The Processing of Experience and the Evaluation of the Self in Depressed and Nondepressed Females.

Patricia Anne bowers Hunter

Louisiana State University and Agricultural & Mechanical College

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THE PROCESSING OF EXPERIENCE AND THE EVALUATION OF THE SELF IN DEPRESSED AND NONDEPRESSED FEMALES

The Louisiana State University and Agricultural and Mechanical Col. Ph.D. 1981

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THE PROCESSING OF EXPERIENCE AND THE EVALUATION
OF THE SELF IN DEPRESSED AND NONDEPRESSED FEMALES

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
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in partial fulfillment of the
requirements for the degree of
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in

The Department of Psychology

by

Patricia Bowers Hunter
B.A., Louisiana State University, 1972
M.A., Louisiana State University, 1978
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ABSTRACT

The hypotheses derived from Beck's theory that depressed individuals "minimize the positive" and "maximize the negative" were investigated using a series of positive and negative imaginary interpersonal situations. Fifty-two depressed and nondepressed college females responded to the imagined situations by rating their self-esteem and mood at three time intervals. Results showed that depressed subjects maintained lower levels of self-esteem and mood across all three measurements yet were less adversely affected with exposure to the negative situations than were nondepressed subjects. Additionally, depressed subjects showed a greater enhancement effect from the positive imagined experience even while maintaining lower levels of self-esteem and mood across all measurements. These unexpected findings are discussed in light of the immediate versus prolonged effects of stress, the needed specificity in the measurement of cognitive reactions, and a limiting effect in the processing of positive experience by depressed subjects. Clinical and research implications are discussed.
CHAPTER ONE

INTRODUCTION AND LITERATURE REVIEW

Introduction

The experience of depressive affect is universal and basic to human functioning. The affects of helplessness and hopelessness arise as a normal psychobiological reaction to a loss or unpleasant, unchangeable reality. Accepting, tolerating, and mastering these affects are viewed as a "developmental necessity" (Zetzel, 1970) and perhaps even the "hallmark of emotional maturity" (Dorpat, 1972).

The importance of this task lies in the adaptive function served by depressive affect. Optimally, sadness, helplessness, hopelessness, and related affects are reality-appropriate and reflect the individual's inability to modify a painful existing reality (Zetzel, 1970). They serve to warn or signal the individual to change or stop activity, including psychic activity, directed toward unobtainable goals or irrevocable losses (Dorpat, 1972). The inhibition of activity toward unobtainable goals also aids the individual in mobilizing responses to available areas of gratification and achievement (Zetzel, 1970).

However, in clinical depression, the inhibitory function of depressive affect is grossly exaggerated. There is a
generalized inhibition and immobilization of psychomotor functions, rather than suspension of only those actions directed toward realistically unobtainable goals. The clinically depressed individual is unable to sustain depressive affect without pathological regression, without ego capitulation and immobilization and without defensive flight from the traumatic situation and the feeling state (Dorpat, 1972). As described by Beck (1974):

The instinct for self-preservation and the natural maternal instincts appear to vanish. Basic biological drives such as hunger and sexual drive are extinguished. Sleep, the easier of all woes, is thwarted. Social instincts such as attraction to other people, love, and affection evaporate. The 'pleasure principle' and the 'reality principle,' the goals of maximizing pleasure and minimizing pain, are turned around. Not only is the capacity for enjoyment stifled, but the victims of this odd malady appear to be driven to behave in ways that enhance their suffering (pp. 3-4).

Thus, rather than serving an adaptive function, the behavior of the clinically depressed individual seems to run counter to the basic human capacity for fulfillment and the natural inclination toward growth.

Akiskal and McKinney (1973) review a wide range of theoretical understandings of this disorder. From the psychoanalytic perspective, depression represents the introJECTION of hostility resulting from the loss of an ambivalently-loved object or a reaction to separation from a significant object of attachment. For the behaviorists,
depression is a set of maladaptive behavioral responses -- elicited by uncontrollable aversive stimuli or by loss of reinforcement -- that are additionally maintained by the reward of the "sick role." Sociologists regard depression as the outcome of a social structure that deprives individuals with certain roles from control over their destiny. From the existentialist perspective, depression supervenes when the individual discovers that his world has lost its meaning and purpose. Recent ego psychological approaches focus on helplessness, lowered self-esteem, and negative cognitive set. The biological psychiatrist conceptualizes depression as the behavioral output of a genetically-vulnerable central nervous system depleted of biogenic amines. Other biological conceptions emphasize cholinergic dominance or reversible deficits in the diencephalic mechanisms of reinforcement.

Whereas these approaches largely focus on etiological considerations, it is also valuable to examine the process characteristics of the disorder. Theory and research considering the manner in which events are experienced by depressed as compared to nondepressed individuals may contribute to an understanding of the maintenance of the disorder as well as imply treatment strategies.

Theory: Aaron Beck and the Processing of Experience

The manner in which depressed individuals process their experience is emphasized in theorizing by Aaron Beck
(1963, 1964, 1972, 1974, 1976). He proposed that a characteristic way of thinking about, perceiving, construing, and interpreting events by depressed individuals insures the maintenance of their symptoms. Beck viewed depression as a downward spiraling cycle of depressive cognitions and affect fueled by processing through dysfunctional cognitive mechanisms.

These dysfunctional cognitive mechanisms include "arbitrary interpretation," in which the individual forms an interpretation of a situation, event, or experience when there is no factual evidence to support the conclusion or when the conclusion is contrary to the evidence. Or an individual may use "selective abstraction," a term referring to the process of focusing on a detail taken out of context, ignoring other more salient features of the situation, and conceptualizing the whole experience on the basis of this element. Beck also observed that depressed individuals tended to "overgeneralize" or draw a general conclusion about their ability, performance, or worth on the basis of a single experience. In addition, the depressed individual tended to "magnify" his problems or tasks or "minimize" his performance, achievement or ability, both errors in evaluation. These processing modes serve to maximize "pain" and minimize "pleasure" and are systematically biased against the self.

According to Beck, depressed individuals process only certain areas of their experience in this manner. He stated
that the particular schemas which are activated during depression are those which relate to a perceived loss or subtraction from one's personal domain. The personal domain includes the individual; significant others; valued objects and attributes; and ideals, principles, and goals held to be important. These subtractions from the personal domain necessarily reflect a threat to self-esteem. As contrasted with the nondepressed individual, the cognitions of the depressed individual associated with these perceived threats are often irrelevant and inappropriate to the reality of the situation and are erroneous and exaggerated ways of viewing oneself and events.

Theory: Self-Esteem and Depression

That depressed individuals process their experience in a manner biased against the self is implied in other theoretical frameworks. Psychoanalytic theorists emphasize the turning of aggressive impulses against the self, but it is generally recognized that this factor is secondary to a breakdown of self-esteem (Wessman & Ricks, 1966). As Fenichel (1945) stated, depression is "a morbid exaggeration of something universally present -- namely, of struggles around the maintenance of self-esteem." Although behaviorally-oriented theorists emphasize a loss of positive reinforcement, the loss of self-esteem is implied. Depressed individuals may engage in less positively-reinforcing activity and may
make fewer self-reinforcing statements -- the consequence of which is to lower self-esteem. Seligman's model (1975) proposes that a sense of helplessness is primary in the etiology and maintenance of depression. Helplessness may be regarded as a component of low self-regard and, in turn, lowered self-esteem may contribute to an individual's sense of helplessness.

Research: Self-Esteem and Depression

Research has supported the loss of self-esteem noted in most accounts of depression. Wessman & Ricks (1966) found that in elation, as contrasted with depression, there was a greater correspondence of self- and ideal self-evaluation. Also, the self-concept was more favorably described in elation that in depression. Subsequent research (e.g. Rosenweig, 1960; Hammern & Krantz, 1976; Flippo, 1972) found that not only was the self-esteem of depressed individuals generally lower than that of nondepressed individuals but also was more adversely affected by failure experience or negative personality-trait feedback. Hokanson and his associates (1980), using a modified Prisoner's Dilemma procedure, found that depressed persons increased communications of self-devaluation and helplessness when they were in either a high- or low-power position.

Research: Depression and the Processing of Experience

Although the above research implied that depressed individuals process their experience in a manner biased
against the self, other research has more directly examined the differential processing of depressed and nondepressed individuals. The research has addressed the observed tendency of depressed individuals to maximize the negative aspects of their experience and minimize the positive. Cognitively-oriented measures such as expectation of success, performance evaluation, performance recall, perception of reinforcement, selective attention, and adherence to certain cognitively-distorted statements were utilized to assess this negative bias.

For example, Hammen & Krantz (1976) compared the responses of depressed and nondepressed women under conditions of positive-, negative-, and no-feedback conditions. They found that the groups did not differ on their initial predictions of task performance. However, following the feedback procedure, the depressed women's expectations about their future performance were more negative than those of nondepressed women and showed more change in the negative direction. However, the nondepressed women typically failed to react differentially as a function of feedback. They also maintained positive evaluations of themselves and expectations about their future performance.

Hammen & Krantz' findings were essentially in agreement with research by Miller & Seligman (1973). Additionally, Loeb et al. (1971) found that depressed patients were more pessimistic in their predictions of success on a task
compared with nondepressed patients. They subsequently rated the quality of their performance as significantly lower than the nondepressed group. Despite these negative expectancies and self-evaluations, they actually performed as well as the nondepressed group.

Several studies compared depressed and nondepressed subjects' perception, recall, or anticipation of performance or reinforcement. These studies have found that relatively depressed, compared with nondepressed, subjects underestimate their number of correct responses (Wener & Rehm, 1975) and recall more punishment trials and less positive-reinforcement trials (Buchwald, 1977; DeMonbreun & Craighead, 1977; Nelson & Craighead, 1977).

Roth (1977) demonstrated that depressed male inpatients, compared with nondepressed inpatients, selectively attended to more failure items on a task when given a choice of viewing both success and failure items. They also monitored more of their behaviors for which they had received negative feedback than those behaviors labeled positive during video-taped replay than did nondepressed subjects.

Stiles (1970) hypothesized that depressed individuals cognitively devalued their past experience when compared with nondepressed individuals. He found that when depressed subjects were asked to estimate their number of mistakes, their success on a task, and their enjoyment of a task, they did not differ from the nondepressed group on the
immediate posttest. However, they significantly devalued their experience on all three measures two weeks later, whereas the nondepressed individuals did not change their evaluation.

In addition, Krantz & Hammenn (1979) reported a consistent relationship between scores on the Beck Depression Inventory and scores on a depressive distortion measure -- a measure designed to assess a tendency to select the most negative, pessimistic, or self-deprecating response options to events depicted in brief stories. This relationship was found across samples of college students, outpatients in therapy for depression, and inpatients.

Rizley (1978) did not find support for the difference between depressed and nondepressed subjects on various measures following a success/failure task. His results did not reflect significant differences on subjective estimates of performance, predictions of future performance, affective reaction to reinforcement, self-attributed ability, self-attributed desire to succeed, and perceived effortfulness of the task. However, this experiment used an impersonal laboratory task, and Rizley questioned its usefulness for providing information about cognitive distortion in interpersonal functioning.

In another experiment, Rizley (1978) found that depressed subjects self-attributed more interpersonal influence and causality for another individual's behavior
change than did nondepressed subjects and that this was true whether the behavior change was positive or negative. This finding is consistent with the hypothesis of maximization of the negative in terms of self-blame for negative experience and is in contrast to the "self-serving bias" of nondepressed subjects. Rizley noted that the "self-serving bias" -- attributing causality to oneself for positive events more than for negative events -- may serve an important adaptive function.

Rizley's finding, however, does not support the hypothesis that depressed individuals minimize the positive. Depressed subjects did not deny their causal responsibility for positive events and, in fact, self-attributed more interpersonal influence and causality for the positive condition than did nondepressed subjects.

Other studies (e.g. Hammen & Krantz, 1976; Hammen, 1975; DeMonbreun, 1976) indicated that depressed individuals do not minimize positive information more than do nondepressed individuals. In fact, one finding emphasized by Loeb et al. (1970) suggested that in some respects depressed individuals actually maximized their positive experience compared with nondepressed individuals. They found that success as compared to failure experience resulted in higher probability of success estimates, higher levels of aspiration and better actual performances for the depressed than for the non-depressed patients.
It is also unclear if depressed subjects maximize the negative and minimize the positive relative to nondepressed subjects when the index is mood rather than cognition. In the depression-induction studies cited, level of depressive affect often was not used as a dependent measure following the induction. The question of whether depressed subjects are more adversely affected at an affective level by these inductions remains unanswered. In one study (DeMonbreun, 1976) which measured change in level of depressive affect following a high rate of punishment condition, both depressed and nondepressed groups were significantly more depressed. In another depression-induction study (Ludwig, 1975) the mood of depressed subjects was significantly affected by the mood manipulations while the mood of elated subjects was not.

The Present Study

The present study continues in the vein of research which examined the influence of certain experiences on the cognitions and mood of depressed compared to nondepressed individuals. It is based on the expectancy that depressed individuals process their experience in a manner which is biased against the self and thus damaging to self-esteem. The effect of this processing mode is thought to magnify the negative, and perhaps minimize the positive, aspects of their experience.
Following Beck, it was expected that events which lie within the "personal domain" would be processed in this manner. In previous studies, these "personal domain events" included success/failure feedback or positive/negative personality trait feedback. A closer and broader approximation of reality was sought by having subjects imagine themselves in various personal and interpersonal situations. Thus, it was expected that "events" such as disapproval from peers, disapproval from authority figures, loneliness, and work dissatisfaction would induce depressive affect in both groups but would be more damaging to the self-esteem of the depressed individuals than to the self-esteem of the nondepressed individuals. The depressed group was expected to process this negatively-toned experience in a manner which was biased against the self and more damaging to self-esteem even though their mood was not expected to be more adversely affected than the mood of the nondepressed group. It was also expected that this adverse effect on self-esteem would covary with the individuals' adherence to certain cognitively-distorted attitudes thought to reflect dysfunctional cognitive mechanisms (Weissman & Beck, 1978).

Similar, though converse, expectations were held with regard to the processing of positively-toned experience by depressed compared to nondepressed individuals. It was expected that "events" such as situations involving approval
from authority figures, pleasurable interpersonal activity, and work satisfaction would induce positive affect in both groups but would be less enhancing to the self-esteem of depressed compared to nondepressed individuals. Again, the negatively-biased processing mode was expected to more adversely affect the self-esteem and not the mood of depressed compared to nondepressed subjects. Evidence of a covariance of cognitive dysfunction and the adverse effect on self-esteem again was sought.

In summary, the present study investigated the differential responses of depressed and nondepressed females to positively- and negatively-toned experience. Several measures of self-esteem and mood state are used to reflect changes in their cognitive and affective state in response to imagined interpersonal situations. Since changes in self-esteem are proposed to operate through processes of cognitive distortion, this variable was used as a covariant.

The following hypotheses were offered:

1. It was predicted that depressed subjects would report lower levels of self-esteem and mood than would nondepressed subjects and that these differences would be maintained across time and exposure to the positive and negative imagined experience.

2. It was also predicted that depressed subjects would lower their self-evaluation to a greater extent than nondepressed subjects after having imagined themselves in
interpersonal situations with negative outcomes.

3. Conversely, it was expected that depressed subjects would increase their level of self-evaluation to a lesser extent than nondepressed subjects when presented with positive imagined experience.

4. Changes in other components of self-esteem were explored, including the discrepancy between the subjects' self-evaluations and goal self-evaluations and the subjects' perceptions of regard by others.

5. Additionally, it was predicted that depressed and nondepressed subjects would not differ significantly in the extent to which they changed their mood level in response to either positive or negative imagined experience.
Subjects

More than 400 female students enrolled in undergraduate psychology courses were given two measures of depression: the Beck Depression Inventory and the D₃₀ Scale. They were informed that a small random sample of subjects would be contacted to participate in an experiment which would "study the responses of college females to imagined situations."

A total of 26 depressed and 26 nondepressed women were selected from this initial sample on the basis of the following criteria:

1. A Beck Depression Inventory (BDI: Beck et al., 1961; see Appendix I) score of 13 or more constituted inclusion in the depressed group and a score of 3 or less constituted inclusion in the nondepressed group. The cutoff scores of 3 and 13 were chosen to obtain a group of nondepressed subjects and a group of subjects reporting clinically-significant symptomatology. A score of 10 or more is considered to reflect mild to moderate depression. The mean BDI score for the nondepressed group on first administration was .88 and on second administration, .77.
The mean BDI score for the depressed group on first administration was 19.2 and on second administration, 19.0.

The BDI is a 21-item self-report measure (range = 0-63) which was constructed to measure level of depression. Beck et al. (1961) reported split-half reliability of .86 (.93 with the Spearman-Brown correction). Validity coefficients of .65 and .64 are reported when scores on the BDI are correlated with clinical judgment of depth of depression. The internal consistency and validity of this widely-used instrument are documented further by Beck & Beamesderfer (1974).

2. A D₃₀ Scale (Dempsey, 1964; see Appendix II) score of 12 or more constituted inclusion in the depressed group and a score of 5 or less constituted inclusion in the nondepressed group. The mean D₃₀ score for the nondepressed group on first administration was 2.7 (T-score<44) and on second administration, 1.7 (T-score<42). The mean D₃₀ score for the depressed group on first administration was 16.2 (T-score>74) and on second administration 16.5 (T-score>74).

The D₃₀ Scale is a 30-item self-report measure of depression derived from the original 60-item depression scale of the Minnesota Multiphasic Personality Inventory. The items selected differentiated between groups of normals and a criterion group of severely depressed patients, and also between the latter and a group of hospital patients not diagnosed as depressed. The D₃₀ is reported (Dempsey, 1964)
to show improved within-group distinctions over the original scale (dimensionality coefficients of .95-.98 obtained in cross-validation) and test-retest reliability of .88-.92.

3. During this screening procedure, subjects also completed the Dysfunctional Attitude Scale (Weissman & Beck, 1978; see Appendix III). Scores on this instrument were not used as a basis for selection but provided a measure of cognitive dysfunction as derived from Beck's theory. The instrument is reported to identify the common assumptions underlying the typical idiosyncratic cognitions in depression. The degree of adherence to certain belief statements contributes to the total score with higher scores representing greater distortion in the individual's way of thinking. Concurrent validation procedures with the Beck Depression Inventory, the Profile of Mood States, and another measure of cognitive distortion resulted in coefficients ranging from .36 to .52. The instrument also differentiated between depressed and nondepressed groups. Test-retest reliability was reported to be .84.

4. Subjects scored in the determined ranges on two administrations of the BDI and the D30, with a one-week testing interval. This criterion was established in order to control for stability of depression (Hammen, 1980). Subjects participated in the experiment on the same day as the second administration of these two instruments provided their scores met this criterion.
The subjects selected for the experiment were not informed that the selection was made on the basis of their mood scores. Ethical guidelines regarding the rights of human subjects were followed. They were informed of their right to withdraw from the study at any time at no disadvantage to them and were insured of the confidentiality of their responses.

Procedure

Participants within each mood group were randomly assigned to one of two treatment conditions. Half of the depressed and half of the nondepressed subjects were assigned to a "positive induction" condition and the remaining subjects were assigned to a "negative induction" condition.

In the positive induction condition, the subjects were asked to imagine themselves in five situations designed to be personally gratifying. They involved approval from peers, approval from authority figures, pleasurable interpersonal activity, and work satisfaction (see Appendix IV, Inductions 1-5A).

The negative induction condition consisted of five situations which could be interpreted by the subjects as being personally stressful in terms of disapproval from peers, disapproval from authority figures, loneliness, and work dissatisfaction (see Appendix IV, Inductions 1-5B).
The inductions were presented to the subjects on audio-tape recordings which were played back by the subjects on cassette recorders in individual experimental rooms. Procedural instructions were included in the recordings.

Subjects were first asked to complete a self-esteem inventory and two measures of current mood state:

Self-esteem measure. A slightly-modified version of the MSGO-I (Miskimins, 1979; see Appendix V) was used to assess self-esteem. In its standard form, the MSGO-I consists of 20 pairs of polar self-descriptions separated by nine points on a scale. The first 15 items are standard items thought to represent important aspects of a person's self-concept. The final spaces, which are not included in the present study, are left blank for the subject to provide polar descriptions of his or her own choice.

The scale is designed to assess several components of self-esteem and discrepancies between these components. These components include the person's evaluation of him/herself, the person's goal evaluation of him/herself, and the person's perception of others' evaluation of him/her. Measures utilized in the present study include: a) a summary measure of self-esteem, b) a measure of the subjects' perceived regard by others, and c) a measure of the discrepancy between self-evaluation and goal self-evaluation.

The author (Miskimins, 1979) reported validation studies in which summary and discrepancy scores were correlated.
with MMPI subscales, with a large number of correlations greater than .415. Several values from the M50-I were also reported to differentiate normals from psychiatric patients and moderate from severe psychopathology. Analyses of internal factor structure are also reported. Test-retest reliability coefficients were reported to range from .24 to .84 for 28 selected variables. Although all correlation coefficients are statistically significant, several must be considered with caution and were not utilized in the present study.

Mood state measures. The Wessman-Ricks Elation-Depression Scale (Wessman & Ricks, 1966; see Appendix VI) was used to assess mood state. As a subscale of the Personal Feeling Scales, the Elation-Depression Scale was designed to be suitable for repeated self-reports over an extended period. In factor analytic work with the entire scale, data collected on the Elation-Depression Scale over a six-week period revealed that this scale loaded heavily (.93 for women) on the factor "general level of happiness." Validation procedures consisted to testing theoretical relationships such as between changes in self-esteem and mood and between changes in frustration and mood.

The scale contains ten descriptive statements ranging from extreme feeling at one end of the continuum, through more neutral feeling, to extreme contrasting feeling at the opposite end. The intervals between statements were
designed to be approximately equal subjectively.

The Depression Adjective Check Lists, Forms A, B, and C (Lubin, 1967; see Appendix VII) were also utilized to provide an additional measure of mood state. Each list consists of 32 adjectives designed to assess self-reported depressive mood. Internal consistency coefficients are reported to range from .79-.90, and split-half reliabilities, .82-.93. Validation studies included correlation with judges' ratings of depression (.71 with total DACL score), analysis of mood change patterns with sensitivity training, correlation with the Beck Depression Inventory (.38-.50) and the Zung Depression Scale (.27-.38).

Following their completion of these instruments, subjects were asked to engage in a brief period of practice in imagination. They visualized the faces of various persons with whom they were familiar and indicated positively or negatively their success in visualizing as instructed. All subjects indicated that they were successful in this visualization practice. Presentation of the interpersonal situations which they were asked to imagine followed (Inductions 1-5A or 1-5B). For 13 of the depressed subjects and 13 of the nondepressed subjects, five positive interpersonal situations were presented, constituting the positive induction condition. For the remaining 13 depressed subjects and 13 nondepressed subjects, five negative
interpersonal situations were presented, constituting the negative induction condition.

After the five situations in both the positive and negative induction conditions, subjects again were administered the measures of self-esteem and mood described above.

To insure that all subjects left in a state of positive affect and relaxation, participants were presented with a "release induction" (see Appendix IV, Induction C) following the above measurements. It involved having the subjects imagine themselves on the beach in the summer. The same release induction was presented to both depressed and nondepressed subjects in both treatment conditions. Following this induction, self esteem and mood state were measured once again.

Subjects were thoroughly debriefed in an open-ended conversation which allowed for a discussion of their reactions to the study and their current feeling state. The purpose and hypotheses of the present study were explained. A few subjects indicated that they had considered seeking counseling and were informed of the services offered by the university student health center.

Statistical Analyses

A 2 X 2 X 3 repeated measures design was used with two levels of depression by two levels of induction by three measurement time periods. Within-induction contrasts
were of particular importance to experimental hypotheses. For each dependent variable, planned contrasts were performed to learn if main effects within each induction condition were obtained. Additionally, interaction effects of interest were nested in the Group by Time effect. Planned contrasts were performed to learn if interaction effects within each induction condition were obtained. The analysis provided independent tests of the Group by Time interaction within each induction condition. Finally, for each dependent variable and within each induction condition, analyses of covariance were performed on pre-/post-induction change scores using the cognitive distortion measure as the covariant. Summary tables for all analyses are given in Appendix VIII.
CHAPTER THREE

RESULTS

Negative Induction Condition

The depressed group in the negative induction condition initially reported and maintained across repeated measurements lower levels of self-esteem and higher levels of depressive affect relative to the nondepressed group. In addition, the depressed group maintained a greater discrepancy between self-evaluation and goal self-evaluation. These results are reflected in significant group effects, and the means and F-values for these variables are presented in Table 1.

The prediction that the self-esteem of depressed subjects would be more adversely affected by the negative inductions was not supported. Examination of the changes in mean values for self-esteem presented in Table 2 shows that nondepressed subjects were more adversely affected. The pattern of this significant Group by Time Period interaction is reflected in Figure 1. At baseline there was a large discrepancy between the high self-esteem of the nondepressed group and the lower self-esteem of the depressed group. The means for both groups decreased to a low level.
<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Depressed</th>
<th>Nondepressed</th>
<th>F-Value (Depression Main Effect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem +</td>
<td>74.1</td>
<td>54.4</td>
<td>19.17 ***</td>
</tr>
<tr>
<td>Self-/Goal Self Discrepancy</td>
<td>46.3</td>
<td>30.0</td>
<td>10.62 ***</td>
</tr>
<tr>
<td>Perceived Regard By Others +</td>
<td>63.9</td>
<td>54.6</td>
<td>3.45</td>
</tr>
<tr>
<td>Depression Adjective Check List ++</td>
<td>13.7</td>
<td>8.1</td>
<td>22.45 ***</td>
</tr>
<tr>
<td>Elation-Depression Scale +++</td>
<td>4.7</td>
<td>6.2</td>
<td>16.84 ***</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p < .001

+ higher score indicates lower esteem
++ higher score indicates higher level of depressive affect
+++ higher score indicates lower level of depressive affect
TABLE 2
MEAN VALUES FOR DEPRESSED AND NONDEPRESSED GROUPS AT THE THREE MEASUREMENT PERIODS WITHIN THE NEGATIVE INDUCTION CONDITION

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Time 1 (baseline)</th>
<th>Time 2 (post-induction)</th>
<th>Time 3 (post-release)</th>
<th>F-Value (Depression X Time Interaction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem +</td>
<td>73.5</td>
<td>97.3</td>
<td>51.6</td>
<td>3.83 *</td>
</tr>
<tr>
<td>Self-/Goal Self Discrepancy</td>
<td>47.9</td>
<td>64.5</td>
<td>26.5</td>
<td>4.47 *</td>
</tr>
<tr>
<td>Perceived Regard By Others +</td>
<td>58.1</td>
<td>88.2</td>
<td>45.2</td>
<td>3.71 *</td>
</tr>
<tr>
<td>Depression Adjective Check List ++</td>
<td>14.5</td>
<td>20.2</td>
<td>6.5</td>
<td>9.17 ***</td>
</tr>
<tr>
<td>Elation-Depression Scale +++</td>
<td>4.1</td>
<td>2.5</td>
<td>7.5</td>
<td>5.81 **</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001

+ higher score indicates lower esteem
++ higher score indicates higher level of depressive affect
+++ higher score indicates lower level of depressive affect
Fig. 1. Mean values for self-esteem at the three measurement periods within the negative induction condition.
of self-esteem and the discrepancy between the means decreased. The mean self-esteem of the nondepressed group decreased to below the mean baseline level for the depressed group and this change was greater for the nondepressed group than for the depressed group. Following the release induction, the means for both groups increased to above-baseline levels and the discrepancy between the means increased.

Inspection of Figure 2 and the mean values in Table 2 reveals a similar pattern of results for the measurement of self-/goal self-evaluation discrepancy. The means for this discrepancy score were higher for both groups following exposure to the negative inductions and the increase was greater for the nondepressed group. Following "release" from the negative situations, the means for both groups returned to below-baseline levels and the discrepancy between the means increased.

As shown in Table 2 and Figure 3, subjects' perception of regard by others changed in the negative direction for both groups following the inductions, and this change was greater for the nondepressed group. Both groups increased these evaluations to above-baseline levels after the release induction and the discrepancy between the means increased.

Not only was the self-esteem of nondepressed subjects more adversely affected than that of depressed subjects, but also the mood of the nondepressed group showed more change in the negative direction. As reflected in Figures 4 and 5
Fig. 2. Mean values for self-/goal self-evaluation discrepancy at the three measurement periods within the negative induction condition.
Fig. 3. Mean values for perceived regard by others at the three measurement periods within the negative induction condition.
Fig. 4. Mean values for depressive affect (as measured by the Depression Adjective Check List) at the three measurement periods within the negative induction condition.
Fig. 5. Mean values for depressive affect (as measured by the Elation-Depression Scale) at the three measurement periods within the negative induction condition.
and by the mean values in Table 2, the nondepressed group initially reported a lower level of depressive affect than did the depressed group. This mean increased to a level exceeding the baseline level for the depressed group with exposure to the negative inductions. The mean level of depressive affect for the depressed group also increased but to a lesser extent. Both groups had means reflecting low levels of depressive affect following the release induction. The discrepancy between the means increased as reflected on the Depression Adjective Check List but not the Elation-Depression Scale.

Positive Induction Condition

In the positive induction condition, as in the negative induction condition, the depressed group initially reported and maintained across repeated measurements lower levels of self-esteem and higher levels of depressive affect relative to the nondepressed group. The depressed group maintained a greater discrepancy between self-evaluation and goal self-evaluation and a lower mean evaluation of how others regarded them. These results are reflected in significant group effects for all dependent variables, and the means and F-values are presented in Table 3.

The prediction that the self-esteem of depressed subjects relative to nondepressed subjects would be less positively affected by the positive inductions was not
### TABLE 3

**MEAN VALUES ACROSS THE THREE MEASUREMENT PERIODS WITHIN THE POSITIVE INDUCTION CONDITION**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Depressed</th>
<th>Nondepressed</th>
<th>F-Value (Depression Main Effect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem +</td>
<td>55.9</td>
<td>31.9</td>
<td>28.52 ***</td>
</tr>
<tr>
<td>Self-/Goal Self Discrepancy</td>
<td>30.8</td>
<td>11.1</td>
<td>15.61 ***</td>
</tr>
<tr>
<td>Perceived Regard By Others</td>
<td>50.7</td>
<td>31.3</td>
<td>15.20 ***</td>
</tr>
<tr>
<td>Depression Adjective Checklist ++</td>
<td>9.0</td>
<td>4.2</td>
<td>16.90 ***</td>
</tr>
<tr>
<td>Elation-Depression Scale +++</td>
<td>6.1</td>
<td>7.7</td>
<td>17.98 ***</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p < .001

+ higher score indicates lower esteem  
++ higher score indicates higher level of depressive affect  
+++ higher score indicates lower level of depressive affect
supported. Examination of Table 4 reveals greater changes in the positive direction for the depressed group on all three dependent measures of self-esteem (self-esteem summary variable, self-/goal self-evaluation discrepancy, and perceived regard by others).

The pattern of this interaction between Group and Time Period for the self-esteem summary variable is reflected in Figure 6. The initially higher mean level of self-esteem for the nondepressed group increased with exposure to the positive inductions as did the level for the depressed group. The mean for the depressed group increased to the baseline level of high self-esteem reported by the nondepressed group. The discrepancy between the mean levels of self-esteem of the two groups decreased following the positive inductions. The depressed group maintained a high, above-baseline, level of self-esteem at measurement following the release induction. This higher level of self-esteem remained in the range of that initially reported by the nondepressed group.

A similar pattern of results was obtained for the measurement of the discrepancy between self-evaluation and goal self-evaluation (Figure 7). The depressed group reduced their discrepancy score mean to a level approaching that initially reported by the nondepressed group. This pattern was also reflected on the measurement of subjects' perception of how others regarded them (Figure 8).
### TABLE 4

**MEAN VALUES FOR DEPRESSED AND NONDEPRESSED GROUPS AT THE THREE MEASUREMENT PERIODS WITHIN THE POSITIVE INDUCTION CONDITION**

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Time 1 (baseline)</th>
<th>Time 2 (post-induction)</th>
<th>Time 3 (post-release)</th>
<th>F-Value (Depression X Time Interaction)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D</td>
<td>ND</td>
<td>D</td>
<td>ND</td>
</tr>
<tr>
<td>Self-Esteem +</td>
<td>80.9</td>
<td>37.0</td>
<td>36.2</td>
<td>24.1</td>
</tr>
<tr>
<td>Self-/Goal Self Discrepancy</td>
<td>57.2</td>
<td>15.5</td>
<td>16.2</td>
<td>6.5</td>
</tr>
<tr>
<td>Perceived Regard By Others +</td>
<td>66.7</td>
<td>35.8</td>
<td>33.5</td>
<td>23.1</td>
</tr>
<tr>
<td>Depression Adjective Check List ++</td>
<td>14.9</td>
<td>4.6</td>
<td>4.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Elation-Depression Scale +++</td>
<td>4.2</td>
<td>6.8</td>
<td>7.6</td>
<td>8.5</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001

+ higher score indicates lower esteem
++ higher score indicates higher level of depressive affect
+++ higher score indicates lower level of depressive affect
Fig. 6. Mean values for self-esteem at the three measurement periods within the positive induction condition.
Fig. 7. Mean values for self-/goal self-evaluation discrepancy at the three measurement periods within the positive induction condition.
Fig. 8. Mean values for perceived regard by others at the three measurement periods within the positive induction condition.
With regard to differential changes in mean level of depressive affect, the pattern of interaction was significant for one measure of mood (Depression Adjective Check List) and not the other (Elation-Depression Scale). Inspection of Figure 9 and the mean values in Table 4 reveals that the mean level of depressive affect for the depressed group decreased following the positive inductions to a level approaching the positive mood reported by the nondepressed group at baseline. Following the release induction, this mean did not return to as high a level as reported by depressed subjects at baseline.

Analyses of Covariance: Negative and Positive Induction Conditions

Utilizing scores on the Dysfunctional Attitude Scale as a covariant with change scores between baseline and post-induction measurement, the covariant did not reach a statistical level of significance on any of the dependent measures. The results of these covariance analyses were completely consistent with the repeated measures analyses reported above, and are not reported.
Fig. 9. Mean values for depressive affect (as measured by the Depression Adjective Check List) at the three measurement periods within the positive induction condition.
CHAPTER FOUR
DISCUSSION

The results of the present study are surprising and contrary to predictions derived from Beck's theory. Results indicated that over the three measurement periods, depressed subjects maintained lower levels of self-esteem and mood compared to nondepressed subjects. However, depressed subjects, unexpectedly, were not more adversely affected by the negative interpersonal situations or less positively affected by the positive situations. Theoretical and clinical implications will be discussed in light of these unexpected findings.

Reactions to the Negative Inductions

Beck proposed that depression is maintained by the dysfunctional cognitive interpretation of events by depressed individuals so that their reactions are biased against the self. He theorized that their negative cognitive reactions are chained to negative affective reactions resulting in a downward spiraling of cognition and affect. Conversely, it has been reported (Lewinsohn, Mischel, Chaplin, & Barton, 1980) that nondepressed individuals protect themselves from depression through the "warm glow of benign self-regard."
The implication is that nondepressed individuals are not as stringently realistic in their self-appraisals as are depressed individuals and, in clinical terms, utilize denial defenses in negative situations. Thus, it was expected that depressed subjects in the present study would magnify the negative impact of the stressful situations they were asked to imagine and nondepressed individuals would minimize this impact.

Surprisingly, however, depressed individuals reported negative reactions, at measurement immediately following these situations, in the same range reported by nondepressed individuals. In fact, nondepressed subjects were more adversely affected than depressed subjects since their initially higher levels of self-esteem and mood resulted in greater negative change. Both groups of subjects reported that, if exposed to the negative events, they would devalue themselves in terms of decreased self-esteem, they would lower their mood, others would perceive them more negatively, and the discrepancy between self-regard and goal self would increase.

From this pre-/post-induction measurement alone it would be difficult to account for the maintenance of depression. The groups were strikingly different on the selection instruments assessing depressive symptomatology yet reported they would behave in a similar manner if exposed to certain distressing life events. The nondepressed
group did not seem to be protected by "the warm glow of benign self-regard" and the depressed group did not exaggerate the negative impact of the situations relative to the non-depressed group, judging from their immediate reactions to the imagined situations.

In accounting for these findings relative to the question of how depression is maintained, it is useful to consider (a) the effect of immediate compared to delayed measurement of self-esteem and mood, and (b) the degree of specificity in the measurement of cognitive reactions.

In the present study, subjects' reactions were measured immediately following the imagined experience and again following exposure to a positively-toned "release" or relaxation induction. This final measurement provided some indication of the effect of intervening experience, the passage of time, and subjects' recovery from the stressful situations. While the cognitive and affective reactions of depressed and nondepressed subjects were similar at immediate posttest, these reactions were more differentiated following the release induction. Higher levels of self-esteem and mood more clearly differentiated the nondepressed from the depressed group at this measurement compared to the immediate posttest. This finding has implications for the stability of the cognitive and affective states of these groups and the maintenance of depression. Both groups of subjects acknowledged and
reacted to -- rather than denied -- the unpleasant reality of the situations they were asked to imagine. However, the nondepressed group clearly recovered their high levels of self-esteem and mood with exposure to the subsequent, relaxing imagined experience. The depressed group also reported the positive effect of this same experience, but to a lesser extent. This finding suggests that the cognitive and emotional effects of stress are more prolonged for depressed compared to nondepressed subjects. Negative cognitions of self-regard and depressive feelings intruded upon their positive reactions following the relaxation experience. It is speculated that these negative thoughts and feelings reflect prolonged reactions to stress -- both the cumulative effects of prior experience and the effect of the immediately preceding imaginary experience.

Thus, it may be that subjects' prolonged rather than immediate reactions to stress are crucial to the processes involved in maintaining depression. This interpretation is supported by Stiles' (1970) finding that depressed individuals did not differ from nondepressed individuals in their evaluation of a task experience on immediate posttest but they significantly devalued their experience two weeks later. Nondepressed subjects did not change their evaluations. Clinically, this finding implies that the treatment of depressed individuals should focus on the "aftermath" of stress rather than on their
theorized exaggerated response to stress. It appears that nondepressed subjects are in some manner better able to recover from or tolerate the stress once it has ended. It is possible, and a question for future research, that nondepressed subjects have better relaxation skills and/or make self-statements regarding the experience so that their recovery is more complete. It is recommended that future research focus on the effects of stress and negative experience over time in depressed compared to nondepressed subjects.

In this regard it is important to consider the degree of specificity in the measurement of cognitive reactions. As suggested by Beck, the cognitions of subjects following a negative experience are important in the maintenance of depression or the recovery from stress. While the present study assessed cognitions relevant to self-evaluation, the specific self-statements or automatic thoughts following the inductions were not assessed. From the measurement of self-esteem, it was found that depressed subjects make negative self-evaluations following stress, but it would also be important, in future research, to tap more specific cognitive reactions, by both depressed and nondepressed subjects. Casual observations during debriefing suggested that the negative imagined experience confirmed the negative expectations of depressed subjects whereas this experience elicited positive coping strategies in nondepressed subjects. An assessment of these cognitions by future researchers
would elucidate the manner in which nondepressed subjects recover from stress and have implications for the treatment of depression. Hollon & Kendall (1980) recently developed a questionnaire which may be useful in this regard although only negative and not positive self-statements are included.

Reactions to the Positive Inductions

From Beck's theory it was predicted that depressed subjects would minimize the impact of the interpersonally-gratifying experiences they were asked to imagine. The results indicated that depressed subjects believed they would make considerable changes in their self-evaluations and would experience a more positive mood if they actually were exposed to these situations. These reported changes in a positive direction were greater for the depressed than for the nondepressed group due to their initially lower levels of self-esteem and mood. These findings alone do not indicate support for the hypothesis of minimization of the positive. However, when results across all three measurement periods are considered, differences between the depressed and nondepressed groups contribute to an understanding of processes involved in the maintenance of depression.

Although the depressed group reported a greater enhancement effect compared to the nondepressed group at measurement following the positive inductions, depressed
subjects maintained lower levels of self-esteem, greater self-/goal self-evaluation discrepancies, lower evaluations of how others regarded them, and lower levels of mood across all three measurement periods. When exposed to the positive inductions, they reported an enhancement effect in the range reported by nondepressed subjects at baseline, but nondepressed subjects reported an enhancement effect above this range. Thus, the phrase "minimization of the positive" is not consistent with these findings since depressed subjects reported a considerable enhancement effect. However, it is clear that depressed subjects did not reach the same level of positive affect from the positive situations as did nondepressed subjects. Generalizing to the natural environment, it is likely that depressed individuals respond dramatically to positive experience, at least for a short time, so that their mood and self-esteem matches the general, everyday state of nondepressed individuals. Nondepressed individuals may experience even more positive affect and self-evaluation from similar events which confirms and bolsters their general high self-regard and mood.

As with reactions to the negative inductions, these findings have implications for the stability of depression. It is likely that a stable depressive state limited the enhancement effect of the positive inductions for depressed subjects. This limiting effect may also be mediated by negative expectancies and automatic thoughts made by
depressed subjects in their processing of positive experiences. Although psychometric instruments of the desired specificity were not available for the present study, it is recommended that future research assess the specific self-statements made by depressed and nondepressed individuals at different points in the processing of positive experience. This elucidation would imply treatment strategies such as teaching clinical patients coping strategies and self-statements utilized by nondepressed persons who cope more effectively.

Another consideration in understanding the maintenance of depression is subjects' prolonged reactions to the positive imagined experience. The question becomes whether depressed compared to nondepressed individuals are able to maintain the enhancement effect and integrate this experience so as to disrupt the depressive cycle. In the present study, both depressed and nondepressed groups tended to return toward baseline although the depressed group maintained a considerable enhancement effect. However, in order to establish the stability of this enhancement effect, it would be important for future research to assess reactions over longer periods of time with neutrally-toned experience. If depressed subjects do in fact maintain an enhancement effect, the clinical implication is that increased exposure to the positive experience offers an effective treatment strategy. However, if this effect is short-lived,
this finding would imply clinically that cognitive and emotional restructuring may be essential to disrupting the depressive cycle and prerequisite to increased exposure to positive reinforcement.

Limitations of the Present Research

The results of the present study are limited to generalizations about the reactions of females of college age, excluding other populations of interest. The results are also not generalizable to the reactions of college females experiencing milder depression below the range selected for the present study. Additionally, the findings are limited by the extent to which subjects' self-report is an accurate representation of their experience.

The present research focused on the role of intra-psychic elements -- self esteem and mood -- in the maintenance of depression. It is useful to consider whether the present findings could be further explained by investigating the behavioral and interactional aspects of depression.

The present methodology did not test Lewinsohn's (1974) concept of "social skills deficits" among depressed individuals. However, it may be that nondepressed, compared to depressed, individuals have coping strategies and social skills which allow them to avoid or alter the negative outcomes they were asked to imagine. Also, they may be more able to create and influence positive outcomes analogous
to the positive inductions. In the present study subjects were not allowed this freedom of behavior. Yet differences in degree and/or frequency of exposure to positive and negative events would certainly have implications for understanding the maintenance of depression.

The present methodology also limited the consideration of the interactional framework. However, as explicated by Coyne (1976), depressed individuals represent a "powerful social stimulus" and as such the reactions they elicit from others are likely to serve a role in maintaining depression. These complex interactional effects were not considered. For example, Hokanson and his colleagues (1980) found that the behavior of depressed individuals during an experimental game elicited noncooperativeness, extrapunitiveness, and expressions of helplessness in their nondepressed partners.

**Research Implications of the Present Methodology**

The use of imaginal induction offers a viable method for understanding the reactions of depressed individuals. By guiding subjects through imaginary experience, future research can explore reactions to a wide range of events typically encountered by depressed and nondepressed individuals. The methodology also allows for a broadening of the content of the experiences investigated as well as a broadening of the nature of the reactions measured. Other emotional
reactions such as anger and cognitive reactions such as automatic thoughts and expectations could be included. Important information may also be gained by sequencing negative, positive, and neutral experiences to understand the cumulative and contrasting effects of the experiences. In this manner, a more thorough understanding of the processing of experience by depressed and nondepressed individuals would be gained. This methodology, in conjunction with methodologies investigating behavioral, interactional, and physiological components, will contribute to a more comprehensive theory of the complexities involved in the maintenance of depression.
REFERENCES


Lewinsohn, P. M., Mischel, W., Chaplin, W., & Barton, R. Social competence and depression: the role of


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These consist of pages:

59-67

84-88
APPENDIX IV

POSITIVE, NEGATIVE, AND RELEASE INDuctions

Positive Inductions:
Induction IA:

Imagine yourself getting out of school for the summer. Many students have gone home for the summer but a few close friends of yours decided to stay in town and go to summer school. Imagine that it has been a few days since the semester ended. You are remembering how much work you had done over the semester and had not had very much time to relax and be with your friends. You are thinking about being out of school now -- no more deadlines for now, plenty of time to read novels, or just sit in the sun. It is a Saturday morning. You are thinking out being out of school after having slept late this morning. You are sitting in a comfortable chair close to an open window. As you gaze out the window, you notice that the weather is clear and the sun is shining. You flip through a magazine and feel the warmth of the sun on your face and hear the pleasant music playing from your neighbor's apartment. As you are sitting there, you decide to call someone who might like to take a bicycle ride with you. You think of several people who are in town and you reach for the phone to dial the number of a girlfriend who lives in the same apartment building. She answers and seems glad to hear from you. You find out
Induction 1A (continued):
that she had also been trying to think of what she might like to do for the day. She thinks bicycling would be a great idea and volunteers to bring along sandwiches and cold drinks. The two of you stay on the phone for awhile talking about plans for the summer and people who you might like to date. You suggest a time to meet her giving yourself plenty of time to leisurely get ready and she agrees. As you hang up the phone and stand up to gaze out of the window, you notice how you feel and what you might be saying to yourself.

Induction 2A:
Imagine yourself walking over to a sandwich shop near campus. It is a popular place where many students go for lunch. You are going to meet a guy for lunch who is in one of your classes. He talked to you briefly after class and had mentioned having lunch the next day. As you walk through campus, you are imagining what it would be like to date him. Imagine that you get to the sandwich shop and as you are opening the door, you see that it is very crowded since it is the noon hour. As you walk in the door, a few people glance over their shoulders to see who is coming in. Imagine their faces looking at you as you stand in the door and scan the restaurant for the guy you are meeting. You catch a glimpse of his face and start
Induction 2A (continued):
heading in that direction. He is across the room and you squeeze between closely-packed tables to get to the other side. As you shoulder your way through, you bump into someone's chair and apologize. You look up again for your date's face and now you notice that three other students are sitting with him at his table and there are no extra chairs. He has not seen you yet. As you approach his table, he stands up, says hello, and excuses himself from the table with his other friends. As he walks over to you he smiles and says that the waitress is holding a table for the two of you upstairs. As you walk up the stairs, he asks you how the day has gone so far for you. The two of you make small talk through lunch and you realize how considerate and interesting he is. As you finish lunch, you tell him that you have another class, and he offers to walk that way with you. As you get up to leave, notice how you are feeling and what you might be thinking.

Induction 3A:
Imagine that you are a member of a committee consisting of faculty members and students. The committee has given you a chance to meet some interesting people and also has given you a change from your schoolwork. You have volunteered to report on the kind of research being done in three different departments on campus. You want to do the report mostly
Induction 3A (continued):
because you would like to be elected as assistant chairman of the committee when they vote next month. Imagine that you have done the work necessary to make the report. All that was required was that you interview the heads of the departments and a few professors. You had a friend of yours type it so that the report would be easy to read. Imagine that you are at the meeting to give your report and that you are sitting at a large conference table with a few other students. As you are sitting there, you watch other people come in and sit down. One of the professors who comes in smiles broadly at you and comes over to say hello. He was the professor who got you on the committee and introduced you to some other students. Also, he is your father's old friend and classmate, and he has known you since you were a child. After he says hello, he goes and sits at the other end of the table and begins talking to another professor. The meeting begins and you sit through the ordinary opening business. Imagine that you realize it is almost time for your report. The chairman announces your report and all heads turn toward you. Put yourself into this situation, and imagine the faces turning toward you and a silence as you turn to the first page of your report. You begin speaking, and your voice seems a little wobbly at first, but it quickly smooths out, and you read the report clearly, looking
Induction 3A (continued):
up at people as you read. As you are speaking, you notice that people seem interested in what you are saying. You go through the report page-by-page. You are getting toward the end, you notice that people are taking notes on your report. You get to the end and look up. You ask if there are any questions, and you see your father's friend. He is smiling and nodding his head. You look around, and the faculty member next to him says that your report has been very informative and that he would like to distribute copies to the entire committee. You thank him and then answer two questions raised by other members. As the chairman thanks you and moves on to the next report, notice how you are feeling and what you might be saying to yourself.

Induction 4A:
Imagine yourself walking across campus on your way to an English class. You spent several hours the night before writing a story that had been assigned for today's class. You had never considered yourself a good writer but you had liked the way the story had turned out. You are a little nervous because the professor has said she would ask for some students to read their stories to the class for a critique. As you get to the classroom, you go in and take your usual seat. You look over your story and glance up once in awhile as the other students come in. Imagine that the professor has been sitting casually on the desk at the front
Induction 4A (continued):
of the room. She asks for someone to volunteer to present their story. One girl does volunteer and reads a story which everyone quietly listens to. Imagine her face as she reads from her desk while everyone is facing toward her and listening. As she finishes, the instructor thanks her and says that she had made a good start but that she might need to do some more work on her paper. The professor looks around the class and then looks in your direction. She asks if you would read your story. Imagine yourself reading and being aware of how silent the room is except for your voice. After you have finished, you look up. Picture the face of other students as you look around the room to see if anyone has comments to make. In the next ten minutes, most of the class participates in a discussion of your story. The instructor comments that the story is excellent and that you must have spent a great deal of time on the assignment. Before asking for another volunteer, she mentions that she would like you to stop by her office later in the week. Notice how you are feeling and what you might be saying to yourself as she moves on to ask for another volunteer.

Induction 5A:
Imagine that you are living in a dorm. It is a Friday night. You have just finished getting dressed to go out with someone who you know casually. You have never been out with
Induction 5A (continued):

him before but he had seemed like someone who would be fun to be with. Imagine that you are propped up on your bed reading a magazine waiting for him to arrive and the phone rings. It's your date, and he says that his parents have come into town unexpectedly and would you go with him on an all-day outing Saturday instead. You agree, and, as you hang the phone up, imagine yourself standing next to the phone, realizing that it's Friday night, and you would rather not spend it in your room alone. Picture yourself as you pick the magazine up and go to the television lounge where some others might be. As you sit on the couch in the lounge, some other girls are there talking about going out for hamburgers and beer. Imagine yourself sitting there looking at the magazine. As they are talking, you decide to invite yourself along. You go up to them and ask if they would mind if you went with them. One girl says that they had talked about asking you anyway but had heard that you already had plans. You explain what had happened, and they smile and ask you for suggestions on a place to go. They like your idea, and all of you go out together. As you are leaving, notice how you are feeling and what you might be thinking.
Negative Inductions:

Induction 1B:

Imagine yourself getting out of school for the summer. Most of your close friends have gone home for the summer to go to school, to be with hometown boyfriends, or to live with their parents. You've decided to stay in town. Imagine it has been a few days since most of your friends left town. Your apartment appears vacant since your roommate moved out. Imagine yourself sitting in a big armchair in an apartment you've been living in with a girlfriend. As you look around you notice that the walls look bare where she took her pictures down. The apartment looks emptier with her few pieces of furniture gone. You become aware that the floors need sweeping badly and there are books, dishes, and clothes scattered everywhere. You decide though not to clean up on a Saturday morning. Instead, you sit and think of who you might call to do something with. As you think of who you know that might still be in town, you come up with two names; one an old boyfriend who must still be in town since his parents live here. Imagine yourself reaching for the phone, dialing his number. The line is ringing and he answers after a few rings. He sounds out of breath as he says hello. You make small talk at first but he sounds in a hurry. He tells you that he cannot talk since a group of people are waiting in the car for him. He tells you hurriedly that they're going on a day-long canoe trip and barbeque.
Induction 1B (continued):
You wish him a good time and slowly hang up the phone. Imagine yourself sitting there for a moment and then looking up a girlfriend's number, a girl who you didn't really like very much but who might be fun to go bicycling with. No answer. You hang up the phone and stand up to gaze out of a front window. It is a bright, clear morning and you stand there looking out toward the street. No one is out in their yards and an occasional car drives by. Stay in this situation and notice how you feel and what you might be saying to yourself as you stand looking out the window.

Induction 2B:
Imagine yourself walking over to a sandwich shop near campus. It's a popular place where many students go for lunch. You are going to meet a guy for lunch who is in one of your classes. He had talked to you briefly after class and had mentioned having lunch the next day. As you walk through campus, you are imagining what it would be like to date him. Imagine that you get to the sandwich shop and as you are opening the door, you see that it is very crowded since it is the noon hour. As you walk in the door, a few people glance over their shoulders to see who is coming in. Imagine their faces looking at you as you stand in the door and scan the restaurant for the guy you are meeting. You catch a glimpse of his face and start heading in that direction. He is across the room and you squeeze between
Induction 2B (continued):
closely-packed tables to get to the other side. As you
shoulder your way through, you bump into someone's chair
and apologize. You look up again for your date's face and
now you notice that three other students are sitting with
him at his table and there are no extra chairs. He has not
seen you yet. As you approach his table, try to picture
his face as he looks up at you and says hello. You say
hello and glance at the other students. As you look at
them he apologizes and introduces them to you. You look
back at him and say that perhaps you could find another
chair. Imagine standing there as he tells you that you are
welcome to join them but that they will be leaving in a few
minutes. Stay in this situation listening to him and
realizing that he has forgotten the date. You mumble an
excuse and make your way toward the stairs to see if you can
find an empty table to eat a sandwich by yourself. Pay
attention to how you are feeling and what you might be saying
to yourself.

Induction 3B:

Imagine that you are a member of a committee consisting
of faculty members and students. The committee has given you
a chance to meet some interesting people and also has given
you a change from your schoolwork. You have volunteered to
report on the kind of research being done in three different
departments on campus. You want to do the report mostly
Induction 3B (continued):

because you would like to be elected as assistant chairman
of the committee when they vote next month. Imagine that
you have done the work necessary to make the report. All
that was required was that you interview the heads of the
departments and a few professors. You had a friend of
yours type it so that the report would be easy to read.
Imagine that you are at the meeting to give your report and
that you are sitting at a large conference table with a few
other students. As you are sitting there, you watch other
people come in and sit down. One of the professors who
comes in smiles broadly at you and comes over to say hello.
He was the professor who got you on the committee and
introduced you to some other students. Also, he is your
father's old friend and classmate, and he has known you
since you were a child. After he says hello, he goes and
sits at the other end of the table and begins talking to
another professor. The meeting begins and you sit through
the ordinary opening business. Imagine that you realize it
is almost time for your report. The chairman announces
your report and all heads turn toward you. Put yourself
into this situation and imagine the faces turning toward you
and a silence as you turn to the first page of your report.
You begin speaking and your voice seems a little wobbly at
first but it quickly smooths out and you read the report
clearly, looking up at people as you read. As you are
Induction 3B (continued):

speaking you notice that people seem interested in what you are saying. You go through the report page-by-page. You are getting to the end, but as you do, you notice that a page is missing and what you have just said didn't make sense. You have no idea what should have been on that page and you start looking around for the missing paper. As you are searching through the papers, you glance up and see your father's friend. Imagine his face vividly. He is obviously frowning and watching you fumble through the pages. Now he is shaking his head, and looking down at his watch. You hear other people figeting in their chairs. The chairman clears his throat and tells you to let him know if you find what you are looking for. In the meantime, he says he will move on to the next report. Imagine yourself in this situation. Notice how you are feeling and what you are thinking as you see the professor out of the corner of your eye.

Induction 4B:

Imagine yourself walking across campus on your way to an English class. You spent several hours the night before writing a story that had been assigned for today's class. You had never considered yourself a good writer but you had liked the way the story had turned out. You are a little nervous because the professor has said she would ask for some students to read their stories to the class for
Induction 4B (continued):

a critique. As you get to the classroom, you go in and take your usual seat. You look over your story and glance up once in awhile as the other students come in. Imagine that the professor has been sitting casually on the desk at the front of the room. She asks for someone to volunteer to present their story. One girl does volunteer and reads a story which obviously catches everyone's attention. Imagine her face as she reads from her desk while everyone is facing toward her and listening. As she finishes, you join in a discussion of her story. The instructor comments that the story is excellent and that she must have spent a good deal of time on the assignment. In the next ten minutes, the entire class participates in the discussion of her story before the instructor asks for another volunteer. You raise your hand and she nods at you. Imagine yourself reading your story and being aware of how silent the room is except for your voice. After you have finished, you look up. Picture the faces of the other students as you look around the room to see if anyone has comments to make. No one says anything, and you look toward the professor as she is thanking you for volunteering. Try to picture her face as she is telling you that you are welcome to come to her office if you find you need some extra help on the next assignment. Notice how you are feeling and what you might be saying to yourself as she moves on to ask for another volunteer.
Induction 5B:

Imagine that you are living in a dorm. It is a Friday night. You have just finished getting dressed to go out with someone who you know casually. You have never been out with him before but he had seemed like someone who would be fun to be with. Imagine that you are propped up on your bed reading a magazine waiting for him to arrive and the phone rings. It's your date and he says that his parents have come into town unexpectedly and would you mind making the date some other time. You agree and as you hang the phone up, imagine yourself standing next to the phone, realizing that it's Friday night, most of your friends have dates and you don't want to spend it in your room alone. Picture yourself as you pick the magazine up and go to the television lounge where some others might be. As you sit on the couch in the lounge, some other girls are there talking about going out for hamburgers and beer. Imagine yourself sitting there looking at the magazine and hoping to be invited to join them. You don't feel you know them well enough to invite yourself along. One of the girls glances over at you and asks you if you are going to be around for awhile. As you nod, she comes over and hands you a piece of paper with a boy's name written on it. She says that if this person calls, would you have him call back at 10. You agree to do that and go back to reading the magazine. Notice how you feel and what you are thinking
Induction 5B (continued):
as the girls leave the lounge and you are sitting there
reading your magazine.

Release Induction:
Induction C:

Imagine that you are walking along the beach; it is
mid-July. It is very, very warm. It is five o'clock in
the afternoon. The sun has not yet begun to set but it
is getting low on the horizon. The sun is a golden blazing
yellow, the sky a brilliant blue, the sand a dazzling,
glistening white in the sunlight. Feel the cold, wet,
firm, hard-packed sand beneath your feet . . . Taste and
smell the salt in the air. You can taste it if you lick
your lips. Hear the beating of the waves, the rhythmic
lapping to and fro, back and forth of the water against
the shore. Hear the far-off cry of a distant gull as you
continue to walk. Suddenly you come to a sand dune, a
mound of pure white sand . . . Covering the mound are
bright yellow buttercups, deep pink moss roses. You sit
down on its crest and look out to sea. The sea is like
a mirror of silver reflecting the sun's rays, a mass of
pure white light, and you are gazing intently into this
light. As you continue to stare into the sun's reflection
off the water, you begin to see flecks of violet, darting
spots of purple intermingled with the silver. Everywhere
Induction C (continued):
there is silver and violet. There is a violet line along the horizon . . . a violet halo around the flowers. Now the sun is beginning to set. With each movement, with each motion of the sun into the sea, you become more relaxed. The sky is turning crimson, scarlet, pink, amber, gold, orange as the sun sets . . . you are engulfed in a velvety blue haze . . . you look up to the night sky. It is a brilliant starry night. The beating of the waves, the smell and taste of the salt, the sea, the sky . . . and you feel one with the universe. After sitting there for a few more moments, you stand up and begin walking back down the beach toward your cabin. As you are walking, notice how you are now feeling and what you might be thinking to yourself.
APPENDIX VIII

TABLE 5

SELF-ESTEEM AS A FUNCTION OF DEPRESSION, INDUCTION CONDITION AND TIME PERIOD

<table>
<thead>
<tr>
<th>SOURCE</th>
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<tr>
<td>Depression/Positive Induction</td>
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<td>11280.051</td>
<td>28.52 ***</td>
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<tr>
<td>Depression/Negative Induction</td>
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<td>7581.551</td>
<td>19.17 ***</td>
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<td>18984.462</td>
<td>1.87 **</td>
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* p < .05
** p < .01
*** p < .001
TABLE 6
SELF-/GOAL SELF DISCREPANCY AS A FUNCTION OF DEPRESSION, INDUCTION CONDITION AND TIME PERIOD

<table>
<thead>
<tr>
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<td>10.62 **</td>
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<td>Induction</td>
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<td>22677.474</td>
<td>57.11 ***</td>
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<td>2353.167</td>
<td>11.85 **</td>
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<td>888.244</td>
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</tr>
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<td>Depression X ID/Induction</td>
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<td>23371.795</td>
<td>2.45 ***</td>
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</table>

* p < .05
** p < .01
*** p < .001
### TABLE 7
PERCEIVED REGARD BY OTHERS AS A FUNCTION OF DEPRESSION, INDUCTION CONDITION AND TIME PERIOD

<table>
<thead>
<tr>
<th>SOURCE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Depression/Positive Induction</td>
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<td>7366.205</td>
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<td>Depression/Negative Induction</td>
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<td>Time X Induction</td>
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<tr>
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<td>23268.974</td>
<td>2.52 ***</td>
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</table>

* p < .05  
** p < .01  
*** p < .001
### TABLE 8

**LEVEL OF DEPRESSIVE AFFECT AS A FUNCTION OF DEPRESSION, INDUCTION CONDITION AND TIME PERIOD**

(as measured by Depression Adjective Check List)

<table>
<thead>
<tr>
<th>SOURCE</th>
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<th>F</th>
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</thead>
<tbody>
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<td>16.90***</td>
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<td>Depression/Negative Induction</td>
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<td>Induction</td>
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<td>Depression X ID/Induction</td>
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<td>1314.513</td>
<td>1.44</td>
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</tbody>
</table>

* * p < .05
** ** p < .01
*** *** p < .001
TABLE 9

LEVEL OF DEPRESSIVE AFFECT AS A FUNCTION OF DEPRESSION, INDUCTION CONDITION AND TIME PERIOD
(as measured by Elation-Depression Scale)

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>DF</th>
<th>SS</th>
<th>F</th>
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<tbody>
<tr>
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<td>Depression/Negative Induction</td>
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<td>Time</td>
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<tr>
<td>Time X Induction</td>
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<td>Depression X Time/Pos. Ind.</td>
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<td>Depression X Time/Neg. Ind.</td>
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<td>Depression X ID/Induction</td>
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<td>28.487</td>
<td>4.4. **</td>
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</tbody>
</table>

* p < .05
** p < .01
*** p < .001
VITA

Pat Hunter received her B.A. degree with a major in History from Louisiana State University in May, 1972. She was awarded her Master's degree from the same institution in December, 1978. She is a candidate for the Ph.D. degree from Louisiana State University with a major in Clinical Psychology and a minor in Developmental Psychology to be awarded August, 1981. Currently Ms. Hunter is an intern at the Veterans Administration Medical Center in Palo Alto, California.
Candidate: Patricia Bowers Hunter

Major Field: Psychology

Title of Thesis: The Processing of Experience and the Evaluation of the Self in Depressed and Nondepressed Females

Approved:

Billy M. Dean
Major Professor and Chairman

James E. Engleham
Dean of the Graduate School

EXAMINING COMMITTEE:

___

Date of Examination:

5/8/81