--we'll do this first--on this paper, write as many numbers as you can, from 100 backwards. You will have 60 seconds. Ready..... Go.

Now I'd like you to fill out these questionnaires. Again, when you're finished place them in this envelope and give it back to me. I'll  
be \_\_\_\_\_ (LOCATION).

(TAKE ENVELOPE, GIVE A DEBRIEFING SHEET, GO OVER IT BRIEFLY, AND THANK SUBJECT)

Condition 5--No Future Performance/Similar Expectancy

Next I'd like you to solve some anagrams. As you probably know, anagrams are words with the letters scrambled. The problem for you is to unscramble the letters so they form a word. Here's an example... (DO SAMPLE PROBLEM) .... The anagrams you will do are part of an intelligence test that we're developing. Your score on this test will be a good predictor of college grades and aptitude test performance--like the GRE. So far, college students have successfully completed this task in 12 minutes. Success is 13 or more correct. While your working, I'll be present to time and observe you.

Now that you understand the task, please fill out this questionnaire; place it in this envelope when your done.  
(TAKE ENVELOPE)

O.K. Normally, if a subject successfully completes this task, he or she would perform a second anagram task. The second task is similar to the first. However, you won't be performing the second task because I don't have enough time to administer it. You will still get full credit though.

Do you have any questions? (BRIEFLY ANSWER QUESTIONS THAT ARE RELEVANT TO INFORMATION PREVIOUSLY CONVEYED)

O.K. Here's the task. Work in any order, and you may write in the margins of the page. I'll put this stopwatch in front of you so you can keep track of the time that has elapsed.

Ready.....go.

(SIT OPPOSITE S, TIME & MONITOR A STOPWATCH, RECORD BOGUS NOTES)

(STOP SUBJECT AFTER 12 MINUTES)

O.K. Now fill out this questionnaire (GIVE PPMC).

Thank you. Now, I will score your test. (SCORE TEST AND GIVE FEEDBACK--'you passed' OR 'you did not pass'.) Again, you will not take a second anagram task.

But before you leave, I would like you to fill out some questionnaires and also--we'll do this first--on this paper, write as many numbers as you can, from 100 backwards. You will have 60 seconds. Ready..... Go.

Now I'd like you to fill out these questionnaires. Again, when you're finished place them in this envelope and give it back to me. I'll

be \_\_\_\_\_ (LOCATION).

(TAKE ENVELOPE, GIVE A DEBRIEFING SHEET, GO OVER IT BRIEFLY,  
AND THANK SUBJECT)

Condition 6--No Future Performance/Easier Expectancy

Next I'd like you to solve some anagrams. As you probably know, anagrams are words with the letters scrambled. The problem for you is to unscramble the letters so they form a word. Here's an example... (DO SAMPLE PROBLEM) .... The anagrams you will do are part of an intelligence test that we're developing. Your score on this test will be a good predictor of college grades and aptitude test performance--like the GRE. So far, college students have successfully completed this task in 12 minutes. Success is 13 or more correct. While your working, I'll be present to time and observe you.

Now that you understand the task, please fill out this questionnaire; place it in this envelope when your done.  
(TAKE ENVELOPE)

O.K. Normally, if a subject successfully completes this task, he or she would perform a second anagram task. The second task is much easier than the first. The words are 3 letters long, as compared to the first task, which has 5-letter anagrams. However, you won't be performing the second task because I don't have enough time to administer it. You will still get full credit though.

Do you have any questions? (BRIEFLY ANSWER QUESTIONS THAT ARE RELEVANT TO INFORMATION PREVIOUSLY CONVEYED)

O.K. Here's the task. Work in any order, and you may write in the margins of the page. I'll put this stopwatch in front of you so you can keep track of the time that has elapsed.

Ready.....go.

(SIT OPPOSITE S, TIME & MONITOR A STOPWATCH, RECORD BOGUS NOTES)  
(STOP SUBJECT AFTER 12 MINUTES)

O.K. Now fill out this questionnaire (GIVE PPMC).

Thank you. Now, I will score your test. (SCORE TEST AND GIVE FEEDBACK--'you passed' OR 'you did not pass'.) Again, you will not take a second anagram task.

But before you leave, I would like you to fill out some questionnaires and also--we'll do this first--on this paper, write as many numbers as you can, from 100 backwards. You will have 60 seconds. Ready..... Go.

Now I'd like you to fill out these questionnaires. Again,

when you're finished place them in this envelope and give it  
back to me. I'll  
be \_\_\_\_\_ (LOCATION).

(TAKE ENVELOPE, GIVE A DEBRIEFING SHEET, GO OVER IT BRIEFLY,  
AND THANK SUBJECT)

APPENDIX I  
CONSENT AND DEBRIEF FORMS

Consent Form

The goals of this study are both scientific and humanitarian. By participating, you will be helping to expand our scientific knowledge about the relationship between mood and task performance.

In the study, you will be asked to complete several questionnaires and to do different tasks that will be described to you. The study will take about forty minutes, and for your participation you will receive credit for your introductory psychology class.

All of the feelings, thoughts, and information that you provide will remain strictly confidential and will be published only in the form of statistical summaries. No individual will be identified. In fact, you will simply have a subject number. At the end of the study, you will be told the purpose and hypotheses of the study in detail. Any questions you may have about the procedures will be answered. If at any time during the course of the study you feel you cannot complete it, you may withdraw without penalty.

This study is being conducted under the auspices of Dr. Jeanne Albright of the Psychology Department of Loyola University. Please feel free to ask any questions. If you would like additional information about the study, you may also contact the investigator at the location below. Thank you for your participation in this study.

I have read the above and understand it.

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Signature

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Date

Evan Finer  
Damen Hall--Room 1028  
Department of Psychology  
Loyola University



## Debriefing Form

Thank you for participating in this study. The purpose of this research is to gain information about the relationship between mood and our ability to do simple tasks.

In this study, you completed an anagram task. We are interested in learning whether individuals who are currently experiencing feelings of depression or sadness take longer to complete this task, and/or make more errors on this task. We are also interested in learning whether people will sometimes try to fail this task in order to avoid having to do a future task.

Generally, in psychology, researchers are interested in average responses, so we won't be looking at just your responses. Instead, we combine the responses from everybody in the study, and look at how people responded, on the average. All of your responses are strictly confidential, and you will never be identified as a subject in this study.

To maintain data integrity, we ask that you not disclose--to anybody--anything about this study. Your cooperation in this regard is greatly appreciated.

If you have any questions or comments, or are interested in receiving feedback about your responses, please contact Dr. Jeanne Albright of the Psychology Department, 1046 Damen Hall, 508-2971.

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## FOOTNOTES

<sup>1</sup>Effect size estimates were based on Cohen's (1988) suggestion of dividing the value of the difference between means by any groups standard deviation ("any" because variances are assumed equal; e.g., see p.20). Cohen (1988) was also the reference for estimating statistical power and the magnitude ("large," "medium," or "small") of effect sizes.

<sup>2</sup>This appears to be a manipulation of publicity. However, because the purpose of this study is to investigate self-handicapping, and because the experimenter was always present (i.e., this is not a traditional manipulation of publicity), this study was presented with the self-handicapping literature, rather than the public-private literature.

<sup>3</sup>Baumgardner (1991) did not present her data in a manner that was amenable to deciphering whether the self-handicapping findings of the Baumgardner et al. (1985) study, which did not employ a depressed-nondepressed subject variable, were replicated. Thus, the present paper excludes this discussion.

<sup>4</sup>The PPMC questionnaire, item 5, initially only requested a rating of "how easy or difficult [the subject was] told the second anagram task [would] be compared to the

first task" if they responded "yes" to item 4, which asked whether a subject expected a second task upon successful completion of the first task. After running 14 subjects, the researchers realized that they wanted a rating of the second task difficulty regardless of whether a subject expected the second task. Thus, from that point forward, the PPMC item 5 was filled out by all subjects. This was accomplished by changing the questionnaire. The revised form is in appendix G; as can be seen, item 5 was changed such that it no longer makes responding contingent on subjects' future performance condition.

<sup>5</sup>Two subjects (1 was a nondepressed-future-performance-similar subject; the other was a nondepressed-future-performance-harder subject) were omitted from this analysis because of a mechanical failure: Their experimental packets were missing a sheet of paper for this task.

<sup>6</sup>Recall that the goal of this study was to examine how anagram score differences were related to subjects' social goals (theoretically the avoidance of future performance demands and potential self-esteem loss), not subjects' ability. Thus, subjects with poor verbal ability were not suitable for the analysis.

<sup>7</sup>This 3-way interaction was significant when the subjects who failed were included in the analysis ( $F(2, 297) = 3.78, p = .02$ ).

<sup>8</sup>Note that the mentioned difference between



nondepressed-future-performance-harder subjects and nondepressed-future-performance-easier subjects was based on Tukey (HSD) contrasts among nondepressed-future-performance groups (an alpha adjustment for 3 comparisons), not on Tukey (HSD) contrasts among all groups. The rationale for conducting follow-up tests in this manner was that the former set of contrasts followed from a priori predictions, while the latter set of contrasts was entirely exploratory.

<sup>9</sup>Before conducting the 3-way (mood x future performance x difficulty expectancy) ANCOVA, a 4-way (mood x future performance x difficulty expectancy x MAACL order [AB v. BA]) ANCOVA was conducted to determine whether the order of administration of the MAACL forms (A, B) had an effect on distress change scores. Results revealed no effects ( $p > .05$ ). Note also that the order of administration of the MAACL was counterbalanced.

<sup>10</sup>A Multivariate analysis of variance (MANOVA) was the planned approach to these tests. Unfortunately, the MANOVA could not confidently be conducted because the assumption of homogeneity of the variance-covariance matrices was not supported ( $\text{Box } M = 1029.85, F(495, 44125) = 1.75, p < .001$ ; see Stevens, 1992, pp.265-268).

<sup>11</sup>This alpha represents the product of the non-adjusted  $p$  of .004 and 63 comparisons (see Stevens, 1992, pp. 7-9). All other effects were associated with a probability of a Type I error above .5.

<sup>12</sup>Although an argument could be levelled against not statistically removing the effects of self-evaluation (self-esteem) from analyses, the response was that partialling the effects of self-esteem from depression would remove too much of depression itself because these constructs are strongly related, both theoretically (e.g., DSM-III-R; American Psychiatric Association, 1987), and empirically (e.g., Weary & Williams, 1990; Socco & Hokanson, 1978; the current study found that the BDI and the Rosenberg correlated at  $r = -.65$ ,  $p < .001$ ). Indeed, in retrospect, the self-evaluation difference between depressed-future-performance subjects and depressed-no-future-performance subjects might have been anticipated based on the difference between these groups on the BDI (see Method section, subjects subsection).

## VITA

Evan Finer, son of Roberta Esp of Gurnee, Illinois and Morris Finer of Buffalo Grove, Illinois, was born in Chicago, Illinois on January 19, 1966. He received a Bachelor of Arts degree from Northwestern University in January, 1989, with distinction, Phi Beta Kappa, and honors in psychology. In August, 1991, Mr. Finer entered the Ph.D. program in clinical psychology at Loyola University of Chicago. His accomplishments to date include completing 1,400 hours of clinical (applied) work, completing 90% of the required classes for the Ph.D., presenting his research at several professional conferences, and successfully implementing several computer programs in a variety of settings within psychology. His interests are psychological theory, the philosophical underpinnings of psychological theory, theory-driven empirical research, and computer innovations in psychology. Mr. Finer is currently engaged in depression research, and he continues to write computer programs to assist psychologists with experiments, data management, and data analysis.

THESIS APPROVAL SHEET

The thesis "Future Task Difficulty and Strategic Failure in Depression: A Test of Depressive Self-presentation Theory," submitted by Evan Finer, has been read and approved by the following committee:

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

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of master of arts.

Jeanne S Albright

Director's Signature

10-6-94

Date