

ACTUAL-IDEAL DISCREPANCIES AND SOCIOTROPY:  
VULNERABILITY MARKERS FOR DEPRESSION

by

Nichole Fairbrother

B. A., The University of British Columbia, 1990

THESIS SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF ARTS  
in the Department  
of  
Psychology

© Nichole Fairbrother 1994

SIMON FRASER UNIVERSITY

September, 1994

All rights reserved. This work may not be  
reproduced in whole or in part by photocopy  
or other means, without permission of the author.

Approval

NAME: Nichole Fairbrother  
DEGREE: Masters of Arts (Psychology)  
TITLE OF THESIS: Actual-ideal Discrepancies and Sociotropy: Vulnerability  
Markers for Depression

Examining Committee:

Chair: Cathy McFarland

---

Marlene Moretti  
Senior Supervisor  
Associate Professor of Psychology

---

Roger Buehler  
Assistant Professor of Psychology

---

William Reynolds  
External Examiner  
Professor of Educational Psychology  
Department of Education  
University of British Columbia

Date Approved: Sept 20, 1994

## PARTIAL COPYRIGHT LICENSE

I hereby grant to Simon Fraser University the right to lend my thesis, project or extended essay (the title of which is shown below) to users of the Simon Fraser University Library, and to make partial or single copies only for such users or in response to a request from the library of any other university, or other educational institution, on its own behalf or for one of its users. I further agree that permission for multiple copying of this work for scholarly purposes may be granted by me or the Dean of Graduate Studies. It is understood that copying or publication of this work for financial gain shall not be allowed without my written permission.

### Title of Thesis/Project/Extended Essay

Actual-ideal Discrepancies and Sociotropy: Vulnerability

---

Markers for Depression

---

---

---

### Author:

\_\_\_\_\_  
(signature)

Nichole Fairbrother

\_\_\_\_\_  
(name)

Dec 06/94  
\_\_\_\_\_  
(date)

## Abstract

This study examined the role of self-discrepancies and sociotropy as vulnerability markers in clinical depression. Clinically depressed subjects ( $N = 20$ ), remitted subjects ( $N = 20$ ), and never-before depressed controls ( $N = 20$ ) were compared. Analysis of variance indicated that depressed and remitted participants exhibited significantly higher levels of sociotropy than control subjects. Remitted and depressed subjects were not significantly different on this variable. Depressed participants also exhibited significantly higher levels of actual-ideal discrepancies than both remitted subjects and controls. Remitted subjects, however, did not exhibit significantly higher levels of actual-ideal discrepancies than controls. Analysis of covariance indicated that, when depressed mood was controlled for, depressed and remitted subjects did not exhibit significantly higher levels of sociotropy and actual-ideal discrepancies than controls. Finally, sociotropy and actual-ideal discrepancies were hypothesized to predict history of depression. Regression analysis indicated that this prediction was not supported by the results. This study provides partial support regarding the ability of sociotropy and actual-ideal discrepancies to distinguish between individuals who are vulnerable to depression and those who are not.

## Acknowledgements

I would like to thank Dr. Marlene Moretti for the time and energy she has given to this project. She has been supportive and available throughout, investing considerable time and effort. I would like to thank her for this, and for the positive influence she has had on my development as a researcher.

I would also like to thank Dr. Roger Buehler for the time and effort he has put into helping me with this project. His feedback and encouragement have been a great help.

Thanks to Vaneesa Wiebe for her assistance in scoring the Selves Questionnaire.

Thanks to Dr. Peter McLean, Dr. Bill Koch, and Dr. Sheila Woody for their permission to collect my data through their facilities, and their time and support in doing so.

To Karen Lawsen and everyone else at the Stress and Anxiety Unit who have spent considerable amounts of their own time, ensuring the collection of my data.

To my friend Roxanne Heichert who pitched in when I needed a hand.

## Table of Contents

Approval.....	ii
Abstract.....	iii
Acknowledgements.....	iv
Table of Contents.....	v
List of Tables.....	vi
Introduction.....	1
Self-Discrepancy Theory.....	1
Sociotropy and Autonomy.....	6
Remission from Depression.....	10
Cognitive Variables in Depression.....	11
The Present Research.....	13
Research Hypotheses.....	15
Hypothesis 1.....	15
Hypothesis 2.....	15
Hypothesis 3.....	15
Additional exploratory hypothesis.....	16
Method.....	17
Participants.....	17
Depressed Participants.....	17
Remitted Participants.....	17
Control Participants.....	17
Materials.....	18
The Selves Questionnaire.....	18
The Anxiety Disorders Interview Schedule-Revised.....	19
The Personal Style Inventory, Version II.....	19
The Beck Depression Inventory.....	20

Procedure.....	21
Results.....	21
Preliminary analyses.....	21
Missing values.....	21
Demographics.....	22
Distributions.....	23
Principal analyses.....	24
Hypothesis 1.....	24
Hypothesis 2.....	26
Hypothesis 3.....	30
Additional exploratory hypothesis.....	40
Discussion.....	40
Limitations.....	47
Future Research.....	49
Summary.....	50
References.....	51
Appendix A.....	58

## List of Tables

Table	Page
1. Means and Standard Deviations for Sociotropy and Actual-ideal Discrepancies by Group.....	25
2. Means and Standard Deviations for BDI Total Scores and BDI Partial Scores by Group.....	28
3. Zero-order Correlations between Total BDI and Partial BDI, and Sociotropy and Actual-ideal Discrepancies.....	29
4. Means and Standard Deviations for the Four History Variables.....	31
5. Zero-order Correlations between the Four History Variables.....	32
6. Summary of Regression Analysis for the Composite History Variable.....	34
7. Summary of Regression Analysis for the Severity of the Most Recent Episode of Depression.....	35
8. Summary of Regression Analysis for the Number of Past Episodes of Depression.....	36
9. Summary of Regression Analysis for the Severity of the Worst Episode of Depression.....	37
10. Summary of Regression Analysis for the Age of Onset of the First Episode of Depression.....	38
11. Zero-order Correlations between Sociotropy and Actual-ideal Discrepancies, and the Four History Variables.....	39
12. Zero-order Correlations between Actual-ideal Discrepancies and Sociotropy and the BDI, by Group.....	45



## Actual-ideal Discrepancies and Sociotropy:

### Vulnerability Markers for Depression

Many psychological variables have been postulated to play a role in the onset and maintenance of depression. Frequently, however, proposed factors are found to fluctuate with depressive symptoms, appearing with the onset of the episode, and subsiding with remission (Barnett & Gotlib, 1988; Eaves & Rush, 1984; Hamilton & Abramson, 1983; Persons & Rao, 1985; Silverman, Silverman, & Eardly, 1984; Simons, Garfield, & Murphy, 1984). This is a problem because it makes it difficult to distinguish between vulnerability markers and symptoms of depression. The results of studies that have examined the relation between depression, and actual-ideal discrepancies (Higgins, 1987) and the two personality dimensions, sociotropy and autonomy (Beck, 1983; or dependency and self-criticism, Blatt, 1974) have been more promising. Both actual-ideal discrepancies and sociotropy have been associated with risk for future depression (Franche & Dobson, 1992; Strauman & Higgins, 1988). The present research examined the role of these variables as vulnerability markers for depression. The following discussion outlines self-discrepancy theory and the theory relating sociotropy and autonomy to depression as well as relevant findings. The role of remission from depression in the investigation of vulnerability markers will be discussed, and research that has examined the role of cognition in depression will be briefly reviewed.

### Self-Discrepancy Theory

The first set of hypotheses guiding the present research were derived from Self-Discrepancy theory. Self-discrepancy theory postulates that when individuals hold beliefs about their actual-self that are incongruent with their goals or self-guides, they are likely to experience emotional distress or discomfort (Higgins, 1987). Different types of discrepant or incompatible sets of beliefs (self-representations) are hypothesized to be associated with different types of psychological distress. For example, not living up to

one's ideals is hypothesized to lead to dejection-related emotions and not living up to one's obligations is hypothesized to result in agitation-related emotions.

Self-state representations are assumed to act as guides or standards for self-evaluation and individuals are hypothesized to evaluate themselves according to these guides. Two cognitive dimensions are postulated to underlie the various self-state representations: "domains of the self" and "stand-points of the self". The three domains are: (a) the actual-self, that represents the traits or characteristics that someone (self or other) believes the person possesses, (b) the ideal-self, that represents the traits or characteristics that someone (self or other) would ideally like the person to possess, and (c) the ought-self, that represents the traits or characteristics that someone (self or other) believes the individual should or ought to possess. There are also two or more standpoints on the self: (a) the individual's own stand point, and (b) the stand point of one or more significant others (e.g., parent, close friend, partner). Combining these factors, yields six different possible self-representations: actual/own, actual/other, ideal/own, ideal/other, ought/own, and ought/other. The first two constitute what is usually considered the person's self-concept, and the latter four constitute standards or self-guides. Most self-discrepancy studies collapse across "own" and "other" perspectives in order to obtain measures of the ideal-self and the ought-self.

The type of distress experienced, is related to the type of perceived discrepancy. When the actual-self is perceived as discrepant from the ideal-self, individuals may feel disappointed with themselves, and unable to attain goals that are important to them. This negative psychological situation is hypothesized to lead to feelings of loss, depression, and other dejection related emotions. When the actual-self is perceived as discrepant from the ought-self, anxiety and other agitation related emotions are hypothesized to result. When individuals feel they are not living up to their duties and obligations they may feel unable to avoid punishment and negative events in their lives, and as a result feel guilty, worthless, fearful or resentful.

This model further hypothesizes that self-discrepancies are the product of parental socialization strategies (Higgins, 1989; Moretti, & Higgins, 1990). When parents focus on discrepancies between their children's behavior and the hopes and wishes they hold for their children, they may experience disappointment. This may, in turn, lead to them responding to their children by withdrawing love and affection. This particular parenting style is hypothesized to result in the development of actual-ideal discrepancies in children. When parents focus on aspects of their children's behavior that are discrepant from the duties and obligations they have prescribed for their children, they are likely to feel angry and resentful and to criticize and punish their children. Their relationships with their children will be characterized by the presence of negative outcomes. This second parenting style is hypothesized to result in the development of actual-ought discrepancies.

The availability and accessibility of self-discrepancies are also hypothesized to play a role in the activation of different types of emotional distress (Higgins, 1987). Availability refers to the kinds of constructs that exist in memory, and accessibility refers to the ease with which those constructs are used in information processing. Self-discrepancy theory assumes that the self attributes that form self-discrepancies are interconnected in memory as cognitive structures (Moretti, Higgins, & Feldman, 1990). These cognitive structures are hypothesized to be stable internal aspects of self-knowledge that guide information processing. The accessibility of the available cognitive structures is hypothesized to depend on how recently and how frequently they have been activated, and how applicable they are to the stimulus event (Higgins, 1987). The greater the number of discrepant traits an individual possesses, the more often they are likely to be activated. As a result, the more accessible they will become. Also, because they are interconnected in memory, when one discrepant trait is activated, all of the discrepant traits that form the self-discrepancy will also be activated (Higgins, Van Hook, & Dorfman, 1988). It is hypothesized that frequent activation of self-discrepancies over an

extended period of time may result in them becoming chronically accessible, even without a triggering event. Consequently, individuals vulnerable to depression are likely to exhibit more discrepant actual-ideal self-attributes than non-vulnerable individuals, and their actual-ideal discrepancies are likely to be chronically accessible.

Research findings indicate that the presence of actual-ideal discrepancies is a risk factor to depression (Strauman & Higgins, 1988). Two studies have examined the ability of self-discrepancies to predict emotional distress (Strauman & Higgins, 1988). In both studies, participants were university undergraduates, and measures of self-discrepancies were taken prior to measures of distress. In the first study, self-discrepancies were assessed two months prior to the assessment of participants' experiences of chronic discomfort. The researchers found that actual/own:ideal/own discrepancies were uniquely predictive of dejection but were unrelated to agitation, and conversely, they found that actual/own:ought/other discrepancies were uniquely predictive of agitation but were unrelated to dejection. In the second study, measures of self-discrepancies were taken during the first week of classes and measures of social anxiety, depression, and related emotional distress were taken one month later. Actual-ideal discrepancies were found to most strongly predict measures of depression, whereas actual-ought discrepancies most strongly predicted measures of social anxiety. The results of both studies support the hypothesis that actual-ideal discrepancies are predictive of future depressed mood.

In addition, several studies have compared groups of individuals experiencing different types of emotional distress (Higgins, Klein, & Strauman, 1985; Strauman, 1989; Scott & O'Hara, 1993). Higgins, Klein, and Strauman administered the Selves Questionnaire (a measure of self-discrepancies), and several measures of depressed and anxious affect to non-depressed, mildly depressed and moderately depressed undergraduates. They found that actual-ideal discrepancies were associated with dejection-related emotions and symptoms, but not with other types of psychological

distress. They also found that the magnitude of the discrepancy was related to the degree of dejection reported. In a study that compared clinically depressed and socially phobic individuals, Strauman (1989) found that although depressed subjects possessed the greatest discrepancy between their actual and ideal/own self-states, social phobics possessed the greatest discrepancy between their actual and ought/other self-states. In a more recent study (Scott & O'Hara, 1993) self-discrepancies were examined in four groups of undergraduate students who met diagnostic criteria for either major depression or dysthymia, an anxiety disorder, both depression and anxiety, or no psychiatric disorder. Depressed subjects possessed higher levels of actual:ideal/own discrepancies than non-depressed subjects. Anxious subjects possessed higher levels of actual:ought/other discrepancies than non-anxious subjects. The results of these studies strongly suggest that actual-ideal discrepancies are associated with dejection but not with other types of emotional distress, and that the greater the discrepancy the more intense the emotional distress.

Research has also demonstrated the consequences of activating various types of self-discrepancies. In two studies, a priming procedure has been used to activate specific actual-self:self-guide mismatches (Strauman & Higgins, 1987). It was found that activation of mismatches resulted in depressed affect for individuals high in actual-ideal discrepancies, and agitation in individuals high in actual-ought discrepancies. Finally, there is evidence that activation of one discrepant self-attribute results in the activation of other discrepant self-attributes (Higgins et al., 1988). This last finding is consistent with self-discrepancy theory that postulates that each actual-ideal discrepancy is part of an interconnected cognitive structure and that activation of one part of the structure will result in activation of other parts of the structure (Moretti et al., 1990).

The above results strongly support the hypothesis that depressed individuals possess higher levels of actual-ideal discrepancies than do non-depressed individuals and that actual-ideal discrepancies are associated with dejection-related emotions and

symptoms of depression, generally. However, few of these studies have used clinical populations. This is an important limitation because mild depression in college students may be qualitatively different from clinical depression, and most treatment efforts are directed at individuals with chronic, clinical depression. Furthermore, studies that have used clinical populations have examined self-discrepancies in currently depressed individuals. This is problematic because without controlling for current mood, it is difficult to distinguish between vulnerability factors and symptoms. In one study, Strauman and Higgins (1988), assessed the predictive ability of self-discrepancies. Unfortunately they did not use a clinical population nor did they assess the level of depression of subjects at the time measures of self-discrepancies were taken. It is therefore difficult to know if self-discrepancies in currently non-depressed individuals are predictive of future depressed mood. In order to assess the role of self-discrepancies as vulnerability markers in depression, it would be important to know if levels of actual-ideal discrepancies can distinguish remitted subjects from control subjects and if this continues to be true even when depressed mood is controlled for. This is one purpose of the present investigation.

### Sociotropy and Autonomy

A second area of study informing the present research, is in the area of personality. Several theorists have suggested that there are two personality dimensions that function as vulnerability factors in depression (Beck, 1983; Blatt, 1974). These two personality styles correspond to Blatt's concepts of dependency and self-criticism and Beck's concepts of sociotropy and autonomy. Interpersonally dependent or sociotropic individuals are described as feeling weak and unloved. They have a strong need for care and approval from others and often act in ways to please others. They are hypothesized to depend on the love and attention of others for the maintenance of their self-esteem. Individuals who possess this interpersonal style are particularly at risk for developing depression when faced with threats in the interpersonal domain. Self-critical individuals

are defined as having a high need for independence and as being very goal oriented. They experience feelings of doubt, self-criticism and guilt at not living up to expectations and obligations. They are hypothesized to be sensitive to personal failure and lack of control over goal attainment.

These two personality traits are hypothesized to be stable and enduring characteristics of the person. Although they were conceived to describe two distinct groups of depression-prone individuals, they are not mutually exclusive and may co-exist to different degrees in the same individual. Researchers who have examined the relation of these two traits to depression have typically attempted to categorize individuals as being either predominantly dependent or predominantly self-critical.

The introduction of sociotropy and autonomy into theories of depression represents a refinement of previous stress-diathesis models (Abramson, Seligman, & Teasdale, 1978; Beck, 1967). Stress-diathesis models predict that vulnerable individuals will become depressed subsequent to stressful life events, but no distinction is made between negative interpersonal and negative autonomy related events. This failure to distinguish between types of stressful events may explain why the relation found between life stress and depression, although consistent, has been small (Lloyd, 1980; Hammen, Mayol, DeMayo, & Marks, 1986). It is generally hypothesized that the two personality dimensions, sociotropy and autonomy, predispose individuals to becoming depressed when faced with stressors from a personally relevant domain. The interaction between life stress and depression may be clarified, and our ability to predict future depression enhanced by hypothesizing a specific match between type of stressful event and personality style. Specifically, it is hypothesized that sociotropic individuals are vulnerable to becoming depressed consequent to interpersonal stress, and autonomous individuals are vulnerable to becoming depressed following achievement stress or failure. The present study does not directly address the person-event congruency hypothesis. However, the hypothesized relation between type of stressor and personality style, and the

empirical evidence for this relation, support the rationale of the present research which hypothesizes that these personality variables represent vulnerability markers in depression.

There are three principal self-report inventories that measure these traits: The Sociotropy-Autonomy Scales or SAS (Beck, Epstein, Harrison, & Emery, 1983), the Depressive Experiences Questionnaire or DEQ (Blatt, D'Afflitti, & Quinlan, 1976), and the Anaclitic and Introjective Dysfunctional Attitude Scales or DAS (Weissman & Beck, 1978). A new measure of sociotropy and autonomy, the Personal Style Inventory (PSI), has been recently developed by Robins, Ladd, and Luten (1990). This measure was developed in response to the fairly consistent finding that although sociotropy correlates with depressive symptomatology and is predictive of future depression, autonomy does not. Robins, Block and Peselow (1989) hypothesized that these findings may be due to problems in the measures rather than problems in the theory. The PSI has since been refined (Robins, C. J., personal communication, August 5, 1991) in an attempt to improve the autonomy scale generally, and to minimize the correlation between the sociotropy scale and the autonomy scale.

In general, support for the personality-event congruence hypothesis, and the relation of sociotropy and autonomy to depression, has been found. The relation between sociotropy, negative interpersonal events and depression has been found more often than the relation between autonomy, negative autonomy-related events and depression, however. Using the Depressive Experiences Questionnaire, Klein, Harding, Taylor and Dickstein (1988), compared clinically depressed individuals and normal controls, and found that depressed subjects exhibited higher scores on both dependency and self-criticism than normals. Franche & Dobson (1992), also compared clinically depressed and remitted participants with controls and found that the depressed and remitted individuals exhibited equally high levels of dependency and self-criticism, which were



significantly higher than those of controls. These two studies provide preliminary support for the role of sociotropy and autonomy as potential vulnerability factors in depression.

In addition, a number of prospective studies, using both clinical and student samples, have found support for the personality-event hypothesis. Two studies (Segal, Shaw, & Vella, 1989; Segal, Shaw, Vella, & Katz, 1992), followed remitted subjects for six months and one year, respectively. The first study found that, for dependent participants only, congruency with life-event was associated with self-reports of depression and with clinical relapse. The second study found support for the association of level of depression with life event content, for both dependent and sociotropic participants. Two additional studies that followed clinically depressed participants over time, found severity of depressive symptoms to be associated with increased levels of negative interpersonal events for sociotropic individuals and with higher levels of achievement stress for autonomous individuals (Hammen, Ellicott, Gitlin & Jamison, 1989; Hammen, Ellicott & Gitlin, 1989). An additional prospective study, involving college students, also found support for the personality-event congruence hypothesis, for both sociotropy and autonomy (Hammen, Marks, Mayol & deMayo, 1985). Ninety-three college students were followed for four months. Stressful life events and depression were assessed monthly. For sociotropic subjects, they found a stronger relation between negative interpersonal events and depression than between negative autonomy related events and depression. The predicted opposite pattern was also found for autonomous individuals.

Further support for this pattern of personality-event congruence was found in two studies by Robins (1990). In the first study, clinically depressed, highly sociotropic patients reported significantly more recent negative interpersonal events than negative autonomy-related events. Highly autonomous patients, however, did not report higher levels of recent negative autonomy than negative interpersonally-related events. In the second study, evidence for personality-event congruence was found in dysphoric students,

but not in nondysphoric students. In the group of dysphoric students the high sociotropy group reported more negative social than negative autonomy events, and the high autonomy group reported more negative autonomy events than negative social events. These differences, although in the hypothesized direction, were not significant. In another study, Robins and Block (1988) found a relation between sociotropy, and depression and frequency of recent negative social events, but not for autonomy. Sociotropy and autonomy have also been found to relate to specific symptom clusters within clinical depression (Robins, Block & Peselow, 1989; Robins & Luten, 1991).

In summary, research findings have supported the value of interpersonal dependency as a vulnerability factor to depression. The value of self-criticism as a vulnerability factor to depression is, however, less well supported (Hammen et al., 1985; Zuroff & Mongrain, 1987).

#### Remission from Depression

There are a number of different ways to investigate factors that are hypothesized to render individuals vulnerable to depression, using both prospective and cross-sectional research designs. A random sample of individuals who have never experienced an episode of clinical depression can be followed, and future episodes of depression predicted, based on the variables of interest. Remitted subjects can be followed and future depression can be predicted. Depressed individuals can also be followed with the prediction that they will be different from controls on the variables of interest and that they will continue to demonstrate this difference during remission. Finally, using a cross-sectional design, depressed and remitted individuals can be compared to controls. Each of the above approaches provides varying degrees of certainty regarding vulnerability factors.

Prospective designs, because they serve to predict future depression, provide the greatest certainty that the variables investigated truly represent vulnerability factors. When never-before depressed individuals are followed over time, it can be demonstrated

that the variables being investigated were present prior to the development of the depression and are therefore not a consequence of it. Unfortunately, this approach requires a substantial investment of time and energy. A large number of never-before depressed individuals need to be followed over a long period of time before a sufficient number of them will experience an episode of depression. For this, and other reasons, it may be more fruitful to predict future depression in remitted individuals. Although this type of study does not allow investigators to rule out the possibility that the variables studied are consequences of depression, it has several advantages. First, about 40% of individuals who are depressed for the first time experience only one episode of depression in their lifetime, whereas 60% go on to experience numerous episodes (Thase, 1990). Those individuals who are vulnerable to recurrent depression are most in need of effective interventions and therefore are the most useful to study. Also, chronic, recurrent depression may be more likely to be caused by vulnerability factors than first episode depression, which may be more strongly influenced by situational variables.

Comparing depressed and remitted subjects with controls represents an important step in the process of researching potential vulnerability factors. This type of design can be useful in determining whether a particular variable is worthy of further investigation. This approach accomplishes this by determining the status of the variables of interest in depressed subjects, remitted subjects and controls. For a psychological variable to be a vulnerability factor to depression, it must be apparent both during the depressive episode and subsequent to it. Consequently, although prospective designs are essential in determining the predictive value of the variables being studied, cross-sectional designs represent an important first step in this process. A cross-sectional design was used in the present investigation.

### Cognitive Variables in Depression

The identification of cognitive and interpersonal variables that may play a causal role in the onset of clinical depression has been an important part of depression research

for some time. Variables such as underlying dysfunctional attitudes (pervasively negative beliefs about the self, the world, and the future) as proposed by Beck's cognitive theory (Beck, Rush, Shaw & Emery, 1979) and dysfunctional attributional styles (internal, stable, and global attributions about negative events) as hypothesized by the reformulated learned helplessness theory (Abramson et al., 1978) have been examined. Unfortunately most of these potential cognitive variables that have been hypothesized to represent vulnerability factors to depression have been found to be concomitants to depression; appearing with the onset of the depressive episode and disappearing with remission (Eaves & Rush, 1984; Hamilton & Abramson, 1983; Persons & Rao, 1985; Silverman et al., 1984; Simons et al., 1984). Many studies have found cognitive differences between currently depressed and non-depressed individuals, but when the research was extended to include remitted individuals, those difference were lost (Barnett & Gotlib, 1988; Hamilton & Abramson, 1983; Hollon, Kendall & Lumry, 1986; Silverman et al., 1984). Lewinsohn, Steinmetz, Larson, and Franklin (1981) failed to predict future depression based on measures of depression-related cognitions. Although there are a small number of studies that are consistent with the prediction that dysfunctional beliefs or attributions interact with life events to produce depression, the overwhelming majority are not (Persons & Miranda, 1992). These findings have led many researchers to conclude that cognitive variables represent concomitants to depression and that they may better thought of as symptoms of the disorder rather than as vulnerability factors.

More recently, an alternative explanation has been proposed (Miranda & Persons, 1988; Persons & Miranda, 1992). It has been suggested that dysfunctional beliefs or attributions are mood-state dependent and are only apparent during negative mood-states. There is some support for this hypothesis. Endorsement of dysfunctional beliefs has been found to depend on current mood state, with endorsement greater when mood is lower. Endorsement of dysfunctional beliefs has also been found to vary with mood in individuals with a history of depression, but not in those who have never been depressed

(Miranda & Persons, 1988; Miranda, Persons, & Byers, 1990). These findings are consistent with Beck's original cognitive model of depression (Beck, 1961) and with a more recent discussion by Beck (1991). He argues that dysfunctional beliefs and attributions should not be apparent during remission because they represent latent cognitive schemas that are then activated by stressful life events.

There is some evidence to suggest that sociotropy and actual-ideal discrepancies may not follow the same pattern as most of the cognitive variables previously investigated, but may in fact represent enduring characteristics of the individual, apparent even during periods of remission and normal mood. The present research tests this prediction, and explores the relation of these variables to negative mood.

#### The Present Research

The present research was designed to extend our understanding of the role of sociotropy and actual-ideal discrepancies in depression in a number of ways. First, a clinical sample was used. In studies that have shown actual-ideal discrepancies to be predictive of future depression, primarily non-clinical populations have been used. Second, when clinical populations have been used, the self-systems of individuals who are currently depressed have been examined, an approach that provides very limited information about vulnerability to future depression. In this project, currently depressed individuals, individuals who were not currently depressed but who had a history of depression and are vulnerable to future depression (remitted participants), and individuals who were not currently depressed and who did not have a history of depression (control participants) were compared. Different levels of actual-ideal discrepancies and sociotropy were predicted for these three groups. The relation of these variables to past history of depression, and the relation between actual-ideal discrepancies and sociotropy was also explored. Finally, a revised measure of sociotropy and autonomy was used. Although a number of studies have shown sociotropy, and to a much lesser degree,

autonomy, to be related to vulnerability to depression, the revised measure, the PSI, had yet to be tested in this manner.

The research findings discussed earlier indicate that both sociotropy and actual-ideal discrepancies are risk factors to depression and that depressed individuals possess more of each of these than normal controls. Because of this, depressed participants were hypothesized to exhibit higher levels of actual-ideal discrepancies and sociotropy than never-before depressed controls.

There are two factors that may influence the levels of actual-ideal discrepancies and sociotropy found in remitted individuals: 1) mood-state dependency, and 2) chronic accessibility. Both actual-ideal discrepancies and sociotropy have been found to correlate positively with depression, suggesting that they may be somewhat mood-state dependent, and more accessible during periods of depressed mood. There is also evidence, however, that both actual-ideal discrepancies and sociotropy represent enduring characteristics of the individual that are apparent, not only during times of depressed mood, but also during periods of normal mood. This evidence is consistent with Beck's model of depression, which hypothesizes that sociotropy is an enduring personality characteristic, and with self-discrepancy theory, which hypothesizes that when a large number of actual-ideal traits are discrepant, they will be frequently activated and as a result become chronically accessible. On the basis of these findings, and the predictions made by these models, the following was hypothesized. Depressed participants were hypothesized to exhibit higher levels of actual-ideal discrepancies and of sociotropy than controls. Remitted participants were also hypothesized to exhibit higher levels of these variables than controls. Remitted participants were, however, hypothesized to demonstrate lower levels of these variables than depressed participants. This is because some of the variance in actual-ideal discrepancies and sociotropy is likely attributable to enduring vulnerabilities, and some is likely attributable to current mood-state. Depressed participants should demonstrate the

same level of vulnerability as remitted participants, but they should also be more symptomatic, thereby increasing the level of these variables that is expressed.

In addition, because the differences between depressed participants, remitted participants and controls should only be partially accounted for by current mood-state, the differences between depressed participants, remitted participants, and controls were predicted to decrease, but remain significant even when depressive symptomatology was controlled for. Because actual-ideal discrepancies and sociotropy are hypothesized to be vulnerability factors to depression, they should correlate positively with other known factors that reflect vulnerability, such as greater numbers of previous episodes of depression, severity of depressive episodes and earlier age of onset of first episode. This relation was hypothesized to be present.

#### Research Hypotheses

To summarize, the following hypotheses were tested:

##### Hypothesis 1

Depressed individuals were predicted to demonstrate the highest levels of actual-ideal discrepancies and of sociotropy, remitted participants the second, and never-before depressed controls the lowest.

##### Hypothesis 2

When the variance in discrepancy scores and sociotropy scores due to depressive symptoms is controlled for, depressed participants were hypothesized to exhibit the same levels of sociotropy and autonomy as remitted participants, and both were hypothesized to exhibit higher levels of these variables than controls.

##### Hypothesis 3

Higher levels of actual-ideal discrepancies and sociotropy were hypothesized to be associated with a greater number of past episodes, the severity of the most recent episode, the severity of the worst episode, and a younger age of onset of the first episode of depression for both depressed participants and remitted participants.

### Additional exploratory hypothesis

In addition to the above hypotheses, the relation between actual-ideal discrepancies and sociotropy was explored. These two constructs have never been studied simultaneously and, therefore, their relation to one another is unknown. A number of possible relations were examined. First, there may be a positive correlation between sociotropy and actual-ideal discrepancies. Self-discrepancy theory hypothesizes that actual-ideal discrepancies develop in the presence of parents who are oriented towards responding to those aspects of their children's behavior that are discrepant from their hopes and wishes for them, and their relationships with their children are likely to be characterized by the withdrawal of support and acceptance. Once formed, actual-ideal discrepancies are hypothesized to produce feelings of sadness and discouragement because the individual is not who he/she would ideally like to be and goals or desires are perceived to be unattainable. These individuals are in the negative psychological situation of the "absence of positive outcomes". This suggests that, as a consequence, individuals who possess actual-ideal discrepancies may be reassurance seeking and oriented towards pleasing others in order to avoid a potential withdrawal of love or support, and highly sensitive to interpersonal loss. In other words they may be highly sociotropic; implying a positive correlation between sociotropy and actual-ideal discrepancies. Second, there may be an interaction between actual-ideal discrepancies and sociotropy. Possibly the strength of the self-guide may be greater in individuals who are highly sociotropic. Strength can be defined as the accessibility of, the coherence of, and the commitment to, the self-guide. In this case, actual-ideal discrepancies would predict a more severe history of depression in individuals who are high in sociotropy. Both of these possibilities were tested.



## Method

### Participants

Depressed participants. The group of 20 depressed individuals was recruited through a treatment outcome study being conducted at the University Hospital psychology department. Only those individuals who met criteria for current major depression and who had experienced at least one previous episode of depression were included. Individuals who met criteria for a bipolar disorder were excluded. The mean age for the depressed group was 38.10 years. Sixty-five percent of the depressed participants were women. Thirty-five percent were married, 50 % single, and 20 % formerly coupled. The average level of education attained was 2 years of college.

Remitted participants. The group of 20 remitted participants was recruited through on-going research projects conducted at the University Hospital psychology department. Only those who were no longer clinically depressed, met criteria for two or more past episodes of major depression and who did not meet criteria for any other Axis-I disorder were included. These participants were offered diagnostic feedback at the end of the assessment interview. Those individuals who were excluded from participation because they met criteria for an Axis-I disorder were, however, offered treatment through the Health Psychology Clinic at the University Hospital. The mean age for the remitted participants was 37.05 years. Fifty-five percent of the remitted participants were women. Twenty-five percent were married, 45 % single, and 30 % formerly coupled. The average level of education attained was 2 years of college.

Control participants. Individuals in the control group ( $N = 20$ ) were recruited through advertisements posted throughout the University Hospital. Only those individuals who did not meet criteria for any Axis-I disorder were included. These participants were given ten dollars for participating in the research project. The mean age for the control participants was 29.95 years. Eighty percent of the control participants

were women. Twenty percent were married, 55 % single, and 20 % formerly coupled. The average level of education attained was 2 years of college.

### Materials

The Selves Questionnaire. The Selves Questionnaire (Higgins, Bond, Klein, & Strauman, 1986) is a self-report inventory used to assess individuals' self-discrepancies. Respondents are asked to spontaneously generate three sets of up to 10 traits or attributes that describe their actual-self, their ideal-self and their ought-self. Estimates of interrater reliability of the Selves range from 0.80 (Higgins et al., 1985) to .94 (Scott & O'Hara, 1993). The test-retest reliability of actual-ideal discrepancy scores has been reported to range from .39 to .65 (Moretti & Higgins, 1990a; Higgins, 1987) over periods of four to six weeks and two months, respectively. The correlation between actual-ideal and actual-ought discrepancies has been found to range from 0.43 (Strauman, 1992) to 0.44 (Higgins, 1987). The previously discussed relation between different types of self-discrepancies and different types of emotional discomfort suggests that the Selves Questionnaire possesses good construct validity.

The Selves Questionnaire was scored in a manner consistent with scoring used by other discrepancy researchers. The primary researcher and another researcher experienced in the scoring of the Selves Questionnaire shared the scoring of the 60 questionnaires. Each of the two scorers received ten questionnaires from the depressed participants, ten from the remitted participants, and ten from the controls. Scorers were partially blind to the group membership during scoring. No effort was made to keep the questionnaires in a particular order, nor did the scorers attend to group membership during the scoring. Reliability was established by having both the experienced and the novice scorer score 10 questionnaires. There was an exact match on more than 95 percent of the items. Any disagreements were resolved through discussion.

Some participants, particularly in the depressed group, had difficulty completing the measure, and consequently, it was submitted late on at least two occasions. In order

to ensure that individuals in the depressed group had not remitted by the time they had completed the Selves Questionnaire, it was decided that participants who's BDI score had fallen below 15, by the time the Selves was completed, would be excluded. Only one subject's BDI score fell to 15 by the time the Selves Questionnaire was submitted, none fell below 15.

The Anxiety Disorders Interview Schedule-Revised. The Anxiety Disorders Interview Schedule-Revised (ADIS-R; Di Nardo & Barlow, 1988) is a structured interview designed to diagnose past and present DSM-III-R Axis-I disorders. This measure screens for psychosis, substance abuse, and somatoform disorders. The ADIS-R also provides information regarding the age of onset of the first episode, the number of subsequent episodes, and the severity of the most recent episode. Reliability estimates are available for both the ADIS and the ADIS-R. In a study of the original version of the ADIS, Di Nardo, O'Brien, Barlow, Waddell, and Blanchard (1983), in a sample of 60 patients, found a K coefficient of .68 for anxiety disorders and .82 for affective disorders. The K coefficient for major depression alone, was found to be .57. In a more recent study of the ADIS-R, the K coefficient for major depression was .65, and for anxiety disorders ranged from .43 to .82. In both of these studies, the proportion of patients who received a diagnosis of major depression was low. Further research that examines the reliability of this instrument for mood disorders is required.

For this project, the primary investigator was trained to criterion before independently administering the interview. In order to meet criterion, the novice interviewer had to match an experienced interviewer on all Axis-I diagnoses and be within one severity rating (ratings vary from 0 to 8) for each diagnosis, on three successive occasions. This criterion was achieved well in advance of the commencement of this project.

The Personal Style Inventory, Version II. The Personal Style Inventory, Version II (PSI; Robins, Ladd, & Lutten, 1990) is a self-report inventory designed to measure the

constructs of sociotropy and autonomy. Each of the scales measuring sociotropy and autonomy contain 24 items each. This version of the PSI was administered to a group of 411 undergraduates (Robins, C. J., personal communication, August 5, 1991). The internal consistencies were .88 for sociotropy and between .72 and .83 for its subfactors, and .86 for autonomy and between .70 and .80 for its subfactors. Sociotropy and autonomy were found to correlate weakly ( $r = 0.18$ ). Correlations with the Beck Depression Inventory, in samples of undergraduates have been found to be .20 for sociotropy and between .13 and .27 for autonomy. Some construct validation has been provided by the correlations between the PSI and the revised DEQ (Welkowitz, Lish, & Bond, 1985). The sociotropy scale correlated .84 with the dependency scale and .50 with the self-criticism scale. Autonomy correlated .50 with self-criticism and .12 with dependency. Robins (1991) argues that the .50 correlation between sociotropy and self-criticism is not problematic because the self-criticism scale is highly correlated with depressed mood, and may be more a measure of low mood rather than personality. Robins (1991), in a sample of 74 students, found the test-retest reliability of the revised PSI to be .80 for sociotropy and .69 for autonomy.

All of the PSI questionnaires were scored by the primary investigator. In order to calculate sociotropy and autonomy scores, specific items were added together.

The Beck Depression Inventory. The Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) is the most widely used self-report measure of depression. It is comprised of 21 categories of symptoms and attitudes. Each category contains a number of self-evaluative statements that can be rated from 0 to 3 in terms of intensity. The internal consistency of the BDI has been found to be quite high. Beck, Steer, and Garbin (1988) reviewed 25 studies that evaluated the internal consistency of the BDI and coefficient alphas were found to range from .73 to .95. Generally high correlations between the BDI and other measures of depressive symptomatology are suggestive of good construct validity. When the BDI has been compared to clinical

ratings of depression, the correlations between these two measures range from .55 to .96 (Beck et al., 1988). Comparisons with other measures of depression have also yielded correlations ranging from .57 to .90 (Beck et al., 1988).

The standard procedure for scoring was used. Scoring for this questionnaire involves tallying the circled numbers for each of the 21 items. If more than one item is circled, then the higher number is used.

### Procedure

Prospective participants were first screened by telephone. They were briefly asked about current and past depression, current treatment, drug and alcohol use, and any other Axis-I disorders that would exclude them from participating in the project. Individuals not excluded on the basis of this conversation were then invited for a thorough diagnostic assessment. The ADIS-R was used for this purpose. Only those individuals who met DSM-III-R criteria for current or past major depression and possessed no other Axis-I diagnosis, or who, in the case of controls, did not meet criteria for any Axis-I diagnosis, were accepted into the study. All three groups were then administered the ADIS-R, the BDI, the PSI, and the Selves Questionnaire. In addition to diagnostic status, the ADIS-R also provided demographic information, treatment history, and history of depression.

## Results

### Preliminary analyses

Missing Values. This particular data set possessed very few missing values. Missing values occurred on the following variables; level of education, current symptom level, psychosocial stressors, the Personal Style Inventory, severity of the worst episode of depression, and the Selves Questionnaire. For education level, one participant's score was missing, for current symptom level, two participants' scores were missing, for psychosocial stressors, one participant's score was missing, for the PSI, a total of four item responses out of 2880 were missing, for the worst episode of depression, three

participants' scores were missing, and for the Selves Questionnaire, a total of 17 item responses out of 480 were missing. Because of the small number of missing values in this data set, most approaches to handling missing values would likely produce almost identical results.

There are a number of different ways of handling missing values, including deleting the case altogether (this would be wise only in large data sets with few missing values), estimating the variable score based on an educated guess, replacing the missing value using the overall mean or the group mean. The group mean is considered a good choice because although it is not as conservative as using the overall mean it is more conservative than making an educated guess (Tabachnick & Fidell, 1989).

The missing values in this data set were handled in the following manner. For education level, the mean for all participants was used. This was considered the best choice, given that there were no group differences on this variable. For current symptom level, the group mean was used. This was considered the wisest choice given that the groups differed significantly on this variable. For psychosocial stressors the group mean was also used because there were group differences in the level of stressors experienced. For the severity of the worst episode of depression, the severity of the most recent episode was used. This is the most conservative estimate, given that the worst episode must be as severe as the most recent episode or worse. For the PSI missing values, and missing discrepancy scores, group means were used.

Demographics. The demographic variables of age, education and marital status were each participantised to a one-way analysis of variance (ANOVA) with group (depressed, remitted, and controls) as the between participants factor. The demographic variable sex, was participantised to a Chi-square test. The results of these analyses indicated that there were group differences on age only ( $F(2,57) = 3.38, p < .05$ ). The mean age was 38 years for the depressed group, 37 years for the remitted group, and 30 years for the controls. Thus, the relation of age with the variables of interest (sociotropy

and actual-ideal discrepancies) was also examined. The correlation between age and sociotropy was not significant ( $r(58) = .01, p > .90$ ), nor was the correlation between age and actual-ideal discrepancies ( $r(58) = -.07, p > .50$ ). Regression analysis indicated that the amount of variance in the variables of interest attributable to age was negligible ( $R^2 = .001$  for sociotropy, and  $R^2 = .005$  for actual-ideal discrepancies). On the basis of these results, it appears that age did not contribute significantly to either sociotropy or actual-ideal discrepancy scores. Consequently age was not controlled for in subsequent analyses.

Distributions. All of the variables were normally distributed with the exception of actual-ideal discrepancies, actual-ought discrepancies, the number of past episodes of clinically significant depression, and the age of onset of the first episode of depression. An alpha level of 0.01, consistent with the recommendations of Tabachnick and Fidell (1989) for small sample sizes, was used to test deviations from normality (skewness and kurtosis). For actual-ideal and actual-ought discrepancies, one outlier was found to be the cause of non-normality. It was decided that these two outlying scores could have been predicted to be high, but not as extreme as had been reported. Therefore, the outlying scores were reduced to the next highest score. A similar decision was made for the number of past episodes of depression. Two participants had experienced an exceptionally high number of episodes of past depression, and a cut off maximum score of ten previous episodes was established. In the case of the age of onset of the first episode of depression, a logarithmic transformation was used to normalize the scores. For each of the four variables that deviated from normality, the results of analyses based on transformed scores were comparable to the results of analyses based on unmodified scores. Therefore, for simplicity of interpretation, all analyses are reported based on original, unmodified scales.

## Principal analyses

**Hypothesis 1.** Depressed participants were predicted to exhibit higher levels of actual-ideal discrepancies and higher levels of sociotropy than both remitted participants and normal controls. Remitted participants were also predicted to exhibit higher levels of these variables than normal controls. This hypothesis was tested using a one-way ANOVA, and received partial support. The means and standard deviations for sociotropy and actual-ideal discrepancies, by group, are presented in Table 1.

For sociotropy, the main effect for group was significant ( $F(2,57) = 6.14, p < .004$ ). Linear contrasts were then used to compare the groups based on a priori predictions. Results indicated that both depressed participants and remitted participants exhibited significantly higher levels of sociotropy than controls ( $t(57) = 3.45, p < .002$  and  $t(57) = 2.24, p < .03$ , respectively), but that depressed participants and remitted participants did not differ significantly ( $t(57) = 1.21, p > .20$ ).

For actual-ideal discrepancies, the main effect for group was also significant, ( $F(2,57) = 7.24, p < .002$ ). Results of linear contrasts indicated that depressed participants possessed significantly higher levels of actual-ideal discrepancies than remitted participants ( $t(57) = 2.80, p < .01$ ), and controls ( $t(57) = 3.63, p < .002$ ). Although the results were in the predicted direction, with controls showing the lowest levels of actual-ideal discrepancies, the difference between remitted participants and controls was not significant ( $t(57) = .83, p > .40$ ).

Self-discrepancy theory predicts that depression is uniquely related to actual-ideal discrepancies. In order to examine the unique relation between actual-ideal discrepancies and depression, analysis of covariance with group as the independent variable, and actual-ought discrepancies as a covariate, was completed. This analysis did not produce a significant main effect for group, ( $F(2,56) = .671, p > .50$ ). Furthermore, the correlation between actual-ideal discrepancies and actual-ought discrepancies was very high ( $r(58) =$



Table 1

Means and Standard Deviations for Sociotropy and Actual-ideal Discrepancies by Group

	<u>Depressed</u>		<u>Remitted</u>		<u>Control</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Sociotropy	101.45 <sup>a</sup>	20.22	95.09 <sup>a</sup>	14.37	83.31 <sup>b</sup>	14.58
Actual-ideal Discrepancies.	4.98 <sup>c</sup>	9.82	-1.46 <sup>d</sup>	6.30	-3.36 <sup>d</sup>	4.70

Note. N = 20 for each group; All comparisons within rows. Means with different subscripts differ significantly at .05 or less.

.82,  $p < .001$ ). These results suggest that, for this particular study, no valid distinction can be made between actual-ideal and actual-ought discrepancies.

Analyses for the first hypothesis were repeated independently for male and female participants in order to assess possible gender differences. For both sociotropy and actual-ideal discrepancies, the main effects for group were significant for women ( $F(2,37) = 3.90$ ,  $p < .03$ ,  $F(2,37) = 5.27$ ,  $p < .01$ ) respectively. The main effects for group were not significant for men, but they did approach significance ( $F(2,17) = 3.18$ ,  $p < .07$ ,  $F(2,17) = 3.27$ ,  $p < .07$ ) for sociotropy and actual-ideal discrepancies respectively. Given that there were significantly fewer men than women in the sample, the differences in results are most likely to be attributable to differing degrees of freedom, rather than to real gender differences.

Hypothesis 2. Actual-ideal discrepancies and sociotropy were predicted to distinguish between individuals vulnerable to depression and non-vulnerable individuals, even after controlling for depressed mood. This prediction was tested using a one-way analysis of covariance (ANCOVA) with group as the between participants factor, and depressive symptoms as the covariate. This analysis was conducted twice; once with the total BDI score as a covariate, and again with only a partial BDI score as a covariate.

In the second analysis, BDI items considered to reflect the non-cognitive, or vegetative aspects of depression were partialled out. It was hypothesized that by partialling out the cognitive features of depression, underlying vulnerabilities, which would be reflected in the more cognitive aspects of depression, were possibly also being factored out. Accordingly, a partial BDI score was formed using items 15 through 21, which were deemed to reflect the more vegetative aspects of depression. The decision to use the last seven questionnaire items to form the partial BDI score was based on a review of factor analytic studies of the BDI (Campbell, Burgess, & Finch, 1984; Louks, Hayne, & Smith, 1989; Tashakkore & Barefoot, 1989; Welch & Ellis, 1991; Welch, Hall, & Walkey, 1990). These studies generally found one large cognitive factor, and

inconsistent support for a two or more factor model of the BDI. Two or more factor solutions generally reflect the cognitive, vegetative and affective aspects of depression (Louks et al., 1989; Campbell et al, 1984). Although there is some variability across studies, in the items that comprise the cognitive factor, items 16 through 21 were consistently not part of this factor. They were, therefore, chosen to comprise the partial BDI. The first 14 items of the BDI reflect feelings of sadness, discouragement, failure, anhedonia, guilt, punishment, disappointment, self-criticism, suicidal ideation, tearfulness, irritation, social withdrawal, decisiveness, and dissatisfaction with one's appearance. Items 15 through 21 pertain to difficulty concentrating and sleeping, loss of energy, fatigue, loss of appetite or weight, concern about physical health, and libido. Item 15, in one study (Tashakkori & Barefoot, 1989) fell within the cognitive factor. Its inclusion in the partial symptom variable was considered a conservative choice. Means and standard deviations of BDI total and BDI partial scores are presented, by group, in Table 2.

When the BDI total score was used as a covariate, the main effect of group was no longer significant for either sociotropy ( $F(2, 56) = .57, p > .50$ ), or actual-ideal discrepancies ( $F(2, 56) = .73, p > .40$ ). Again, when only the partial BDI score (reflecting vegetative versus cognitive features of depression) was controlled for, the results remained non-significant (for sociotropy,  $F(2, 56) = 1.09, p > .30$ , and for actual-ideal discrepancies  $F(2, 56) = 1.62, p > .21$ ). In addition, when the correlations between the BDI and partial BDI scores, and sociotropy and actual-ideal discrepancies were examined, they proved to be highly significant (see Table 3). In conclusion, the results of the present study do not support the hypothesis that actual-ideal discrepancies and sociotropy can distinguish between vulnerable and non-vulnerable individuals, when negative mood is controlled for.

Table 2

Means and Standard Deviations for BDI Total Scores and BDI Partial Scores by Group

	<u>Depressed</u>		<u>Remitted</u>		<u>Control</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
BDI Total	23.30 <sup>a</sup>	7.38	13.00 <sup>b</sup>	8.35	4.25 <sup>c</sup>	4.24
BDI Partial	6.65 <sup>d</sup>	2.46	4.00 <sup>e</sup>	2.85	1.65 <sup>f</sup>	1.50

Note. N = 20 for each group; All comparisons within rows. Means with different subscripts differ significantly at .05 or less.

Table 3

Zero-order Correlations between Total BDI and Partial BDI, and Sociotropy and Actual-ideal Discrepancies

---

	<u>Actual-ideal Discrepancies</u>	<u>Sociotropy</u>
BDI	.51*	.60*
Partial BDI	.46*	.45*

---

Note. N = 60

\* p < .001

**Hypothesis 3.** Sociotropy and actual-ideal discrepancies were hypothesized to predict the severity of participant's history of depression (age of onset of first episode, number of previous episodes, severity of most recent episode, and severity of worst episode). Because history of depression has been shown to be predictive of future depression (Krantz & Moos, 1988; Lewinsohn & Hoberman, 1988), it was hypothesized that the proposed vulnerability factors should relate to participants' previous experience with clinical depression. Multiple regression was used to test this hypothesis. Because the number of past episodes of depression may depend, in part, on the age of participant at the time of testing, participant's current age was partialled out, and a residualized variable was used for the analysis. Means and standard deviations for the four history variables are presented in Table 4.

For the first regression analysis, a composite history variable, comprised of the four variables cited above, was used. New standardized variables were formed from the four original history variables. For number of previous episodes of depression, a standardized residualized variable with current age partialled out was created. The four new variables were then added together to form the composite. It was hypothesized that the younger the age of onset of first episode of depression, the greater the risk of future depression. Consequently, in order to contribute positively to the composite history variable, the age of onset of the first episode was subtracted, rather than added to the other three history variables. Standardized variables were used to ensure that each of the variables contributed equally to the composite. Sociotropy and actual-ideal discrepancies were entered as predictors, and the new composite variable history, was the criterion. The results this regression analysis were non-significant.

In order to determine if the four history variables formed a uniform construct, the intercorrelations between them were examined (see Table 5).

Table 4

Means and Standard Deviations for the Four History Variables

---

	M	SD
Age of onset of first episode	22.53	.80
Number of previous episodes	5.73	.33
Severity of most recent episode	5.33	.80
Severity of worst episode	6.08	.83

---

Note. N = 40

Table 5

Zero-order Correlations between the Four History Variables

Variables	1	2	3	4
1. Age of onset of first episode	--	-.27	-.05	-.15
2. Number of previous episodes		--	.04	.05
3. Severity of most recent episode			--	.51*
4. Severity of worst episode				--

Note. N = 40      \*p < .002



Only the severity of the worst episode and the severity of the most recent episode correlated significantly ( $t(38) = .51, p < .002$ ). Because the pattern of correlations does not suggest a highly inter-related construct, individual regression analyses for each of the four history variables were conducted, with each history variable used independently as a criterion. Sociotropy and actual-ideal discrepancies were entered first, together as a block into the regression, and the interaction between these two variables was entered second. None of the four regression analyses were significant, and no more than six percent of the variance in any history variable could be predicted by either sociotropy or actual-ideal discrepancies. In the case of the worst episode of depression, there were three cases where the severity of the worst episode of depression had been replaced by the severity of the most recent episode due to missing data. The regression analysis was repeated with these three cases removed. This did not substantially improve the results which remained nonsignificant. In addition, none of the interaction terms were significant. Tables 6 through 10 provide a summary of the regression analyses.

The zero-order correlations between the four history variables (criterion variables) and the two predictors (sociotropy and actual-ideal discrepancies) were examined. None of these correlations were significant, with the highest correlation between the age of onset of the first episode and sociotropy. Correlations between sociotropy and actual-ideal discrepancies, and the four history variables are presented in Table 11.

Table 6

Summary of Regression Analysis for the Composite History Variable

	<b>B</b>	<b>SE B</b>	<b>B</b>
<b>Block 1</b>			
Sociotropy	.013	.026	.095
Actual-ideal Discrepancies	.014	.052	.049
<b>Block 2</b>			
Sociotropy	.015	.029	.110
Actual-ideal Discrepancies	.073	.309	.259
Interaction	.000	.003	-.221

Note.  $R^2 = .016$  for Block 1;  $R^2 = .017$  for Block 2.

Table 7

Summary of Regression Analysis for the Severity of the Most Recent Episode of Depression

	B	SE B	B
Block 1			
Sociotropy	-.007	.008	-.153
Actual-ideal Discrepancies	.021	.017	.236
Block 2			
Sociotropy	-.009	.009	-.191
Actual-ideal Discrepancies	-.027	.098	-.293
Interaction	.000	.000	.555

Note.  $R^2 = .045$  for Block 1;  $R^2 = .052$  for Block 2.

Table 8

Summary of Regression Analysis for the Number of Past Episodes of Depression

	B	SE B	B
Block 1			
Sociotropy	.046	.059	.142
Actual-ideal Discrepancies	-.041	.119	-.064
Block 2			
Sociotropy	.075	.064	.233
Actual-ideal Discrepancies	.769	.696	1.191
Interaction	-.008	.007	-1.315

Note.  $R^2 = .016$  for Block 1;  $R^2 = .052$  for Block 2.

Table 9

Summary of Regression Analysis for the Severity of the Worst Episode of Depression

	<i>B</i>	<i>SE B</i>	<i>B</i>
Block 1			
Sociotropy	.000	.009	-.011
Actual-ideal Discrepancies	.007	.018	.073
Block 2			
Sociotropy	.000	.010	.006
Actual-ideal Discrepancies	.029	.104	.305
Interaction	.000	.001	-.243

Note.  $R^2 = .005$  for Block 1;  $R^2 = .006$  for Block 2.

Table 10

Summary of Regression Analysis for the Age of Onset of the First Episode of Depression

	<b>B</b>	<b>SE B</b>	<b>B</b>
<b>Block 1</b>			
Sociotropy	-.175	.123	-.258
Actual-ideal Discrepancies	.172	.248	.126
<b>Block 2</b>			
Sociotropy	-.155	.135	-.228
Actual-ideal Discrepancies	.747	1.468	.547
Interaction	-.006	.015	-.441

Note.  $R^2 = .052$  for Block 1;  $R^2 = .056$  for Block 2.

Table 11

Zero-order Correlations between Sociotropy and Actual-ideal Discrepancies, and the Four History Variables

	Sociotropy	Actual-ideal Discrepancies
Age of onset of first episode	-.20	.00
Number of previous episodes	.11	.00
Severity of most recent episode	-.04	.16
Severity of worst episode	.02	.07

Note. N = 40; For all correlations, p > .05.

### Additional exploratory hypothesis

In addition to the above hypotheses, two possible relations between sociotropy and actual-ideal discrepancies were proposed. It was first hypothesized that these two variables, if they both represent vulnerabilities to depression, may be positively correlated. This possibility was supported by the results. The correlation between sociotropy and actual-ideal discrepancies was quite high ( $r(58) = .42, p < .002$ ). Second, it was hypothesized that there may be an interaction between sociotropy and actual-ideal discrepancies; possibly the strength of the self-discrepancy may be greater in highly sociotropic individuals. This second possibility was tested using regression analysis, with the composite history variable, and each of the individual history variables, as the dependent variables. The results of the regression analyses for history of depression did not produce significant interaction terms (see Tables 5 through 9).

### Discussion

This project was designed to examine the role of sociotropy and actual-ideal discrepancies as vulnerability markers in clinical depression. Depressed participants, remitted participants, and control participants were compared. Results confirmed a relation between sociotropy and actual-ideal discrepancies, and depression. As predicted, depressed participants exhibited higher levels of these variables than controls. In addition, remitted participants exhibited higher levels of sociotropy than controls. Remitted participants, however, did not exhibit higher levels of actual-ideal discrepancies than control participants. Contrary to predictions, sociotropy and actual-ideal discrepancies did not distinguish between vulnerable and non-vulnerable individuals once depressed mood was controlled for. History of depression, defined as the number of previous episodes of clinical depression, the age of onset of the first episode, the severity of the worst episode, and the severity of the most recent episode, was not related to either sociotropy or actual-ideal discrepancies. Interestingly, the individual history variables only showed a weak relation to each other. Although the results of this study are not



inconsistent with the hypothesis that sociotropy and actual-ideal discrepancies predispose individuals to depression, they do not clearly support this hypothesis either.

Why might sociotropy and actual-ideal discrepancies only partially discriminate between vulnerable and non-vulnerable individuals, and why might these distinctions be lost when negative mood is controlled for? One possibility is that neither of these variables represent vulnerability markers for depression, but are simply symptoms of the disorder, coming and going with negative mood. Most depression research has found a high correlation between proposed vulnerability factors and depressed mood, and differences between vulnerable individuals and non-vulnerable individuals disappear when current mood is controlled for (Eaves & Rush, 1984; Hamilton & Abramson, 1983; Persons & Rao, 1985; Silverman et al., 1984; Simons et al., 1984). There are, however, several alternatives to this explanation. First, these variables may function in a manner more consistent with Beck's stress-diathesis perspective (Beck et al., 1979), representing latent vulnerabilities which are activated by stressful-life events. Second, it may be that the variables under consideration are mood-state dependent, but nevertheless represent vulnerability factors in depression, consistent with work by Miranda and Persons (Miranda & Persons, 1988; Miranda et al., 1990; Persons & Miranda, 1992). Both of these explanations will be considered in relation to the results of the present investigation.

A stress-diathesis explanation will be considered first. Beck's (Beck et al., 1979) cognitive theory of depression proposes that dysfunctional attitudes or beliefs, are stable aspects of the individual that remain latent until they are activated by stressful life-events. Further refinement of this model of depression occurred with the introduction of the concepts of sociotropy and autonomy, and the personality-event congruency hypothesis. The personality-event congruency hypothesis proposes that individuals who are vulnerable to depression are prone to becoming depressed when exposed to stressful life-events in a personally relevant domain. Sociotropic individuals are hypothesized to

become depressed when exposed to negative interpersonal events, and autonomous individuals are hypothesized to become depressed when exposed to negative achievement-related events.

According to the personality-event congruency hypothesis, vulnerable individuals (depressed and remitted participants) should exhibit higher levels of sociotropy than non-vulnerable individuals (control participants). Also, according to this hypothesis, depressed participants should report more recent negative interpersonal events than remitted participants. The results of the present investigation are consistent with the first prediction. Depressed and remitted participants both exhibited higher levels of sociotropy than control participants. It may be that sociotropy interacts with negative interpersonal events to produce depression. Sociotropy alone may be insufficient to produce more than mild low mood. Remitted individuals typically remain somewhat symptomatic, even when they are no longer clinically depressed. Sociotropy alone, may contribute to moderate levels of negative mood (accounting for the moderate levels of negative mood found in remitted participants), but in the absence of interpersonal stress, is insufficient to lead to clinical depression. Although the results of this study are consistent with a personality-event congruency hypothesis, they are inconclusive given that the relation between life-events, sociotropy, and depression was not examined.

Discrepancy theory is partially consistent with a stress-diathesis model of depression, also. Self-discrepancies are hypothesized to represent stable internal aspects of self-knowledge that are, at least initially, triggered by stressful life-events. Discrepancy theory proposes, however, that over time, discrepancies become chronically accessible, no longer requiring stressful life-events to activate them. According to this theory, both depressed and remitted participants should endorse higher levels of actual-ideal discrepancies than control participants. The results of the present investigation partially support this hypothesis. Although depressed participants exhibited higher levels of actual-ideal discrepancies, remitted participants did not. One explanation for the

absence of a significant difference between remitted and control participants is that sample sizes were too small. This is plausible, given that differences were in the predicted direction, but not of significant magnitude. It may also be, that in this particular sample, problems that participants had completing the Selves Questionnaire led to atypical results. Many of the depressed participants, and some of the remitted and control participants complained that the measure was long, difficult to complete, and that they could not think of what to write. In addition, the correlation between actual-ideal discrepancies and actual-ought discrepancies was moderate ( $r(58) = .42, p = .001$ ), suggesting that no real distinction between the two constructs can be made. These problems with the Selves Questionnaire will be discussed in more detail in a subsequent section dealing with the limitations of this project. Discrepancy theory also predicts a strong relation between endorsement of actual-ideal discrepancies and negative mood. This prediction will be considered in relation to the mood-state dependency hypothesis.

The results of the present study can also be understood in relation to the mood-state dependency hypothesis. Generally, support for the hypothesis that dysfunctional attitudes predispose individuals to depression has not been supported (Eaves & Rush, 1984; Hamilton & Abramson, 1983; Persons & Rao, 1985; Silverman et al., 1984; Simons et al., 1984). Recently, Miranda and Persons (1988) have proposed an explanation that accounts for the negative evidence with respect to cognitive models of depression. They hypothesize that dysfunctional beliefs predispose individuals to depression, but that endorsement of these beliefs is mood-state dependent. In addition, they hypothesize that endorsement of dysfunctional beliefs, when in a negative mood-state, should occur for vulnerable individuals only.

The results of the present investigation can be understood from this perspective also. According to the mood-state dependency hypothesis, both depressed and remitted participants should exhibit higher levels of sociotropy and actual-ideal discrepancies than control participants. If this hypothesis is correct, sociotropy and actual-ideal discrepancy

scores should correlate highly with the BDI, and the relation between sociotropy and BDI scores should be greater for vulnerable individuals than for control participants. This possibility is partially supported by the results. Sociotropy scores and BDI scores were found to be highly correlated ( $r(58) = .60, p < .001$ ), but the relation of sociotropy to the BDI was very similar across groups (see Table 12). It may be that sample sizes are too small to detect group differences in the association between sociotropy scores and BDI scores. Further research is necessary to clarify the relation between sociotropy and mood.

The relation between actual-ideal discrepancies and mood is more easily understood. Discrepancy theory predicts a high correlation between actual-ideal discrepancies and negative mood, a prediction which was supported by the results. Consequently, it is not surprising that controlling for negative mood also controlled for self-discrepancies. It may be that actual-ideal discrepancies are chronically accessible and alone, result in some level of low mood, but only lead to clinical depression in the context of stressful events. According to the mood-state dependency hypothesis, actual-ideal discrepancies should correlate strongly with negative mood, and the relation between actual-ideal discrepancies and mood should be stronger for vulnerable individuals than for control participants. This possibility was explored by looking at the correlation between BDI scores and actual-ideal discrepancy scores. Actual-ideal discrepancy scores correlated strongly with BDI scores ( $r(58) = .51, p < .001$ ). The correlations between actual-ideal discrepancy scores and BDI scores, by group, were also examined (see Table 12). The relation between actual-ideal discrepancies and the BDI was strongest for depressed participants, weaker for remitted participants and weakest for control participants. These correlations did not, however, differ significantly ( $p > .40$ ). The observed trend is partially consistent with the mood-state dependency hypothesis, although the correlation between the BDI and actual-ideal discrepancies should be similar for depressed and remitted participants. In this study, the relation was stronger for depressed than remitted participants.

Table 12

Zero-order Correlations between Actual-ideal Discrepancies and Sociotropy and the BDI by Group

---

	<u>Depressed</u>	<u>Remitted</u>	<u>Control</u>
Actual-ideal Discrepancies	.44*	.22	.15
Sociotropy	.53*	.49*	.47*

---

Note. N = 20 for each group

\* p < .05

In addition, the correlations between the BDI and actual-ideal discrepancies for both remitted and control participants were not significant. Finally, small group sizes make it difficult to draw conclusions about differing relations between discrepancies and mood for the different groups of participants.

In addition, some of the relation between sociotropy and BDI scores may be attributed to the PSI, which may have psychometric limitations not detected in earlier research. The correlation between sociotropy and the BDI in this study was much higher than in Robins (1991) most recent work. He found a correlation of .20 between sociotropy and BDI scores, and we found a correlation of .60. One possible explanation for this difference is that in Robins research, the PSI was administered to undergraduates and not to a clinical population. Using a nonclinical population may have restricted the range of BDI scores reported, thus limiting the correlation between BDI scores and sociotropy. It may also be that low mood in college students is qualitatively different than in individuals known to be at risk for clinical depression. If this is the case, a different, possibly stronger, relation between the PSI and low mood would be expected in a clinical population, such as the one utilized in the present research.

Although the decision was made to examine the role of actual-ideal discrepancies and sociotropy as vulnerability factors in depression, by controlling for mood and looking for group differences, in light of the mood-state dependency hypothesis, it can be argued that this may not be a useful approach. If the mood-state dependency hypothesis is correct, controlling for negative mood may simply eliminate the observed effect without being very informative. The results of this study show that for both sociotropy and actual-ideal discrepancies, there is a strong correlation with mood. If the proposed vulnerability factors, alone, contribute to low mood, then equalizing the group with respect to mood also equalizes with respect to vulnerability. Experiments designed to directly test the relation of these variables to mood, may lead to a clearer understanding of the role of these variables in depression.

Because this project does not directly investigate either the personality-event congruency hypothesis, or the mood-state dependency hypothesis, and sample sizes are small, no firm conclusions can be drawn. Possibilities for future research will be explored in a subsequent section of this text.

Why was no relation between history of depression and sociotropy and actual-ideal discrepancies found? It was hypothesized that because history of depression is predictive of future depression (Lewinsohn et al., 1988), history of depression would be a good indicator of vulnerability, and should, consequently, relate to other vulnerability factors. No support was found for the relation between sociotropy and actual-ideal discrepancies, and the four history variables (age of onset of first episode, number of previous episodes, severity of most recent episode, and severity of worst episode), examined. In fact, the four history variables only correlated weakly. These results are somewhat inconsistent with previous research that has found symptom severity, younger age, and prior history of depression at time one, to be predictive of depression eight months later (Lewinsohn et al., 1988). Also severity of depression at intake has been found to be predictive of nonremission one year later (Krantz & Moos, 1988). In spite of these findings, it may be that the four history variables considered in this study, are not indicative of future risk for depression. The low correlations found between the four history variables support this possibility. Alternatively, without taking stressful life-events into considerations, sociotropy and actual-ideal discrepancies may not predict future depression or history of depression. Prospective research would be needed to test this hypothesis.

### Limitations

This project is hindered by a several limitations, both in the design and implementation. The first problem was the difficulty that participants had in completing the Selves Questionnaire. Most participants, especially those in the depressed and remitted groups, expressed distress at completing this measure. Although the researchers

attempted to ensure that participants filled out the Selves immediately, often it was submitted several days late, and occasionally several weeks late. Often, the more depressed the patient was, the more difficulty he/she had in completing the measure. Consequently, by the time some participants completed the measure, their BDI scores had dropped somewhat. In order to protect against possible remission, any participant whose BDI score fell below 15 was excluded. Only one participant had a BDI score of 15 at the time the Selves was completed, and none fell below 15. Many participants complained either that they found the measure upsetting, or that they could simply not think of anything to write. Also, many participants stated that they could not see any difference between the "ideal" and the "ought" dimensions. This last difficulty was supported by the finding that actual-ought discrepancies differentiated between groups equally well as actual-ideal discrepancies, and the correlation between actual-ideal and actual-ought discrepancies was very high. These difficulties may partially explain the negative findings with respect to actual-ideal discrepancies. The strong relation between actual-ideal and actual-ought discrepancies found in this study is inconsistent with previous research which has shown actual-ideal discrepancies to be uniquely related to dejection-related emotions (Higgins et al., 1985; Scott & O'Hara, 1993; Strauman, 1989; Strauman & Higgins, 1988). If participants did not distinguish between actual-ideal and actual-ought discrepancies, a unique relation between actual-ideal discrepancies and depression would not be expected. Consequently, the negative findings with respect to actual-ideal discrepancies found in this study should be interpreted cautiously. It is possible that participants in this study had more difficulty completing the Selves than has been previously documented because of the number of questionnaires they were required to complete. The questionnaires completed for this project were administered with numerous other measures being administered for a concurrent project. In addition, the Selves Questionnaire was the longest of all of these to complete.



A second limitation, relating to the design of the study, is the small sample size of each group. This is a problem for much clinical research. Due to the time and effort required to recruit large numbers of clinical participants, often sample sizes are smaller than would be ideal. Although group differences were in the predicted direction for both sociotropy and actual-ideal discrepancies, there was insufficient power for these differences to be statistically significant.

Because this study utilized a cross-sectional design, it is limited in its ability to demonstrate the role of sociotropy and actual-ideal discrepancies in predicting either relapse or recurrence. A prospective design would have provided a better opportunity to examine the possible predisposing role of these variables. This alternate design will be discussed in greater detail in the following section.

#### Future research

Despite the limitations of the present study, there is sufficient evidence from this and previous research to merit further investigation of these variables as they relate to clinical depression. There are two important directions that could be pursued. First, a prospective study following depressed or remitted persons over time, using time-one sociotropy and discrepancy scores to predict future depression would be very informative. Using measures taken from remitted individuals can provide stronger evidence for the role of these variables as vulnerability factors, due to the strong relation of these variables to mood. It may be that the relation of sociotropy to depression is mediated by the presence of stressful interpersonal events. Taking measures of stressful life events, categorized in terms of either sociotropy-related or autonomy-related events would make it more likely, that if there is a relation between sociotropy and relapse, this relation would be found. High sociotropy or autonomy scores alone, may not be sufficient to predict relapse.

Second, a study that examines more closely the relation between these variables and mood, would also be useful. Experimentally inducing low mood in vulnerable and

non-vulnerable individuals would be one way of testing the mood-state dependency hypothesis. If the mood-state dependency hypothesis is correct, a strong relation between actual-ideal discrepancies and sociotropy, and negative mood would be expected. In addition, the relation between negative mood and these variables should be stronger for vulnerable individuals than nonvulnerable individuals. Sample sizes larger than those used in this project would increase the likelihood that group differences would be significant if they exist. One would need to ensure that, following mood induction, the two groups were comparable in terms of the severity of the negative mood induced.

In addition, experimental research that attempts to manipulate levels of sociotropy in vulnerable individuals would also be informative. Using interpersonal interventions directed at reducing sociotropy should reduce the likelihood of relapse in the event of interpersonal stress. Treating clinically depressed individuals using this approach and then comparing them to placebo treatment in terms of relapse would be one way of testing this hypothesis.

### Summary

The results of this study clearly demonstrate a relation between depression and actual-ideal discrepancies and sociotropy. Controlling for negative mood and then looking for group differences represents one of the most stringent tests for potential vulnerability markers. If group differences remain after controlling for mood, this constitutes very strong evidence for the role of the variables investigated, as vulnerability markers. If group differences are not found, as was the case of the present investigation, however, this does not disconfirm the possibility that the variables being investigated are vulnerability markers. Questions about the usefulness of testing for the role of proposed vulnerability factors by controlling for negative mood have been raised, and will hopefully inform future research examining the role of these variables in depression.

## References

- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. (1978). Learned helplessness in humans: critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.
- Barnett, P. A., & Gotlib, I. H. (1988). Psychosocial functioning and depression: Distinguishing among antecedents, concomitants, and consequences. Psychological Bulletin, 104, 97-126.
- Beck, A. T. (1961). A systematic investigation of depression. Comprehensive Psychiatry, 2, 163-170.
- Beck, A. T. (1967). Depression: Clinical, experimental and theoretical aspects. New York: Harper & Row.
- Beck, A. T. (1983). Cognitive therapy of depression: New perspectives. In P. J. Clayton & J. E. Barrett (Eds.), Treatment of depression: Old controversies and new approaches. New York: Guilford Press.
- Beck, A. T. (1991). Cognitive therapy: A 30 year retrospective. American Psychologist, 46, 368-375.
- Beck, A. T., Epstein, N., Harrison, R. P. & Emery, G. (1983). Development of the Sociotropy-Autonomy Scale: A measure of personality factors in psychopathology. Unpublished manuscript, University of Pennsylvania, Philadelphia.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). Cognitive therapy of depression. New York: Guilford Press.
- Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. Clinical Psychology Review, 8, 77-100.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

- Blatt, S. J. (1974). Level of object representation in anaclitic and introjective depression. Psychoanalytic Study of the Child, 29, 107-157.
- Blatt, S. J., D'Afflitti, J. P., & Quinlan, D. M. (1976). Experiences of depression in normal young adults. Journal of Abnormal Psychology, 85, 383-389.
- Di Nardo, P. A., & Barlow, D. H., (1988). Anxiety Disorders Interview Schedule-Revised ADIS-R. Albany, Ny: Phobia and Anxiety Disorders Clinic.
- Di Nardo, P. A., Moras, K., Barlow, D. H., Rapee, R. M., & Brown, T. A., (1993). Reliability of DSM-III-R anxiety disorder categories using the Anxiety Disorders Interview Schedule-Revised (ADIS-R). Archives of General Psychiatry, 50, 251-256.
- Di Nardo, P. A., O'Brien, G. T., Barlow, D. H., Waddell, M. T., & Blanchard, E. B. (1983). Reliability of DSM-III anxiety disorder categories using a new structured interview. Archives of General Psychiatry, 40, 1070-1074.
- Campbell, I. M., Burgess, P. M. & Finch, S. J. (1984). A factorial analysis of BDI scores. Journal of Clinical Psychology, 40, 992-996.
- Eaves, G., & Rush, J. A. (1984). Cognitive patterns in symptomatic and remitted unipolar major depression. Journal of Abnormal Psychology, 93, 31-40.
- Franche, R., & Dobson, K. (1992). Self-criticism and interpersonal dependency as vulnerability factors to depression. Cognitive Therapy and Research, 16, 419-435.
- Hamilton, E. W., & Abramson, L. Y. (1983). Cognitive patterns and major depressive disorder: A longitudinal study in a hospital setting. Journal of Abnormal Psychology, 92, 173-184.
- Hammen, C., Ellicott, A., & Gitlin, M. (1989). Vulnerability to specific life events and prediction of course of disorder in unipolar depressed patients. Canadian Journal of Behavioral Science, Review, 21, 377-387.

- Hammen, C., Ellicott, A., Gitlin, M., & Jamison, K. R. (1989). Sociotropy/autonomy and vulnerability to specific life events in patients with unipolar depression and bipolar disorders. Journal of Abnormal Psychology, 98, 154-160.
- Hammen, C., Marks, T., Mayol, A., & deMayo, R. (1985). Depressive self-schemas, life stress, and vulnerability to depression. Journal of Abnormal Psychology, 94, 308-319.
- Hammen, C., Mayol, A., deMayo, R., & Marks, T. (1986). Initial symptom levels and the life event-depression relationship. Journal of Abnormal Psychology, 95, 114-122.
- Higgins, E. T. (1989). Continuities and discontinuities in self-regulatory and self-evaluative processes: A developmental theory relating self and affect. Journal of Personality, 52, 407- 444.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. Psychological Review, 94, 319-340.
- Higgins, E. T., Bond, R., Klein, R., & Strauman, T. J. (1986). Self-discrepancies and emotional vulnerability: How magnitude, accessibility and type of discrepancy influence affect. Journal of Personality and Social Psychology, 51, 5-15.
- Higgins, E. T., Klein, R. & Strauman, T. (1985). Self-concept discrepancy theory: A psychological model for distinguishing among different aspects of depression and anxiety. Social Cognition, 3, 51-76.
- Higgins, E. T., Van Hook, E., & Dorfman, D. (1988). Do self-attributes form a cognitive structure? Social Cognition, 6, 177-207.
- Hollon, S. D., Kendall, P. C., & Lumry, A. (1986). Specificity of depressotypic cognitions in clinical depression. Journal of Abnormal Psychology, 95, 52-59.
- Klein, D. N., Harding, H., Taylor, E. B., & Dickstein, S. (1988). Dependency and self-criticism in depression: Evaluation in a clinical population. Journal of Abnormal Psychology, 97, 399-404.

- Krantz, S. E., & Moos, R. H. (1988). Risk factors at intake predict nonremission among depressed patients. Journal of Consulting and Clinical Psychology, *56*, 863-869.
- Lewinsohn, P. M., Rosenbaum, M., & Hoberman, H. M. (1988). A prospective study of risk factors for unipolar depression. Journal of Abnormal Psychology, *97*, 251-264.
- Lewinsohn, P. M., Steinmetz, J. L., Larson, D. W., & Franklin, J. (1981). Depression-related cognitions: Antecedent or consequence? Journal of Abnormal Psychology, *90*, 213-219.
- Louks, J., Hayne, C., & Smith, J. (1989). Replicated factor structure of the Beck Depression Inventory. The Journal of Nervous and Mental Disease, *177*, 473-479.
- Lloyd, C. (1980). Life events and depressive disorders reviewed: Part 2. Events as precipitating factors. Archives of General Psychiatry, *37*, 541-548.
- Miranda, J., & Persons, J. B. (1988). Dysfunctional attitudes are mood-state dependent. Journal of Abnormal Psychology, *97*, 76-79.
- Miranda, J., Persons, J. B., & Byers, C. N. (1990). Endorsement of dysfunctional beliefs depends on current mood state. Journal of Abnormal Psychology, *99*, 237-241.
- Moretti, M. M. & Higgins, E. T. (1990a). Relating self-discrepancy to self-esteem: The contribution of discrepancy beyond actual-self ratings. Journal of Experimental Social Psychology, *26*, 108-123.
- Moretti, M. M. & Higgins, E. T. (1990b). The development of self-system vulnerabilities: Social and cognitive factors in developmental psychopathology, In R. J. Sternberg & J. Kolligian (Eds.), Perception of competence and incompetence across the lifespan. New Haven, CT: Yale University Press.
- Moretti, M. M., Higgins, E. T., & Feldman, L. A. (1990). The self-system in depression: conceptualization and treatment, In C. D. McCann, & N. S. Endler (Eds.), Depression: New directions in theory, research, and practice. Toronto, Ontario: Wall & Emerson.

- Persons, J. B., & Miranda, J. (1992). Cognitive theories of vulnerability to depression: Reconciling negative evidence. Cognitive Therapy and Research, *16*, 485-502.
- Persons, J. B., & Rao, P. A. (1985). Longitudinal study of cognitions, life events, and depression in psychiatric inpatients. Journal of Abnormal Psychology, *94*, 51-63.
- Robins, C. J. (1990). Congruence of personality and life events in depression. Journal of Abnormal Psychology, *99*, 393-397.
- Robins, C. J., & Block, P. (1988). Personal vulnerability, life events, and depressive symptoms: A test of a specific interactional model. Journal of Personality and Social Psychology, *54*, 847-852.
- Robins, C. J., Block, P., & Peselow, E. D. (1989). Relations of sociotropic and autonomous personality characteristics to specific symptoms in depressed patients. Journal of Abnormal Psychology, *98*, 86-88.
- Robins, C. J., Ladd, J., & Luten, A. H. (1990). Development and preliminary validation of the Personal Style Inventory: a questionnaire to assess sociotropic and autonomous personality characteristics. Unpublished manuscript, Duke University Medical Center, Department of Psychiatry.
- Robins, C. J., & Luten, A. G. (1991). Sociotropy and autonomy: Differential patterns of clinical presentation in unipolar depression. Journal of Abnormal Psychology, *100*, 74-77.
- Scott, L. & O'Hara, M. W. (1993). Self-discrepancies in clinically anxious and depressed university students. Journal of Abnormal Psychology, *102*, 282-287.
- Segal, Z. V., Shaw, B. F., & Vella, D. D. (1989). Life stress and depression: A test of the congruency hypothesis for life event content and depressive subtype. Canadian Journal of Behavioural Science, *21*, 389-400.
- Segal, Z. V., Shaw, B. F., Vella, D. D., & Katz, R. (1992). Cognitive and life stress predictors of relapse in remitted unipolar depressed patients: Test of the congruency hypothesis. Journal of Abnormal Psychology, *1*, 26-36.

- Silverman, J. S., Silverman, J. A., & Eardley, D. A. (1984). Do maladaptive attitudes cause depression? Archives of General Psychiatry, 41, 28-30.
- Simons, A. D., Garfield, S. L., & Murphy, G. E. (1984). The process of change in cognitive therapy and pharmacotherapy for depression. Archives of General Psychiatry, 41, 45-51.
- Strauman, T. J. (1992). Self-guides, autobiographical memory, and anxiety and dysphoria: Towards a cognitive model of vulnerability to emotional distress. Journal of Abnormal Psychology, 101, 87-95.
- Strauman, T. J. (1989). Self-discrepancies in clinical depression and social phobia: Cognitive structures that underlie emotional disorders. Journal of Abnormal Psychology, 98, 14-22.
- Strauman, T. J., & Higgins, E. T. (1987). Automatic activation of self-discrepancies and emotional syndromes: When cognitive structures influence affect. Journal of Personality and Social Psychology, 53, 1004-1014.
- Strauman, T. J., & Higgins, E. T. (1988). Self-discrepancies as predictors of vulnerability to distinct syndromes of chronic emotional distress. Journal of Personality, 56, 685-707.
- Tabachnick, B. G., & Fidell, L. S. (1989). Using multivariate statistics (2nd ed.). New York: Harper Collins.
- Tashakkore, A., & Barefoot, J. (1989). What does the Beck Depression Inventory measure in college students?: Evidence from a non-western culture. Journal of Clinical Psychology, 45, 595-602.
- Thase, M. E. (1990). Relapse and recurrence in unipolar major depression: Short-term and long-term approaches. Journal of Clinical Psychiatry, 51, 51-57.
- Weissman, A., & Beck, A. T. (1978, November). Development and validation of the Dysfunctional Attitude Scale. Paper presented at the meeting of the Association for Advancement of Behavior Therapy, Chicago.



- Welkowitz, J., Lish, J., & Bond, R. N. (1985). The depressive experiences questionnaire: Revision and validation. Journal of Personality Assessment, 49, 89-94.
- Welch, G., & Ellis, P. M. (1991). FACTOREP: A new tool to explore the dimensions of depression. Journal of Affective Disorders, 21, 101-108.
- Welch, G., Hall, A., & Walkey, F. (1990). The replicable dimensions of the Beck Depression Inventory. Journal of Clinical Psychology, 46, 817-827.
- Zuroff, D. C., & Mongrain, M. (1987). Dependency and self-criticism: Vulnerability factors for depressive affective states. Journal of Abnormal Psychology, 96, 14-22.

## CONSENT TO PARTICIPATE IN RESEARCH

### Actual-ideal Discrepancies and Sociotropy: Vulnerability Markers for Depression

We are conducting research on cognitive and personality variables in depression. If you decide to participate in this research, you will be asked to undergo a two-hour structured interview and to complete several questionnaires. You will receive feedback about the interview at its completion. Participation is entirely voluntary, and you are free to change your mind and withdraw at any time, if you wish. Your participation in this project has no bearing on any treatment you may receive here or elsewhere.

All information collected during this study is entirely confidential. Such information will be identified only with a code number and will be stored in a secure location.

When the project is completed, we will be happy to send you a description of the results if you wish. If you have any questions or concerns about the study, please feel free to contact:

Nichole Fairbrother  
Department of Psychology  
Simon Fraser University  
(604) 291-3354

Dr. Marlene Moretti  
Department of Psychology  
Simon Fraser University  
(604) 291-3604

Dr. Peter McLean  
Department of Psychiatry  
University of British Columbia  
(604) 822-7334

By signing this document, you are indicating that you have read and understood its contents and agree to volunteer for this study. You are also indicating you have received a copy of this form for your own records.

\_\_\_\_\_  
Name (please print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

If you would like to receive a copy of our results, please complete the following:

Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

## SELVES QUESTIONNAIRE

### Part I: Your Own Beliefs About You

In the following section of the questionnaire you will be asked to list the attributes of the type of person that YOU believe you actually are, ideally would like to be, and ought to be:

#### Your Actual Self:

Your beliefs concerning the attributes or characteristics you think you actually possess.

#### Your Ideal Self:

Your beliefs concerning the attributes or characteristics you would like ideally to possess; the type of person you wish, desire, or hope to be.

#### Your Ought Self:

Your beliefs concerning the attributes or characteristics you believe you should or ought to possess; the type of person you believe it is your duty, obligation, or responsibility to be.

In addition to listing the traits, you will be asked about the extent to which you believe you actually possess, would like to possess, or ought to possess each trait. Make these ratings after you have listed the attribute.

Please list the attributes of the type of person YOU believe you actually are:

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which YOU believe you actually possess the attribute, using the following scale:

- |          |            |              |           |
|----------|------------|--------------|-----------|
| 1        | 2          | 3            | 4         |
| slightly | moderately | a great deal | extremely |

Please list the attributes of the type of person YOU believe would ideally like to be (i.e., wish, desire, or hope to be):

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which YOU would ideally like to possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

Please list the attributes of the type of person YOU believe you ought to be (i.e., believe it is your duty, obligation or responsibility to be):

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which YOU believe you ought to possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

**PART II: Other's Beliefs About You**

Other people also have beliefs about the type of person you are, the type of person they would ideally like you to be, or believe you ought to be. In this section of the questionnaire you will be asked to list the attributes of the type of person that your mother and your father ideally would like you to be and believe you ought to be.

Please list the attributes of the type of person your mother would ideally like you to be (i.e., wishes, desires, or hopes you to be):

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which your mother would ideally like you to possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely



Please list the attributes of the type of person your mother believes you ought to be (i.e., believes it is your duty, obligation, or responsibility to be):

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which your mother believes you ought to possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

Please list the attributes of the type of person your father would ideally like you to be (i.e., wishes, desires, or hopes you to be):

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which your father would ideally like you to possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

Please list the attributes of the type of person your father believes you ought to be (i.e., believes it is your duty, obligation, or responsibility to be):

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which your father believes you ought to possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

Please list the attributes of the type of person a close friend would ideally like you to be (i.e., wishes, desires, or hopes you to be):

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which a close friend would ideally like you to possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

Please list the attributes of the type of person a close friend believes you ought to be (i.e., believes it is your duty, obligation, or responsibility to be):

	EXTENT
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

For each attribute above, rate the extent to which a close friend believes you ought to possess the attribute, using the following scale:

1	2	3	4
slightly	moderately	a great deal	extremely

Appendix

Personal Style Inventory II

Here are a number of statements about personal characteristics. Please read each one carefully, and indicate whether you agree or disagree, and to what extent, by circling a number.

	<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Slightly</u> <u>Disagree</u>	<u>Slightly</u> <u>Agree</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
1. I often put other people's needs before my own.	1	2	3	4	5	6
2. I tend to keep other people at a distance.	1	2	3	4	5	6
3. I find it difficult to be separated from people I love.	1	2	3	4	5	6
4. I am easily bothered by other people making demands of me.	1	2	3	4	5	6
5. I am very sensitive to the effects I have on the feelings of other people.	1	2	3	4	5	6
6. I don't like relying on others for help.	1	2	3	4	5	6
7. I am very sensitive to criticism by others.	1	2	3	4	5	6
8. It bothers me when I feel that I am only average and ordinary.	1	2	3	4	5	6
9. I worry a lot about hurting or offending other people.	1	2	3	4	5	6
10. When I'm feeling blue, I don't like to be offered sympathy.	1	2	3	4	5	6
11. It is hard for me to break off a relationship even if it is making me unhappy.	1	2	3	4	5	6
12. In relationships, people are often too demanding of one another.	1	2	3	4	5	6
13. I am easily persuaded by others.	1	2	3	4	5	6
14. I usually view my performance as either a complete success or a complete failure.	1	2	3	4	5	6

	<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Slightly</u> <u>Disagree</u>	<u>Slightly</u> <u>Agree</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
15. I try to please other people too much.	1	2	3	4	5	6
16. I don't like people to invade my privacy.	1	2	3	4	5	6
17. I find it difficult if I have to be alone all day.	1	2	3	4	5	6
18. It is hard for me to take instructions from people who have authority over me.	1	2	3	4	5	6
19. I often feel responsible for solving other people's problems.	1	2	3	4	5	6
20. I often handle big decisions without telling anyone else about them.	1	2	3	4	5	6
21. It is very hard for me to get over the feeling of loss when a relationship has ended.	1	2	3	4	5	6
22. It is hard for me to have someone dependent on me.	1	2	3	4	5	6
23. It is very important to me to be liked or admired by others.	1	2	3	4	5	6
24. I feel badly about myself when I am not actively accomplishing things.	1	2	3	4	5	6
25. I feel I have to be nice to other people.	1	2	3	4	5	6
26. It is hard for me to express admiration or affection.	1	2	3	4	5	6
27. I like to be certain that there is somebody close I can contact in case something unpleasant happens to me.	1	2	3	4	5	6
28. It is difficult for me to make a long-term commitment to a relationship.	1	2	3	4	5	6

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
29. I am too apologetic to other people.	1	2	3	4	5	6
30. It is hard for me to open up and talk about my feelings and other personal things.	1	2	3	4	5	6
31. I am very concerned with how people react to me.	1	2	3	4	5	6
32. I have a hard time forgiving myself when I feel I haven't worked up to my potential.	1	2	3	4	5	6
33. I get very uncomfortable when I'm not sure whether or not someone likes me.	1	2	3	4	5	6
34. When making a big decision, I usually feel that advice from others is intrusive.	1	2	3	4	5	6
35. It is hard for me to say "no" to other people's requests.	1	2	3	4	5	6
36. I resent it when people try to direct my behavior or activities.	1	2	3	4	5	6
37. I become upset when something happens to me and there's nobody around to talk to.	1	2	3	4	5	6
38. Personal questions from others usually feel like an invasion of my privacy.	1	2	3	4	5	6
39. I am most comfortable when I know my behavior is what others expect of me.	1	2	3	4	5	6
40. I am very upset when other people or circumstances interfere with my plans.	1	2	3	4	5	6
41. I often let people take advantage of me.	1	2	3	4	5	6



	<u>Strongly</u> <u>Disagree</u>	<u>Disagree</u>	<u>Slightly</u> <u>Disagree</u>	<u>Slightly</u> <u>Agree</u>	<u>Agree</u>	<u>Strongly</u> <u>Agree</u>
42. I rarely trust the advice of others when making a big decision.	1	2	3	4	5	6
43. I become very upset when a friend breaks a date or forgets to call me as planned.	1	2	3	4	5	6
44. I become upset more than most people I know when limits are placed on my personal independence and freedom.	1	2	3	4	5	6
45. I judge myself based on how I think others feel about me.	1	2	3	4	5	6
46. I become upset when others try to influence my thinking on a problem.	1	2	3	4	5	6
47. It is hard for me to let people know when I am angry with them.	1	2	3	4	5	6
48. I feel controlled when others have a say in my plans.	1	2	3	4	5	6