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"Trigger events" for depressed affect in sociotropic vs. autonomous individuals: A test of the specificity hypothesis

Johnson, Diane Elizabeth, Ph.D.

The University of North Carolina at Greensboro, 1994

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"TRIGGER EVENTS" FOR DEPRESSED AFFECT IN SOCIOTROPIC VS. AUTONOMOUS INDIVIDUALS: A TEST OF THE SPECIFICITY HYPOTHESIS

by

Diane E. Johnson

A Dissertation Submitted to
the Faculty of The Graduate School at
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Approved by

Rosemary Nelson-Gray
Dissertation Advisor

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This study was designed to investigate possible trigger events for depression. The specificity hypothesis states that certain personality types make a person vulnerable to depression when trigger events that match their personality are present. Two personality vulnerabilities related to depression have been described: Sociotropic people are concerned with pleasing others while autonomous persons are concerned about failure. It was hypothesized that sociotropic individuals would report more depressed affect following social loss scenarios and autonomous individuals would report more depressed affect following achievement failure scenarios. Persons scoring high on both dimensions would report more depressed affect following both types of negative events.

Eighty female undergraduate college students served as research participants, based on their Sociotropy and Autonomy scores as determined by the Personal Style Inventory, Version II (PSI; Robins, Ladd, & Luten, 1990). Four groups were formed: High Sociotropy/Low Autonomy, Low Sociotropy/High Autonomy, High Sociotropy/High Autonomy, Low Sociotropy/Low Autonomy. Each participant observed two sets of videotaped scenes, one depicting social loss and one depicting achievement failure, and rated their mood on the Depressive Adjective Check Lists (DACL; Lubin, 1981) following each set of videotapes.

Analyses of covariance across the four groups were performed. An interesting finding was that the two groups scoring high in sociotropy reported significantly more depressed affect to both types of scenes than the groups low in sociotropy. The groups scoring high in autonomy did not differ from those groups scoring low in autonomy. This finding suggests that sociotropy was the more significant vulnerability affecting depressed affect in this study. Age and social support were significant covariates.

Results were discussed in terms of the clinical implications for treatment and prevention. The findings call for further exploration of the specificity hypothesis and the importance of adding individuals high on both dimensions to future research.

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Dissertation Advisor ________________________

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CHAPTER I

INTRODUCTION

The American Psychiatric Association (APA, 1987) estimates that approximately 18-23% of females and 8-11% of males have had at least one major depressive episode. The APA also estimates that 50% of individuals who have had one major depressive episode will eventually have another major depressive episode. One goal for research in this area, and a highly important one, is to identify ways to reduce the number of recurrent episodes of depression. One way to reduce the recurrence of depression is to identify events that cause, or trigger, depression. Prevention can occur by teaching depression-prone individuals how to cope with their trigger events. This study was designed to investigate possible trigger events for these recurrent depressive episodes. As is discussed later, these triggers may vary, depending on the individual's personality style; certain personality types may make a person vulnerable to depression when trigger events that match their personality type are present.

On the one hand, many of the original theories of depression and subsequent studies have investigated depression using a unitary model (Craighead, 1980) which assumes that depression has a homogeneous etiology,

symptomatology, prognosis, and treatment. A cognitive model such as Beck's (Beck, Rush, Shaw, & Emery, 1979), a psychoanalytic model such as Freud's (1917/1957), or a behavioral model such as Lewinsohn's (Lewinsohn, Hoberman, Teri, & Hautzinger, 1985) are all examples of unitary models that attempt to account for depression across all individuals.

On the other hand, a polydimensional model assumes that there is more than one type of depression and that individual differences exist among depressives in etiology, symptomatology, prognosis, and response to treatment (Craighead, 1980). By conceptualizing depression as more than one entity, research can be directed toward issues of whether people who are depressed show different symptom patterns (Crow, 1985), whether there are different trigger events for different types of people, and whether different subtypes of depression have varying responses to treatments.

Fowles (1984) noted that "depression is sufficiently heterogeneous so that a single dimension of severity is insufficient to account for all differences among depressed patients" (p. 98). In his review, Fowles noted that the unipolar-bipolar distinction is an important way to subtype depression in the current literature. Another distinction that has been emphasized in the literature recently is the endogenous/exogenous (reactive) distinction. The Diagnostic and Statistical Manual, Third Edition, Revised (DSM-III-R;

APA, 1987) subtypes depression into four diagnoses: Bipolar disorder, major depression, dysthymia, and adjustment disorder with depressed mood. Because depression has shown considerable heterogeneity with regard to symptoms, etiology, course, and treatment, subtyping has been a useful attempt to account for the variability.

A more recent attempt at subtyping has involved identifying heterogeneity in depression based on personality disorders. Farmer and Nelson-Gray (1990) reviewed the literature regarding the interface between depression and personality disorders. Research shows that 30 to 90% of people diagnosed with major depressive also carry an Axis II diagnosis of personality disorder. In one such study, Shea, Glass, Pilkonis, Watkins, and Docherty (1987) reported that 35% of people diagnosed with major depression also had a personality disorder, and an additional 40% of people diagnosed with major depression had a probable personality disorder. They cited avoidant, dependent, and compulsive as the most frequent personality disorders that accompany major depression. More importantly, the combined diagnosis of major depression and personality disorder changes the pattern of the depressive episode (Shea et al., 1987). For example, personality disordered patients are likely to have earlier onsets of depression, longer durations of current episodes, poorer prognoses, higher frequencies of separation and divorce, and histories of more hospitalizations,

recurrent episodes, and suicide attempts than depressed patients without accompanying personality disorders. The importance of the relationship between depression and personality has implications for treatment and prevention.

There are many hypotheses about the relationship between depression and personality (Farmer & Nelson-Gray, 1990). Four hypotheses have been suggested that are more descriptive in nature. The modification hypothesis suggests that the presence of a personality disorder may influence the clinical picture of depression. The orthogonal hypothesis suggests that personality disorders and depression are independent, but since both are frequently observed, they commonly co-occur. The overlapping hypothesis suggests that the comorbidity of depression with personality disorders is an artifact of overlapping criteria. The heterogeneity hypothesis suggests that the signs and symptoms of depression and personality disorders arise from different sources.

There are four causal explanations for the relationship between depression and personality disorders. The complication hypothesis postulates that personality disorders are the product of depression. The attenuation hypothesis assumes that both depression and personality disorders arise from the same genetic or constitutional origins so that personality disorders are an alterated expression of depression. The coeffect hypothesis proposes

that depression and personality are both caused by a third, as yet unknown, source. The most popular hypothesis, and the one assumed in the present study, is the characterological predisposition hypothesis. The characterological predisposition hypothesis postulates that characterological disorders, or personality vulnerabilities, are primary, with depression being a secondary feature of the personality pathology. "Depression is seen as a product of difficulties which the individual experiences as a result of the habitual and maladaptive behaviors he or she displays" (Farmer & Nelson-Gray, 1990, p. 455).

The interface between depression and negative life events is another important relationship to consider. The predominant negative events appear to be within the domains of interpersonal relationship loss and personal achievement failure (Billings & Moos, 1985). Weissman and Paykel (1974) have indicated that depressed people, when reporting life events at the onset of depression, report more stress than non-depressed people in similar time periods. The most common stressful event reported was separation from people with whom one is close. Twenty-five percent of depressives reported such an event during the six months prior to onset, as opposed to five percent of the general population in the same time period (Weissman & Paykel, 1974). Hammen, Marks, Mayol, and deMayo (1985) discussed the importance of integrating life-stress approaches to the study of

personality vulnerabilities and depression. However, it is noteworthy that while stressful life events and depression are related, the majority of individuals who experience even major stressors do not become depressed.

The relationship between the individual and the environment has long been debated. Behaviorists would argue for a situational explanation of depression. For example, from a behavior analytic perspective (Ferster, 1973), depression is conceptualized as behavior that is functionally controlled by contingencies in the environment. Depressive behaviors such as feelings of hopelessness and dysphoric mood are viewed as responses to continuous stimuli from the environment. Thus, behavior is flexible and constantly shaped by the situation, or situationally-controlled.

Others would argue that behavior is stable, trait-like, and longitudinally consistent. Psychodynamic theorists account for this consistency in terms of stable traits within the organism that allows the individual to behave in the same manner across many situations. For example, Akiskal, Khani, and Scott-Strauss (1979) advocated for the hypothesis that lifelong affective traits, or affective personalities, may represent gradual stages of transition into a depressive episode. For example, the cyclothymic personality may transition into a bipolar affective disorder.

Behaviorists would not employ the construct of stable personality traits in their explanation of longitudinal consistency. Staats (1975), a social behaviorist, explained longitudinal consistency as the fact that individuals live in fairly consistent environments, seeing the same people in the same work place or home. Consistent environments allow for stable contingencies for well-established behaviors. Skinner (1974) noted that our past learning histories shape our current repertoires so that how we respond to a situation today is influenced by a cumulative past learning that has had continuity.

As opposed to a personological approach to behavior, where personality is seen as stable and trait-like across situations, or a situational model, where behavior is seen as contingent upon the environment, the interactional approach suggests that behavior is a reciprocal transaction between various personality vulnerabilities and situational factors. This interactional model of situational specificity and longitudinal consistency offers a broad context in which to study depression. This interactional model has generated the specificity hypothesis, or as Robins (1990) defined it, the personality-event congruence hypothesis. The specificity hypothesis posits that specific events in the environment trigger depression in people who have a personality vulnerability, or past learning history, which matches the trigger event. The present study examined

the specificity hypothesis within the context of an interactional approach.

Sociotropy and Autonomy

Two types of personality vulnerabilities relevant to depression have been identified in the literature. Blatt (1974), a psychodynamic and object relations theorist, discussed two vulnerabilities as primary types of depression. Anaclitic depression involves feelings of helplessness, intense fear of abandonment, and being unloved. These individuals have an early disruption in their care giver relationship which results in trauma in the oral stage of development. Anaclitic individuals seek others and feel blissful when united and, conversely, feel depleted when rejected or abandoned. Therefore, they struggle to maintain direct contact with objects (people) who gratify their needs; they wish to be cared for and protected.

Blatt (1974) identified the other vulnerability as introjective depression. Introjective depression involves feelings of worthlessness, guilt, and a sense of having failed to live up to standards and expectations. These individuals have a higher ego development than is associated with anaclitic depression. Introjective individuals have a harsh, punitive, and critical superego that creates intense feelings of inferiority. Therefore, trauma occurs in the later phallic-Oedipal stage of development. Introjective

individuals have high ideals, a strong sense of morality, and fear being criticized. While the anaclitic individual is sensitive to separation, the introjective individual is sensitive to criticism and failure, perhaps due to hostile parenting. Blatt views these two vulnerabilities as interrelated on a continuum.

Arieti and Bemporad (1980), psychodynamic theorists, described the "dominant other" and "dominant goal" predispositions to depression. The "dominant other" individual has a need to be nurtured and for support, and clings to others. The significant other is relied on to give meaning, allow gratification, and maintain self-esteem. The "dominant goal" individual strives for lofty goals, is arrogant, and his/her behavior is often obsessive. This individual invests self-esteem into achieving a goal and shuns other activities that are diversions. The "dominant other" fits nicely with Blatt's (1974) anaclitic depression while the "dominant goal" matches Blatt's introjective depression.

Arieti and Bemporad (1980), while discussing these predispositions to depression, mentioned the importance of the interaction between environment and personality. They noted:

> Thus the environment and the patient both contribute to the transformation of the event into a cause: the environment, by offering the contingency of the event; the patient, by attributing either consciously or unconsciously a special meaning to the event (p. 1362).

Attachment theory has contributed to the hypothesis of vulnerabilities to depression as well. The central factor of Bowlby's (1980) theory is that disturbances in the development, maintenance, and/or termination of attachment bonds underlie a variety of psychopathological syndromes, including depression. Infants are innately prepared to learn from and take interest in their social environment (Gilbert, 1992). Bowlby discusses disturbances in early attachment that leads to anxiously attached individuals, or compulsively detached (self-reliant) individuals.

Beck (1983), coming from a cognitive perspective, identified two personality vulnerabilities as well - sociotropy and autonomy. On the one hand, sociotropy, or social dependency, "refers to the person's investment in positive interchange with other people" (Beck, 1983, p. 272). Highly sociotropic individuals are very concerned with the possibility that others will disapprove of or reject them and act in ways to please others to secure their attachments. On the other hand, autonomy "refers to the person's investment in preserving and increasing his independence, mobility, and personal rights...and attaining meaningful goals" (Beck, 1983, p. 272). Highly autonomous individuals are concerned about the possibility of personal failure and often act to maximize their control over the environment so to reduce the probability of failure. Autonomous individuals have their own set of internalized goals that are often higher than conventional norms.

Beck (1983) stated that these personality dimensions may be related to several areas of heterogeneity in depression, such as trigger events, clinical presentation, and treatment response. Supporting the specificity hypothesis, Beck proposed that depression should occur when sociotropic persons experience a perceived interpersonal loss or rejection, or when autonomous persons experience a perceived failure or lack of control over the environment. Beck's model, then, is an interactional one in the depression is "associated not only with recent negative events and with the personality dimensions of sociotropy and autonomy, but also with specific congruent interactions between these two classes of variables" (Robins, 1990, p. 393).

Empirical Support

Several studies to date have attempted to test the specificity hypothesis with sociotropic and autonomous personality vulnerabilities. In the ten studies discussed below, the pairing of sociotropy with negative social events (losses) was consistently a more robust finding than the pairing of autonomy with negative achievement events (failure). Nietzel and Harris (1990) note:

> The interaction of elevated dependency needs with negative social events is a uniquely pernicious combination compared to other "mismatched" pairings of vulnerabilities with types of life stressors. By contrast, the specific depressogenic effect of the match between high achievement/autonomy needs and

> failure events is not robust. Sometimes it is there; sometimes it is not; but seldom is it as toxic as the sociotropy-rejection coupling (p.291).

A study by Hammen, Marks, Mayol, and DeMayo (1985) was the first test of the specificity hypothesis as it relates to sociotropy/autonomy and depression. This longitudinal study of 94 college students, who were selected based on their responses to items on the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), followed participants monthly for four months. Participants were identified as having a dependent schema or a self-critical schema based on their preponderance of a specific type of thought content across four behavioral examples tasks. Once each month, the subjects completed questionnaires and interviews that assessed the presence of stressful life events. These measures included the Life Events Inventory (LEI; Cochrane & Robertson, 1973), the Psychiatric Epidemiology Research Inventory Life Events Scale (PERI; Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978) and the Life Experiences Survey (LES; Sarason, Johnson, & Siegel, 1978). Depressive symptoms were assessed monthly as well. The findings were, as predicted, that the dependent group had higher associations between depression and interpersonal events than with depression and achievement events. The prediction that the self-critical group would have higher associations between depression and

achievement events than with depression and interpersonal events was observed but was not significant.

There were several limitations of this study. The groups of dependent and self-critical personality types were selected based on methods developed for this study, with limited psychometric information. There was no control group. Also, the correlational nature of this study did not allow the researchers to make causal conclusions from their findings.

Hammen and Goodman-Brown (1990) extended the above mentioned methodology to a sample of children (ages eight to 16) that included high risk offspring of mothers with affective disorders and control children of normal mothers. As predicted, children became significantly more depressed over a six month follow-up period when they experienced more events in the domain of their personality vulnerability; the effect was stronger in the high-risk children. Because the sample size was small, Hammen and Goodman-Brown could not determine whether sociotropic and achievement-oriented children were equally susceptible to this effect (most children who became depressed in this sample were sociotropic).

Hammen, Ellicott, Gitlin, and Jamison (1989) found clear support for specificity in unipolar depression. Their longitudinal study of bipolar and unipolar/dependent and autonomous people, reporting symptoms and life events for

six months, found higher levels of depression with patients whose events matched their subtype in unipolar depression only. Twenty-two unipolar depressed and 25 bipolar depressed patients, of both sexes, were asked to complete the Sociotropy-Autonomy Scale (SAS; Beck, Epstein, Harrison, & Emery, 1983). Baseline and three month interviews were conducted to obtain information about stressful life events. Depressive symptoms were obtained longitudinally using Research Diagnostic Criteria (RDC; Spitzer, Endicott, & Robins, 1978) check lists. They found that the onset or exacerbation of symptoms, as well as the total number of symptoms, could be predicted for sociotropic individuals experiencing more negative interpersonal events than achievement events, and for autonomous-achievement patients experiencing more achievement events than interpersonal events.

This study is significant for several reasons. First, it demonstrates that the specificity hypothesis can be supported using a longitudinal design that could be tapping into trigger events more so than the other cross-sectional or retrospective designs. Also important is the finding that the specificity hypothesis was supported in unipolar depressed participants, implying, perhaps, that high dysphoria or depression may result in a higher likelihood of obtaining statistically significant support for specificity.

Hammen, Ellicott, and Gitlin (1989) continued to follow these patients every three months for two years, by way of telephone interview assessment. There were 15 patients who were symptomatic during this follow-up period and who could be classified as sociotropic/autonomous using the Sociotropy-Autonomy Scale (SAS; Beck et al., 1983). Hammen, Ellicott, and Gitlin found that among these unipolar depressed outpatients, their worst period of depressive symptoms was related to the occurrence of a preponderance of life stress that matched their personality vulnerability. Because the sample was small, the effect was significant only for the combined number of patients, using a regression analysis approach.

Another body of research testing the specificity hypothesis is being conducted by Robins and colleagues. Robins (1990) asked 78 depressed patients of both sexes to fill out a life events assessment using the Schedule of Recent Events (SRE; Holmes & Rahe, 1967)) and, using the Sociotropy-Autonomy Scale (SAS; Beck et al., 1983), also determined personality vulnerability. The congruence hypothesis was supported for sociotropy but not for autonomy in this sample. Highly sociotropic depressed patients reported more negative interpersonal events than negative autonomy events and more negative interpersonal events than autonomous patients. This pattern was not found in the autonomous depressed patients. A control group of

nondepressed schizophrenic patients showed no support for the specificity hypothesis. A second study employed the same methodology for 82 undergraduates of both sexes; there was a finding of personality-event congruence in dysphoric students (although not statistically significant), but not in nondysphoric students.

Again, these studies indicate moderate support for the specificity hypothesis. Robins' (1990) methodology does not address causal factors, only relationships. The use of a cross-sectional design opens the possibility for response biases in that sociotropic persons could recall more negative social events than actually happened or forget more negative autonomous events. The opposite could be occurring with autonomous persons. Also, as Robins (1990) noted, the sample size was small. Another interesting finding is that the depressed sample had 30 males and 11 females and the mildly depressed undergraduate sample consisted of 3 males and 12 females; despite these gender differences, the results were essentially the same. Robins (1990) found, as in the previous study by Hammen, Ellicott, Gitlin, & Jamison (1989), that the higher the dysphoria, the better the likelihood of supporting the specificity hypothesis. The specificity hypothesis does not appear to be generalizing to schizophrenia.

In another study, Robins and Block (1988) also found mixed support for the specificity model. Their design was a

correlational study of male and female college students (n = 98) measured on questionnaires assessing depression, as measured by the Beck Depression Inventory (BDI; Beck et al., 1961); recent life events, as measured by the Life Events Inventory (LEI; Cochrane & Robertson, 1973); and sociotropic/autonomous motivations, as measured by the Sociotropy-Autonomy Scale (SAS; Beck et al., 1983). The authors hypothesized that depression would be associated with the interaction of sociotropy with a high number of negative social events and autonomy with a high number of negative autonomous achievement events. They did not predict an interaction with events unrelated to their own domain. Using regression analyses, Robins and Block found higher depression for sociotropics who experience negative social events (specificity), as well as negative achievement events. Autonomy did not correlate with depression for either type of event.

Robins and Block (1988) noted that a major limitation of this study was its cross-sectional design which did not examine the causal direction of the relationships found. They called for more prospective longitudinal and analog experimental studies. Robins and Block also noted that the lack of support for autonomy as a vulnerability factor, as seen in the three studies cited thus far, could be due to a problem in measurement. They noted:

> The Autonomy scale actually appears to assess at least two distinct constructs, need for achievement and need for control...The internal consistency figures for the Autonomy scale are less than optimal and suggest that in future work it may be worthwhile to consider needs for achievement and for control as separate constructs, each of which may need to be represented by a greater number of items than in the present scale in order to achieve adequate internal consistencies as primary rather than secondary factors (p. 851).

The relationships between the various measures of sociotropy and autonomy are discussed in detail further in the Introduction.

Recently, Segal, Shaw, Vella, and Katz (1992) followed 59 remitted depressed participants longitudinally to determine whether dependent or self-critical persons were more vulnerable to relapse of depression after exposure to life events congruent with their personality vulnerabilities. Segal et al. used the factor scales of the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) to measure affiliate and achievement concerns and beliefs. Every two months, for one year, participants were sent the DAS, the Beck Depression Inventory (BDI; Beck et al., 1961), and the Psychiatric Epidemiology Research Inventory Life Events Scale (PERI; Dohrenwend et al., 1978) which assesses 102 life events. Fifty percent of the participants relapsed. A regression analysis revealed that:

> congruency effects, as measured by the occurrence of achievement-related adversity in the lives of self-critical subjects, accounted for a significant increment in relapse variance over each variable

> entered singly. When data from the 2 months just before relapse were analyzed, some evidence of congruency effects in dependent subjects experiencing interpersonal-related adversity was obtained (p. 26).

Segal, Shaw, Vella, and Katz' (1992) study found support for the specificity hypothesis; however, the findings were more robust with the autonomy/achievement failure pairing. Limitations of this study include the fact that the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) has not been tested psychometrically as a measurement of personality vulnerability. As is discussed later, it was designed to measure global psychopathology. Also, the use of a check list design to assess life events has its limitations in that no information is obtained about how the event is functioning for the person, and little is revealed about the process of event resolution (which may be relevant to the study of relapse).

A similar study by several of these authors (Segal, Shaw, & Vella, 1989) was published several years ago which, again, found mixed support for the specificity hypothesis, this time in the opposite direction. Segal et al. (1989) followed ten dependent and 16 self-critical remitted depressed patients for six months. As with the previous design (Segal et al., 1992), participants were selected using the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) and were assessed every two months for six months, using the DAS, the Beck Depression Inventory (BDI;

Beck et al., 1961) and the PERI Life Events Scale (Dohrenwend et al., 1978). Results indicated that for dependent participants only, interpersonal, rather than achievement, life events were associated with both self-reported levels of depression and with clinical relapse. Participants in the self-critical group relapsed equally as a result of both types of events (interpersonal and achievement).

Zuroff and Mongrain (1987) asked dependent (n = 16), self-critical (n = 14), and control groups (n = 15) of college women to listen to audiotapes depicting a rejection scene and an achievement failure scene and to rate the experience using measures of anaclitic (dependent) and introjective (self-critical) state depression created by the authors. Participants were selected based on their responses to the Depressive Experiences Questionnaire (DEQ; Blatt, Quinlan, Chevron, & McDonald, 1982). They found that dependent participants reported anaclitic depressions that were specific to rejection, supporting the specificity hypothesis. Self-critical participants, however, reported introjective depression in response to both failure and rejection, indicating nonspecificity. The three groups did not differ from one another in their responses to failure.

Zuroff and Mongrain's (1987) study is the only published research, to date, to employ an experimental design, thus allowing for conclusions about causality to be

drawn. This study did, however, have several limitations. The authors noted that no baseline measures of mood were collected, that only one episode of loss and failure were presented so generalizability is limited, and that stimuli were audio-taped presentations. The measures of anaclitic and introjective state depression were not subjected to psychometric scrutiny. Another confound not noted by the authors but significant is the fact that the achievement failure scene was set up so that a father told his son or daughter about a failure. This scenario was confounded because this failure could to be viewed as a social loss as well, given the feedback was from another person. Zuroff and Mongrain's (1987) experimental design was used in the present study, and several of these limitations were addressed.

In a later study, Zuroff, Igreja, and Mongrain (1990) asked 46 undergraduate women to complete the Dysfunctional Attitude Scale (DAS; Weissman & Beck, 1978), the Dependency and Self-Criticism scales from the Depressive Experiences Questionnaire (DEQ; Blatt, et al., 1982), and the Beck Depression Inventory (BDI; Beck, et al., 1961) at the beginning of the study and twelve-months later. Participants also rated their most severe period of dysphoria during the 12-month interval using a retrospective version of the BDI and measures of anaclitic and introjective state depression. The authors found that

dependency predicted anaclitic state depression, and self-criticism predicted introjective state depression. The worst periods of depression for both dependent and self-critical participants involved interpersonal events.

The study supports the specificity hypothesis although it was not directly tested. The goal of this study was to examine the dysfunctional attitudes of the two personality groups. Using a retrospective design to assess depression and trigger events has its drawbacks because experiences of depression can alter an individual's perception of an event, and it is difficult to determine if the events noted retrospectively were precipitating events or consequences of the depression. As has been discussed in the previous studies, the Depressive Experiences Questionnaire (DEQ; Blatt et al., 1982) is but one of several measures available to select dependent and self-critical personality vulnerabilities.

A study completed last year by this experimenter (Johnson, Nelson-Gray, Foyle, & DeArellano, 1991) found mixed support for the specificity hypothesis. Sixty participants were selected based on their scores on the Millon Clinical Multiaxial Inventory (MCMI; Millon, 1977). Histrionic (sociotropic) participants, compulsive (autonomous) participants, and controls were asked to perform one of two types of tasks - either achievement tasks (math problems and analogies) or social tasks (sentence

completion and interview topics). Each task had a reinforcement phase (either verbal social reinforcement or verbal achievement reinforcement), followed by an extinction phase. Changes in mood were assessed after reinforcement and extinction using the Depressive Adjective Check Lists (DACL; Lubin, 1981). As would be expected, trends in the data revealed that histrionic individuals reported more depressed affect with the withdrawal of social reinforcement, and compulsives reported more depressed affect with the withdrawal of achievement reinforcement; the control group tended to stay the same with the withdrawal of both social and achievement reinforcement. There were no task differences. However, an ANOVA revealed a significant change in affect, in the depressive direction, in histrionics with achievement reinforcement withdrawal, $F = 3.65$, $p = .03$.

This study had several limitations. First, the authors made the leap from sociotropy and autonomy to DSM-III-R (APA, 1987) Axis II (personality disorders) diagnostic categories without correlational data on the relationship between histrionic personality disorder and sociotropy, and obsessive/compulsive personality disorder and autonomy. Secondly, baseline data was not obtained. Thirdly, the tasks and reinforcements were confounded in that they all had a social component to them. Both social and achievement reinforcement was verbal and, thus, was a social interaction between the participant and experimenter.

Measures of Sociotropy and Autonomy

Overall, these studies have found the specificity hypothesis, or personality-event congruence hypothesis, more robust with the dependency/negative social events pairing than with any other pairings of vulnerability with life stressors. Robins (1992) suggested that these findings are more the result of problems with measurement, rather than with the specificity hypothesis. One measurement problem was the use of check lists to obtain information on life events. With the studies listed above, life events information was obtained by having subjects endorse items from lists like the Life Events Inventory (LEI; Cochrane & Robertson, 1973) and the Schedule of Recent Events (SRE; Holmes & Rahe, 1967). Two people could endorse the same event when, in fact, the events could turn out to be very different if more information was obtained. Conversely, two people could endorse two separate events which actually function in a similar manner for both people.

With regard to the various measures of personality vulnerability, there is general agreement that the autonomy (self-critical) scales appear to be weaker and less consistent measures than the various sociotropy (dependency) scales (Blaney & Kutcher, 1991; Nietzel & Harris, 1990; Robins, 1992).

In the studies cited above, if standardized measures of personality vulnerabilities were used, the most commonly

used measures were: The Depressive Experiences Questionnaire (DEQ; Blatt et al., 1982), the Revised DEQ (Welkowitz, Lish & Bond, 1985); the Sociotropy-Autonomy Scale (SAS; Beck et al., 1983), and the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978). Robins (1992) critiqued these scales. The DEQ and Revised DEQ, through factor analyses, have been found to have three factors - dependency, self-criticism, and efficacy. It is dependency and self-criticism that define the sociotropy and autonomy dimensions, respectively. The two factors of the DEQ are strongly correlated; Blatt (1974) theorized the two dimensions to be interrelated on a continuum. Robins suggested that many of the items on the questionnaire encompass both dimensions and some items do not tap into either dimension. Also, the questions appear to reflect affective states more than personality dimensions.

The Sociotropy-Autonomy Scale (SAS), developed by Beck et al., 1983), through factor analyses, yielded two factors - sociotropy and autonomy, with subscales within each factor. Robins (1992) reported that the Autonomy scale is insufficient in that the subscales do not hang together well. Furthermore, autonomy items include statements that are really reverse sociotropy items, rather than autonomy items. Beck (1983) views these dimensions as orthogonal; by asking reversal questions, Beck is going against his theory and suggesting more of a continuum (Robins, 1992). Also,

Robins noted, the autonomy scale is not so much a scale of self-criticism and perfectionism, as it is of self-standards, which is actually an indication of what Robins calls healthy self-achievement.

The Dysfunctional Attitudes Scale (DAS), also developed by Beck (Weissman & Beck, 1978), is a global measure of vulnerability to psychopathology. It was not designed to be a measure of personality vulnerability but factor analyses yielded two factors analogous to the personality dimensions of sociotropy, named approval of others, and autonomy, named performance evaluation. This scale has yet to receive adequate validity and reliability work as a measure of personality vulnerability.

Robins (1992) reviewed the information on these measures and, incorporating cognitive theory, developed a new measure designed to examine the two constructs as orthogonal dimensions. The psychometrics of the Personal Style Inventory, Version II (PSI; Robins, Ladd & Luten, 1990) is discussed in detail in the Materials section. Overall, the PSI, which has Sociotropy and Autonomy subscales, has been found to have a good factor structure, internal reliability, and temporal stability. According to Robins (1992), the PSI's Autonomy scale is better than the Autonomy scale of the Sociotropy-Autonomy Scale (SAS; Beck et al., 1983) because it better identifies self-criticism and not efficacy. He also reports that it is better than

the Autonomy scale of the Depressive Experiences Questionnaire, (DEQ; Blatt, 1982) with regard to its relationship to depression, as measured by the Beck Depression Inventory (BDI; Beck et al., 1961). The Sociotropy scale of the PSI correlates higher with dependency, as does the SAS's Sociotropy scale. Also noteworthy is the finding that, in an undergraduate sample, the correlation between the sociotropy and autonomy factors is weak, unlike the correlation of the DEQ's factors. This suggests orthogonal dimensions.

Another strength of the Personal Style Inventory (PSI; Robins, et al., 1990) is its usefulness in predicting clusters of clinical features (Robins, 1992; Robins & Luten, 1991). The other measures of personality vulnerability have not been successful in doing so (Persons, Miranda, & Perloff, 1991; Robins, Block, & Peselow, 1989). The Personal Style Inventory, Version I, in a study of 50 unipolar depressed inpatients, was able to predict clinical features consistent with Beck's hypotheses, that is, more reactive-type symptoms associated with sociotropy/depression and more endogenous-type symptoms associated with autonomy/depression (Robins & Luten, 1991).

The present study examined the specificity hypothesis, using the Personal Style Inventory, Version II (PSI; Robins et al., 1990) to identify sociotropic and autonomous personality vulnerabilities. The study was developed to

explore the causal relationship between negative life events and personality vulnerabilities in the development of depression; therefore, an experimental design was used. Information was obtained about other factors that could contribute to the development of depression, such as psychosocial factors of social support resources and previous history of loss and failure.

Statement of Purpose

The present study focused on possible trigger events for recurrent depression based on the sociotropic person's concern for attention and social success, and on the autonomous person's concern for work and achievement success. Based on an interactional model of behavior suggesting that there is a reciprocal transaction between personality and situational factors, the following hypotheses are proposed:

1) Sociotropic personality types, that is the High Sociotropy/Low Autonomy group, or Hi S group, will experience more depressed affect when exposed to negative social experiences (loss) than they will when exposed to negative achievement experiences (failure). Furthermore, this Hi S group will experience more depressed affect when exposed to negative social experiences than will autonomous personality types (the Low Sociotropy/High Autonomy group, or Hi A group) or those persons with neither personality vulnerability (the Low Sociotropy/Low Autonomy group, or Lo S/A group).

2) Autonomous personality types, that is the Hi A group, will experience more depressed affect when exposed to negative achievement experiences (failure) than they will when exposed to negative social experiences (loss). Furthermore, this Hi A group will experience more depressed affect when exposed to negative achievement experiences than will the Hi S or Lo S/A groups.

3) Persons that are both sociotropic and autonomous, that is the Hi S/A group, will experience more depressed affect when exposed to both negative social experiences (loss) and negative achievement experiences (failure) than will those persons with neither personality vulnerability, the Lo S/A group.

CHAPTER II

METHOD

Participants

Eighty female undergraduate students at the University of North Carolina at Greensboro served as research participants in this study. All participants were enrolled in psychology courses, either General Psychology (n = 72), Cognitive Psychology (n = 5), Sex, Gender, and Behavior (n = 2), or Introduction to Personality (n = 1). They either received research credit for their participation in this study (n = 40), or were paid $10.00 if they had already completed their research requirement and chose to participate.

Participants were screened on the dimensions of sociotropy and autonomy with the Personal Style Inventory, Version II (PSI, Robins, et al., 1990) and based on their scores, were placed in one of four groups. In order to determine group placement, means and medians for the Sociotropy and Autonomy scales of the PSI had to be determined for this population. Two hundred eleven female undergraduate General Psychology students were administered the Personal Style Inventory. Robins (1992) reported previous data on the Personal Style Inventory, obtained from an undergraduate population, and found the Sociotropy Scale

to have a mean of 95.8, with a standard deviation of 15.9; and the Autonomy Scale to have a mean of 82.6, with a standard deviation of 15.1 (*n* = 411). In the present sample of females (*n* = 211), the Sociotropy Scale had a mean of 93.4, with a standard deviation of 18.2, and a median of 94. The Autonomy Scale had a mean of 82.9, with a standard deviation of 13.6, and a median of 82.

Once means and medians were identified, the groups were determined. Twenty students who scored 111 or more (one standard deviation or more above the mean) on the Sociotropy Scale and 82 or less (median or below) on the Autonomy Scale of the Personal Style Inventory, Version II (PSI, Robins et al., 1990) served as the Hi *S* group. Twenty students who scored 96 or more (one standard deviation or more above the mean) on the Autonomy Scale and 94 or less (median or below) on the Sociotropy Scale of the PSI served as the Hi *A* group. Twenty students who scored 111 or more (one standard deviation or more above the mean) on the Sociotropy Scale and 96 or more (one standard deviation or more above the mean) on the Autonomy Scale of the PSI served as the Hi *S*/*A* group. Twenty students who scored 94 or less (the median or below) on the Sociotropic Scale and 82 or less (the median or below) on the Autonomous Scale of the PSI served as the Lo *S*/*A* group. See Table 1 for a summary of group scores on the Sociotropy and Autonomy Scales, as well

as demographic information on race and age. (Table 1 and all subsequent tables are located in Appendix A).

The decision to use the mean to include participants and the median to exclude participants was suggested by Robins (1992). Robins commented that it is difficult to obtain an adequate sample of people scoring one standard deviation below the mean on the measures in this population. In actuality, the mean and median in the present study's sample (n = 211) were very similar. For sociotropy, the mean and median were both 94. For autonomy, the mean was 83 and the median 82.

Experimental Design

This experiment had four groups and two types of negative events. The between-subjects variable was type of personality vulnerability. The four personality vulnerability groups were: (a) High Sociotropy/Low Autonomy (Hi S); (b) Low Sociotropy/High Autonomy (Hi A); (c) High Sociotropy/High Autonomy (Hi S/A); and (d) Low Sociotropy/Low Autonomy (Lo S/A). The within-subjects variable was the type of negative event (one block of two videotaped scenes depicting social loss or rejection, and one block of two videotaped scenes depicting achievement failure). The blocks of videotaped scenes were counter-balanced across all groups to control for any order effects.

The three dependent variables were the participants perceived level of depressed affect, as measured by the

Depression Adjective Check Lists (DACL; Lubin, 1981), following social loss videotapes, achievement failure videotapes, and the difference between these two scores. The difference score, which was the social loss post-treatment DACL score minus the achievement failure post-treatment DACL score, was computed in order to determine which type of negative event was evoking more depressive affect within groups. If the social loss scenes evoked more depressed affect than the achievement failure scenes, a positive difference score would be expected. Conversely, if the achievement failure scenes evoked more depressed affect than the social loss scenes, a negative difference score would be expected.

Covariates obtained included: baseline depression, as measured by the Beck Depression Inventory (BDI; et al., 1961); baseline affect before each treatment exposure, as measured by the DACL; recent life events, as measured by the Life Experiences Survey (LES; Sarason et al., 1978); and social support, as measured by the Social Support Questionnaire (SSQ6; Sarason, Sarason, Shearin, & Pierce, 1987).

It is important to realize that baseline depression, as measured by the BDI, is a relative term in this study. Participants were not clinically depressed. In order to be categorized as clinically depressed, a BDI score of 16 or greater is necessary. None of the participants in this

study scored above 15. For this study, depression is being used in a relative sense, not in absolute terms.

Materials

Screening Measure: Personal Style Inventory, Version II (PSI)

As noted, subjects were screened and assigned to experimental groups based on their scores on the Personal Style Inventory, Version II (Robins et al., 1990, see Appendix B). The PSI is a self-report measure that requires the individual to indicate whether he/she agrees or disagrees, and to what extent, with each of the 48 statements about personal characteristics. Each item is rated on a 6-point scale, from strongly disagree to strongly agree. Of the 48 statements, 24 are sociotropic items and 24 are autonomous items. Within each scale are three subscales. The sociotropic items include subscales of: Concern about what others are thinking (n = 7), Dependency (n = 7), and Pleasing others (n = 10). The autonomous items include subscales of: Perfectionism/Self-criticism (n = 4), Need for control (n = 8), and Defensive separation (n = 12). The Sociotropic and Autonomous scales are considered to be orthogonal.

In a sample of 411 undergraduates, the internal consistencies were .88 for the Sociotropy scale and between .72 and .83 for its subscales; and .86 for the Autonomy scale and between .70 and .80 for its subscales (Robins,

1991). The correlation between sociotropy and autonomy was .18 and none of the correlations of subscales across the two main factors was as high as any of the correlations among the subscales within each main factor. In a subsample of 169 undergraduates, correlations with the Beck Depression Inventory (BDI; Beck et al., 1961) were .20 for sociotropy and .27 for autonomy, and in another sample were .20 and .13, respectively (n = 147). Robins believes that these correlations are ideal since these items are intended to be vulnerability measures and not measures of a depressive state. "Test-retest reliabilities of the PSI Version II scales in a subsample of 74 students, over a 5 to 13 week period, were .80 for Sociotropy and .69 for Autonomy" (Robins, 1991, p. 2).

Robins (1991) reports that construct validation has been provided by a correlation with the Revised Depressive Experiences Questionnaire (DEQ; Welkowitz et al., 1985). Sociotropy correlated .84 with the Dependency scale of the Revised DEQ and .50 with its Self-Criticism scale, whereas autonomy correlated .12 with Dependency and .50 with Self-Criticism. Robins (1991) noted:

> We do not view the correlation of .50 between Sociotropy and Self-Criticism as a problem, since there is evidence that the Self-Criticism scale is, to some extent, a measure of depressed affect rather than personality e.g. a strong correlation with depression level and item content that seems to reflect an affective state (p. 2).

The Personal Style Inventory (PSI; Robins et al., 1990) Autonomy Scale, according to Robins (1991), has an advantage over the Autonomy scale of the Sociotropy-Autonomy Scale (SAS; Beck et al., 1983) because the latter shows a strong correlation with the Efficacy subscale, rather than the Self-Criticism subscale. Robins (1991) notes that the Autonomy Scale of the SAS appears to be not so much a measure of self-criticism and perfectionism as it is a measure of self-standards which is a healthier self-achievement scale.

Robins (1993) notes that sex differences appear to be minimal. Robins cites that in the original derivation study using undergraduates (n = 411), there was a statistically significant sex difference but not substantially significant; this was attributed to the large sample size. Men scored slightly but significantly higher than women on autonomy, t = 2.44, p<.05, and women score slightly but significantly higher than men on sociotropy, t = 2.65, p<.01. In the validation study using undergraduates (n =156), there were no significant sex differences on either scale. Robins and Luten (1991) obtained data on 50 depressed adults (13 males and 37 females) and found males and females did not differ significantly on either scale of the Personal Style Inventory (PSI; Robins et al., 1990). In the present norming sample, only female participants were included.

Dependent Measure: Depressive Adjective Check Lists (DACL)

Depressive affect, a more transient depressed feeling or mood, was self-reported by each subject using the Depression Adjective Check Lists (DACL; Lubin, 1981; see Appendix C). Depressive affect was assessed four times during the experiment, before and after each of the two manipulations. The DACL contains seven versions of the scale, making repeated measures over a short period of time possible. Each participant received four different versions of the DACL, randomly chosen from the complete set of seven, so that each participant was receiving a different combination of the DACL. The mean score on the DACL is 7, with increasing scores indicating increasing depressive affect. Each version of the DACL contains 32 to 34 adjectives, half of which are positive indicators of depression and half of which are negative indicators of depression. Standard instructions ask the person to check the words that describe how they are feeling today. The instructions were changed slightly to require the person to respond to how they are feeling at that particular moment.

Shaw, Vallis, and McCabe (1985) summarized the psychometric qualities of the Depressive Adjective Check Lists (DACL; Lubin, 1981). Internal consistency of the lists is high, with split-half correlations ranging from .82 to .93 for the seven lists, and correlations between the lists ranging from .80 to .93. Concurrent validity

coefficients with the Beck Depression Inventory (BDI; Beck et al., 1961) are .38 to .66 and with the Minnesota Multiphasic Personality Inventory - Depression Scale (MMPI-D; Hathaway & McKinley, 1943) are .25 to .53. These low concurrent validity scores could be explained by the fact that the DACL was designed to measured depressed mood while the BDI and MMPI-D are designed to measure the syndrome of depression.

Pre-Experimental Measure - Beck Depression Inventory (BDI)

Experimental participants were asked to complete the Beck Depression Inventory (BDI; Beck et al., 1961; see Appendix D) to obtain baseline data on the presence and severity of symptoms of depression. The BDI is the most frequently used self-report instrument for assessing the severity of depression (Shaw et al., 1985). This 21-item scale consists of four self-evaluative statements scored 0 to 3, with the higher number representing a greater severity of the depressive symptom. Responses are added together and scores range from 0 to 63. According to Shaw et al., BDI scores are generally categorized into levels of depression so that: 0-9 indicates a nondepressed state (normal), 10-15 reflects mild depression, 16-23 reflects moderate depression, and 24-63 reflects severe depression.

There has been extensive psychometric examinations of the Beck Depression Inventory (BDI; Beck et al., 1961). Shaw et al. (1985) summarized the findings of this scale's

internal consistency and concurrent validity. In terms of internal consistency, split-half reliability coefficients have been reported in the range of .58 to .93, and item-total correlations ranged from .22 to .86 with the average being .68. Test-retest correlations have ranged from .69 to .90, but it is important to note that test-retest is a poor evaluative criterion due to expected changes in symptom severity during a depressive episode. In terms of concurrent validity, Shaw et al. (1985) noted that the Beck Depression Inventory (BDI; Beck et al., 1961) has been correlated with clinician's ratings of depression in the range of .62 to .77. Also, there have been moderate to good correlations with other measures of depression, such as the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960), a clinical interview instrument, as well as with self-report measures of depression such as the Minnesota Multiphasic Personality Inventory - Depression Scale (MMPI-D; Hathaway & McKinley, 1943) and the Zung Self-Rating Depression Scale (SDS; Zung, 1965).

Post-Experimental Measures

Participants' Perceptions

After the experiment, and before debriefing, three other questionnaires were given which asked questions about each participant's perceptions, social support, and recent life events. The first post-experimental measure of the participants' perceptions consists of three parts, and can

be found in Appendix E. The first part of this questionnaire was a subjective assessment of how well the individual was able to "enter imaginatively into each situation" (Zuroff & Mongrain, 1987, p. 17). As with the Zuroff and Mongrain study, the participants rated this feature on a 7-point Likert scale anchored by not at all to extremely (see Appendix E).

The second part of the first post-experimental measure asked two sets of questions (see Appendix E). The first set of questions asked what it was about each set of videos that caused a change of mood, if any, for that individual. The purpose behind asking this set of questions was the hypothesis that individual differences may be important. Robins and Block (1988) noted:

> Events rated by us as primarily negative autonomy or achievement related for the average person, such as unemployment or dropping out of school, may be perceived by highly sociotropic individuals as having a greater impact on their social relationships (e.g., because of social censure) (p. 850).

The same can be assumed for autonomous people in that they could be perceiving social losses as personal failures.

The third set of questions on the first post-experimental measure (see Appendix E) was an inquiry into whether the person had experienced a major social loss or personal failure within the past two years, and, if so, to briefly describe the loss and its present impact on the

participant. The data obtained from the third set of questions were not analyzed in the present study because the same information was obtained by the Social Support Questionnaire (SSQ6; Sarason et al., 1987).

Social Support Questionnaire

The second post-experimental measure was designed to determine the social support of the individual. There is evidence that good social support, both real and perceived, serves as a buffer against depression with certain negative life events (Sarason et al., 1987). The authors noted:

> In a study of interrelationships among negative life events, social support and illness, social support was shown to be a significant moderator of the relationship between life events and illness...The correlation between negative life events and illness was much stronger among subjects with low than high SSQ scores (p. 499-500).

The 6-item Social Support Questionnaire (SSQ6; Sarason et al., 1987, see Appendix F) is a short form of the 27-item Social Support Questionnaire (SSQ; Sarason, Levine, Basham, & Sarason, 1983). The SSQ6 has two parts to each item, the first part assesses the number of available others the individual can turn to in times of need, and the second part measures the individual's degree of satisfaction with the perceived support. Satisfaction is rated on a 6-point Likert scale from "very dissatisfied" to "very satisfied".

The 6-item Social Support Questionnaire (SSQ6; Sarason et al., 1987) has been found to be highly correlated with

the SSQ (Sarason, et al., 1983), has high internal reliability, and is similar to the SSQ in personality variables (Sarason et al., 1987). A psychometric examination of the SSQ6 in an undergraduate population found that it correlated with the SSQ .95 on number and .96 on satisfaction. The internal reliability for the SSQ6 ranged from .90 to .93 for both number and satisfaction. Although the test-retest coefficients were not stated, they were reported as highly satisfactory. The test-retest reliability for the SSQ, at four weeks, is .90 for number and .83 for satisfaction (Sarason et al., 1983). The two scales' correlations with depression, based on the Beck Depression Inventory (BDI, Beck et al., 1961), ranged from -.18 to -.22, and there were no significant differences between the SSQ and SSQ6.

Life Experiences Survey

The Life Experiences Survey (LES; Sarason et al., 1978), is a 57-item self-report measure that allows respondents to indicate events that have occurred within the past year (see Appendix G). With the LES, the respondent endorses any items that have occurred during the past year, and rates the impact of that event on a 7-point Likert scale, from extremely negative to extremely positive. The LES was selected because of the items' relevance to college students, and because it is becoming the standard measure in this field (Robins, 1992). Robins (1992) has categorized

the events listed in the LES as having consequences that are primarily positive social related (n = 5), negative social related (n = 20), positive autonomy/achievement related (n = 6), negative autonomy/achievement related (n = 15), or ambiguous (n = 9). These life events were classified by agreement of 3 of 4 raters.

Two test-retest reliability studies of the Life Experiences Survey (LES; Sarason et al., 1978) have been conducted on undergraduate populations. Coefficients for the total change score, over five to six weeks, was .63 ($p<.001$) and .64 ($p<.001$), indicating that the measure is moderately reliable, given the small sample sizes (n = 58 and n = 34). The LES was found to be correlated with state anxiety, r = .37, $p<.01$, and the negative life change score was found to be correlated with depression, r = .24, $p<.05$. The content validity of the LES has also been demonstrated in two comparative studies of the LES with the Schedule of Recent Experiences (SRE; Holmes & Rahe, 1967). In the first study, the difference between the correlations obtained between the LES and the SRE on depression and anxiety was significant, $t(66) = 2.31$, $p<.05$. In the second study, the correlations obtained between the LES and the SRE on personal maladjustment were not significant. The authors noted the superiority of the LES measure of negative change.

Stimulus Materials

Each participant was asked to view two blocks of videotapes, each block containing two 2-minute scenes. One block of videos depicted social losses, and one block of videos depicted achievement failures. Six theater majors (one male and five females) were hired from the Communications and Theater Department at the University of North Carolina at Greensboro to portray the people in the four scenes. Different actors were used in each scene to avoid actor effects across scenes or blocks. Scripts of the scenes (see Appendix H) were written by the experimenter, and include descriptions of the needs and vulnerabilities of sociotropic and autonomous individuals, based on Nietzel and Harris' (1990) review of the theories of these vulnerabilities. Rather than using Blatt's (1974) theory or Beck's (1982) theory alone, features were obtained than encompass both. Nietzel and Harris (1990) noted:

> Contemporary conceptualizations of these two pathways show a remarkable convergence, regardless of whether approached from an analytic perspective, in which personological vulnerabilities persist as re-enacted conflicts from the past, or from a cognitive perspective, in which depressogenic schemata prime the person to be susceptible to dysphoric states. (p. 280)

The social loss scenes included one female being rejected by a boyfriend and another female being rejected by a same-sex peer. The camera focused more on the rejecting person than on the actress being rejected in order to avoid

response cuing. The achievement failure scenes included different females than were employed in the social loss scenes; the achievement failure scenes included one female finding out that she has failed a class necessary for graduation by way of a letter posted on the professor's door and another female finding out that she has not gotten a needed job by way of a letter from the employer. Again, care was taken to avoid response biasing by filming the actresses from behind while reading their rejection letters.

Validation of Stimulus Materials

Although care was taken to avoid including any social component to the achievement scenes, and any failure component to the social scenes, content validation of the scenes was obtained to insure that the scenes contained what the experimenter had intended. The content validity of the four videotaped scenes was rated by two groups of individuals. One group consisted of 33 female undergraduate General Psychology students who were asked to rate the content validity of the four scenes and received research credit for their participation. These students rated the videos in small groups. The order of the four scenes was randomly assigned across the groups. Content validation by undergraduate females was important since this was the same population from which the participants came. The second group consisted of experts in the field who were also asked to validate the scenes. Five upper-level graduate students

in Clinical Psychology were chosen as experts due to their knowledge and expertise in the dimensions of sociotropy and autonomy, as well as the interface between personality and depression. These five experts viewed the scenes individually. The order of the four scenes was randomly assigned.

Signed consent was obtained by undergraduate and expert raters (see Appendix I). Each rater was given four copies of a check list (see Appendix J) prior to observing any videos. The check list consisted of two parts, both of which were on the same page. First, there was a list of features of sociotropy and autonomy that were compiled based on Nietzel and Harris' (1990) review of the literature. The components of sociotropy that the raters were asked to identify, if present, were: a sense of helplessness, interpersonal loss, being unloved, not being cared for, separation, loss of protection, loneliness, weakness, being abandoned, wanting others to be dominant, and wanting intimacy. The components of autonomy that the raters were asked to identify, if present, were: feeling worthless, feeling guilty, having a sense of not living up to standards, personal achievement failure, feelings of inferiority, feeling that punishment is deserved, being criticized, wanting independence, self-blame, need for control, and goals not obtained. These components were not identified as sociotropic or autonomous on the checklists;

they were merely listed. The second part of the check list contained a general question as to whether the scene appeared to be portraying an interpersonal social loss or a personal achievement failure. An interpersonal social loss was defined as one person being rejected by a person who is significant in their life. A personal achievement failure was defined as one person failing to achieve a goal that is important to them. After each scene, the raters were asked to check all items that they believed appeared in the scene.

The videotapes appear to be content-valid stimulus material. For the social loss scene where the boyfriend is rejecting his girlfriend, 94% of undergraduates and 100% of experts agreed that the scene depicted an interpersonal social loss. For the social loss scene where one female friend is rejecting her female friend, 97% of undergraduates and 100% of experts agreed that the scene depicted an interpersonal social loss. For the achievement failure scene where the female student fails a course, 100% of undergraduates and 100% of experts agreed that the scene depicted a personal achievement failure. For the achievement failure scene where the female student fails to get a jobs she needs, 91% of undergraduates and 100% of experts agreed that the scene depicted a personal achievement failure.

Tables 2 and 3 contain more support for the validity of the videotapes. In Table 2 are found the percentages of

sociotropic and autonomous components that the undergraduate raters felt were present in each videotaped scenario. In Table 3 are found the percentages of sociotropic and autonomous components that the expert raters felt were present in each videotaped scenario. Overall, the two social loss scenes contain significantly more sociotropic components than autonomous components, and the two achievement failures contain significantly more autonomous components than sociotropic components. It is important to note, however, that the social loss scenarios were more powerful than the achievement failure scenarios. Both student and expert raters perceived more sociotropic components in the social loss scenes, overall, than they perceived autonomous components in the achievement failure scenes.

Equipment

A standard color television set and VCR to show the video recordings were used.

Procedure

Each participant was tested individually by the present author. The experimenter was blind to the Personal Style Inventory, Version II (PSI; Robins et al., 1990) scores of the participant to prevent experimenter bias. Two research assistants in Dr. Nelson-Gray's lab assisted the experimenter in scoring the PSI. Four lists of subjects, one list for each group, were then compiled by the

experimenter, with group identification unknown to the experimenter at time of each person's participation in the study.

Testing took approximately 35 to 45 minutes to complete and occurred in one of two small experimental rooms in the Department of Psychology at the University of North Carolina at Greensboro. Participants were seated at a table in front of a television set. Participants were told that they would be asked to watch several videos depicting scenes that could occur in the average college student's life and record their feelings on a mood scale as they went along. Participants, after signing consent and rating their level of depression and depressed affect, viewed one block of two, two-minute videotaped scenarios (social loss or achievement failure) and then responded to the videotapes by endorsing any adjectives on the Depressive Adjective Check Lists (DACL; Lubin, 1981) that they felt would describe how they would feel if they had experienced the same events. After the first set of videotapes, a 5-minute music video played, followed by another baseline DACL, the presentation of the second set of videotapes, and a final DACL. Post-experimental questionnaires were then completed.

Listed below in chronological order is the complete experimental procedure:

1. After being seated, each participant was informed that she would be asked to view several brief video scenes that

depicted events that could occur in a typical college woman's life and would then be asked to respond to these scenes by completing a check list. Each participant was told that all information would be held in strict confidence and nothing would ever identify them. They were reminded that they were volunteering for the study and that they had the option to discontinue a task, or stop altogether, if necessary, without consequence. Each participant was then given a consent form to read and sign (see Appendix K). Any questions were answered.

2. After obtaining signed consent, the participant was asked to complete the Beck Depression Inventory (BDI; Beck et al., 1961; see Appendix D). The BDI was scored immediately after its administration and any participant with a score of 16 or higher (indicating clinically significant depression) was not included in the study, for two reasons. First, there would be a ceiling effect of mood change. More importantly, ethically, these participants should be given the opportunity to seek services for their depression, if they desired, by way of a list of referral sources. There were five participants who scored 16 or above on the BDI and these participants were debriefed and referral sources were given (see Appendix L).

3. If the participant met the criteria of 15 or less on the Beck Depression Inventory (BDI; Beck et al., 1961), and had not previously completed the Personal Style Inventory,

Version II (PSI; Robins et al., 1990; see Appendix B), the PSI was administered and scored after completion of the experiment.

4. Each participant was then asked to complete the first of four versions of the Depressive Adjective Check Lists (DACL; Lubin, 1981; see Appendix C).

5. Next, each participant was asked to view the first of two blocks of videotaped scenarios. Each block consisted of two, two-minute scenes, with one block depicting social loss (rejection) scenes and one block depicting achievement failure scenes. The order of the two scenes within each block as well as the order of the blocks were counter-balanced in an effort to avoid order effects. Appendix H contains the scripts for each of the four scenes. The following oral instructions were given:

> You are about to see two brief scenes. In each scene there is a woman. What I would like for you to do is watch each scene and try to put yourself in the woman's place. Try to imagine that what is happening to her is happening to you. After the scenes are over, I will turn off the TV and say okay. At that point, I would like for you to turn over the mood scale in front of you and check off any of the words that you feel would describe <u>how you would feel if you had experienced the same things</u>. Do you have any questions?

When the social loss block was presented, an additional statement was made at this point:

> In one of the scenes you will see a man and a woman. I would like for you to put yourself in the place of the woman in that scene. In the other scene,

> there are two women. The woman who begins the scene on the right side, she is wearing a white sweater, is the one I would like you to imagine being. I will point to her when the scene begins.

If, during the manipulation, a participant recognized any of the actors, participation was ended, the participant was debriefed, and research credit was given or the participant was paid. This occurred twice.

6. After viewing the first block of videotapes, a second version of the Depressive Adjective Check Lists (DACL; Lubin, 1981) was administered.

7. A five minute break occurred after the completion of the second version of the Depressive Adjective Check Lists (DACL; Lubin, 1981) in an effort to separate the effects of the first block of videos from the second block. During the break, one of several music videos appeared on the television.

8. After the break, a third version of the Depressive Adjective Check Lists (DACL; Lubin, 1981) was administered to re-establish a baseline. The instructions were to complete the mood scale based on how the person was feeling at the present moment.

9. The second block of videos was presented and the relevant instructions were given (see #5 of procedure).

10. Following the viewing of the second block of videos, the fourth and final version of the Depressive Adjective Check Lists (DACL; Lubin, 1981) was administered.

11. After the manipulation, three follow-up questionnaires were administered. These included: (a) a measure of how able the person was to experience the videos and questions involving the subject's perception of the videotapes and recent personal loss and failure history (see Appendix E); (b) the 6-item Social Support Questionnaire (SSQ6; Sarason et al., 1987; see Appendix F); and (c) the Life Experiences Survey (LES; Sarason et al., 1978; see Appendix G) that measures the impact of recent social losses and achievement failures.

12. The participant was verbally debriefed. Appendix M contains the script used for debriefing. A list of referring agencies (see Appendix L) was given to each participant for several reasons. First of all, the participant may have wanted more information about her individual personality type. Secondly, the possibility existed, however remote, that the videotapes could have triggered some negative affect that the participant may have wanted to discuss with a professional. The participant was asked if she recognized any of the people acting in the videos and if she did, her data were disqualified. If the participant so chose, she left her name and address with the experimenter so that results of the study (a copy of the final abstract) could be mailed to her.

13. Any remaining questions were answered by the experimenter and the participant was thanked and dismissed.

CHAPTER III

RESULTS

Overview

The overall finding that remained robust throughout all analyses was that the two groups scoring high in sociotropy reported significantly more depressed affect to both social loss and achievement failure than the groups low in sociotropy. The groups scoring high in autonomy did not differ from those groups scoring low in autonomy. This finding suggests that sociotropy was the more significant vulnerability related to depressed affect in this study. Figure 1, located in Appendix N, contains a bar graph of the simple means by group. Note that Group 1 represents the Hi S group; Group 2 is the Hi A group; Group 3 is the Hi S/A group; and Group 4 represents the Lo S/A group.

Before presenting specific analyses, a review of the design is indicated. In order to determine the effect of the social loss and achievement failure videotaped scenes on the four groups, three separate analyses of covariance, and subsequent contrasts, were performed. The three dependent variables were: (a) the Depression Adjective Check Lists (DACL; Lubin, 1981) score that was obtained following the social loss videotapes; (b) the DACL score that was obtained following the achievement failure videotapes; and (c) the

difference between these two DACL scores. The difference score, which represents the post-social loss DACL score minus the post-achievement failure DACL score, allows for the type of negative event that was evoking more depressive affect within groups to be determined. A positive difference score would indicate more depressed affect following social loss. Conversely, if the achievement failure evoked more depressed affect, the difference score would be negative.

How did each Group Respond to the Loss and Failure Scenes?

Preliminary Analyses of Covariance

The first several analyses of covariance performed on the three post-treatment Depressive Adjective Check Lists (DACL; Lubin, 1981) scores were somewhat exploratory in nature and are not reported in detail. In these initial analyses, all possible a priori covariates were included in the analyses of the dependent variables. The covariates included: (a) the order of presentation of the videotapes as well as the group by order effect; (b) age; (c) baseline depression, as determined by the Beck Depression Inventory (BDI; Beck, et al., 1961); (d) pre-treatment social loss and achievement failure DACL scores; (e) the impact of recent social losses and achievement failures, as measured by the Life Experiences Survey (LES; Sarason, et al., 1978); (f) the level of satisfaction with social support, as measured by the 6-item Social Support Questionnaire (SSQ6; Sarason,

et al., 1987). The SSQ6 can be scored two ways so that the actual number of people in one's support system can be determined. Social support can be computed using a mean score based on the six questions or by counting the number of different individuals listed. Both these computations were included as covariates in the preliminary analyses. Because of the predominance of Caucasian participants, race was not considered a covariate (see Table 1 for composition of groups by race).

Results of the preliminary analyses found that covariates a, c, and d listed above were not significant for any of the three DACL scores. Therefore, these covariates were not included in further analyses. The significance level adopted for this study was $p \leq .10$.

Based on these preliminary findings, analyses of covariance were performed on each of the three dependent measures with five covariates included in the analysis: (a) age; (b) the impact of recent social losses; (c) the impact of recent achievement failures; (d) actual number of people in social support system; and (e) the mean number of people in social support system. All of these covariates had been statistically significant at some point in the initial analyses. The results of these preliminary analyses of covariance, as well the least squares means for these analyses (adjusted by the five covariates), are contained in Appendix N.

In these preliminary analyses of covariance, for the dependent variable of Depressive Adjective Check Lists (DACL; Lubin, 1981) score following the social loss scenes, there was a significant main effect for group, $F(3, 71) = 10.57$, $p<.0001$. For the dependent variable of DACL score following the achievement loss scenes, significant effects were found for group as well, $F(3, 71) = 4.89$, $p=.0038$. For the dependent variable of the difference score between the social loss DACL minus the achievement failure DACL, group differences were not significant $F(3, 71) = 2.03$, $p=.1169$. A review of the least squares means in Appendix N reveals that the Hi S and Hi S/A groups appeared to have higher mean scores than the Hi A and Lo S/A groups in response to both the social loss and achievement failure videotapes.

Final Analyses of Covariance

The next step in the analyses of covariance was to eliminate several more of the covariates that consistently failed to be significant. As a result of the preliminary analyses (see Appendix N), all covariates were eliminated except age and mean number of people in participant's social support system, as determined by the Life Experiences Survey (LES; Sarason et al., 1978). Since mean number of people in social support system and actual number of people in social support system were tapping into the same construct, and due to the fact that the mean number remained a more robust covariate throughout the analysis, the mean number was

chosen as the covariate. The final analyses of covariance for the three dependent variables are found in Table 5, and the least squares means for the three dependent variables are found in Table 6. Again, the least squares mean table presents means adjusted by the two covariates.

As seen in Table 5, there is a statistically significant main effect for group. Group differences were significant for the dependent measure of Depressive Adjective Check Lists (DACL; Lubin, 1981) following social loss (F (3, 74) = 10.52, $p<.0001$) and following achievement failure (F (3, 74) = 5.02, $p=.0032$), as well as for the difference score between these two DACL's (F (3, 74) = 2.25, $p=.0892$).

In terms of statistically significant covariates, age was a significant covariate for Depressive Adjective Check Lists (DACL; Lubin, 1981) following social loss, F (1, 74) = 5.75, $p=.0190$, and for the difference score, F (1, 74) = 5.24, $p=.0250$. Mean number of people in one's social support system was a significant co-variate for DACL following achievement failure, F (1, 74) = 6.14, $p=.0155$, and for the difference score, F (1, 74) = 2.91, $p=.0923$.

A review of the least squares means, located in Table 6, reveals that the Hi S and Hi S/A groups appeared to have higher mean scores than the Hi A and Lo S/A groups in response to both the social loss and achievement failure videotapes. It was hypothesized that the Hi S group would

report more depressed affect following the social loss scenarios than following the achievement failure scenes. The difference score for the Hi S group was in the positive direction, as expected, indicating social loss elicited more depressed affect (M = 1.35, p=.0806). It was hypothesized that the Hi A group would experience more depressed affect following the achievement failure scenarios than following the social loss scenarios but the difference score for that group, although in the correct (negative) direction, was not significant, M = -0.77, p=.3392.

No hypotheses were proposed for the Hi S/A and Lo S/A groups with regard to how each would respond to the two scenes. It appears as though the Hi S/A group responded similarly to the Hi S group in that the Hi S/A group reported more depressed affect with social loss than with achievement failure; this finding was significant, M = 1.57, p=.0527. The Lo S/A group reported more depressed affect with the achievement failure scenes, as did the Hi A group, but the difference was not significant, M = -0.40, p=.6103.

A Tukey's Studentized Range (HSD) Test was performed following the final analyses of covariance to compare group differences. The findings are found in Table 7. As mentioned with the preliminary analyses, the Tukey's HSD was computed based on simple means, not least squares means. According to the Tukey's HSD computation for Depression Adjective Check Lists (DACL; Lubin, 1981) score following

social loss, three subsets of groups were not significantly different from one another at alpha = .05. These groups were: (a) Hi S and Hi S/A; (b) Hi S and Lo S/A; and (c) Hi A and Lo S/A. However, the Hi A and Hi S/A groups were significantly different, indicating that the two groups that were high in autonomy were different from one another. For DACL score following achievement failure, the Hi S, Hi S/A, and Lo S/A groups were not significantly different from each other, and the Hi S, Hi A, and Lo S/A groups were not significantly different from each other. However, the Hi A and Hi S/A groups did differ significantly, indicating, again, that the two groups high in autonomy were different from one another. For the difference score (loss - failure), none of the four groups were significantly different from one another.

Overall, the Tukey's HSD Test is supporting the finding that the groups high in sociotropy, Hi S and Hi S/A, did not appear to be significantly different from one another across all three dependent variables. The groups high in autonomy, Hi A and Hi S/A, conversely, appear to be significantly different from one another, at least for the post-loss and post-failure variables. In order to further compare group differences, contrasts based on least squares means were conducted.

Did the Groups Differ from one Another in Response to Loss and Failure?

Preliminary Contrasts

In order to better interpret the relationships between the four groups, further analyses were performed by contrasting the various groups. The preliminary contrasts are found in Appendix N. Note that Group 1 refers to the Hi S group; Group 2 refers to the Hi A group; Group 3 refers to the Hi S/A group; and Group 4 refers to the Lo S/A group. The five initial covariates used in the preliminary analyses of covariance included: (a) age; (b) recent losses; (c) recent failures; (d) actual number of social support; and (e) mean number of people in social support system. Since the findings in the preliminary contrasts parallel the final contrasts, the results are discussed in detail below.

Final Contrasts

Final contrasts with age and mean number of people in one's social support system used as covariates are found in Tables 8 and 9. Table 6 contains the least squares group means and Table 1 contains group information on the means of the covariates.

For the Depressive Adjective Check Lists (DACL; Lubin, 1961) score following social loss, the Hi S group (Group 1) reported more depressed affect than the Hi A group (Group 2), Estimated Difference = 5.357, $p<.0001$. This supports the specificity hypothesis. It was hypothesized that the Hi

S group (Group 1) would report more depressed affect than the Lo S/A group (Group 4) after the social loss scenarios, and this hypothesis was supported, Estimated Difference = 3.406, p=.0091. It was also hypothesized that the Hi S/A group (Group 3) would report more depressed affect than the Lo S/A group (Group 4) and this hypothesis was supported, Estimated Difference = 4.742, p=.006. Age was the significant covariate for social loss.

For the Depressive Adjective Check Lists (DACL; Lubin, 1981) scores following achievement failure, it was hypothesized that the Hi A group (Group 2) would report more depressed affect than the Hi S group (Group 1). Although the groups were significantly different, Estimated Difference = 3.239, p=.0069, the difference was in the opposite direction than was hypothesized. This indicates that the Hi S group (Group 1) reported more depressed affect than the Hi A group (Group 2) following failure scenes, just as the Hi S group reported more depressed affect following social loss scenes. This finding does not support the specificity hypothesis. It was also hypothesized that the Hi A group (Group 2) would report more depressed affect following achievement failure than the Lo S/A group (Group 4) but this was not supported. The Hi A group did not differ significantly from the Lo S/A group, Estimated Difference = -1.579, p=.1897.

It was hypothesized that the Hi S/A group (Group 3) would report more depressed affect than the Lo S/A group (Group 4), and this hypothesis was supported, Estimated Difference = 2.779, p=.0211. The only significant covariate with achievement failure was mean number of people in one's social support system.

An interesting and rather robust finding throughout these analyses was that the groups that were high in sociotropy, Hi S (Group 1) and Hi S/A (Group 3), were reporting more depressed affect with both types of scenes than were the two groups that were low in sociotropy, Hi A (Group 2) and Lo S/A (Group 4). The results of comparing the high sociotropy group means (Group 1 + Group 3) to the low sociotropy group means (Group 2 + Group 4) supported this finding. Table 8 illustrates that the Hi S (Group 1) and Hi S/A (Group 3) combined group means were significantly different than the Hi A (Group 2) and Lo S/A (Group 4) combined group means for social loss, Estimated Difference = 5.005, p<.0001, and for achievement failure, Estimated Difference = 3.009, p=.0005. It appears as though the dimension of sociotropy was the variable that was accountable for mood change in this study, more so than is the dimension of autonomy.

Contrasts further supported the finding that autonomy was not a significant variable in mood change. The combined group means for those groups that were high in autonomy, Hi

A (Group 2) and Hi S/A (Group 3), were not significantly different than the combined group mean for the groups that were low in autonomy, Hi S (Group 1) and Lo S/A (Group 4), for either social loss, Estimated Difference = 0.308, p.=7410, or achievement failure, Estimated Difference = 0.230, p=.7823.

The final contrasts between the groups by their difference scores are located in Table 9. The Hi S (Group 1) and Hi A (Group 2) groups appeared to be significantly different, Estimated Difference = 2.119, p=.0595. Referring back to Table 6, this finding indicated that the Hi S group (Group 1) was reporting more depressed affect following social loss (M = 1.350) and the Hi A group (Group 2) was reporting more depressed affect following achievement failure (M = -0.769), and that these difference scores were significantly different from one another. In other words, the Hi S (Group 1) responded differently to both loss and failure than the Hi A group (Group 2) did. Also, contrasts between the combined group means for the two groups that were high in sociotropy (Groups 1 and 3) and the two groups that were low in sociotropy (Groups 2 and 4) revealed that the groups have different difference scores, Estimated Difference = 2.041, p=.0115. Contrasts between the combined group means for the two groups that were low in autonomy (Groups 1 and 4)and the two groups that were high in autonomy (Groups 2 and 3) did not differ, Estimated

Difference = 0.078, p=.9216. The only significant covariate was age.

Alternative Analyses

The data could have been analyzed using a 2 (sociotropy/ autonomy) x 2 (high/low) design. An interaction between type of personality vulnerability (sociotropy/autonomy) and the presence of the personality vulnerability (high/low) would be predicted. The results of a 2 x 2 ANCOVA, with age and mean social support as covariates, are depicted in Table 10. Following social loss, there was a main effect for sociotropy, F(1,74) = 29.59, p<.0001. Age was the only statistically significant covariate, F(1,74) = 5.75, p=.0190. As predicted, there was a significant interaction between sociotropy/autonomy and high/low, F(1,74) = 3.06, p=.0844.

Following the presentation of achievement failure video scenes, there was also a main effect for sociotropy, F(1,74) = 13.15, p=.0005. Mean social support was the only statistically significant covariate, F(1,74) = 6.14, p=.0155.

The difference score also yielded statistical significance for the sociotropy dimension, F(1,74) = 6.71, p=.0115. Age (F(1,74) = 5.24, p=.0250) and mean social support (F(1,74) = 2.91, p=.0923) were both significant covariates. There was no statistically significant interaction between sociotropy/autonomy and high/low following achievement failure or for the difference score.

There were no main effects for the high/low dimension across any of the three dependent variables. The decision to analyze the data using ANCOVAs and contrasts was based on utilizing statistics that best tested the a priori hypotheses. Furthermore, the analyses presented have a better clinical utility in that the four types of personality vulnerabilities could be compared, rather than the construct of sociotropy alone.

Ancillary Analyses

a posteriori ANCOVAs on Mood Measure

Once data were analyzed and conclusions drawn, it was decided to re-analyze the dependent variables in the same manner as mentioned above, using the covariates age and mean number of people in one's social support system, and adding two new covariates that were not considered a priori. These variables were added for exploratory reasons and did not affect the overall findings cited above. The a posteriori covariates entered as continuous variables were: (a) the level that each person was able to enter imaginatively into the scenes was rated by each participant on a Likert scale of 1 to 7 (1 = not at all to 7 = extremely; see Appendix E); and (b) whether the participant had been paid or not. Tables 11-14 contain these ancillary analyses. A surprising finding was that while imagination level was non-significant across all three dependent variables, whether a participant was paid or not was significant for the Depressive Adjective

Check Lists (DACL; Lubin, 1981) post-experimental social loss, $F(1, 72) = 8.22$, $p=.0054$, and for the DACL post-experimental achievement failure, $F(1, 72) = 10.46$, $p=.0018$. Whether a participant was paid or not did not affect the difference score, $F(1, 72) = 0.00$, $p=.9449$. Fortunately, the distribution of participants who were paid within and between each group was equal to those not paid (see Table 1). The significant covariate, however, raises interesting questions. For example, how does a paid participant differ from an unpaid participant? What would be the effects of an unequal distribution of payment across groups in studies paying college participants for participation. In the present study, almost uniformly, paying a participant resulted in that person reporting more depressed affect. Table 15 contains the least squares means for each group, based on whether or not the participants were paid.

Pearson product-moment Correlations between Subscales of Sociotropy and Autonomy and Mood Measure

Of the 48 statements found in the Personal Style Inventory, Version II (PSI; Robins et al., 1990), 24 are sociotropic statements, and 24 are autonomous statements. Within each scale are three subscales. Pearson product-moment correlation coefficients were calculated between the three subscales of Sociotropy (Concern about what others are thinking, Dependency, and Pleasing others) and the three

subscales of Autonomy (Perfectionism/self-criticism, Need for control, and Defensive Separation), as well as between the factors and the total Sociotropy score, the total Autonomy score, the post-treatment Depressive Adjective Check Lists (DACL; Lubin, 1981) social loss score, and the post-treatment DACL achievement failure DACL score. The results of these correlations are found in Table 15.

Several interesting and unexpected relationships were discovered. According to the Pearson product-moment correlation coefficients (see Table 16), and as one would predict, the three subscales of the sociotropy score were highly correlated. What was not anticipated was the finding that two of the three autonomous subscales, Perfectionism/ self-criticism and Need for control, correlated significantly with each of the three subscales of sociotropy, as well as to the total Sociotropy and Autonomy scores. The Autonomous subscale of Defensive separateness did not correlate significantly with any sociotropic subscale nor with the total sociotropy score, r = .118, p=.2982. Defensive separateness did correlate significantly with Perfectionism/self-criticism and Need for control, as well as with the total autonomy score, r = .920, p<.0001. The total sociotropy and total autonomy scores were significantly correlated as well, r = .363, p=.0009. Robins (1991) reported these two dimensions as orthogonal and attempted to construct the Personal Style Inventory,

Version II (PSI; Robins, et al., 1990) to reflect the orthogonicity of sociotropy and autonomy. Robins reported a correlation of .18 between the two dimensions in a correlational study of a sample of 411 undergraduates. It is noted that the sample used in the present study (n = 80) was not a randomly sampled group. Because Table 16 presents relationships between four extreme groups, correlation matrices for each group are also included (see Appendix Q).

Also included in the correlations in Table 16 are the post-treatment Depressive Adjective Check Lists (DACL; Lubin, 1981) for social loss and achievement failure. For the DACL following social loss, the scores correlated with all three subscales of the Sociotropy scale, as would be expected, as well as with the total sociotropy score, r = .449, $p<.0001$. The DACL following social loss also correlated with the autonomous dimension of Perfectionism/ self-criticism, r = .227, p=.0431, but not with the other two dimensions of autonomy. The DACL following social loss did not correlate with the total autonomy score, r = -0.026, p=.8216. For the DACL following achievement failure, the scores correlated with all three subscales of sociotropy. The DACL following achievement failure correlated significantly with one of the Autonomy subscales, Perfectionism/ self-criticism, r = .267, p=.0167. The DACL following achievement failure correlated with the total sociotropy score, r = .312, p=.0049, but not with the total

autonomy score, r = .051 p=.6510. It is also interesting to note that the DACL following social loss and the DACL score following achievement failure were significantly correlated, r = .653, p<.0001. Appendix Q contains the same correlations reported for each group.

Pearson product-moment Correlation coefficients were calculated between post-social loss and post-achievement failure Depressive Adjective Check Lists scores (DACL; Lubin, 1981), Personal Style Inventory, Version II sociotropy and autonomy total scores (PSI; Robins, et al., 1990) and six covariates: age, mean number of people in one's social support system, recent losses, recent failures, baseline depression, and degree to which participant could enter imaginatively into the scenarios (see Table 17). Baseline level of depression, as measured by the Beck Depression Inventory (BDI; Beck, et al., 1961), correlated significantly with sociotropy, r = .3021, p=.0065, and with autonomy, r = .429, p<.0001. BDI was negatively correlated with the mean number of people in one's social support system, r = -.0304, p=.0061 and with impact of recent failures, r = -0.327, p=.0031. This suggests that as level of depression increases, social support decreases and the number and impact of recent failures increases, as would be expected. Also, mean social support correlated negatively with autonomy, r = -0.251, p=.0249, suggesting that as autonomous features increase, mean social support decreases.

Finally, age correlated with sociotropy, r = .205, p=.0679, and autonomy, r = 0.248, p=.0265, suggesting a relationship between older age and more sociotropic and autonomous features. Because the correlations listed in Table 16 are between four extreme groups, Appendix Q has been included and contains correlation matrices for each of the four groups.

Chapter IV

Chapter IV

Discussion

Support for Hypotheses

The specificity hypothesis states that specific events in the environment trigger depression in people who have a personality vulnerability, or past learning history, that matches the trigger event. Sociotropic persons, according to Beck (1983), who are concerned that others will disapprove of or reject them, would be more susceptible to depression when faced with a social loss or rejection than to an achievement failure. Autonomous individuals who are concerned about the possibility of personal failure would be more susceptible to depression when faced with a personal achievement failure (Beck, 1983) than to a social rejection or loss.

The present study found mixed support for the specificity hypothesis. These present findings are consistent with the literature. The first set of hypotheses, regarding the Hi S group, were supported. It was hypothesized that the Hi S group would experience more depressed affect following exposure to negative social experiences (loss) than following negative achievement (failure). Analyses of covariance revealed that the Hi S group did report more depressed affect following social

loss. Age and mean number of people in one's social support system were covariates used in all final analyses. It was also hypothesized that the Hi S group would report more depressed affect following social loss than would the Hi A and Lo S/A groups. Contrasts between the groups revealed that the Hi S group did report significantly more depressed affect following social loss than did the Hi A and Lo S/A groups, again supporting the specificity hypothesis.

The second set of hypotheses involved the group of individuals who scored high on autonomy, the Hi A group. The specificity hypothesis was not supported for this group. It was hypothesized that the Hi A group would report more depressed affect following exposure to achievement failure than social loss. The Hi A group did report more depressed affect following achievement failure, but this difference was not statistically significant.

Furthermore, it was hypothesized that the Hi A group would report more depressed affect following achievement failure than would the Hi S and Lo S/A groups. Results of the contrasts revealed that the Hi A group was different from the Hi S group, but in the opposite direction, indicating that the Hi A group reported less depressed affect than the Hi S group following failure scenes. This finding did not support the specificity hypothesis. The Hi A group did report more depressed affect following achievement failure than the Lo S/A group, but the group

differences were not statistically significant.

The third hypothesis stated that the group high in sociotropy and autonomy would report more depressed affect following social loss and achievement failure than the group low in sociotropy and autonomy. This hypothesis was more exploratory in nature due to the fact that most studies to date have failed to include this group. The hypothesis was supported. The Hi S/A group reported significantly more depressed affect following both social loss and achievement failure videotaped scenarios than did the Lo S/A group.

Although no specific hypotheses were made with regard to the Hi S/A group's response to each type of event, the Hi S/A group responded similarly to the Hi S group in that the Hi S/A group reported significantly more depressed affect with social loss than with achievement failure. The Lo S/A group reported more depressed affect following achievement failure, as did the Hi A group, but the difference was not significant.

The inclusion of Hi S/A group, and its relationship to the other groups, has yielded an interesting and rather robust finding; this finding is the major contribution of this study. A consistent finding throughout all the least squares means was that the groups high in sociotropy, the Hi S and Hi S/A groups, reported significantly more depressed affect following both types of negative event (social loss and achievement failure) than did the groups low in

sociotropy, the Hi A and Lo S/A groups. The mean of the combined scores of the Hi S and Hi S/A groups was significantly different from the mean of the combined scores of the Hi A and Lo S/A groups for both types of negative events. In other words, the dimension of high sociotropy, regardless of autonomy score, resulted in more depressed affect in response to both social loss and achievement failure in this study.

The autonomy dimension did not appear to have a functional role in the participants' responses to either negative event. Comparisons were made between combined group means for the individuals scoring high on autonomy, the Hi A and Hi S/A groups, with groups that scored low on autonomy, the Hi S and Lo S/A groups. No differences were found for either type of negative event, based on the autonomy dimension. Robins and Block (1988) concluded that sociotropy may be a general vulnerability factor for any type of negative event, and the results of this study support this hypothesis.

Could this help explain why the sociotropy/social loss pairing has proven so robust in the literature? Could it be that in some of the past studies designed to explore the specificity hypothesis using only Hi S and Hi A groups, and perhaps a Lo S/A group as a control, the phenomenon actually being investigated is high versus low sociotropy, as opposed to high sociotropy versus high autonomy? It is difficult to

answer these questions based on the present methodological concerns and mixed results found in the literature. The findings of this study, however, certainly call for further consideration of the dimensions of sociotropy and autonomy and suggest the importance of including a group high on both dimensions in future research.

Robustness of Sociotropy: Possible Explanations

This section offers several possible explanations as to why the dimension of sociotropy, especially paired with social loss, is so robust a finding. Besides concerns about the assessment measures of autonomy that have been utilized to date, developmental, psychoanalytical, behavioral (coping style), biological, social, and cognitive theories all provide possible explanations for the robustness of the sociotropy/social loss pairing. This section will also discuss why sociotropic individuals were found to be sensitive to achievement failure. The psychoanalytic, behavioral, and cognitive theories provide viable explanations.

Nietzel and Harris (1990), in their review article, address several of the possible explanations mentioned above. In terms of assessment concerns, Nietzel and Harris suggest that available measures of sociotropy are more reliable than measures of achievement/autonomy. The limitations of the autonomy scales were discussed in detail in the Introduction and Methods sections. As noted, Robins

et al. (1990) attempted to address these concerns by constructing an instrument, the Personal Style Inventory, Version II (PSI), that purported to measure autonomy as it relates to self-criticism and perfectionism, and to measure autonomy independently of sociotropy and depression. Whether the PSI consistently proves to assess autonomy with these concerns in mind will require further psychometric scrutiny. If the PSI has achieved its goal of providing an appropriate measure of autonomy, the specificity hypothesis for autonomy was not supported in this study.

Besides measurement concerns, another explanation for the robust pairing of sociotropy and social loss, according to Nietzel and Harris (1990) could involve the prevalence of college students as participants. "Perhaps the prevailing developmental issues of college samples and/or the greater frequency of certain types of life events in collegiate life potentiates the power of the dependency-negative social events interaction" (p. 292). In the present sample, however, the Lo S/A group, which typically serves as a control group in similar studies, actually reported more depressed affect following achievement failure scenes than following social loss scenes, and this group also had the youngest mean age. This calls into question Nietzel and Harris' hypothesis that the prevailing developmental issue of college students (females in the present sample) is negative social events. Results of the present study

indicated that achievement failure, as well social loss, are salient developmental issues of the college women in this study.

A third explanation for the robust pairing of sociotropy and social loss, discussed by Nietzel and Harris (1990), arose from psychoanalytic theory. Sociotropy is conceptualized as being related to anaclitic depression which arises from interpersonal threats, or trauma, to one's dependency needs. Dependency needs are more primitive developmentally (in the oral stage of development) than are the needs for control and independence associated with autonomy. Autonomy needs develop at a later stage, after superego development. Blatt (1974) located the trauma as occurring, more specifically, late in the phallic-Oedipal stage, during individuation. Introjective depression arises if autonomous needs are not met.

Blatt (1974) proposed that anaclitic depression occurs as a result of frustration of dependency needs with regard to self-other relationships while introjective depression occurs as a result of negative evaluations of self and achievement goals. Blatt would support the specificity hypothesis. Nietzel and Harris (1990) hypothesized that anaclitic depression is more primitive and, therefore, is more disruptive to the person than is introjective depression. Nietzel and Harris's hypothesis, as with most psychoanalytic constructs, would be difficult to explore

experimentally. In the present study, people scoring high in sociotropy, regardless of their autonomy scores, reported more depressed affect in response to social losses and achievement failures. This supports Nietzel and Harris' hypothesis that sociotropy is a more primitive and disruptive vulnerability across negative life events and serves as an explanation as to why sociotropic individuals were also sensitive to achievement failure. It is understood that this study can only draw conclusions about the role of sociotropy and autonomy in relation to depressed affect and not depression.

A fourth hypothesis, and one that is being explored by Nietzel and Harris (1990), is the idea that sociotropic individuals engage in coping responses that are different from those of the autonomous individuals. Perhaps sociotropic individuals respond to life stressors with more unintentional self-defeating behaviors and perpetuate those behaviors longer. Nietzel and Harris hypothesized that sociotropic individuals pursue their interpersonal losses longer and more intensely than achievement setbacks while autonomous people may be better able to shift attention away from negative events. If this hypothesis is viable, it could help explain why the high sociotropic groups responded with more depressed affect to both loss and failure. Sociotropic individuals could experience the losses more intensely and, therefore, react to the mood measure with

more intensity. The autonomous individual could have shifted attention quickly, and responded to the mood measure to a lesser degree. Another possibility could be that the autonomous individuals may not have experienced the impact of the event until later and thus, the post-treatment mood measure did not reflect the later mood change. These comments are speculation at this point. The proposed study was not designed to address the coping responses of the participants.

Another theoretical explanation for the robustness of the sociotropy dimension, especially its pairing with social loss, arises from Bowlby's (1980) attachment theory. Paul Gilbert (1992), an evolutionary theorist, states that humans, especially young people, are biologically predisposed to attach to others for survival. One of the fundamental tenets to Gilbert's approach is that the content of "meaning-creating faculties operates on and through biologically prepared, archetypal patterns" (p. 467). According to Gilbert, depression is related to two basic, social outcomes - power and belonging. Depressed people feel powerless to achieve goals and to interact socially, and they feel their values and sense of relatedness are not shared by others. Overall, depression results when these biological needs for attachment (power and belongingness) are not met. This would explain why social loss produces

more depression across individuals than does achievement failure.

Gilbert's (1992) theory, however, does not explain why twice as many women as men become depressed or why some individuals who have experienced social loss become depressed while others do not. In order to consider individual differences, nurture theories must be considered as well. One nurture theory comes from feminist psychology. Feminist theory offers an explanation for the robustness of sociotropy in depression research by emphasizing the role of socialization and its impact on women. Hansen and O'Leary (1985) suggested that the issue is not one of sex differences as much as one of gender and power. Weissman and Klerman (1987) noted that real social discriminations make it difficult for women to achieve mastery by self-assertion and direct action and, therefore, situations can be depressing for them. Gilbert (1992) notes that females are rarely regarded as the dominant group in any animal social group.

It is not possible to discuss sex differences in the present study since all participants were females; however, feminist theory offers a viable explanation for the robustness of sociotropy as a personality vulnerability to depression. Gilligan (1982) notes that female children must learn to attach to their same sex care-giver so that separation (loss) becomes threatening. Male children must

learn to individuate from their opposite sex care-giver so that intimacy becomes more of a threat. This would help to explain why the present groups of women who were high in sociotropy reported more depressed affect following social loss than following achievement failure.

Another explanation for the congruency found between sociotropy and social loss is cognitive in nature. The basic theory, advocated by Segal, Shaw and Vella (1989) and Hammen, Marks, Mayol, and DeMayo (1985), notes the possibility that the experience of dysphoria following the exposure to a subtype-congruent negative event in predisposed individuals results from the activation of a cognitive/affective schema or structure. "This structure may be comprised of negative or depressive elements and may begin to exert an increasingly intrusive influence on the patient's information processing, thereby making the conclusions or appraisals reached regarding those life events less amenable to experiential disconfirmation" (Segal, Shaw and Vella, p. 397). This hypothesis helps explain why the same event will impact different individuals in various ways. This hypothesis was not tested specifically in the present study but warrants consideration.

Based on this cognitive theory, there is the notion that different individuals may interpret events to have different meanings and respond to them based on their

interpretations. Several experimenters have called for an understanding into the individual's interpretation of events (Hammen, Ellicott, Gitlin, & Jamison, 1989; Nietzel & Harris, 1990; Robins, 1990). For example, could a sociotropic individual view an achievement failure as a social loss (what would my friends think of me if I fail this course?) and respond to the failure as if it were a loss? The following section discusses the present study's attempt to explore qualitatively participants' interpretations of events.

Participants' Interpretations of Events

The present methodology was not conducive to drawing any specific conclusions about how participants interpreted the negative events. After participants had viewed both sets of videotapes, they were asked what it was about each set of scenes that caused a change in mood, if any (see Appendix E). Asking an open-ended question, in retrospect, was not an appropriate measure of specific perceptions that could have been playing a role in the interpretation and affective responding of the participants. The question remains an important one, and future research could include more focused questionnaires or interviews about perceptions.

The experimenter collected all 80 questionnaires and classified each response into one of three categories: perceived scenes as a social loss, perceived scenes as an achievement failure, or response was too vague to classify.

The experimenter was blind to the group membership of the respondents. After all responses were classified, they were reviewed a second time (on a different day), and any response thought to be vague on either occasion was classified as too vague to classify. A response was considered a social loss if it mentioned that one person hurt another individual or that other people would be affected by what had happened. A response was considered an achievement failure if it mentioned personal failure or an inability to achieve a goal. However, it was difficult to classify responses as social loss or achievement failure because specific words were not uniformly used. For example, many people used the word rejection in the failure scenes, but the word was used in the context of rejection letters. A rejection letter does not necessarily imply a social loss. Appendix P contains a sampling of several of the participants' responses.

The findings, as noted, are somewhat subjective. No second rater was employed to validate the findings because the overall measure was not sufficiently well designed to assess the information needed. Table 18 contains the type of response by group. There do not appear to be any trends that stand out in these results. There did not appear to be any differences in responding as measured by the questions asked. Across groups, reactions to the social loss scenes were attributed to a rejection by others or a concern for

others, and reactions to the achievement failure scenes were attributed to personal failure. Perhaps individual cases where perceptions were not in the expected direction could be examined, but this is beyond the scope of this study. The question of participants' interpretation of events remains a viable and unanswered question.

Clinical Implications

The results of the present study indicate that individuals, specifically college-age women, who score high on the dimension of sociotropy, based on the Personal Style Inventory (Robins et al., 1990), report more depressed affect in response to negative life events, whether social loss or achievement failure, than do those individuals low in sociotropy. This analogue experimental design was employed in an effort to address the issue of causality in depressive affect. It is the desire of this author that this study, and others like it, be used to explore trigger events for depression. Hammen, Ellicott, and Gitlin (1989) believe that identifying personality vulnerability to life events can be established. The present author notes the implication for generalizing depression from depressed affect, and hence the present results must be viewed cautiously.

The implications of identifying trigger events for depression are many. Primary prevention, aimed at preventing depression before it occurs, could focus on

informing individuals of their personality vulnerability and specific triggers to which they may be more susceptible. Coping strategies, stress management, and problem solving, for example, could be used to prevent initial depression. Tertiary prevention, aimed at relapse prevention, could be part of one's treatment during an initial depressive episode, again identifying personality vulnerability and congruent negative life event susceptibility. "Clinicians and individuals who know the areas of personality vulnerability may be better able to take an active, preventive approach in dealing with individuals' circumstances" (Hammen, Ellicott & Gitlin, 1989, p. 385).

Not only could the identification of specific trigger events based on personalty vulnerability be used to target prevention, the identification of these events and vulnerabilities could have treatment benefit as well. The goal of behavior therapy is to analyze the antecedents, organismic variables, responses, and consequences of the person's behavior (the SORC model). Behavior therapy, for example, could target environmental stimuli, or antecedents (trigger events), and/or organismic variables (personality vulnerability). Or, from a cognitive perspective, treatment could focus on restructuring the processing of specific classes of events (Robins, 1990).

Another treatment implication for the specificity hypothesis relates to different clinical presentations of

depressions based on personality vulnerability. Robins, Block, and Peselow (1989), in their study of 80 unipolar inpatients, found that sociotropy was related to a set of symptoms associated with anxious-reactive depression; symptoms such as dwelling on loss for gratification, crying, lability of mood, sadness, and unrelated to the autonomous symptom set. Autonomy was not found to be significantly related to its predicted cluster of symptoms which were more endogenous in nature; symptoms such as anhedonia, self-criticism, loss of interest, loss of reactivity. Furthermore, Peselow, Robins, Sanfilipo, Block, and Fieve (1992) found that individuals who had high autonomous-low sociotropic traits showed greater response to antidepressants, and greater drug-placebo differences, than those who had high sociotropic-low autonomous traits. The latter group showed no drug-placebo differences. Their sample of 217 depressed outpatients showed that sociotropy was related to nonendogenous, or reactive, depression, whereas autonomy was related to endogenous depression.

Another clinical implication of the dimensions of sociotropy and autonomy is in the area of assessment. Gilbert and Reynolds (1990) suggest that "it is useful to explore the relationship between newly developed and more traditional personality questionnaires " (p.319). For example, Gilbert and Reynolds have correlated Beck et al.'s

(1983) Sociotropy-Autonomy Scale with Eysenck's Personality Questionnaire. Ouimette, Klein, Anderson, Riso and Lizardi (1992) have studied the relationship between Robins et al.'s (1990) Personal Style Inventory and Blatt et al.'s (1982) Depressive Experiences Questionnaire, to the American Psychiatric Association's (1987) Diagnostic and Statistical Manual of Mental Disorders, Axis II personality disorders. These types of studies allow for the translation of new constructs into existing frameworks so that existing frameworks can be continually challenged and modified.

Strengths and Limitations

The main contribution of this study was the finding that individuals who scored high on the dimension of sociotropy, regardless of their autonomy score, reacted with more depressed affect following both types of negative events, suggesting sociotropy may be a more general vulnerability to depression. No studies in the past have included a group of individuals high in sociotropy and high in autonomy, and these results call for the inclusion of this group in future research. A strength of the present study is its use of an experimental design so that conclusions about causality can be drawn. Robins and Block (1988), regarding the specificity hypothesis, note "prospective longitudinal studies and analogue experimental studies are now needed to provide clearer information regarding causality" (p. 851).

The present study used Zuroff and Mongrain's (1987) study of vulnerability factors for depressive affective states as a framework. Zuroff and Mongrain used an experimental design to test dependent, self-critical, and controls groups of female college students. The dependent variable was measures of anaclitic and introjective state depression. Participants listened to audiotapes of rejection and failure. They found specific support for anaclitic depression and nonspecificity for introjective depression. The present study sought to add to Zuroff and Mongrain's methodology by including relevant covariates, taking baseline measures of depression and mood, and by revising and validating the stimulus material. In the present study, two social loss and two achievement failure videoscenes were created, thereby enhancing the generalizability of the results. Care was taken to create scenes that were more readily distinguished as social loss or achievement failure, and content validation of the tapes by undergraduates and experts support this effort. It is also noteworthy that there were no outliers in the data set. The videotapes produced depressed affect across all individuals, further supporting the utility of the scenes.

It is important to remember that the participant's task was to watch the block of videotapes and report how they would feel if they had experienced the same events. Had the directions been to record how they felt, then initial mood

would have been important to include. Having the participant record their perception of mood is different from actual mood. The dimension of sociotropy and autonomy, though, would be affecting both types of responses. A limitation of this study could be the use of perception of depressive affect rather than actual affect and is an area for future exploration. Whether video-taped scenarios could elicit a significant change in mood, as measured by the Depressive Adjective Check Lists (DACL; Lubin, 1981), would need further investigation.

Covariates that did not play a significant role in the final analyses include one's satisfaction with their social support, baseline depression, and the impact of recent life events, both losses and failures. Two covariates that were significant were age and number of people in one's social support system (mean score). The Hi S/A group was the oldest group, M = 21.3, and the Lo S/A group was the youngest group, M = 18.7. The videos were scripted for younger college students (scenes such as moving out of the dorm) and higher age may have resulted in less responsiveness to tapes. However, the Hi S/A group was able to enter imaginatively into the scenes as well as the other groups, if not better. Age correlated significantly with both sociotropy and autonomy scores.

Mean social support is important to consider in future studies as well. The Hi S/A group had less social support

than the other groups, as well as fewer people in their support system. Lower mean social support was related to higher autonomy scores and higher baseline depression.

Another contribution of the study was the finding, a posteriori, of the effect of payment on participant's participation. Fortunately, there was an equal distribution of payment and non-payment of participants in this study, and, therefore, the results of the present study are not affected. Participants were given the choice to participant for payment ($10), if the research requirement had been fulfilled. What appeared to occur, almost uniformly, was that the participants who were paid in each group reported more depressed affect than those participants in the group who were not paid. This occurred across both post-loss and post-failure scenarios.

Several limitations should be noted as well. One limitation is generalizability. The population was all female, with mean ages of 18 to 21 for the groups. The videotapes were scripted for young college women. Conclusions drawn cannot be generalized to populations other than young, female college students. Also, the findings on depressed affect may not generalize to more severe clinical depression. There were, however, two videotaped scenarios for each type of negative event which enhances generalizability across events. Another limitation is the fact that all measures were based on self-report. It is

ideal to have ratings by others, either experimenters or persons who know the participant, to validate self-report.

Future Research

Several areas for future research, related to the present study, have already been noted. One important finding of the present study is the importance of including a Hi S/A group in future studies. Also important is the replication of the present findings. As stated above, it would be useful to change the instructions given to the participants preceding the videotapes so that, instead of recording how they would feel if they had experienced the same events, the participants could record their present mood following the stimulus tape. Pilot work would need to be done to insure that the tapes do indeed induce a depressed mood. Another interesting area of future research would be to replicate this study using a male population with videotapes scripted for male-oriented social loss and achievement failure, to insure sex-role congruency. Examining an older population of women would be interesting as well, to see if sociotropic needs decrease across women as they get older. The area of participants' perceptions of the videotaped scenes also require refinement. Another type of methodology, other than one open-ended question, needs to be employed to gain information about what aspects of the scene the participant is reacting. Perhaps an interview at the end of the experiment would be more useful.

Future research in the field of personality vulnerability to depression calls for more longitudinal and analogue experimental designs, such as the experimental design employed in present study. The role of life events and personality vulnerability on anxiety, stress, and depression would be an interesting extension to the literature. For example, Rutter, Izard, and Read (1986) note that there may be as much as a 60 percent overlap between depression and anxiety. Identifying anxious reactions to negative life events, as well as depressive reactions, would prove therapeutically useful. Also, exploring coping strategies, cognitive strategies, and perceptions across the different personality vulnerabilities need further work.

Concluding Statement

The use of an analogue experimental design to test the specificity hypothesis has proven useful. The specificity hypothesis was supported for the Hi S group in that Hi S individuals reported more depressed affect following social loss than achievement failure. Between group differences found support for the specificity hypothesis as well; the Hi S group reported more depressed affect following social loss than did the Hi A and Lo S/A groups. The most interesting finding was the fact that the groups high in Sociotropy, Hi S and Hi S/A, reported significantly more depressed affect to both types of events, than did the groups low in

sociotropy, signifying that perhaps sociotropy is a more general vulnerability factor for negative events.

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APPENDIX A

TABLES

Table 1

Participant Information

	GROUPS (SOC/AUT)							
	(Hi S)		(Hi A)		(Hi S/A)		(Lo S/A)	
	M	SD	M	SD	M	SD	M	SD
PSI Scores:								
Sociotropy	114	4	83	12	120	9	70	12
Autonomy	76	7	103	7	102	7	66	10
Demographic Information:								
Age	19.2	1.7	19.3	2.2	21.3	5.6	18.7	2.2
Race (in number):								
Caucasian	19		15		20		15	
Afro-American	0		5		0		5	
Asian	1		0		0		0	
Covariates:								
BDI	4.6	3.3	6.5	3.7	6.7	4.9	2.7	2.6
Impact of Life Events (Recent):								
Losses	-2.4	3.0	-1.6	3.0	-2.3	2.9	-1.7	2.4
Failures	-1.3	2.9	12.2	3.4	-1.9	3.3	-1.2	3.5
Social Support:								
Satisfaction Level	5.3	0.5	5.2	0.8	5.3	0.5	5.6	0.4
Actual Number	8.8	2.8	7.7	3.0	9.5	3.3	9.5	2.8
Mean Number	4.5	1.9	3.4	1.5	4.9	1.7	4.9	1.7
Baseline DACL's:								
Pre-loss	8.1	3.3	7.6	3.5	7.7	4.5	4.9	3.1
Pre-failure	6.6	3.9	7.6	4.0	7.7	4.2	6.0	3.6
Imagination Level	6.0	0.8	5.1	1.1	6.0	0.9	5.9	0.7
Paid (in number):	9		9		11		11	

Note. Population Means (n = 221)
Sociotropy Scale: M = 93.2, SD = 18.2, Median = 94
Autonomy Scale: M = 82.9, SD = 13.6, Median = 82

APPENDIX A - continued

Table 2

Validation of Stimulus Material: Undergraduate Ratings on Videotapes' Sociotropic and Autonomous Components (n = 33)

Type of Scenario	M	Standard Error	t-test	p
Boyfriend Rejection:				
Sociotropic Components	.63	.03		
Autonomous Components	.18	.02		
Component Differences			16.06	0.0001
Friend Rejection:				
Sociotropic Components	.44	.03		
Autonomous Components	.24	.03		
Component Differences			6.45	0.0001
Class Failure:				
Sociotropic Components	.13	.02		
Autonomous Components	.47	.03		
Component Differences			-11.33	0.0001
Job Failure:				
Sociotropic Components	.15	.02		
Autonomous Components	.44	.03		
Component Differences			-9.24	0.0001

APPENDIX A - continued

Table 3

Validation of Stimulus Material: Expert Ratings on Videotapes' Sociotropic and Autonomous Components (n = 5)

Type of Scenario	M	Standard Error	t-test	p
Boyfriend Rejection:				
Sociotropic Components	.64	.05		
Autonomous Components	.05	.04		
Component Differences			10.67	0.0004
Friend Rejection:				
Sociotropic Components	.51	.05		
Autonomous Components	.18	.06		
Component Differences			14.70	0.0001
Class Failure:				
Sociotropic Components	.09	.05		
Autonomous Components	.53	.07		
Component Differences			-4.50	0.0109
Job Failure:				
Sociotropic Components	.07	.03		
Autonomous Components	.51	.07		
Component Differences			-5.58	0.0051

APPENDIX A - continued

Table 4

Simple Means: DACL Scores by Group

	Mean	Standard Error
POST-SOCIAL LOSS:		
Hi S	22.750	3.076
Hi A	17.600	4.581
Hi S/A	23.300	4.532
Lo S/A	19.450	4.084
POST-ACHIEVEMENT FAILURE:		
Hi S	21.250	3.878
Hi A	18.700	3.629
Hi S/A	22.000	3.129
Lo S/A	19.400	4.018
DIFFERENCE SCORE (LOSS - FAILURE):		
Hi S	1.500	3.052
Hi A	-1.100	4.811
Hi S/A	1.300	3.600
Lo S/A	0.050	2.188

APPENDIX A - continued

Table 5

FINAL ANCOVAs: Post-Experimental DACL's by Group

Source	df	Type III SS	F value	p
SOCIAL LOSS:				
Group	3	506.354	10.52	0.0001
Age	1	92.253	5.75	0.0190
Mean Social Support	1	9.464	0.59	0.4448
Error	74	1186.743		
ACHIEVEMENT FAILURE:				
Group	3	192.817	5.02	0.0032
Age	1	3.332	0.26	0.6116
Mean Social Support	1	78.725	6.14	0.0155
Error	74	948.136		
DIFFERENCE SCORE (LOSS - FAILURE):				
Group	3	78.090	2.25	0.0892
Age	1	60.519	5.24	0.0250
Mean Social Support	1	33.597	2.91	0.0923
Error	74	854.970		

APPENDIX A - continued

Table 6

Least Squares Group Means of Final Analyses of Covariance

	Mean	Standard Error
SOCIAL LOSS:		
Hi S	22.632	0.898
Hi A	17.275	0.942
Hi S/A	23.968	0.937
Lo S/A	19.226	0.914
ACHIEVEMENT FAILURE:		
Hi S	21.282	0.802
Hi A	18.044	0.842
Hi S/A	22.401	0.838
Lo S/A	19.622	0.817
DIFFERENCE SCORE (LOSS - FAILURE):		
Hi S	1.350	0.762*
Hi A	-0.769	0.780**
Hi S/A	1.567	0.795***
Lo S/A	-0.397	0.775****

Note. * p=.0806
** p=.3392
*** p=.0527
****p=.6103

APPENDIX A - continued

Table 7

Post Hoc Test on ANCOVA: Tukey's Studentized Range (HSD) Test on Simple Means of Mood Measure (Means with the same letter are not significantly difference at alpha = .05; df = 74)

	Tukey Grouping		Mean	Group
POST-LOSS:*				
		A	23.30	Hi S/A
	B	A	22.75	Hi S
	B	C	19.45	Lo S/A
		C	17.60	HI A
POST-FAILURE:**				
		A	22.00	Hi S/A
	B	A	21.25	Hi S
	B	A	19.40	Lo S/A
	B		18.70	Hi A
POST-DIFFERENCE:***				
		A	1.50	Hi S
		A	1.30	Hi S/A
		A	0.05	Lo S/A
		A	-1.10	Hi A

Note. * MSE = 16.037, Critical Value of HSD = 3.717; Minimum Significant Difference = 3.328
** MSE = 12.813, Critical Value of HSD = 3.717; Minimum Significant Difference = 2.975
***MSE = 11.554. Critical Value of HSD = 3.717, Minimum Significant Difference = 2.825

APPENDIX A - continued

Table 8

Final Contrasts: Estimated Differences Between Groups by Social Loss and Achievement Failure

	Estimated Difference	Standard Error of Measurement	p
SOCIAL LOSS:			
Age	-0.335	0.140	0.0190
Mean Social Support	-0.035	0.045	0.4448
1 vs. 2	5.357	1.305	0.0001
1 & 3 vs. 2 & 4	5.005	0.929	0.0001
1 & 4 vs. 2 & 3	0.308	0.927	0.7410
1 vs. 3	-1.336	1.306	0.3095
1 vs. 4	3.406	1.272	0.0091
2 vs. 4	-1.951	1.334	0.1480
3 vs. 4	4.742	1.320	0.0006
ACHIEVEMENT FAILURE:			
Age	-0.064	0.125	0.6116
Mean social support	-0.100	0.040	0.0155
1 vs. 2	3.239	1.166	0.0069
1 & 3 vs. 2 & 4	3.009	0.830	0.0005
1 & 4 vs. 2 & 3	0.230	0.829	0.7823
1 vs. 3	-1.119	1.167	0.3408
1 vs. 4	1.660	1.137	0.1486
2 vs. 4	-1.579	1.193	0.1897
3 vs. 4	2.779	1.179	0.0211

Note. Group 1 = High S
Group 2 = High A
Group 3 = High S/A
Group 4 = Low S/A

APPENDIX A - continued

Table 9

Final Contrasts: Estimated Differences Between Groups by Difference Score (Loss - Failure)

	Estimated Difference	Standard Error of Measurement	p
Age	-0.272	0.119	0.0250
Mean Social Support	0.065	0.038	0.0923
1 vs. 2	2.119	1.107	0.0595
1 & 3 vs. 2 & 4	2.041	0.788	0.0115
1 & 4 vs. 2 & 3	0.078	0.787	0.9216
1 vs. 3	-0.217	1.108	0.8453
1 vs. 4	1.746	1.080	0.1101
2 vs. 4	-0.372	1.133	0.7432
3 vs. 4	1.963	1.120	0.0837

Note. Group 1 = Hi S
Group 2 = Hi A
Group 3 = Hi S/A
Group 4 = Lo S/A

APPENDIX A - continued

Table 10

ALTERNATIVE ANALYSES: 2(Sociotropy/Autonomy) x 2(High/Low) ANCOVA

Source	df	Type III SS	F value	p
SOCIAL LOSS:				
Sociotropy-Autonomy	1	474.517	29.59	.0001
High-Low	1	1.765	0.11	.7410
Sociotropy*High-Low	1	49.065	3.06	.0844
Age	1	92.253	5.75	.0190
Mean Social Support	1	9.464	0.59	.4448
Error	74	1186.743		
ACHIEVEMENT FAILURE:				
Sociotropy-Autonomy	1	168.449	13.15	.0005
High-Low	1	0.985	0.08	.7823
Sociotropy*High-Low	1	33.045	2.58	.1125
Age	1	3.332	0.26	.6116
Mean Social Support	1	78.725	6.14	.0155
Error	74	948.136		
DIFFERENCE SCORE (LOSS - FAILURE):				
Sociotropy-Autonomy	1	77.522	6.71	.0115
High-Low	1	0.113	0.01	.9216
Sociotropy*High-Low	1	1.578	0.14	.7128
Age	1	60.519	5.24	.0250
Mean Social Support	1	33.597	2.91	.0923
Error	74	854.970		

APPENDIX A - continued

Table 11

Ancillary ANCOVAs: Post-Experimental DACL Scores by Group with Paid and Imagination as Covariates

Source	df	Type III SS	F value	p
SOCIAL LOSS:				
Group	3	429.769	9.64	0.0001
Age	1	78.472	5.28	0.0245
Mean Social Support	1	4.680	0.31	0.5764
Paid	1	116.419	7.84	0.0066
Imagine	1	1.468	0.10	0.7542
Error	72	1069.751		
ACHIEVEMENT FAILURE:				
Group	3	191.266	5.63	0.0016
Age	1	0.093	0.01	0.9279
Mean Social Support	1	33.142	5.84	0.0182
Paid	1	111.134	9.82	0.0025
Imagine	1	17.832	1.58	0.2135
Error	72	815.176		
DIFFERENCE SCORE (LOSS - FAILURE):				
Group	3	54.730	1.59	0.1990
Age	1	73.151	6.38	0.0137
Mean Social Support	1	35.636	3.11	0.0821
Paid	1	0.061	0.01	0.9419
Imagine	1	29.533	2.58	0.1129
Error	72	825.437		

APPENDIX A - continued

Table 12

Least Squares Group Means of Ancillary Analyses of Covariance

	Mean	Standard Error	
SOCIAL LOSS:			
Hi S	22.718	0.875	
Hi A	17.569	0.966	
Hi S/A	23.742	0.909	
Lo S/A	19.071	0.886	
ACHIEVEMENT FAILURE:			
Hi S	21.553	0.764	
Hi A	17.880	0.843	
Hi S/A	22.304	0.794	
Lo S/A	19.612	0.774	
DIFFERENCE SCORE (LOSS - FAILURE):			
Hi S	1.164	0.769	p=.1342
Hi A	-0.311	0.848	p=.7145
Hi S/A	1.438	0.799	p=.0760
Lo S/A	-0.541	0.779	p=.4895

APPENDIX A - continued

Table 13

Ancillary Contrasts: Estimated Differences Between Groups by Social Loss and Achievement Failure

	Estimated Difference	Standard Error of Measurement	p
SOCIAL LOSS:			
Age	-0.315	0.137	0.0245
Mean Social Support	-0.024	0.044	0.5764
Paid	2.441	0.872	0.0066
Imagine	0.155	0.492	0.7542
1 vs. 2	5.149	1.336	0.0002
1 & 3 vs. 2 & 4	4.910	0.921	0.0001
1 & 4 vs. 2 & 3	0.240	0.923	0.7960
1 vs. 3	-1.024	1.263	0.4200
1 vs. 4	3.647	1.228	0.0041
2 vs. 4	-1.503	1.358	0.2721
3 vs. 4	4.671	1.270	0.0005
ACHIEVEMENT FAILURE:			
Age	-0.011	0.119	0.9279
Mean Social Support	-0.092	0.038	0.0182
Paid	2.385	0.761	0.0025
Imagine	-0.539	0.430	0.2135
1 vs. 2	3.674	1.166	0.0024
1 & 3 vs. 2 & 4	3.183	0.804	0.0002
1 & 4 vs. 2 & 3	0.491	0.306	0.5441
1 vs. 3	-0.751	1.102	0.4981
1 vs. 4	1.941	1.072	0.0744
2 vs. 4	-1.732	1.185	0.1483
3 vs. 4	2.692	1.109	0.0177

Note. Group 1 = Hi S
Group 2 = Hi A
Group 3 = Hi S/A
Group 4 = Lo S/A

APPENDIX A - continued

Table 14

Ancillary Contrasts: Estimated Differences Between Groups by Difference Score (Loss - Failure)

	Estimated Difference	Standard Error of Measurement	p
Age	-0.304	0.120	0.0137
Mean Social Support	0.067	0.038	0.0821
Paid	0.056	0.766	0.9419
Imagine	0.694	0.432	0.1129
1 vs. 2	1.476	1.174	0.2126
1 & 3 vs. 2 & 4	1.728	0.809	0.0362
1 & 4 vs. 2 & 3	-0.252	0.810	0.7572
1 vs. 3	-0.274	1.109	0.8059
1 vs. 4	1.705	1.079	0.1184
2 vs. 4	0.229	1.193	0.8481
3 vs. 4	1.979	1.116	0.0804

Note. Group 1 = Hi S
Group 2 = Hi A
Group 3 = Hi S/A
Group 4 = Lo S/A

APPENDIX A - continued

Table 15

LEAST SQUARES MEANS: GROUP BY COVARIATE OF PAID

		Mean	Standard Error
SOCIAL LOSS:			
Hi S	Not Paid	21.455	1.203
	Paid	24.333	1.330
Hi A	Not Paid	16.455	1.203
	Paid	19.000	1.330
Hi S/A	Not Paid	21.556	1.330
	Paid	24.727	1.203
Lo S/A	Not Paid	18.444	1.330
	Paid	20.273	1.203
ACHIEVEMENT FAILURE:			
Hi S	Not Paid	18.545	0.982
	Paid	24.556	1.086
Hi A	Not Paid	19.091	0.982
	Paid	18.222	1.086
Hi S/A	Not Paid	19.889	1.086
	Paid	23.727	0.982
Lo S/A	Not Paid	18.667	1.086
	Paid	20.000	0.982

APPENDIX A - continued

Table 16

Pearson product-moment Correlation Coefficients Between the Subscales of the PSI and Mood Measure (n = 80)

	S1	S2	S3	A1	A2	A3	LOSS	FAIL	SOC	AUT
S1		.74*	.80*	.60*	.45*	.14	.46*	.32#	.94*	.39*
S2	.74*		.60*	.46*	.37*	-.01	.39*	.30#	.84*	.24#
S3	.80*	.60*		.62*	.29*	.17	.37*	.23#	.91*	.34#
A1	.60*	.46*	.62*		.51*	.46*	.23#	.27#	.63*	.68*
A2	.45*	.37*	.29*	.51*		.68*	.06	.05	.40*	.87*
A3	.14	-.01	.17	.46*	.68*		-.18	-.05	.12	.92*
LOSS	.46*	.39*	.37*	.23#	.06	-.18		.65*	.45*	-.03
FAIL	.32#	.30#	.23#	.27#	.05	-.05	.65*		.31#	.05
SOC	.94*	.84*	.91*	.63*	.40*	.12	.45*	.31#		.36*
AUT	.39*	.24#	.34#	.68*	.87*	.92*	-.03	.05	.36*	

Note. S1=Concern about what others are thinking, S2=Dependency, S3=Pleasing others, A1=Perfectionism/ self-criticism, A2=Need for control, A3=Defensive separation, LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score.

Note. *significant at $p<.001$
#significant at $p<.10$

APPENDIX A - continued

Table 17

Pearson product-moment Correlation Coefficients Between the Mood Measure, PSI, and Covariates (n = 80)

	LOSS	FAIL	SOC	AUT	AGE	SSQ6	LES LOSS	LES FAIL	BDI	IMAGINE
LOSS		.65*	.45*	-.03	-.13	.07	-.21#	-.14	-.03	.15
FAIL	.65*		.31#	.05	.04	-.16	-.05	-.03	.02	-.02
SOC	.45*	.31#		.36*	.21#	.10	-.14	-.09	.30#	.16
AUT	-.03	.05	.36*		.25#	-.25#	.01	-.17	.43*	-.22#
AGE	-.13	.04	.21#	.25#		-.02	.11	-.01	.17	.18
SSQ6	.07	-.16	.10	-.25#	-.02		-.01	.15	-.30#	.10
LES LOSS	-.21#	-.05	-.14	.01	.11	-.01		.30#	-.16	-.06
LES FAIL	-.14	-.03	-.09	-.17	-.01	.15	.30#		-.33#	-.26#
BDI	-.03	.02	.30#	.43*	.17	-.30#	-.16	-.33#		-.01
IMAGINE	.15	-.02	.16	-.22#	.18	.10	-.06	-.26#	-.01	

Note. LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score, SSQ6=mean number of people in social support system, LESLOSS=recent losses, LESFAIL=recent failures, BDI=Beck Depression Inventory score, IMAGINE=level to which participants were able to imagine themselves in scenes.

Note. *significant at $p<.001$
#significant $p<.10$

APPENDIX A - continued

Table 18

PARTICIPANTS' PERCEPTIONS OF EVENTS

	Perception of Event		
	Too Vague	Loss	Failure
Hi S			
Loss scene (n = 20)	10	10	0
Failure scene (n = 20)	13	1	6
Hi A			
Loss scene (n = 20)	10	10	0
Failure scene (n = 10)	10	2	7
Hi S/A			
Loss scene (n = 20)	6	12	2
Failure scene (n = 20)	16	1	3
Lo S/A			
Loss scene (n = 20)	9	11	0
Failure scene (n = 19)	10	2	7

APPENDIX E

POST-EXPERIMENTAL QUESTIONNAIRE

Please rate the degree to which you were able to enter imaginatively into each situation by circling a number on the following 7-point scale below. 1 = not at all and 7 = extremely.

1	2	3	4	5	6	7
Not at all						Extremely

APPENDIX E - continued

This question refers to the first set of videos you saw. Please take time to remember the first two videos.

What was it about the first two scenes that caused a change in your mood, if any?

Now, think about the last (second) set of videos you saw. What was it about the second two scenes that caused a change in your mood, if any?

APPENDIX E - continued

In your opinion, have you experienced a major personal loss or personal failure within the past two years?

PERSONAL LOSS _____yes _____no

PERSONAL FAILURE _____yes _____no

If you feel you have experienced a personal loss or personal failure, briefly describe the loss or failure.

Do you feel that this loss or failure event is presently impacting your life?

_____yes _____no

If yes, how so?

APPENDIX F

Social Support Questionnaire Instructions

INSTRUCTIONS: The following questions ask about people in your environment who provide you with help or support. Each question has two parts. For the first part, list all the people you know, excluding yourself, whom you can count on for help or support in the manner described. Give the person's initials and their relationship to your (see example). Do not list more than one person next to each of the letters beneath the question.

For the second part, circle how satisfied you are with the overall support you have.

If you have no support for a question, check the words "No One," but still rate your level of satisfaction. Do not list more than nine persons per question.

Please answer all questions as best as you can. All your responses will be kept confidential.

EXAMPLE:

Who do you know whom you can trust with information that could get you in trouble?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied
3-very dissatisfied	2-fairly dissatisfied	1-a little dissatisfied

APPENDIX F - continued

Social Support Questionnaire

1. Whom can you really count on to distract you from your worries when you feel under stress?

No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How satisfied?

6-very satisfied 5-fairly satisfied 4-a little satisfied

3-very dissatisfied 2-fairly dissatisfied 1-a little dissatisfied

2. Whom can you really count on to help you feel more relaxed when you are under pressure or tense?

No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How satisfied?

6-very satisfied 5-fairly satisfied 4-a little satisfied

3-very dissatisfied 2-fairly dissatisfied 1-a little dissatisfied

3. Who accepts you totally, including both your worst and your best points?

No one 1) 2) 3) 4) 5) 6) 7) 8) 9)

How satisfied?

6-very satisfied 5-fairly satisfied 4-a little satisfied

3-very dissatisfied 2-fairly dissatisfied 1-a little dissatisfied

APPENDIX F - continued

4. Whom can you really count on to care about you, regardless of what is happening to you?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied
3-very dissatisfied	2-fairly dissatisfied	4-a little dissatisfied

5. Whom can you really count on to help you feel better when you are feeling generally down-in-the-dumps?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied
3-very dissatisfied	2-fairly dissatisfied	1-a little dissatisfied

6. Whom can you count on to console you when you are very upset?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

How satisfied?

6-very satisfied	5-fairly satisfied	4-a little satisfied
3-very dissatisfied	2-fairly dissatisfied	1-a little dissatisfied

APPENDIX G

The Life Experiences Survey

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. Please check those events which you have experienced in the recent past and indicate the time period during which you have experienced each event. Be sure that all check marks are directly across from the items they correspond to.

Also, for each item checked below, please indicate the extent to which you viewed the event as having either a positive or negative impact on your life at the time the event occurred. That is, indicate the type and extent of impact that the event had. A rating of -3 would indicate an extremely negative impact. A rating of 0 suggests no impact either positive or negative. A rating of +3 would indicate an extremely positive impact.

	0 to 6mo	7mo to 1yr	extremely negative	moderately negative	slightly negative	no impact	slightly positive	moderately positive	extremely positive
1. Marriage			-3	-2	-1	0	+1	+2	+3
2. Detention in jail or comparable institution			-3	-2	-1	0	+1	+2	+3
3. Death of spouse			-3	-2	-1	0	+1	+2	+3
4. Death of close family member:									
a. mother			-3	-2	-1	0	+1	+2	+3
b. father			-3	-2	-1	0	+1	+2	+3
c. brother			-3	-2	-1	0	+1	+2	+3
d. sister			-3	-2	-1	0	+1	+2	+3
e. grandmother			-3	-2	-1	0	+1	+2	+3
f. grandfather			-3	-2	-1	0	+1	+2	+3
g. other (specify)			-3	-2	-1	0	+1	+2	+3
5. Foreclosure on mortgage or loan			-3	-2	-1	0	+1	+2	+3
6. Death of close friend			-3	-2	-1	0	+1	+2	+3

APPENDIX G -continued

18. Gaining a new family member (through birth, adoption, family member moving in, etc.)	-3	-2	-1	0	+1	+2	+3
19. Change in residence	-3	-2	-1	0	+1	+2	+3
20. Marital separation from mate (due to conflict)	-3	-2	-1	0	+1	+2	+3
21. Major change in church activities (increased or decreased attendance)	-3	-2	-1	0	+1	+2	+3
22. Marital reconciliation with mate	-3	-2	-1	0	+1	+2	+3
23. Major change in number of arguments with spouse (a lot more or a lot less arguments)	-3	-2	-1	0	+1	+2	+3
24. Married male: Change in wife's work outside the home (beginning work, ceasing work, changing to a new job, etc.)	-3	-2	-1	0	+1	+2	+3
25. Married female: Change in husband's work (loss of job, beginning new job, retirement, etc.)	-3	-2	-1	0	+1	+2	+3
26. Major change in usual type and/or amount of recreation	-3	-2	-1	0	+1	+2	+3
27. Borrowing more than $10,000 (buying home, business, etc.)	-3	-2	-1	0	+1	+2	+3
28. Borrowing less than $10,000 (buying car, TV, getting school loan, etc.)	-3	-2	-1	0	+1	+2	+3
29. Being fired from job	-3	-2	-1	0	+1	+2	+3
30. Male: Wife/girlfriend having abortion	-3	-2	-1	0	+1	+2	+3

APPENDIX G - continued

31. Female: Having abortion	-3	-2	-1	0	+1	+2	+3
32. Major personal illness or injury	-3	-2	-1	0	+1	+2	+3
33. Major change in social activities e.g., parties, movies, visiting (increased or decreased)	-3	-2	-1	0	+1	+2	+3
34. Major change in living conditions (building new home, remodeling, deterioration of home, neighborhood, etc.	-3	-2	-1	0	+1	+2	+3
35. Divorce	-3	-2	-1	0	+1	+2	+3
36. Serious injury or illness of close friend	-3	-2	-1	0	+1	+2	+3
37. Retirement from work	-3	-2	-1	0	+1	+2	+3
38. Son or daughter leaving home (due to marriage, college, etc.)	-3	-2	-1	0	+1	+2	+3
39. Ending of formal schooling	-3	-2	-1	0	+1	+2	+3
40. Separation from spouse (due to work, travel, etc.)	-3	-2	-1	0	+1	+2	+3
41. Engagement	-3	-2	-1	0	+1	+2	+3
42. Breaking up with boyfriend/girlfriend	-3	-2	-1	0	+1	+2	+3
43. Leaving home for the first time	-3	-2	-1	0	+1	+2	+3
44. Reconciliation with boyfriend/girlfriend	-3	-2	-1	0	+1	+2	+3
45. Beginning a new school experience at a higher academic level (college, graduate school, etc.)	-3	-2	-1	0	+1	+2	+3
46. Changing to a new school at same academic level (undergraduate, graduate, etc.)	-3	-2	-1	0	+1	+2	+3

APPENDIX G - continued

47. Academic probation	-3	-2	-1	0	+1	+2	+3
48. Being dismissed from dormitory or other residence	-3	-2	-1	0	+1	+2	+3
49. Failing an important exam	-3	-2	-1	0	+1	+2	+3
50. Changing a major	-3	-2	-1	0	+1	+2	+3
51. Failing a course	-3	-2	-1	0	+1	+2	+3
52. Dropping a course	-3	-2	-1	0	+1	+2	+3
53. Joining a fraternity/ sorority	-3	-2	-1	0	+1	+2	+3
54. Financial problems concerning school (in danger of not having sufficient money to continue)	-3	-2	-1	0	+1	+2	+3

Other recent experiences which had an impact on your life. List and rate.

55. _____	-3	-2	-1	0	+1	+2	+3
56. _____	-3	-2	-1	0	+1	+2	+3
57. _____	-3	-2	-1	0	+1	+2	+3

APPENDIX H

VIDEOTAPED SCENARIO SCRIPTS

Interpersonal Social Loss - Scenario #1 - Script
No two scenes have the same actress

Scene 1: Female actress and male actor drive up in a car, get out, and walk toward door of apartment. Cameraperson is on porch, filming approach

Female: I had a great time tonight but you were so quiet, what's up?
Male: We need to talk.
Female: OK, come on in.

Scene 2: Camera films both individuals sitting on sofa, as actor begins to talk, camera shifts to him and remains there until end of video

Female: What's wrong? I hope you feel that you can talk to me. I really love you and care about what's upsetting you. Come on, we've been together a long time.
Male: This is so difficult for me, you have to know that. I don't want to hurt you but I am not happy anymore. I want to break-up. I don't know why but my feelings have changed. I don't love you anymore. I've been thinking about this for some time and I can't explain to you why this is happening to me because I don't understand it myself. I do know that I need out of this relationship. I feel as if we spend all our time together and we are getting too close. This scares me. I hate to leave you alone but I am not happy anymore. There is nothing you can do about it; no matter how hard this hurts you, I have made up my mind. I can't be that caring person for you anymore. Let me leave before this gets any more difficult.

Camera follows him as he gets up to leave.

APPENDIX H - continued

Interpersonal Social Loss - Scenario #2 - Script
No two scenes have the same actresses

Scene 1: One actress (#1) and a second actress (#2) are walking down the hall at school. Cameraperson is down the hall filming approach

#1: Did you and your roommates have a chance to talk yet about me moving into your place? I've known all of you since Freshman year and I can't wait to move out of the dorm and in with my closest friends.
#2: Let's talk about it in here (go into a classroom)

Scene 2: Camera films both individuals sitting at a table, as #2 begins to talk, camera shifts to her and remains there until end of video

#1: This will be so fun. I am ready to move in anytime.
#2 I can't believe I have to be the one to tell you this. I didn't want to but since we're best friends, I got chosen. We talked about you moving in and we all decided it would not be a good idea. Things are really working out OK the way they are and one more person may be too much. I know you want out of the dorm because all of us live together but why should we risk wrecking a good situation. You know we are all friends but now I have gotten so close with my roommates and comfortable with my situation that I don't want to change it. The others feel the same way. We voted and that's our decision. I know this is a weird situation for all of us but hopefully things will work out OK for you. Listen, I've got class.

Camera follows her (#2) as she gets up to leave.

APPENDIX H - continued

Personal Achievement Failure - Scenario #1 - Script
No two scenes have the same actress

Scene 1: Female actress is sitting in a classroom, alone, waiting

Female: What time is it? (Looks at watch). I wonder if that grade has been posted yet. I have got to pass that class to graduate. I can't stand the suspense anymore, I'm going to see if its posted.

Camera follows her as she leaves.

Scene 2: Actress now coming down the hallway and stops at professor's door. Several envelopes, one with her name on it, are taped to wall next to grades.

Female: (Scanning names) Why isn't my name on here? This envelope has my name on it. (Opens it - reads out loud while camera points to letter). This letter is to inform you that you have not met the standards and expectations required to pass this course. Your grade on the final exam was failing and, because it counted for so much of your grade, you have failed the course. Because it is impossible to know how much effort you put into this class, it's difficult to comment on why this happened. Although this is a demanding class, few students fail. Perhaps a less advanced class would better suit you. It is strongly recommended that you talk to the registrar's office as soon as possible since graduation paperwork will need to be stopped.

End of scene.

APPENDIX H - continued

Personal Achievement Failure - Scenario #2 - Script
No Two scenes have the same actress

Scene 1: Female actress is sitting at the kitchen table, balancing her checkbook, and thinking out loud

Female: I don't know where I'm going to get the money to pay for these bills. If I don't hear from that job today, I don't know how I am going to be able to afford to stay in school. (getting up) The mail has got to be here by now.

Camera scans as actress gets up to check mailbox.

Scene 2: Female actress walks back into kitchen, looking through mail (walking toward camera, says)

Female: Oh great, they've written. Please let me get this job. (Opens letter and begin to read as camera scans to letter). Thank you for your interest in our company. Recently, we have received applications from highly qualified individuals. Unfortunately, we can not hire everyone. We regret to inform you that you were unsuccessful in meeting our requirements for the position and; therefore, we can not offer you the part-time position you requested. Perhaps offering some feedback will be useful should you choose to apply for employment at another company. When we review applicants, we look for characteristics such as superior academic skills, commitment, excellence, as well as self-motivation. Our standards are high but people who come to work with us reap the benefits of our expectations. Good luck with your future endeavors.

End of scene.

APPENDIX I

Subject Consent Form for Video Validation Study

I agree to participate in the present study being conducted by Diane Johnson, a clinical psychology graduate student, under the supervision of Dr. Rosemery Nelson-Gray, a faculty member of the Psychology Department of the University of North Carolina at Greensboro. You will be asked to view four two-minute videos that depict various social situations that could occur in the average college student's life. After viewing each video, you will be asked to complete a checklist where you will check all features that you think happened to the actress in the scene, or that she could be experiencing because of the scene. These videos, once they have been rated by a group of individuals like yourself, will be used in a study that looks at how college students' mood changes with various social situations.

I have been informed about the procedures to be followed and I realize that any discomforts or risks are minimal. I also realize that all information about me will be held in strict confidence, and that any information made public will be in the form of group data, nothing will identify me by name. I understand that any information obtained about me during this experiment will be kept, without any identifying information, in a locked cabinet in Dr. Nelson-Gray's laboratory for the mandatory five years and then will be destroyed. The investigator has offered to answer further questions that I may have regarding the procedures of this study. I understand that I am free to terminate my participation at any time without penalty or prejudice. I am aware that further information about the conduce and review of human research at the University of North Carolina at Greensboro can be obtained by calling 334-5878, the Office of Sponsored Programs.

Please sign below after your questions have been answered and if you are willing to participate in the experiment.

_____ _____

Printed name of subject Subject's signature

_____ _____

Signature of witness Date

APPENDIX J

Checklist for Validating Content of Videos

After viewing the video, please check all features below that you think happened to the actress in the scene, or that she could be experiencing because of the scene.

_____ sense of helplessness

_____ interpersonal loss

_____ being unloved

_____ not being cared for

_____ separation

_____ loss of protection

_____ loneliness

_____ weakness

_____ being abandoned

_____ wants others to be dominant

_____ wanting intimacy

_____ feeling worthless

_____ feeling guilty

_____ sense of not living up to standards

_____ personal achievement failure

_____ feelings of inferiority

_____ feeling that punishment is deserved

_____ being criticized

_____ wanting independence

_____ self-blame

_____ need for control

_____ goals not obtained

Do you think this scene is portraying an interpersonal social loss or a personal achievement failure?

_____loss

_____failure

APPENDIX K

Subject Consent Form

I agree to participate in the present study being conducted by Diane Johnson, a clinical psychology graduate student, under the supervision of Dr. Rosemery Nelson-Gray, a faculty member of the Psychology Department of the University of North Carolina at Greensboro. This study is designed to look at how college students' mood changes with various social situations. I understand that I will be asked to view two sets of two-minute video scenes, for a total of four scenes, that depict events that could occur in the average college student's life. At various times during the study, I will be asked to complete a questionnaire that describes my mood at the present moment. At the end of the experiment, I will be asked to complete several questionnaires about recent life experiences. The experiment should take approximately forty-five minutes.

I have been informed about the procedures to be followed and I realize that any discomforts or risks are minimal. I also realize that all information about me will be held in strict confidence, and that any information made public will be in the form of group data, nothing will identify me by name. I understand that any information obtained about me during this experiment will be kept, without any identifying information, in a locked cabinet in Dr. Nelson-Gray's laboratory for the mandatory five years and then will be destroyed. The investigator has offered to answer further questions that I may have regarding the procedures of this study. I understand that I am free to terminate my participation at any time without penalty or prejudice. I am aware that further information about the conduct and review of human research at the University of North Carolina at Greensboro can be obtained by calling 334-5878, the Office of Sponsored Programs.

Please sign below after your questions have been answered and if you are willing to participate in the experiment.

_____ _____

Printed name of subject Subject's signature

_____ _____

Signature of witness Date

APPENDIX L

Debriefing Statement

It is not possible to discuss your individual personality type or individual responses in this study at this time. If you would like to explore your own personality, below is a list of resources that we are giving to all subjects. Fees for the Psychology Clinic are based on income and insurance is honored. The Counseling Center is free to students, and Guilford County Mental Health has minimal to no fees. If you would like to know the overall results of this study, please leave your name and address, and a summary of the results will be mailed to you.

UNC-G Psychology Clinic
377 Eberhart Building, UNCG
Greensboro, NC 27412-5001
(919) 334-5662

UNC-G Student Counseling Center
12 Gove Building, UNCG
Greensboro, NC 27412-5001
(919) 334-5874

Guilford County Mental Health
300 N. Edgeworth Street
Greensboro, NC 27401
(919) 373-3630

APPENDIX M

Verbal Debriefing Statement

Read this statement:

The study in which you just participated examined the effects of different types of events on subjects' mood. This study is within the area of clinical psychology. The independent variable was different types of events viewed on the videos and the dependent variables were the subject's mood during various portions of the experiment, as well as recent life events and social support.

The basic question being investigated was how did the different independent variables interact with the subject's personality to produce differences in mood at different times during the study. You were selected to participate in this study because of your score on a measure that was included in the mass screening packet you completed earlier this semester. On this personality measure, two dimensions were obtained: how sensitive to others the person is, and how goal-oriented the person is. Subjects varied, higher and lower, along these two dimensions. It is important that you know that all four of these personality types, higher or lower in both dimensions, are commonly found in the population. I do not have the information available to tell you about your personality type because my knowledge of that information could have biased the experiment. Because of that, I am giving you a list of resources that you can use if you are curious about exploring your personality further.

Then, give the subject the written debriefing statement with referring agencies.

APPENDIX N

PRELIMINARY ANALYSES

Preliminary ANCOVAs: Post-Treatment DACL Scores by Group

Source	df	Type III SS	F value	p
SOCIAL LOSS:				
Group	3	478.576	10.57	0.0001
Age	1	71.595	4.74	0.0328
Recent losses	1	7.929	0.53	0.4710
Recent failures	1	36.172	2.40	0.1261
Social support:				
Actual	1	65.424	4.33	0.0410
Mean	1	51.605	3.42	0.0687
Error	71	1071.943		
ACHIEVEMENT FAILURE:				
Group	3	191.211	4.89	0.0038
Age	1	2.322	0.18	0.6744
Recent losses	1	0.190	0.01	0.9042
Recent failures	1	0.865	0.07	0.7975
Social support:				
Actual	1	21.928	1.68	0.1990
Mean	1	92.180	7.07	0.0097
Error	71	926.017		
DIFFERENCE SCORE (LOSS - FAILURE):				
Group	3	68.380	2.03	0.1169
Age	1	48.131	4.29	0.0419
Recent losses	1	10.577	0.94	0.3346
Recent failures	1	25.848	2.31	0.1333
Social support:				
Actual	1	11.599	1.03	0.3125
Mean	1	5.844	0.52	0.4726
Error	71	795.806		

APPENDIX N - continued

Least Squares Group Means of Preliminary Analyses of Covariance

	Mean	Standard Error	
SOCIAL LOSS:			
Hi S	22.755	0.877	
Hi A	17.240	0.920	
Hi S/A	23.760	0.914	
Lo S/A	19.346	0.889	
ACHIEVEMENT FAILURE:			
Hi S	21.356	0.815	
Hi A	18.001	0.855	
Hi S/A	22.361	0.850	
Lo S/A	19.627	0.826	
DIFFERENCE SCORE:			
Hi S	1.399	0.755	p=.0682
Hi A	-0.766	0.792	p=.3369
Hi S/A	1.398	0.788	p=.0801
Lo S/A	-0.281	0.766	p=.7150

APPENDIX N - continued

Preliminary Contrasts: Estimated Differences Between Groups with Loss and Failure

	Estimated Difference	Standard Error of Measurement	p
SOCIAL LOSS:			
Age	-0.299	0.137	0.0328
Recent losses	-0.121	0.167	0.4710
Recent failures	-0.226	0.146	0.1261
Actual social support	0.432	0.207	0.0410
Mean social support	-0.111	0.060	0.0687
1 vs. 2	5.515	1.281	0.0001
1 & 3 vs. 2 & 4	4.964	0.913	0.0001
1 & 4 vs. 2 & 3	0.551	0.906	0.5448
1 vs. 3	-1.004	1.273	0.4328
1 vs. 4	3.408	1.242	0.0077
2 vs. 4	-2.107	1.298	0.1091
3 vs. 4	4.413	1.290	0.0010
ACHIEVEMENT FAILURE:			
Age	-0.054	0.128	0.6744
Recent losses	0.019	0.155	0.9042
Recent failures	-0.035	0.135	0.7975
Actual social support	0.250	0.193	0.1927
Mean social support	-0.149	0.056	0.0097
1 vs. 2	3.350	1.191	0.0063
1 & 3 vs. 2 & 4	3.042	0.848	0.0006
1 & 4 vs. 2 & 3	0.308	0.842	0.7154
1 vs. 3	-1.005	1.183	0.3986
1 vs. 4	1.729	1.154	0.1386
2 vs. 4	-1.621	1.207	0.1833
3 vs. 4	2.734	1.199	0.0256

Note. Group 1 = High S
Group 2 = High A
Group 3 = High S/A
Group 4 = Low S/A

APPENDIX N - continued

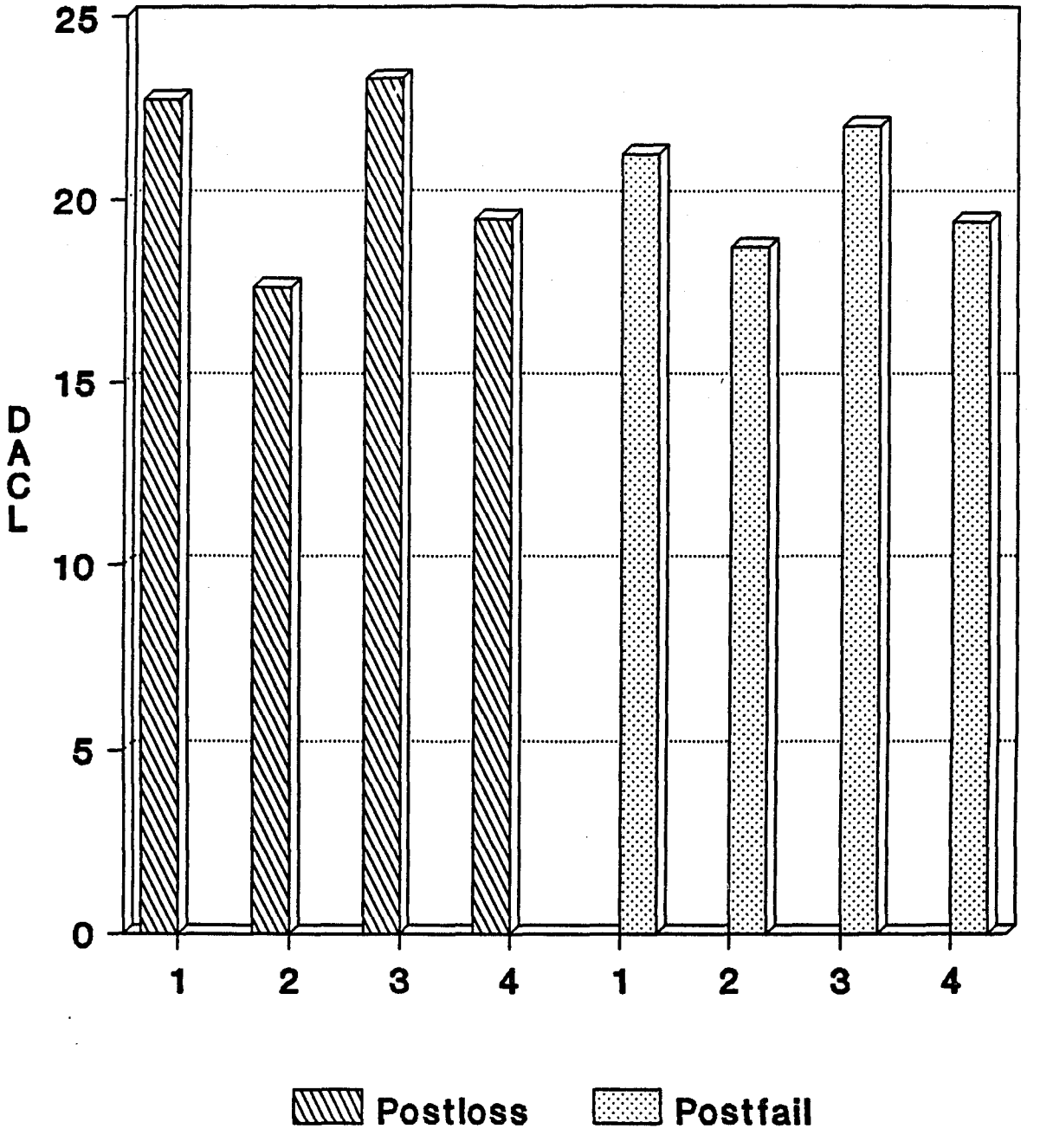
Preliminary Contrasts: Estimated Differences Between Groups by Difference Score (Loss - Failure)

	Estimated Difference	Standard Error of Measurement	p
Age	-0.245	0.118	0.0419
Recent losses	-0.140	0.144	0.3346
Recent failures	-0.191	0.126	0.1333
Actual social support	0.182	0.179	0.3125
Mean social support	0.038	0.052	0.4726
1 vs. 2	2.165	1.104	0.0538
1 & 3 vs. 2 & 4	1.922	0.786	0.0170
1 & 4 vs. 2 & 3	0.243	0.781	0.7565
1 vs. 3	0.000	1.097	0.9997
1 vs. 4	1.679	1.070	0.1209
2 vs. 4	-0.485	1.119	0.6656
3 vs. 4	1.679	1.112	0.1354

Note: Group 1 = High S
Group 2 = High A
Group 3 = High S/A
Group 4 = Low S/A

APPENDIX O

FIGURE 1. Post-experimental Mood Measure by Group: Simple Means



APPENDIX P

PARTICIPANTS' PERCEPTIONS

Social Loss Scenarios:
Vague Responses:

(1) "Both scenes were a powerful effect on my mood. However, the second scene was more so than the first". (Hi S)

(2) "They brought back unhappy memories of things that I've experienced personally". (Hi S)

Social Loss Responses:

(1) "The idea that you valued people's relationships and they don't value their relationship with you. I was being rejected by others". (Lo S/A)

(2) "Rejection from a loved one, either it being male or female". (Hi S/A)

(3) When someone breaks up with you, it;s very devastating. When your friends reject you, you feel sad". (Hi S/A)

Achievement Failure Scenarios:
Vague Responses:

(1) "The fact that I have been in both of these situations". (Lo S/A)

(2) "I am in those exact same situations. I can directly relate". (Hi S/A)

(3) "No one like to fail or be rejected.-at least I don't. Even though I haven't failed a class or been rejected from a job position, I can still relate". (Hi S)

Achievement Failure Responses:

(1) "The lady truly wanted to go to school, but her dream was crushed when she couldn't get a job to pay for school". (Hi A)

(2) "I had a much drastic mood swing this time. Achievement and success are important when one makes an effort. I know from experience how doing less than what you hope feels. I take failure personally and make things harder on myself". (Hi S)

APPENDIX Q

CORRELATIONS BY GROUP

Pearson product-moment Correlation Coefficients Between the Subscales of the PSI and Mood Measure for Group 1 (Hi S); n=20

	S1	S2	S3	A1	A2	A3	LOSS	FAIL	SOC	AUT
S1		-.15	-.07	.13	.06	-.23	.16	.33	.41#	-.09
S2	-.15		-.58#	.00	.07	.00	-.02	.14	.13	.03
S3	-.07	-.58#		.00	-.43#	-.25	-.18	-.09	.57#	-.34
A1	.13	.00	.00		.37#	.13	.38#	.26	.08	.57#
A2	.06	.07	-.43#	.37#		.18	.49#	.42#	-.38#	.65#
A3	.23	.00	-.25	.13	.18		-.08	-.11	-.43#	.80*
LOSS	.16	-.02	-.18	.38#	.49#	-.08		.64#	-.11	.27
FAIL	.33	.14	-.09	.26	.42#	-.11	.64#		.23	.18
SOC	.41#	.13	.57#	.08	-.38#	-.43#	-.11	.23		-.42#
AUT	.09	.03	-.34	.57#	.65#	.80*	.27	.18	-.42#	

Note. S1=Concern about what others are thinking, S2=Dependency, S3=Pleasing others, A1=Perfectionism/ self-criticism, A2=Need for control, A3=Defensive separation, LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score.

Note. *significant at $p<.001$
#significant at $p<.10$

APPENDIX Q - continued

Pearson product-moment Correlation Coefficients Between the Subscales of the PSI and Mood Measure for Group 2 (Hi A); n=20

	S1	S2	S3	A1	A2	A3	LOSS	FAIL	SOC	AUT
S1		.63#	.00	-.13	.50#	-.42#	.23	.10	.85*	-.03
S2	.63#		-.27	-.01	.48#	-.48#	.42#	.40#	.77*	-.03
S3	.00	-.27		-.07	-.35	.17	.04	-.16	.31	-.15
A1	-.13	-.01	-.07		-.37	.37	-.41#	.04	-.10	.52#
A2	.50#	.48#	-.35	-.37		-.32	.26	.08	.35	.27
A3	-.42#	-.48#	.17	.37	-.32		-.16	.08	-.40#	.72*
LOSS	.23	.42#	.04	-.41#	.26	-.16		.33	.38#	-.15
FAIL	.10	.40#	-.16	.04	.08	.08	.33		.21	.13
SOC	.85*	.76*	.31	-.10	.35	-.40#	.38#	.21		-.11
AUT	-.03	-.03	-.15	.52#	.27	.72*	-.15	.13	-.11	

Note. S1=Concern about what others are thinking, S2=Dependency, S3=Pleasing others, A1=Perfectionism/ self-criticism, A2=Need for control, A3=Defensive separation, LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score.

Note. *significant at $p<.001$
#significant at $p<.10$

APPENDIX Q - continued

Pearson product-moment Correlation Coefficients Between the Subscales of the PSI and Mood Measure for Group 3 (HiS/A); n=20

	S1	S2	S3	A1	A2	A3	LOSS	FAIL	SOC	AUT
S1		-.30	.72*	.42#	-.26	.19	.44#	.44#	.71*	.13
S2	-.30		-.09	.17	.32	-.35	-.20	-.24	.32	.01
S3	.72*	-.09		.60#	-.28	-.08	.34	.28	.88*	.00
A1	.42#	.17	.60#		.01	-.25	.43#	.49#	.64#	.21
A2	-.26	.32	-.28	.01		.18	-.10	.00	-.13	.73*
A3	.19	-.35	-.08	-.25	.18		-.13	.05	-.15	.70*
LOSS	.44#	-.20	.34	.43#	-.10	-.13		.61#	.29	.01
FAIL	.44#	-.24	.28	.49#	.00	.05	.61#		.23	.22
SOC	.71*	.32	.88*	.64#	-.13	-.15	.29	.23		.06
AUT	.13	.01	.00	.21	.73*	.70*	.01	.22	.06	

Note. S1=Concern about what others are thinking, S2=Dependency, S3=Pleasing others, A1=Perfectionism/ self-criticism, A2=Need for control, A3=Defensive separation, LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score.

Note. *significant at $p<.001$
#significant at $p<.10$

APPENDIX Q - continued

Pearson product-moment Correlation Coefficients Between the Subscales of the PSI and Mood Measure for Group 4 (Lo S/A); n=20

	S1	S2	S3	A1	A2	A3	LOSS	FAIL	SOC	AUT
S1		.38#	.37	.57#	.67*	.25	-.06	-.19	.70*	.63#
S2	.38#		.48#	.35	.43#	.35	-.19	-.12	.76*	.51#
S3	.37	.48#		.61#	.37	.38#	-.17	-.19	.86*	.57#
A1	.57#	.35	.61#		.40#	.12	.28	.10	.67*	.58#
A2	.67*	.43#	.34	.40#		.38#	-.16	-.32	.58#	.80*
A3	.25	.35	.38#	.12	.38#		-.20	-.14	.43#	.78*
LOSS	-.06	-.19	-.17	.28	-.16	-.20		.85*	-.19	-.09
FAIL	-.19	-.12	-.19	.10	-.32	-.14	.85*		-.22	-.19
SOC	.70*	.76*	.86*	.67*	.58#	.43#	-.19	-.22		.73*
AUT	.63#	.51#	.57#	.58#	.80*	.78*	-.09	-.19	.73*	

Note. S1=Concern about what others are thinking, S2=Dependency, S3=Pleasing others, A1=Perfectionism/ self-criticism, A2=Need for control, A3=Defensive separation, LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score.

Note. *significant at $p<.001$
#significant at $p<.10$

APPENDIX Q - continued

Pearson product-moment Correlation Coefficients Between the Mood Measure, PSI, and Covariates for Group 1 (Hi S); n=20

	LOSS	FAIL	SOC	AUT	AGE	SSQ6	LES LOSS	LES FAIL	BDI	IMAGINE
LOSS		.64#	-.11	.27	-.34	.07	-.29	-.22	-.24	.02
FAIL	.64#		.23	.18	-.56#	-.18	-.22	-.08	-.31	-.55#
SOC	-.11	.23		-.42#	-.15	.15	-.15	.03	.20	-.04
AUT	.27	.18	-.42#		-.05	-.38#	.01	.15	.01	-.24
AGE	-.34	-.56#	-.15	-.05		.21	.22	.08	-.01	.49#
SSQ6	.07	-.18	.15	-.38#	.21		.28	.04	.09	.23
LES LOSS	-.29	-.22	-.15	.01	.22	.28		.26	-.22	-.01
LES FAIL	-.22	-.08	.03	.15	.08	.04	.26		-.06	-.22
BDI	-.24	-.31	.20	.01	-.01	.09	-.22	-.06		.16
IMAGINE	.02	-.55#	-.04	-.24	.49#	.23	-.01	-.22	.16	

Note. LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score, SSQ6=mean number of people in social support system, LESLOSS=recent losses, LESFAIL=recent failures, BDI=Beck Depression Inventory score, IMAGINE=level to which participants were able to imagine themselves in scenes.

Note. *significant at $p<.001$
#significant at $p<.10$

APPENDIX Q - continued

Pearson product-moment Correlation Coefficients Between the Mood Measure, PSI, and Covariates for Group 2 (Hi A); n=20

	LOSS	FAIL	SOC	AUT	AGE	SSQ6	LES LOSS	LES FAIL	BDI	IMAGINE
LOSS		.33	.38#	-.15	-.44#	-.17	-.17	-.48#	-.01	-.05
FAIL	.33		.21	.13	-.05	-.29	.01	-.59#	.11	.02
SOC	.38#	.21		-.11	-.24	-.37#	-.04	-.42#	.71*	-.04
AUT	-.15	.13	-.11		-.06	-.42#	.00	-.23	.15	.02
AGE	-.44#	-.05	-.24	-.06		.15	.26	.29	-.14	.29
SSQ6	-.17	-.29	-.37#	-.42#	.15		-.06	.53#	-.33	-.20
LES LOSS	-.17	.01	-.04	.00	.26	-.06		.24	-.07	-.02
LES FAIL	-.48#	-.59#	-.42#	-.23	.29	.53#	.24		-.36	-.40#
BDI	-.01	.11	.71*	.15	-.14	-.33	-.07	-.36		-.04
IMAGINE	-.05	.02	-.04	.02	.29	-.20	-.02	-.40#	-.04	

Note. LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score, SSQ6=mean number of people in social support system, LESLOSS=recent losses, LESFAIL=recent failures, BDI=Beck Depression Inventory score, IMAGINE=level to which participants were able to imagine themselves in scenes.

Note. *significant at $p<.001$
#significant at $p<.10$

APPENDIX Q - continued

Pearson product-moment Correlation Coefficients Between the Mood Measure, PSI,and Covariates for Group 3 (Hi S/A); n=20

	LOSS	FAIL	SOC	AUT	AGE	SSQ6	LES LOSS	LES FAIL	BDI	IMAGINE
LOSS		.61#	.29	.01	-.25	.32	-.16	-.16	-.06	.18
FAIL	.61#		.23	.22	.32	-.12	.11	.29	.03	.07
SOC	.29	.23		.06	.02	.27	-.12	-.02	.07	.20
AUT	.01	.22	.06		.32	-.21	.33	-.08	.19	.09
AGE	-.25	.32	.02	.32		-.40#	.16	-.06	.27	.13
SSQ6	.32	-.12	.27	-.21	-.40#		-.35	-.11	-.52#	-.01
LES LOSS	-.16	.11	-.12	.33	.16	-.35		.30	-.19	-.31
LES FAIL	-.16	.29	-.02	-.08	-.06	-.11	.30		-.31	-.47#
BDI	-.06	.03	.07	.19	.27	-.52#	-.19	-.31		.11
IMAGINE	.18	.07	.20	.09	.13	-.01	-.31	-.47#	.11	

Note. LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score, SSQ6=mean number of people in social support system, LESLOSS=recent losses, LESFAIL=recent failures, BDI=Beck Depression Inventory score, IMAGINE=level to which participants were able to imagine themselves in scenes.

Note. *significant at $p<.001$
#significant at $p<.10$

APPENDIX Q - continued

Pearson product-moment Correlation Coefficients Between the Mood Measure, PSI, and Covariates for Group 4 (Lo S/A); n=20

	LOSS	FAIL	SOC	AUT	AGE	SSQ6	LES LOSS	LES FAIL	BDI	IMAGINE
LOSS		.85*	-.19	-.09	-.20	-.53#	-.08	.12	-.05	-.29
FAIL	.85*		-.22	-.19	-.40#	-.49#	.12	.21	.07	-.19
SOC	-.19	-.22		.73*	.24	.16	-.11	-.14	.03	-.23
AUT	-.09	-.19	.73*		.22	.02	-.20	-.31	.41#	-.36
AGE	-.20	-.40#	.24	.22		.41#	-.09	-.16	-.25	.00
SSQ6	-.53#	-.49#	.16	.02	.41#		.18	.09	-.33	-.17
LES LOSS	-.08	.12	-.11	-.20	-.09	.18		.44#	-.21	.39#
LES FAIL	.12	.21	-.14	-.31	-.16	.09	.44#		-.56#	-.11
BDI	-.05	.07	.03	.41#	-.25	-.33	-.21	-.56#		.06
IMAGINE	-.29	-.19	-.23	-.36	.00	-.17	.39#	-.11	.06	

Note. LOSS=DACL score post-social loss, FAIL=DACL score post-achievement failure, SOC=total sociotropy score, AUT=total autonomy score, SSQ6=mean number of people in social support system, LESLOSS=recent losses, LESFAIL=recent failures, BDI=Beck Depression Inventory score, IMAGINE=level to which participants were able to imagine themselves in scenes.

Note. *significant at $p<.001$
#significant at $p<.10$