

## **Sociotropy, Autonomy, and Self-Discrepancy: Status in Depressed, Remitted Depressed, and Control Participants**

**Nichole Fairbrother<sup>1</sup> and Marlene Moretti<sup>2</sup>**

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*This study examined the status of sociotropy, autonomy, and self-discrepancy in clinically depressed (N = 28), remitted depressed (N = 20), and control individuals (N = 20). Results from the Personal Style Inventory (PSI) and the Selves Questionnaire indicated that depressed, remitted, and control participants differed significantly in their levels of sociotropy, autonomy, and actual-ideal discrepancy. Results were in the predicted direction with depressed participants evidencing the highest levels of these variables, remitted participants the next highest, and control participants the lowest. Both sociotropy and autonomy were significantly correlated with actual-ideal discrepancy. Each of the three variables studied accounted for unique variance in current depression. Together they accounted for 48% of the variance in depression scores. This study provides support for the relation of sociotropy, autonomy, and actual-ideal discrepancy to depression, and suggests a need for greater attention to issues of availability and accessibility in the area of depression research.*

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**KEY WORDS:** depression; sociotropy and autonomy; self-discrepancy; vulnerability.

Various cognitive and personality variables have been postulated to predispose individuals to depression (see Barnett & Gotlib, 1988, for a review). Among the most promising of these are actual-ideal discrepancy (Higgins, 1987) and the two personality dimensions, sociotropy and autonomy (Beck, 1983; or dependency and self-criticism, Blatt, 1974). Research supports the hypothesis that these variables represent cognitive and personality factors that may predispose individuals to depression (Franche & Dobson, 1992; Higgins, Klein, & Strauman, 1985; Segal, Shaw, & Vella, 1989; Segal, Shaw, Vella, & Katz, 1992; Strauman, 1989; Strauman & Higgins, 1988). The purpose of this study was (a) to evaluate the status of these vulnerability markers in clinically depressed, remitted depressed and control

<sup>1</sup>Department of Psychology, University of British Columbia, 2136 West Mall, Vancouver, British Columbia, Canada V6T 1Z4.

<sup>2</sup>Department of Psychology, Simon Fraser University, Burnaby, British Columbia, Canada.

participants; and (b) to examine the unique and shared relations of these markers with depression.

### **Sociotropy and Autonomy**

A substantial literature has accumulated on the relation between sociotropy/autonomy and depression (see Blatt & Zuroff, 1992). A number of 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 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, and are particularly at risk for developing depression when faced with threats in the interpersonal domain. Autonomous or self-critical individuals have a high need for independence and are very goal oriented. They experience feelings of doubt, self-criticism, and guilt at not living up to expectations and obligations. They are sensitive to personal failure and lack of control over goal attainment. Sociotropy/dependency and autonomy/self-criticism are hypothesized to be stable and enduring traits of the person. Although they were conceived to describe two distinct groups of depression-prone individuals, they are not mutually exclusive and may coexist to different degrees in the same individual.

Higher levels of both dependency and self-criticism, and sociotropy and autonomy have been reported by clinically depressed individuals as compared with normal controls (Franche & Dobson, 1992; Klein, Harding, Taylor, & Dickstein, 1988). Remitted individuals in the Franche and Dobson study also reported higher levels of dependency and self-criticism than controls. These two studies provide preliminary support for the role of sociotropy and autonomy as potential vulnerability factors in depression.

It is generally hypothesized that the personality dimensions, sociotropy/dependency and autonomy/self-criticism, predispose individuals to becoming depressed when faced with stressors from a personally relevant domain (the personality-event congruence hypothesis). Several prospective studies, involving college students, have found support for the personality-event congruence hypothesis (Hammen, Marks, Mayol, & deMayo, 1985; Lakey & Ross, 1994; Robins, Hayes, Block, Kramer, & Villena, 1995; Rude & Burnham, 1993). Hammen et al. (1985) found support for the congruence hypothesis for both sociotropy and autonomy. Two other studies found support for sociotropy or dependency, but not for autonomy or self-criticism (Lakey & Ross, 1994; Rude & Burnham, 1993). Robins et al. found support for the interaction of personality and events in the prediction of depression, but their results were not domain-specific.

A number of prospective studies, using clinical samples, have also found support for the personality-event hypothesis. Two studies (Segal et al. 1989, 1992) found that for dependent participants congruency with life-event was associated with self-reports of depression and with clinical relapse. The second study also

found support for the association of level of depression with life event content, for both sociotropic and autonomous participants. Two additional studies 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, 1989; Hammen, Ellicott, Gitlin, & Jamison, 1989).

Further support for this pattern of personality–event congruence has been found in several cross-sectional studies (Bartelstone & Trull, 1995; Clark & Oates, 1995; Robins, 1990; Robins & Block, 1988). A relationship between sociotropy, depression, and frequency of recent negative social events has been found (Robins, 1990; Robins & Block, 1988) in both clinical and student samples. Sociotropy and autonomy have also been found to relate to specific symptom clusters within clinical depression (Persons, Miranda, & Perloff, 1991; Robins, Block & Peselow, 1989; Robins, et. al, 1995; Robins & Luten, 1991).

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

### **Self-Discrepancy Theory**

Self-discrepancy theory postulates that when individuals believe that the traits and characteristics they actually possess are incongruent with their goals or self-guides, they are likely to experience emotional distress (Higgins, 1987). More specifically, when the actual-self is perceived as discrepant from the hopes and wishes that individuals or important others hold for the self (i.e., the ideal-self), they are likely to feel disappointed with themselves, and unable to attain goals that are important to them. This negative psychological situation represents the absence of positives and is hypothesized to lead to feelings of loss, depression, and other dejection-related emotions. When the actual-self is perceived as discrepant from the duties or obligations that individuals or important others hold for the self (i.e., the ought-self), anxiety and other agitation-related emotions are hypothesized to result. This negative psychological situation represents the presence of negatives and is associated with feelings of guilt, worthlessness, fear, or resentment.

Several studies have examined the concurrent relationship between discrepancy and psychological distress, or have compared self-discrepancy in groups of individuals experiencing different types of emotional distress (Higgins et al. 1985; Scott & O'Hara, 1993; Strauman, 1989). Higgins et al., in a study of college undergraduates, found that actual-ideal discrepancy was 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 comparing clinically depressed and socially phobic individuals, Strauman found that depressed participants possessed the greatest discrepancy between their actual and ideal/own self-states, whereas social phobics possessed the greatest discrepancy between their actual and ought/other self-states. Similar results

were reported by Scott and O'Hara (1993) in a study of undergraduate students who met diagnostic criteria for either major depression, dysthymia, an anxiety disorder, both depression and anxiety, or no psychiatric disorder. Consistent with self-discrepancy theory, depressed subjects possessed higher levels of actual:ideal/own discrepancy than nondepressed subjects. Anxious subjects possessed higher levels of actual:ought/other discrepancy than non-anxious subjects.

Empirical findings indicate that the presence of actual-ideal discrepancy is a risk factor for depression (Strauman & Higgins, 1988). Strauman and Higgins, in two studies, have examined the ability of self-discrepancy to predict emotional distress. In both studies, participants were university undergraduates, and measures of self-discrepancy were taken prior to measures of distress. In the first study, actual/own:ideal/own discrepancy was found to be uniquely predictive of dejection but were unrelated to agitation, and conversely, actual/own:ought/other discrepancy was found to be uniquely predictive of agitation but were unrelated to dejection. In the second study, actual-ideal discrepancy was found to predict most strongly measures of depression, whereas actual-ought discrepancy most strongly predicted measures of social anxiety.

### **The Status of Actual-Ideal Discrepancy, Sociotropy, and Autonomy in Remission**

Although sociotropy/dependency and autonomy/self-criticism have been well researched, only a small number of studies have examined the status of these variables during periods of remission (Franché & Dobson, 1992; Hammen et al., 1985; Hirschfeld, Klerman, Clayton, Keller, & Andreason, 1984; Klein, et al., 1988). The results of these studies have been inconsistent. Hammen et al. did not find change in mood to be significantly associated with changes in self-reports of personality. Hirschfeld et al. (1984), using the Interpersonal Dependency Inventory (IDI; Hirschfeld et al., 1977), found significantly higher levels of interpersonal dependency in remitted versus control participants. In contrast, Klein et al. found that participants' reports of dependency and self-criticism declined with remission from depression. More recently, Franché and Dobson assessed the status of dependency and self-criticism in remitted depressives most directly. They selected participants on the basis of diagnostic status and current mood. Individuals were excluded from the depressed group if their Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erdbaugh, 1961) scores were less than 16, and individuals were excluded from the remitted and control groups if their BDI scores were greater than 15. Consequently, remitted participants were selected to ensure that their levels of depressed mood were in the nondepressed range, and comparable to that of control participants. The results of their study indicated that, for both dependency and self-criticism, significant differences were found between depressed and remitted participants, and between remitted and control participants. For sociotropy they found that clinically depressed and remitted depressed individuals reported higher levels of this variable than controls. Similar results were also found for autonomy.

Actual-ideal discrepancy has consistently been shown to be elevated in individuals with clinical and subclinical depression. The status of these markers in remitted depressed individuals, however, remains unclear. To our knowledge, there has been no study of actual-ideal discrepancy in remitted depressed individuals. Self-discrepancy theory predicts that the accessibility of actual-ideal discrepancy varies over time. The likelihood that an individual will experience depression is determined both by the availability of actual-ideal discrepancies in memory and the accessibility of these discrepancies at a given point in time. It is likely that the accessibility of actual-ideal discrepancies in remitted depressed individuals is lower than in clinically depressed individuals, although the availability of self-discrepancies in these two groups should not differ substantially. The accessibility of actual-ideal discrepancy in remitted depressives should be less than in depressives because they are in a less depressed mood state. In contrast, remitted depressed individuals may report a higher level of actual-ideal discrepancy than control participants because they differ with respect to both the availability and accessibility of these self-discrepancies.

Although the current study is not designed to assess the role of vulnerability factors in the onset or course of depression, several vulnerability models are relevant to predictions about the status of markers in depressed, remitted, and control participants. A strong vulnerability model predicts that similar levels of markers should be found in both depressed and remitted individuals. This strong vulnerability model (i.e., trait model also predicts that markers should not correlate with depressed mood). To date, research has provided weak support for this model. Vulnerability factors that do not correlate with depressed mood have been difficult to find (Persons & Miranda, 1992; Roberts & Kassel, 1996).

An alternative model predicts that the status of vulnerability markers depends on both the presence of these individual difference characteristics (i.e., availability) and moment to moment patterns of activation (i.e., accessibility) due to mood or other situational factors (Higgins, Bond, Klein, & Strauman, 1986; Riskind & Rhoades, 1985). This model has gained increasing empirical support over the past decade (see Segal & Ingram, 1994, for a review). In the current study, predictions regarding the status of sociotropy, autonomy, and actual-ideal discrepancy in clinically depressed, remitted depressed, and control participants are based on accessibility theory. Specifically, depressed participants were predicted to display the highest level of these factors and control participants were predicted to display the lowest level. We also predicted that markers would be moderately elevated in remitted depressed participants, relative to controls, due to vulnerability and residual negative mood.

### **The Relation of Self-Discrepancy to Sociotropy and Autonomy**

The second goal of the current study is to investigate the unique and shared relation of actual-ideal discrepancy and sociotropy/autonomy to depression. Although each of these factors has been identified as important in the etiology of depression, they are distinctly conceptualized with respect to their role in the dis-

order. Actual-ideal discrepancy is conceptualized as a structural component of the self-regulatory system that influences information processing and affect. Once activated, actual-ideal discrepancy evokes a psychological sense of loss and gives rise to feelings of dejection. The accessibility of actual-ideal discrepancy varies over time, but is not dependent on exposure to particular types of stressful events. Although events may heighten levels of accessibility of self-discrepancies in general, there is no specific link that is hypothesized to occur between exposure to specific stressful events and increased accessibility of specific types of self-discrepancy. In contrast, sociotropy and autonomy describe individual differences in the tendency to link self-esteem with success or failure in particular domains of life experience. It is only when confronted with loss in sensitive domains that highly sociotropic and highly autonomous individuals are hypothesized to become depressed.

It is reasonable to expect that the two sets of vulnerability factors are not redundant, and that sociotropy, autonomy, and actual-ideal discrepancy should each contribute uniquely to depression. Although likely correlated, it is probable that individuals who are highly sociotropic or autonomous and who also perceive their actual-self as discrepant from their ideal-self are likely to be most vulnerable to depression. We predicted that actual-ideal discrepancy and sociotropy/autonomy would be moderately correlated but would each account for unique variance in the prediction of level of depression.

## METHOD

### Participants

*Depressed Participants.* The group of 28 clinically depressed individuals was recruited through the Vancouver Hospital (UBC Site) Department of Psychology. Participants were outpatients who were being assessed for participation in a cognitive-behavioral treatment outcome study. The measures for the present research were administered at the time of this initial interview. Individuals who met criteria for a bipolar disorder, or any other Axis-I disorder, were excluded. The mean age for the depressed group was 37.50 years ( $SD = 8.92$ ). Sixty-five percent of the depressed participants were women. Twenty-five percent were married, 54% single, and 21% formerly coupled. The average level of education attained was 2 years of college.

*Remitted Participants.* The group of 20 remitted participants was also recruited through the Vancouver Hospital (UBC) Site, Department of Psychology. Remitted participants were community volunteer and individuals participating in the treatment trial, who had remitted during the 10 weeks they were on a wait list. Only those who were no longer clinically depressed, 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 another 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 ( $SD$

= 12.74). 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 \$10 for participating in the research project. The mean age for the control participants was 29.95 years ( $SD = 10.50$ ). 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 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 anxiety and mood disorders. 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. For this project, the primary investigator was trained to criterion before independently administering the interview. Reliability of diagnosis and ADIS severity ratings were established on a set of three consecutive interviews, prior to commencement of the study. Agreement on primary and any secondary diagnoses was required. Severity ratings were required to agree within 1 point (on an 8 point scale).

### *The Selves Questionnaire*

The Selves Questionnaire (Higgins et al., 1986) asks participants to generate three sets of up to 10 traits or attributes for a number of different self-states: their actual-self (i.e., attributes they believed they actually possessed), ideal-self (i.e., attributes they ideally wished or hoped to possess), and ought-self (i.e., attributes they believed they should or ought to possess), respectively. In addition, participants were asked to generate traits or attributes that they believed their mother, father, and a close friend wished or hoped they possessed (ideal-other) and felt they should or ought to possess (ought-other). Participants also rated the extent to which they believed they possessed (actual-self), wished they possessed (ideal-self), or felt they

should possess (ought-self) each self-state attribute on a scale from 1 (*slightly*) to 4 (*extremely*).

Discrepancy scores were calculated in the following manner. Each attribute of the actual-self was compared with the attributes of the ideal-self and ought-self and classified according to a thesaurus, as a match (i.e., a synonymous attribute represented in both the actual-self and the ideal-self with extent ratings that did not differ by more than 1), a synonymous mismatch (i.e., a synonymous attribute represented in both the actual-self and the ideal-self with extent ratings differing by 2 or more), an antonymous mismatch (i.e., an attribute in the ideal-self opposite to an attribute in the actual-self), or a nonmatch (i.e., an attribute in the actual-self that did not appear in the ideal-self). Discrepancy scores were calculated using the following standard formula (see Higgins et al., 1986) for each actual-self/self-guide comparison.

$$\text{Discrepancy} = [\text{synonymous mismatches} + (2 \times \text{antonymous mismatches})] - \text{synonymous matches}.$$

All attributes that are structurally connected with the ideal-self guide (i.e., matches and mismatches) are included in the calculation of discrepancy scores regardless of their valence. Nonmatches are excluded from this formula because they are not structurally connected with the ideal-self guide. Although as many as eight discrepancy scores are possible for each individual (actual-ideal own, actual-ideal mother, actual-ideal father, etc.) for the purposes of this study we calculated only two: actual-ideal total (combining own, mother, father, and friend) and actual-ought total (combining own, mother, father, and friend).

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 and actual-ought discrepancy scores has been reported to range from .39 to .65 (Higgins, 1987; Moretti & Higgins, 1990) over periods of 4 to 6 weeks and 2 months, respectively. The correlation between actual-ideal and actual-ought discrepancy 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 administered and scored following the procedures outlined above. Scorers (the primary investigator and a research assistant) received extensive training in the scoring of the Selves prior to scoring the questionnaires in this study. Interrater reliability for the two scorers was 0.95 (the proportion of the total number of attributes scored, for which there was agreement, based on 10 questionnaires).

### *The Personal Style Inventory, Version II*

The Personal Style Inventory, Version II (PSI; Robins, Ladd, & Luten, 1990) is a self-report inventory designed to measure the constructs of sociotropy and autonomy. The two scales measuring sociotropy and autonomy contain 24 items

each. Items are personal statements of needs, attitudes, feelings and behaviors (e.g., "I am very sensitive to criticism by others," "I feel I have to be nice to other people," "I often let people take advantage of me"). The revised PSI has received preliminary validation in two studies (Robins et al., 1994). In the first study, the revised PSI was administered to a group of 411 undergraduates. Sociotropy and autonomy correlated weakly ( $r = .18$ ). Correlations with the Beck Depression Inventory were .20 for sociotropy and .27 for autonomy. Evidence of construct validation has been provided by the correlations between the PSI and the revised DEQ (Welkowitz, Lish, & Bond, 1985). In this validation study, 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 et al. (1994) argued that the .50 correlation between sociotropy and self-criticism is not problematic because the self-criticism scale is highly correlated with depressed mood ( $r = .53$ ), and may be more a measure of low mood rather than personality. In the second validation study, in a sample of 74 students, the test-retest reliability of the revised PSI was .80 for sociotropy and .69 for autonomy over a 5- to 13-week period.

### *The Beck Depression Inventory*

The Beck Depression Inventory (BDI; Beck et al. 1961) is the most widely used self-report measure of depression. It comprises 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, Steer, & Garbin, 1988). Comparisons with other measures of depression have also yielded correlations ranging from .57 to .90 (Beck, Steer, & Garbin, 1988). The standard procedure for scoring was used.

### *The Beck Anxiety Inventory*

The Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988), a 21-item self-report scale, measures severity of state anxiety. Each of the 21 items contains descriptive statements of symptoms of anxiety which are rated on a 4-point scale, from 0 (*not at all*) to 3 (*severely; I could barely stand it*). This measure shows good reliability and validity (Beck, Epstein, et al., 1988; Fydrich, Dowdall, & Chambless, 1990).

## 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 PSI, the Selves Questionnaire, the BDI, and the BAI. In addition to diagnostic status, the ADIS-R also provided demographic information, treatment history, and history of depression. Remitted and control participants were debriefed at the end of their participation in the study, and were paid \$10 for their time. Individuals in the depressed group, and seven of the remitted participants were administered the PSI and the Selves questionnaire in the context of a larger treatment study for which their consent was obtained.

## RESULTS

### Demographics

Control participants were significantly younger than both depressed and remitted participants,  $t(65) = 2.43, p < .02$ , and  $t(65) = 2.12, p < .04$ , respectively. To determine if this age difference would affect subsequent analyses, the correlations between age and the variables of interest (sociotropy, autonomy, actual-ideal discrepancy, actual-ought discrepancy, and depressed mood) were examined. None of these correlations were significant. No significant group differences emerged with respect to marital status,  $X^2(4) = 0.75, p > .90$ ; gender,  $X^2(2) = 3.05, p > .20$ ; or level of education,  $X^2(8) = 6.64, p > .50$ .

### Diagnosis and Symptomatology

Several analyses were completed to ensure that clinically depressed and remitted participants were significantly different with respect to depressive symptomatology, but comparable on clinical variables related to their history of depression. First, we compared depressed and remitted participants' level of current depressive symptoms as assessed by the ADIS (Table I). The mean level of symptoms for the remitted group was significantly lower than for the depressed group ( $t = 10.40, p < .001$ ). This finding indicates that remitted participants were distinct from depressed participants and exhibited only minimal symptoms of depression.

Depressed and remitted participants were comparable with respect to their history of depression (Table II). They did not differ on the age of their first episode of depression,  $t(46) = 0.49, p > .60$ ; the reported severity of their worst episode

**Table I.** Means for Sociotropy and Autonomy, Actual-Ideal Discrepancy, BDI, BAI, and Number of Current Symptoms by Group<sup>a</sup>

| Measure                                   | Depressed ( <i>n</i> = 28) |           | Remitted ( <i>n</i> = 20) |           | Control ( <i>n</i> = 20) |           |
|-------------------------------------------|----------------------------|-----------|---------------------------|-----------|--------------------------|-----------|
|                                           | <i>M</i>                   | <i>SD</i> | <i>M</i>                  | <i>SD</i> | <i>M</i>                 | <i>SD</i> |
| Sociotropy                                | 104.11 <sub>a</sub>        | 17.95     | 95.09 <sub>a</sub>        | 14.37     | 83.31 <sub>b</sub>       | 14.58     |
| Autonomy                                  | 91.80 <sub>a</sub>         | 17.82     | 87.70 <sub>ab</sub>       | 14.79     | 77.35 <sub>b</sub>       | 19.87     |
| Actual-ideal                              | 4.58 <sub>a</sub>          | 9.37      | -1.46 <sub>b</sub>        | 6.30      | -3.36 <sub>b</sub>       | 4.70      |
| Beck Depression Inventory                 | 23.86 <sub>a</sub>         | 7.31      | 13.00 <sub>b</sub>        | 8.35      | 4.25 <sub>c</sub>        | 4.24      |
| Beck Anxiety Inventory                    | 13.61 <sub>a</sub>         | 9.84      | 9.40                      | 8.00      | 5.90 <sub>b</sub>        | 6.19      |
| No. of current symptoms<br>(ADIS ratings) | 13.50 <sub>a</sub>         | 3.39      | 3.83 <sub>b</sub>         | 2.83      | —                        | —         |

<sup>a</sup>All comparisons within rows. Means with different subscripts differ significantly at .01 or less.

**Table II.** History of Depression Variables for Depressed and Remitted Participants

| History of depression variable | Depressed ( <i>n</i> = 28) |           | Remitted ( <i>n</i> = 20) |           |
|--------------------------------|----------------------------|-----------|---------------------------|-----------|
|                                | <i>M</i>                   | <i>SD</i> | <i>M</i>                  | <i>SD</i> |
| Age of first episode           | 24.14                      | 11.35     | 22.40                     | 13.07     |
| Severity of worst episode      | 6.21                       | 0.83      | 5.85                      | 0.75      |
| Number of previous episodes    | 5.00                       | 4.28      | 5.75                      | 7.11      |

of depression,  $t(46) = 1.56, p > .10$ ; nor on the reported number of previous episodes of depression,  $t(46) = -0.46, p > .60$ .

Nonetheless, our remitted group continued to exhibit mild to moderate symptoms of depression when assessed using the BDI (see Table I). Depressed participants reported the highest levels of BDI scores, remitted participants reported the next highest, and controls participants the lowest,  $F(2, 65) = 47.95, p < .001$ . Depressed and remitted participants also reported elevated levels of anxiety (measured using the BAI; see Table I) compared with controls,  $F(2, 65) = 5.05, p < .01$ . These results indicate that although remitted participants continued to suffer from mild to moderate depressed mood at the time of the study, their depressive symptoms clearly do not constitute a depressive syndrome.

Status of Vulnerability Markers in Depressed and Remitted Participants

We predicted that depressed and remitted participants would exhibit higher levels of sociotropy, autonomy, and actual-ideal discrepancy than control participants, and that remitted individuals would exhibit lower levels of these vulnerability markers than depressed participants. We tested this hypothesis using a one-way analysis of variance, followed by contrasts based on a priori predictions.

### *Sociotropy and Autonomy*

As predicted, depressed, remitted and control participants differed significantly in their levels of sociotropy and autonomy,  $F(2, 65) = 9.85, p < .001$ ; and  $F(2, 65) = 4.00, p < .03$ , for sociotropy and autonomy, respectively (see Table I). Pairwise comparisons indicated that depressed participants exhibited significantly higher levels of sociotropy and autonomy than controls,  $t(65) = 4.44, p < .001$ , and  $t(65) = 2.80, p < .007$ , respectively. This difference reflected large effect sizes (1.30 for sociotropy, and 1.11 for autonomy).

Results supported the prediction that remitted participants would exhibit higher levels of sociotropy and autonomy than control participants, and lower levels of these variables than depressed participants. Remitted depressives exhibited significantly higher levels of sociotropy than controls,  $t(65) = 2.33, p < .03$ , reflecting a medium effect size (0.74). The effect size difference between depressed and remitted participants was 0.56, and was marginally significant,  $t(65) = 1.92, p < .06$ . For autonomy, remitted participants reported a trend towards elevated levels of autonomy relative to control participants,  $t(65) = 1.86, p < .07$ . This difference was marginally significant, and reflected an effect size of 0.58. Differences between depressed and remitted participants were not significant,  $t(65) = 0.79, p < .40$ , and the effect size difference was small (0.23).

### **Actual-Ideal Discrepancy**

*Specificity of Actual-Ideal Discrepancy to Depression.* Self-discrepancy theory predicts that types of distress are specific to types of self-discrepancy: actual-ideal discrepancy is associated with dejection-related emotions, and actual-ought discrepancy is associated with agitation-related emotions. To test the specificity of actual-ideal discrepancy to depressed mood, residualized correlations were computed between actual-ideal discrepancy (with actual-ought partialed out), actual-ought discrepancy (with actual-ideal partialed out), depression (BDI scores with BAI scores partialed out), and anxiety (BAI scores with BDI scores partialed out). As predicted, actual-ideal discrepancy was significantly associated with depression,  $r(68) = .26, p < .05$ , and actual-ought discrepancy was not,  $r(68) = .04, p > .75$ .

*Status in Depression and Remission.* The means and standard deviations for actual-ideal discrepancy are presented in Table I. As predicted, depressed participants possessed significantly higher levels of actual-ideal discrepancy than control participants,  $F(2, 65) = 7.71, p < .001$ ;  $t(65) = 3.67, p < .001$ . This difference reflects a large effect size (1.08). Remitted participants demonstrated significantly lower levels of actual-ideal discrepancy than depressed participants,  $t(65) = 2.80, p < .005$ ; however, the difference between remitted participants and controls was not significant,  $t(65) = 0.81, p > .40$ . The effect size of the difference between remitted and depressed participants was large (0.82), whereas the effect size of the difference between remitted and control participants was small (0.26).

| Table III. Correlations Between Subscales <sup>a</sup> |                   |                   |                   |                   |                   |
|--------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Subscale                                               | 2                 | 3                 | 4                 | 5                 | 6                 |
| 1. SOCIO                                               | 0.59 <sup>d</sup> | 0.40 <sup>c</sup> | 0.42 <sup>d</sup> | 0.61 <sup>d</sup> | 0.38 <sup>c</sup> |
| 2. AUTO                                                | —                 | 0.30 <sup>b</sup> | 0.32 <sup>c</sup> | 0.54 <sup>d</sup> | 0.37 <sup>c</sup> |
| 3. AID                                                 |                   | —                 | 0.76 <sup>d</sup> | 0.51 <sup>d</sup> | 0.25 <sup>b</sup> |
| 4. AOD                                                 |                   |                   | —                 | 0.48 <sup>d</sup> | 0.32 <sup>c</sup> |
| 5. BDI                                                 |                   |                   |                   | —                 | 0.56 <sup>d</sup> |
| 6. BAI                                                 |                   |                   |                   |                   | —                 |

<sup>a</sup>SOCIO = sociotropy; AUTO = autonomy; AOD = actual-ought discrepancy; AID = Actual-ideal discrepancy; BDI = Beck Depression Inventory; BAI = Beck Anxiety Inventory.

<sup>b</sup> $p < .05$ .

<sup>c</sup> $p < .01$ .

<sup>d</sup> $p < .001$ .

Table IV. Multiple Regression of Depression Scores (BDI) on Sociotropy, Autonomy, and Actual-Ideal Discrepancy

| Variables entered        | $\beta$ | $t$ Value                    | Sig. of $t$ | Partial correlations |
|--------------------------|---------|------------------------------|-------------|----------------------|
| Sociotropy               | .352    | 3.09                         | .003        | .36                  |
| Autonomy                 | .246    | 2.25                         | .028        | .27                  |
| Actual-Ideal discrepancy | .295    | 3.05                         | .034        | .36                  |
| Multiple $R$             | = .71   | F(3, 64) = 21.26, $p < .001$ |             |                      |
| $R^2$                    | = .50   |                              |             |                      |
| Adjusted $R^2$           | = .48   |                              |             |                      |

Relation Between Sociotropy and Autonomy and Self-Discrepancy

The second purpose of the study focused on sociotropy, autonomy, and actual-ideal discrepancy, and examined the shared and unique contribution of each variable to depressed mood. We anticipated moderate correlations between sociotropy and autonomy and discrepancy, indicative of some overlap between these factors (Table III). Results supported this prediction, with both sociotropy and autonomy correlating positively with actual-ideal discrepancy,  $r(68) = .40, p < .05$ , and  $r(68) = .30, p < .05$ , respectively. In addition, we hypothesized that each of these three variables would contribute unique variance to the prediction of depressed mood. We conducted a multiple regression analysis, utilizing a simultaneous entry procedure with BDI scores as the criterion, and each of the three markers as the predictors (Table IV). This approach was selected because we had no a priori reason to select a particular order of entry for our variables. The regression analysis was highly significant,  $F(3, 64) = 21.26, p < .001$ . All variables were identified as significant predictors, indicating that each factor contributed uniquely to depression. Together, these variables accounted for 48% of the variance in BDI scores. Partial correlations (see Table IV) indicated that sociotropy accounted for 12.97% of

unique variance in BDI scores, actual-ideal accounted for 12.66%, and autonomy accounted for 7.32%. Interaction terms were entered into the equation following the main effects. None of the interaction terms were significant.

## DISCUSSION

The results of this study indicate that depressed participants evidenced higher levels of sociotropy, autonomy, and actual-ideal discrepancy than control participants, thereby supporting the hypothesis that these variables are related to individuals' experience of depression. The results of analyses comparing remitted participants to depressed and control participants, for the most part, also support our predictions. For all three of the markers studied, results were in the predicted direction. Depressed participants reported the highest levels, remitted participants reported moderate levels, and control participants reported the lowest levels of these factors. In the case of sociotropy, the difference between remitted and control participants represented a medium effect size, and was statistically significant. The difference between depressed and remitted participants represented a medium effect size, and was marginally significant. The difference in autonomy between remitted and control participants also reflected a medium effect size, and was significant. However, the difference between remitted and depressed participants reflected only a small effect size, and was not significant. Remitted participants did not differ significantly from control participants on actual-ideal discrepancy, but they did exhibit significantly lower levels of actual-ideal discrepancy than depressed participants. These results are consistent with the theory that sociotropy, autonomy, and actual-ideal discrepancy represent stable aspects of the individual that remain somewhat accessible during periods of remission (Beck, 1983; Strauman & Higgins, 1988).

The difference in status of sociotropy and autonomy versus actual-ideal discrepancy in remitted depressed participants compared with control participants is interesting. One explanation for these findings rests on the different aspects of depression captured by these two measures. Sociotropy and autonomy focus on the types of events that are critical for one's self-esteem. The domains that are central to an individual's self-esteem, and the types of events they find distressing, may vary only marginally between periods of depression and remission, although the degree to which they feel they are successful in these domains may vary considerably. In contrast, self-discrepancy assesses structural aspects of individuals' self-regulatory system. Shifts in mood or other situational factors can result in temporary reduction in the accessibility of actual-self:ideal-guide discrepancy. This structural vulnerability is therefore not apparent unless specific manipulations (e.g., priming) are used to increase accessibility (Higgins et al., 1986; Strauman & Higgins, 1987). Indeed, it is possible that remitted depressives engage in intentional cognitive efforts to inhibit the accessibility of these aspects of the self-system (i.e., focus attention on areas of functioning where they feel they are meeting rather than failing to meet ideal guides) in an attempt to avoid relapsing into depression (Moretti et al., 1996). Overall, these results suggest that researchers may need to tailor methodologies to assess vulnerability to the specific nature of the measures that are used.

Moderate correlations between sociotropy and autonomy, and actual-ideal and actual-ought discrepancy, were also found. This finding supports our hypothesis that sociotropy, autonomy, and actual-ideal discrepancy represent related yet nonredundant constructs. Although related, these variables contributed significantly and independently to the prediction of negative mood. Sociotropy, actual-ideal discrepancy, and autonomy combined predicted 48% of the variance in depression scores. Sociotropy and actual-ideal discrepancy accounted for similar amounts of unique variance in depression scores (12.97 and 12.66%, respectively). Autonomy accounted for less of the variance in depression scores (7.32%). This finding is consistent with the sociotropy/autonomy literature, showing a strong and consistent relation of sociotropy to depression (Franché & Dobson, 1992; Hammen et al., 1985; Klein et al., 1988; Robins et al., 1995; Taylor & Dickstein, 1988), and a comparatively weaker, and less consistent relation of autonomy to depression (Lakey & Ross, 1994; Rude & Burnham, 1993). This finding is also consistent with discrepancy research that has repeatedly demonstrated a strong relation between actual-ideal discrepancy and depressed mood (Higgins et al., 1985; Scott & O'Hara, 1993; Strauman, 1989; Strauman & Higgins, 1988). Together these results further support the notion that sociotropy, actual-ideal discrepancy, and, to a lesser degree, autonomy are related but nonredundant correlates of depressed mood. These results are the first documentation of the independent but overlapping relation of actual-ideal discrepancy, sociotropy, and autonomy to negative mood.

The relation of sociotropy and autonomy to depressed mood is of particular interest because it contradicts previous research that did not find a positive association between sociotropy and autonomy, and depressed mood (Robins et al., 1994). Robins et al. reported correlations of .20 and .27 between sociotropy and autonomy, and depression, respectively. We found much higher correlations (.61 for sociotropy, and .54 for autonomy). A likely explanation for this discrepancy, is the use of samples with very different characteristics. In Robins validation studies, student samples were used, suggesting the possibility of a restriction in the range of scores possible. Conversely, we used a clinical sample for the depressed and remitted groups, and a nonstudent sample for the control group, samples that provided a wide range of sociotropy, autonomy, and BDI scores. This finding is important because it suggests that sociotropy and autonomy are not independent of negative mood, and may vary in their accessibility as a function of moodstate. Further research using the PSI and nonstudent samples is necessary before this conclusion can be accepted, however.

Taken together, the results of this study support the role of sociotropy, autonomy, and actual-ideal discrepancy in depression, and the relation of each of these variables to depressed mood. In addition, these findings suggest that these variables may be more accessible during periods of depression. There are, however, several noteworthy limitations to the study. First, using a cross-sectional design, it is only possible to infer vulnerability. Differences in the variables studied, across the three groups may co-occur with diagnostic status, without being causally related to depression. Only longitudinal and experimental designs can evaluate causality effectively. Second, our remitted sample continued to experience some symptoms of depression which make it difficult to disentangle mood-state effects from vulner-

ability. It is not possible to know whether remitted participants would have continued to evidence elevated levels of the variables studied relative to controls, had they been free of depressed mood. Had we used a priming procedure, it is possible that we would have found larger differences between remitted participants and controls, and smaller differences between depressed and remitted participants on the variables studied. The use of multiple self-report measures may have resulted in slightly inflated correlations between the variables studied, due to shared method variance. Finally, small samples may have resulted in low statistical power, preventing us from detecting small effect sizes.

In this study, a strong relation was found between depressed mood and sociotropy, autonomy, and actual-ideal discrepancy. Depression research has been burdened by attempts to demonstrate independence of proposed vulnerability factors from negative mood. In light of our findings, and the general failure of cognitive theories of depression to identify variables that are independent of current mood (Persons & Miranda, 1992; Roberts & Kassel, 1996), it is critical that researchers take issues of accessibility and availability into consideration, and implement priming techniques more consistently in depression research. Similar conclusions have been reached by Persons and Miranda (1992), who argue that beliefs that are vulnerability factors to depression are stable, but accessible only during periods of negative mood. Recent success in the use of priming procedures in depression research supports this conclusion (Miranda & Persons, 1988; Miranda, Persons, & Byers, 1990; Segal & Ingram, 1994). Miranda and Persons (1988) assessed dysfunctional attitudes before and after a negative or elated mood induction procedure. Individuals with a history of depression reported higher levels of dysfunctional attitudes than individuals who did not have a history of depression, but only when in a negative mood state. Individuals without a history of depression evidenced no such change in dysfunctional attitudes. Similar results were found by Miranda et al. (1990). In a review by Segal and Ingram (1994), the authors argue that mood-state dependent effects are consistent with cognitive diathesis models of depression, and they emphasize the importance of priming in depression research. Studies that have tested the personality-event congruency hypothesis provide support for the use of priming techniques in research relating sociotropy and autonomy to depression. These studies evaluate the interaction of negative life events with personality style, in the prediction of depression. the occurrence of personality-specific events can be viewed as a naturalistic prime, suggesting that only when sociotropy and autonomy are adequately primed by relevant life events will they be predictive of depression.

Work by Strauman (1989; Strauman & Higgins, 1987), developing priming techniques may be useful in suggesting methodologies and techniques that would be helpful in this regard. Strauman and Higgins (1987) developed an idiographically sensitive priming procedure to experimentally increase the accessibility of self-state attributes associated with vulnerability. This research demonstrated that moment-to-moment changes in mood and information processing could be induced by increasing that accessibility of particular self-state attributes are made accessible. Studies that have tested the personality-event congruency hypothesis provide support for the use of priming techniques in sociotropy/autonomy research through the use of a naturalistic prime. Other potential priming procedures such as negative

mood induction, or the induction of self-focused attention, have been suggested by Segal and Ingram (1994). Finally, our findings are relevant to clinical practice. They suggest that it may be useful to consider multiple levels of cognitive vulnerability, and to strategically employ interventions based on a thorough understanding of the self-system (Moretti, Higgins, & Feldman, 1990).

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