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UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

THE RELATIONSHIP OF STRUCTURAL COMPONENTS OF SOCIOTROPY AND AUTONOMY WITH GENDER IDENTITY AND DEPRESSION

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

BY

ELIZABETH A. GRAY
Norman, Oklahoma
1998

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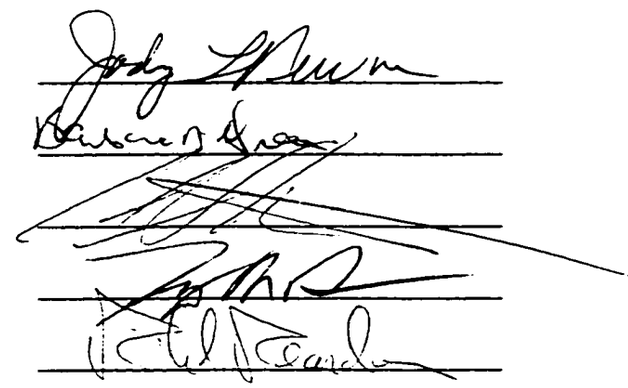
THE RELATIONSHIP OF STRUCTURAL COMPONENTS OF SOCIOTROPY AND AUTONOMY WITH GENDER IDENTITY AND DEPRESSION

A Dissertation APPROVED FOR THE DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

BY



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Abstract

Women are diagnosed with depression, on average, twice as often as men. Over the years, research has failed to satisfactorily explain the etiology of this sex differential. One particular line of research that has emerged in recent years has focused on the apparent overlap between depressive symptomotology and definitions of feminine sex role.

Interestingly, Beck (1983), a leading researcher in the area of depression and cognition has hypothesized that two cognitive personality structures, sociotropy and autonomy, act as predispositional variables in depression. According to Beck (1983), women are more likely to develop sociotropic structures, while men more likely to develop autonomous structures. Beck has operationalized these constructs in his Sociotropy/Autonomy Scale (SAS). Research examining the SAS has generally supported sociotropy as a vulnerability factor in depression. On the other hand, support for autonomy as a predispositional variable in depression has been sparse; and, in fact, it has been suggested that autonomy may act as a buffer against depressiom.

Newman, Gray, and Fuqua (1996) observed that definitions of sociotropy and autonomy, as well as specific items on the SAS, appear to overlap in some fundamental ways with definitions of femininity and masculinity. In a preliminary exploration of this potential relationship, subscale socres from the SAS were factor analyzed along with four instruments designed to measure sex-role orientation. This analysis resulted in a two-factor solution. The first factor clearly represented a feminine dimension, the second a masculine dimension. Sociotropy loaded cleanly on the feminine dimension, while autonomy loaded cleanly on the masculine dimension.

The purpose of this study was to expand the Newman et al. study by examining the underlying structure of Beck's (1983) Sociotropy/Autonomy Scale (SAS) and exploring the relationships of these dimensions to gender identity and depression. The 60 items of the SAS were factor analyzed resulting a a six-factor solution accounting for 38.2% of the variance.

Factor scores were generated for participants on the SAS factors, which were then used in separate multiple regression analyses predicting masculinity and femininity, as measured by the Personal Attributes Scale (PAQ) and the Bem Sex Role Inventory (BSRI) , and depression, as measured by the Beck Depression Inventory (BDI). Regression equations emerging from these analyses predicted masculinity and femininity approximately equally well. Surprisingly, the linear combination of SAS factors accounted for less variance in depression than in either masculinity or femininity.

These findings raise serious questions regarding the structural validity of the SAS. Further, the apparent overlap involving gender identity and depression evokes concerns that women are being pathologized for exhibiting behaviors that are consistent with normal socialized role prescriptions.

The Relationship of Structural Components of Sociotropy and Autonomy with Gender Identity and Depression

Introduction

The fact that women are diagnosed with depression at a rate twice that of men has been frequently and consistently reported in the literature (e.g., Culbertson, 1997; Nolen-Hoeksema, 1987; Weissman & Lerman, 1977; Wittchen, Essau, von Zerssen, Krieg, & Zaudig, 1992). Over the years there have been numerous efforts to explain this sex differential approaching the matter from a broad range of biological, environmental, and psychological perspectives. Very limited support has emerged for biological explanations of this sex differential in rates of depression, although there appears to be a consensus that genetic characteristics are likely to have an interactive effect (Bebbington, 1996; Nolen-Hoeksema, 1995, 1990, 1987). A stronger body of evidence exists in support of an environmental basis for explaining higher rates of depression among women. For example, differences in physical and sexual power between males and females often make females more vulnerable to certain acts of intrusion and violence such as childhood sexual abuse and rape (Cutler & Nolen-Hoeksema, 1991; Nolen-Hoeksema, 1991; Whiffen & Clark, 1997). Further, women have fewer employment opportunities and financial resources, lower social status, and less political power than do men (McGrath, 1990). Certain symptoms of depression, e.g., helplessness and hopelessness, have been attributed to women's oppression, victimization, and relative powerlessness in our culture (Brems, 1995; Steen, 1991). Relatedly, some psychological perspectives emphasize the development of cognitive

personality structures through women's interaction with their environment. For example, Beck (1983,1987) has hypothesized that depression is the result of maladaptive schemata, which surface in reaction to environmental stressors. To date, research in all three areas, biological, environmental, and psychological, continues with no single group of explanations proving fully satisfactory. Most researchers acknowledge that the sex differential in depression is doubtlessly multifaceted demanding a biopsychosocial approach in defining its etiology.

Gender Identity and Social Power

Cultural definitions of gender roles and gender identity have been characterized as probable contributors to the sex differences in the occurrence of depressive disorders and other psychological difficulties. Conceptualizations of psychological well-being in terms of gender identity have included three principal models: (a) the gender constancy model, (b) the male model, and (c) the androgyny model (Whitley, 1984).

Early conceptualizations proposed that to be psychologically healthy was to be "gender constant," or to conform to one's gender role as defined by the dominant culture (Whitley, 1984). Historically, the ideal female has been characterized as subservient, reticent, dependent, and frail; therefore, to conform to the female gender role meant to accept ancillary status. Feminist theorists have identified this subordination as a primary source for women's psychological distress and have contended that society's conceptualization of the "good woman" continues to promote "dependency, weakness, and compliance" (Steen, 1991, p. 371).

The second model, the male model, suggested that the possession of masculine attributes promoted psychological well-being, regardless of biological sex (Bassoff & Glass, 1982; Taylor & Hall, 1982). Traits that have been traditionally attributed to masculine gender identity have consistently generated the strongest empirical support as contributors to current definitions of psychological adjustment (Bem, 1974; Whitley, 1984). According to Gilligan (1977) "repeated finding of developmental inferiority in women may...have more to do with the standard by which development has been measured than with the quality of women's thinking per se" (p.288). Simply put, findings which emerge from a male point of view, from male research data, and conflict with a male archetype can only be interpreted as "a failure of development" in women (Gilligan, 1977, p.288).

Finally, the third model suggested that "androgyny," i.e., high masculinity and high femininity combined, might contribute to a healthier mental status in both males and females (Bem, 1974; Cook, 1985). It was speculated that this balance would foster flexibility and adaptability, allowing the individual to draw on a variety of cognitions and behaviors, in lieu of being limited by traditional gender-role conventions (Helmreich, Spence & Holahan, 1979). While this proposal has much intuitive appeal, it has not generally been supported by empirical studies. Most of the variance in the androgyny model can be explained by the presence of masculine traits alone (Antill & Cunningham, 1979, 1980; Lamke, 1982, Silvern & Ryan, 1979; Taylor & Hall, 1982, Whitley, 1983); the presence of feminine traits emerges as extraneous to androgyny's relationship to psychological well-being (Bassoff & Glass, 1982, Whitley, 1984).

Thus, the androgyny model is simply a recapitulation of the male model of mental health. Research has failed to document how the adaptive aspects of femininity might be protective or functional in respect to mental health for both men and women. This avenue of investigation might spur renewed interest in androgyny.

Nonetheless, there has been strong empirical support for the male model in relation to current definitions of psychological health. Two meta-analyses conducted in the mid-1980s revealed a positive relationship between the possession of masculine traits and psychological well-being and a negative relationship between the possession of masculine traits and depression. Femininity was minimally or not at all related to these same constructs (Bassoff & Glass, 1982; Whitley, 1984).

Whitley (1984), in his meta-analytic study, included 32 studies examining the relationship between gender identity and depression or other measures of general adjustment. Masculinity was found to have a moderately strong relationship with both depression and general adjustment, while femininity emerged as having little or no relationship to either depression or general adjustment. Neither the androgyny model nor the congruence model was supported. Bassoff and Glass (1982) reported that both androgyny and masculinity were related to higher levels of psychological well-being than femininity in their meta-analysis of 26 studies. Statistical differences between masculinity and femininity as well as between androgyny and femininity were large, whereas differences between masculinity and androgyny were insignificant. In fact, the authors stated, "The masculinity component of androgyny is correlated to the extent that androgyny is correlated with mental health" (Bassoff & Glass, 1982, p. 109). In other

words, it was the masculinity component of androgyny that was related to psychological well-being. Subsequent research has supported these findings (Feather, 1985; Nezu & Nezu, 1984; O'Heron & Orlofsky, 1990; Roos & Cohen, 1987; Whitley & Gridley, 1993).

While most studies have suggested that it is the lack of masculine characteristics that is associated with vulnerability to psychological difficulties, a handful of studies have implicated feminine traits in the mental health/gender identity equation. The majority of these studies have employed measures of interpersonal competence as their dependent variable, e.g., loneliness, social self-esteem, and social satisfaction (Krames, England, & Flett, 1988; Payne, 1987; Wheeler, Reis, & Nezlek, 1983). Given that femininity scales are composed of expressive, interpersonally-oriented traits, this is not surprising.

Jordon (1997), has suggested that psychological theory has failed to acknowledge and value women's relational nature stating that, "...psychological theory reflects an old tradition captured in Aristotle's statement that : 'the female is a female by virtue of a certain lack of qualities; we should regard the female nature as afflicted with natural defectiveness' (Sanday, 1988, p.58)." Researchers at the Stone Center (Jordan, 1997; Kaplan, 1991; Miller, Jordon, Kaplan, Stiver, & Surrey, 1997; Striver, 1997) have proposed that current theories of self fail to acknowledge women's "primary experience of self" as relational and echo Gilligan's view (1977) that women are seen as "either deviant or lacking in their development" (p. 278). These authors have formulated a new theory of development metaphorically resembling "embryological

development," or growing within the relationship rather than separating from it. Surrey (1997) described this relational growth as "an experience of emotional and cognitive intersubjectivity...," involving "...continuous psychological connection" (p. 61). In fact, Stiver (1997) has even suggested that dependency be redefined and reevaluated as a "normal, growth-producing process" (p. 60). While many researchers have advocated the creation of theories acknowledging women's experiences and understanding, empirical support for these perspectives as more beneficial in conceptualizing, diagnosing, and treating women is lacking (Nolen-Hoeksema, 1990). Research, to date, has consistently reported that feminine traits that engender interdependency and social competence fail to buffer one against depression or to contribute to general adjustment.

One particular line of research that has emerged in recent years has focused on the apparent overlap between depressive symtomatology and definitions of the feminine sex role. Several researchers have observed remarkable similarities between these two constructs, e.g., helplessness, tendency to cry easily, passivity, difficulty with decision-making, and feelings of inferiority (Kaplan, 1984; Landrine, 1988; McGrath, 1990; Tinsely, Sullivan-Guest, & McGuire, 1984) . These similarities have led to the "gender-role hypothesis," which suggests that the clinical category of depression and women's traditional social category are overlapping; that is, "the clinical category is an extreme version (a caricature) of aspects of women's gender role" (Landrine, 1988, p. 528). In examining this hypothesis, Landrine (1988) found that individuals who scored highly on femininity tended to score highly on measures of depression, whereas

individuals who scored highly on masculinity tended to score highly on measures of self-esteem and lowly on measures of depression.

Landrine (1988) also provided evidence that descriptions of women's social roles overlap with descriptions of depression. Respondents in her study described individuals experiencing depressive symptoms largely with the same terms they used to describe White, middle-classed, middle-aged women, e.g., dependent, passive, helpless, incompetent, unassertive, and emotionally dependent, to name a few. Additionally, individuals described as severely depressed in vignettes were commonly identified as married women, whereas those with milder depressive symptoms were categorized as women of no specific marital status. Further, when respondents were asked to describe different categories of people, their descriptions of married women differed from descriptions of individuals considered to be functioning normally on 90% of the items presented.

Interestingly, the rates of depression for married females do appear to be higher than for single females, while the rates of depression for married males are lower than for single males (Gove, 1972; Rothblum, 1983). Landrine (1988) concluded that:

> Depressives are generally women, and those women are usually married. Given that men and women do not change genetically and/or physiologically as their marital status changes from single to married (let alone in opposite directions!), these Gender x Marital Status interaction data have been interpreted as suggesting that

> role, role expectations, and role stereotypes of women — and of married women in particular are related to depression (p. 528).

Marriage, for women, does appear to create dissonance and emotional distress, especially when partnerships are inequitable (Nolen-Hoeksema, 1990; Vanfossen, 1981), when the majority of marital interchanges are identified as displeasing by the female partner (Assh & Byers, 1996), and when there is little emotional support provided by the male partner (Gruen, Gwadz, & Morrobel, 1994). It has also been reported that family strain and economic hardship are predictors of emotional distress for married females (Wu & DeMaris, 1996). Some empirical findings have suggested that women's socialization processes create maladaptive attitudes towards and unrealistic expectations for marital interchanges creating both marital dissatisfaction and personal distress (Assh & Byers, 1996). Further, chronic stress, trait anxiety, and pessimistic rumination appear to affect married women's mental well-being (Ali, A., & Toner, B., 1996; Bromberger & Matthews, 1996; Butler & Nolen-Hoeksema, 1994; Nolen-Hoeksema, 1990).

From a cognitive perspective, maladaptive thoughts, expectations, and schemata are challenged and adjusted to enable more effective functioning. There is clear evidence that this adjustment relieves symptoms of depression for women (Beckham & Leber, 1985; Thase, Reynolds, Frank, Simons, McGeary, Fasiczka, Garamoni, Jennings, & Kupfer, 1994)). Stoppard (1989), however, has taken issue with this model of treatment for women asserting that it simply promotes a male-based model of

mental well-being, does nothing to add to the understanding of women's depression, and is destructive to women's self-concept because:

> Women who receive cognitive/behavioral therapy are likely to be given an implicit message that they contribute to their depressions by acting in ways that deviate from prevailing, male-valued norms of psychological adjustment, i.e., they are insufficiently masculine....cognitive/behavioral approaches to depression imply that a useful strategy for preventing depression in women would be to encourage women's participation in programs for training in rational thinking, effective problem solving, and other male-valued skills... (p.47).

This statement echoes the sentiments of many feminist theorists, that females are found lacking when compared to a male prototype (Gilligan, 1977; Kaplan, 1991; Stiver, 1997).

The underpinnings of the "gender-role hypothesis" and the implication that feminine personality may be a mild variant of depression are not new (Hirschfeld, 1984; Jack, 1987; Kaplan, 1986). Tinsley, Sullivan-Guest, and McGuire (1984) suggested that "Helplessness and symptoms of depression may...be considered an intensification of once considered normal female sex-role behaviors, such as passivity, dependence, self-sacrifice, self-deprecation, fearfulness, naiveté, and lack of self-confidence" (p. 26). Kaplan (1984) observed that the key elements of depression are analogous to definitions of women in our culture.

McGrath et al. (1990) have observed that:

> For disorders such as depression that are congruent with gender role stereotypes, prevalence rates for women are markedly higher than for men. For disorders that are incongruent with society's idealized view of femininity and the "good" woman (e.g., alcoholism is not congruent with the idealized view), women's needs have been neglected and may go untreated or misdiagnosed" (p. 34).

This suggestion has been supported by empirical studies which have concluded that base rates for psychiatric disorders influence clinical judgment (Lopez, 1990; Loring & Powell, 1988). For example, in a study of 523 medical and mental health providers assessing 23,101 patients, among those patients who met criteria for clinical depression according to the Diagnostic Interview Schedule (DIS), men were significantly less likely to be diagnosed as experiencing clinical depression than were women. For patients who failed to meet DIS criteria, women were significantly more likely to be diagnosed with clinical depression than were men. These findings remained after adjusting for patient demographic factors and severity of depression (Potts, Burnam, & Wells, 1991). Clinical judgment may be influenced by reports that specific maladies are more prevalent among one gender than the other. This elicits concern that certain diagnoses are applied as a function of group membership and stereotyping. Members of these groups may be overpathologized and overdiagnosed in selected categories and underdiagnosed in others (Lopez, 1990).

Additionally, consider that cultural standards appear to prescribe different characteristics and behaviors for each sex. The fact that men and women are socialized to exhibit certain traits seems to indicate that one set of traits is valuable in women and another in men. Interestingly, this may not be the case. When Grimmell and Stern (1992) asked participants to describe the ideal person (gender was not specified), both men and women in their study depicted the ideal as more masculine than themselves. Neither males nor females rated any masculine item as lower for the ideal person than for self. In fact, the ideal person was rated by both sexes as much more masculine than feminine, even though most females described themselves as more feminine than masculine. Although only a single study, these findings suggest that masculine characteristics may be considered more valuable than feminine characteristics in this society by both men and women. Herman (1983) has concluded that depression has a clear cultural element related to the devaluation of feminine traits and stereotypes which overlap with symptoms of depression. Brems (1995) has stated that:

> It appears safe to agree with Herman (1983), who suggests that differences in depression will only disappear if cultural valuation of male and female roles and traits change, and if the socialization process becomes more equitable for children of both genders (p. 556).

Kaplan (1991) has suggested that "...the field of psychology needs to make fundamental revisions in its thinking about the dynamics of depression in women..." (pp.220-221). Aligned with her colleagues at the Stone Center, Kaplan has promoted a "self-in-relation" perspective, which views connection with others as a fundamental

ingredient in women's development. Current definitions of psychological health endorse autonomy, independence, and separation as buffers against distress failing to recognize the constriction this places on females' needs for mutuality and empathy (Jordan, 1991; Kaplan, 1991).

Jack (1987) has posited that women's relational selves conflict with societal expectations of "the good woman" and that traditional definitions of feminine roles promote the development of relationship schemata, "collectively known as silencing the self" (Thompson, 1995, p. 338). Silencing the self theory posits that the "centrality of relationships to women's sense of self" (Thompson, 1995, p. 338) coupled with traditional prescriptions for female roles encourages perceptions and behaviors that lead to emotional distress. Females are socialized to be selfless, to repress feelings of anger, and to censor personal perceptions. According to Jack (1991), when adherence to these prescriptions fails to establish or maintain satisfying intimate relationships, women are likely to experience depressive symptoms.

Personality and Cognition

Like Jack (1991), cognitive theorists maintain that human behavior and emotion are guided by information processing which depends on "organized representations of prior experience," or schemata (Kovacs & Beck, 1978, p. 526). Schemata, which are relatively stable, allow people to classify, interpret, and respond to stimuli by accessing knowledge gained through previous exposure to similar conditions (Kovacs & Beck, 1978). According to Beck (1987), a leading researcher in the area of cognition and depression, maladaptive schemata are often responsible for depressive states. Beck,

(1983) has suggested that two cognitive personality structures, "sociotropy" and "autonomy," due to latent maladaptive schema, predispose individuals to depression. Although Beck (1983) has not directly linked these personality structures to the sex differential in depression, he has observed that females are more likely to develop sociotropic clusters of cognitive schema, and males are more likely to develop autonomous structures.

Sociotropy and Autonomy. According to Beck (1983), sociotropy refers to "...investment in positive interchange with other people," while autonomy consists of "...the person's investment in preserving and increasing his independence, mobility, and personal rights; freedom of choice; action and expression; protection of his domain; defining his boundaries" (p. 272). Beck (1983) has proposed the "specific life events hypothesis," which suggests that when an environmental stimulus matches one of these personality structures, the associated maladaptive schema is triggered and may precipitate depressive symptoms. More simply, a highly sociotropic individual is more likely to react with depression to stressors affecting interpersonal relationships, while a highly autonomous person is more likely to become depressed in response to threats to independence or goal achievement. Beck (1983) has operationalized the sociotropy and autonomy constructs in his Sociotropy/Autonomy Scale (SAS). As the name implies, the instrument consists of two subscales, one to assess sociotropic schema and the other to measure autonomous schema.

Research has consistently revealed a positive relationship between the SAS-Sociotropy subscale and self-report measures of depression (Alford & Gerrity, 1995;

Allen, de L Horne, & Trinder, 1996; Baron & Peixoto, 1991; Bartelston & Trull, 1995; Gilbert & Reynolds, 1990; Reynolds & Gilbert, 1991; Robins & Block, 1988; Sahin, Ulusoy, & Sahin, 1992), with correlations ranging from .23 to .51 (Clark & Beck, 1991). This subscale has also been found to correlate with measures of interpersonal dependency (Barnett & Gotlib, 1988; Gilbert & Reynolds, 1990, Philon, 1989; Robins, 1985), which is consistent with descriptions of sociotropy. Support for the specific life-events hypothesis (negative events specific to maladaptive schema) in relation to sociotropy has been mixed. Several studies have produced results indicating that sociotropy is a vulnerability factor when events match this cognitive personality structure (Bartelston & Trull, 1995; Clark, Beck, & Brown, 1992, Hammen, Ellicott, & Gitlin, 1989; Robins, 1990, Study 1). However, in some cases authors have concluded that sociotropy acts as a vulnerability factor in response to any stressor, including those which should match with autonomous schema (Allen, de L Horne, & Trinder, 1996; Clark, Beck, & Brown, 1992; Hammen, Ellicott, Gitlin, & Jamison, 1989; Robins & Block, 1988; Robins, Hayes, Block, Kramer, & Villena, 1995; Rude & Burnham, 1993). While Beck has stated that there is a higher prevalence of sociotropic schema in females, few studies have specifically examined this assertion. Those studies that have analyzed sex as a variable related to sociotropy have generally supported Beck's statement (Baron & Peixoto, 1991; Newman, Gray, & Fuqua, 1996). It appears that women, as a group, may have a more relational orientation than men.

Support for the validity of the SAS-Autonomy subscale as a predisposing variable to depression has been less encouraging than for sociotropy. Correlations of

autonomy with self-report measures of depression have consistently been low (Baron & Peixoto, 1991; Bartelstone & Trull, 1995; Reynolds & Gilbert, 1991; Robins & Block, 1988; Sahin, Ulusoy, & Sahin, 1992). Similarly, studies examining the relationship of autonomy to negative events which are specific to its schema have been disappointing (Bartelston & Trull, 1995; Clark, Beck, & Brown, 1992; Moore & Blackburn, 1993; Robins, 1990; Robins & Block, 1988; Robins, Hayes, Block, Kramer, & Villena, 1995; Rude & Burnham, 1993). As a matter of fact, it has been suggested that autonomy may actually act as a buffer against depression (Robins & Block, 1988). Finally, contrary to Beck's assertion that males were more autonomous than females, similar scores for men and women on the Autonomy subscale have been reported in several studies (Newman et al., 1996; Sahin, Ulusoy, & Sahin, 1993).

Support for the concurrent validity of the SAS-Autonomy subscale has also been mixed. While the Autonomy subscale has been found to correlate moderately with other scales designed to measure autonomy, e.g., the Personality Research Form Autonomy subscale, it has failed to correlate with other measures believed to be associated with autonomy, e.g., self-criticalness (Barnett & Gotlib, 1988; Blaney & Kutcher, 1991; Robins, 1985; Sutter & Epstein, 1983). However, the Autonomy subscale has been found to have correlated negatively with the Dependency subscale of the Depressive Experiences Questionnaire. This finding has led to the suggestion that the SAS Autonomy subscale may actually be a measure of the "absence of dependency...or counterdependency" (Blaney & Kutcher, 1991).

Sociotropy, Autonomy, and Gender Identity. In reviewing definitions of sociotropy and autonomy, as well as specific items on the SAS, Newman et al. (1996) observed that definitions of these constructs appear to overlap in some fundamental ways with traditional definitions of femininity and masculinity. In a preliminary exploration of this potential relationship, utilizing an undergraduate population, subscale scores from the SAS were factor analyzed along with four instruments designed to measure sex-role orientation. This analysis resulted in a two-factor solution. The first factor quite clearly represented a feminine dimension while the second factor clearly represented a masculine dimension. As hypothesized, sociotropy loaded cleanly on the feminine factor and not at all on the masculine factor, while autonomy loaded cleanly on the masculine factor and not at all on the feminine factor. The obvious conclusion from these findings was that autonomy is largely a masculine construct while sociotropy is largely a feminine construct.

Newman et al. then calculated factor scores for each participant and utilized these as dependent variables in independent t-tests comparing men and women. The mean score for college women on the feminine/sociotropy factor was found to be significantly higher than the mean score for college men. In contrast, the means for college men and women did not differ on the masculinity/autonomy factor. In order to better understand the contribution of sociotropic and autonomous schema to these sex differences, the authors examined scores on the SAS. Given the sex differences on the two factors, it is not surprising that the mean score for women on the Sociotropy

subscale was found to be significantly higher than the mean score for men, but there was no significant sex difference in mean scores on the Autonomy subscale.

These results raise serious questions regarding the independence of vulnerability to depression as measured by the SAS and sex-role orientation constructs. Do these results provide support for the gender-role hypothesis, i.e., the hypothesized overlap between depressive symtomatology and the feminine gender role (Landrine, 1988)? In light of the fact that women are diagnosed with depression twice as often as men, this question certainly warrants examination. Are the attitudes and behaviors cultivated through normal sex-role socialization being "pathologized" in counseling or therapeutic settings (Kupers et al., 1997; Lopez, 1990; Loring & Powell,1988; Potts, Burnam, & Wells, 1991)? Empirical evidence indicates that the Sociotropy subscale has some significant validity as a measure of vulnerability to depression. Interestingly, it also appears to have some validity as a measure of femininity. The apparent confusion of these two constructs needs to be empirically delineated or linked and explained.

This study was designed to extend the Newman et al. (1996) study in two important ways. First, a factor analysis of the SAS was conducted utilizing items rather than subscale scores as was done in the earlier study, thereby permitting a more thorough examination of the underlying structure of the instrument. Second, in addition to examining the relationships of the structural components of the SAS with masculinity and femininity, their relationships with depression were also investigated. The specific questions addressed in this study were: (a) What are the underlying structural dimensions of the SAS? (b) How do these underlying structural dimensions

relate to masculinity and femininity? (c) How do these same dimensions relate to depression?

Method

Participants

Participants consisted of 693 undergraduate students (308 men, 385 women) enrolled in a large southwestern university. Participants ranged in age from 16 to 57 years, with a mean age of 19.9 years and a median age of 19. The sample was predominantly Caucasian.

Instruments

Participants completed a short demographic questionnaire, a measure of depression, two gender role measures, and a measure of vulnerabilities to depression.

Bem Sex Role Inventory (BSRI). The BSRI (Bem, 1974) consists of 60 adjectives representing traits which are considered to be stereotypically more desirable for either males or females. The adjectives contained in the BSRI are scored on a 7-point scale ranging from "never or almost never true" to "always or almost always true." The BSRI was designed to test the hypothesis that masculinity and femininity are orthogonal constructs. Orthogonality would allow for individuals to exhibit both masculine and feminine traits, i.e., androgyny (Bem, 1974). While it has been proposed and supported by some research that androgyny is predictive of psychological well-being (Cook, 1985), most of the variance in androgyny appears to be associated with high masculinity scores (Whitley, 1983).

Initial analyses of the scales yielded internal consistency reliabilities of .86 and .82 for masculinity and femininity, respectively (Bem, 1974). In their 1992 study, Ballard-Reish and Elton reported alpha coefficients of .78 for masculinity and .86 for femininity. Test-retest reliability of .90 has been reported for both scales. Statistical independence of the constructs was demonstrated in two separate samples (Stanford University, r = .11 for males and r = -.14 for females; Foothill Junior College r = -.02 for males an r = -.14 for females).

Personal Attributes Questionnaire (PAQ). Like the BSRI, the PAQ (Spence, Helmreich, & Stapp, 1974, 1979) was also designed to measure distinct constructs which can be combined to produce an androgyny score. The PAQ consists of three scales, Expressiveness (E - formerly Femininity), Instrumentality (I - formerly Masculinity), and Expressiveness/Instrumentality (E/I - formerly Femininity/Masculinity). The E and I scales include traits that are desirable for both sexes but which are more characteristic of one sex or the other. The E/I scale includes traits for which desirability differs for the two sexes. Each scale consists of 8 bipolar adjectives presented on a 5-point scale. Spence and Helmreich (1979, 1981) have asserted that rather than measuring global self-image, the feminine scale assesses expressive/communal (language oriented, sensitive to interpersonal needs) attributes, while their masculine scale measures instrumental (goal-directed, task-oriented) qualities. Spence, Helmreich, and Stapp (1974) reported Cronbach coefficient alphas for college students to be .85, .82, and .78 for the Masculinity, Femininity, and Masculinity/Femininity scales, respectively, for the original version of the PAQ.

While the authors of the BSRI and PAQ report somewhat different theoretical perspectives and methodologies in the development of their instruments, research suggests that the instruments are highly correlated and measure similar constructs (Lamke, 1982; Lubinski, Tellegen, & Butcher, 1983; Marsh & Myers, 1986). Both instruments were developed utilizing empirical methods and the authors clearly state that the intention of the instruments is to measure stereotypical traits related to sex roles; however, both have been used to evaluate gender-orientation and have been highly criticized on theoretical and methodological grounds (Gill, Stockard, Johnson, & Williams, 1987; Kelly & Worell, 1977).

Sociotropy-Autonomy Scale (SAS). The SAS (Beck, Epstein, Harrison, & Emery, 1983) is a 60-item self-report questionnaire designed to measure vulnerability to depression. The SAS consists of two subscales measuring sociotropy, "an investment in positive interchanges with other people," and autonomy, "investments in preserving independence, mobility and freedom of choice" (Clark & Beck, 1991, p. 370). Beck has proposed that individuals who are highly sociotropic are more likely to be vulnerable to negative events in relation to disapproval by others and loss of relationships, whereas autonomous individuals are more likely to be vulnerable to negative events related to achievement and control.

The SAS is answered by indicating "what percentage of time" (0% = 0 points, 25% = 1, 50% = 2, 75% = 3, 100% = 4) each statement applies to oneself. Beck et al. (1983) reported a factor analysis of the Sociotropy subscale resulting in a three-factor solution. The three factors included: Concern about Disapproval,

Attachment/Separation, and Pleasing Others, with internal consistencies for the factors ranging from .68 to .90. They similarly reported a three-factor solution for the Autonomy subscale consisting of the following dimensions: Individualistic Achievement, Freedom from Control by Others, and Preference for Solitude. These subscales are reportedly more heterogeneous in nature.

Although a six-factor solution is reported for the SAS, the Sociotropy and Autonomy subscales yielded high internal consistency reliabilities, i.e., .90 and .83 (.80), respectively in two independent samples (Beck et al., 1983; Robins, 1985). Test-retest reliabilities across four to six week intervals were .75 for the Sociotropy subscale and .69 for the Autonomy subscale (Robins, 1985). Studies indicate that the Sociotropy subscale has high concurrent validity with measures of dependency and affiliation (Barnett & Gotlib, 1988; Blaney & Kutcher, 1991) and with self-report measures of depression (Barnett & Gotlib, 1988; Gilbert & Reynolds, 1990; Philon, 1989). Correlations of the Autonomy subscale with both measures of dependency and affiliation and self-report measures of depression have routinely been low, leading to the conclusion that autonomy may measure a lack of dependency, or "counterdependency" (Blaney & Kutcher, 1991). Further, this evidence raises serious questions regarding the role of this construct as a predispositional variable in depression (Robins & Block, 1988).

Research suggests that individuals who score highly on the Sociotropy subscale do show a vulnerability to depression when confronted with congruent life events and may, in reality, have a general vulnerability to any type of negative event. Support for

the Autonomy subscale has been less impressive. In fact, Robins and Block (1988) reported that "far from being a vulnerability factor, our results suggest that autonomy may even serve an event-buffering role" (p. 851).

The Beck Depression Inventory (BDI). The BDI (Beck, Ward, Mendelson, Mock & Erbaugh, 1961,1978) is a self-report instrument developed to measure severity of depression. The BDI consists of 21 items each containing four self-descriptive statements ordered from neutral (0) to most severe (3). Each item describes a specific depressive symptom or attitude (Beck, 1970). The authors recommend evaluating scores based on the following ranges: 0-9 Normal Range; 10-15 Mild Depression; 16-19 Mild-Moderate Depression, 20-29 Moderate-Severe Depression; and 30-63 Severe Depression. In a study of psychiatric patients, Beck (1970) reported a test-retest reliability of above .90, an internal consistency reliability .86, and a Spearman-Brown correlation of .93. Validity studies document strong support for the BDI (Beck, 1970; Beck, Ward, Mendelson, Mock, & Erbauch, 1960; Keyser & Sweetland, 1984; Reynolds & Gould, 1981).

Procedures

Participants were solicited on a voluntary basis from undergraduate courses in psychology. Following a brief description of the study and an explanation of informed consent, participants completed all instruments. A trained administrator was available to answer questions and collect instruments. Students received course credit for their participation.

Results

A principle axis factor analysis with oblique rotation was conducted on the 60 items comprising the SAS. Table 1 presents the zero-order correlations of factor scores with masculinity and femininity scale scores, with BDI total scores, and with each other. Based on a visual examination of a scree plot, inspection of the cumulative percentage of variance accounted for by the factors, and consideration of Beck's theoretical model, a six-factor solution was determined to be most appropriate. These six factors accounted for 38.2% of the total variance in the SAS (See Table 2).

Table 3 presents the results of the factor analysis, including factor loadings from the structure matrix and final communalities. Based upon examination of the item structure matrix and the content of items comprising factors as presented in Table 4, factor labels were designated. Factor 1, Social Dependence, consisted of items that seemed to reflect a strong need for approval from others, apprehension surrounding the ability to gain this approval, and a lack of investment in achievement for any reason other than positive feedback. Factor 2, Independence, consisted of items that appeared to represent freedom from control by others, a strong sense of individuality, and an investment in achievement for self-satisfaction. Factor 3, Interdependence, consisted of items characterizing the valuing of relationships over accomplishments. Factor 4, Social Self-Confidence, contained items connoting social competency which allowed for self-acceptance and self-presentation unencumbered by worry about the judgments of others. Factor 5, Comfort with Solitude, was comprised of items which suggested contentment with solitary activities, although there was little indication that this was a preferred state.

Lastly, Factor 6, Low Social Need, was comprised of items which appeared to represent a low investment in social relationships. While some of the items in Factor 6 seemed to represent a healthy form of autonomy, others seemed to border on a lack of attachment to others. Interestingly, the Social Dependence and the Comfort with Solitude factors contained items from both the Sociotropy and Autonomy subscales. The Social Independence and Interdependence factors consisted of all Autonomy subscale items, while the Social Self-Confidence and Low Social Need factors consisted of all Sociotropy subscale items.

Intercorrelations among factors are presented in Table 5. As can be seen in the table, significant relationships among factors support the use of an oblique rotation. For the most part, relations among factors are as would be expected. Of particular note is the correlation between Factor 4 (Social Self-Confidence) and Factor 6 (Low Social Need) where $\underline{r} = .41$. Both factors are comprised of sociotropy items and seem to relate to a kind of "social competence."

In order to examine the relationship of SAS factors to gender identity, factor scores were computed for all subjects and used in multiple regression analyses predicting masculinity and femininity. Results of the multiple regression analyses predicting femininity as measured by the PAQF and BSRIF are presented in Tables 6 and 7, respectively. In both cases, femininity was predicted by a linear combination of Social Self-Confidence, Interdependence, Social Dependence, Low Social Need, and Comfort with Solitude. For both the PAQF and BSRIF, this linear combination of SAS factors accounted for 34% of the variance in femininity. The fact that identical equations

predicted femininity as measured by the PAQ and the BSRI reflects the substantial overlap that has commonly been reported for these instruments. It is interesting that the Social Dependence factor entered the equation before the Low Social Need factor in both cases, despite a negligible zero order correlation with femininity. It appears to add unique variance to the equation in combination with other factors.

Likewise, results of the multiple regression analyses using factor scores to predict masculinity as measured by the PAQM and BSRIM are presented in Tables 8 and 9, respectively. Although the results are similar for the PAQ and BSRI, they are not identical as in the case of femininity. Masculinity scores as measured by the PAQM were predicted by a linear combination of Independence, Low Social Need, Interdependence, Social Self-Confidence and Social Dependence accounting for 31% of the variance in masculinity. For the BSRIM, scores were predicted by a linear combination of Independence, Low Social Need, and Interdependence accounting for 34% of the variance in masculinity. In both cases, the Interdependence factor entered the equation before other factors with higher zero order correlations, again, suggesting this factor explains some unique variance.

Table 10 presents the results of the multiple regression analysis predicting depression as measured by the BDI from a linear combination of factors from the SAS. These results indicate that depression is best predicted by a linear combination of Social Dependence, Interdependence, Low Social Need, and Comfort with Solitude with the equation accounting for 23% of the variance in depression. Table 11 lists the items in the

order they are presented on the Sociotropy/Autonomy Scale. Table 12 presents the means, standard deviations, and mean differences for all instruments.

Discussion

The results of the factor analysis of the SAS raise some serious questions regarding the structural validity of this instrument. SAS items in this study failed to load as expected based on their subscale designations. Two factors, Social Dependence and Comfort with Solitude, contained both Sociotropy and Autonomy subscale items. Further, the six factors which emerged in this study appear to represent somewhat different dimensions than those reported in Beck's (1983) original factor analysis. Additionally, the six factors emerging in this study accounted for only 38.2% of the total variance in SAS scores, leaving a large portion of the variance unaccounted for. These problems appear to emerge from structural deficits of the instrument and would probably be most effectively addressed by a thorough review and refinement of items and item content.

Results of the multiple regression analysis using SAS factors to predict depression scores produced an equation that accounted for only 23.33% of the variance in depression. Although use of a nonclinical sample may have limited variability in depression scores, this seems rather disappointing for an instrument that purports to measure vulnerability to depression and raises serious questions regarding its construct validity.

The fact that the SAS factors predicted more of the variance in both masculinity and femininity than in depression raises the question of construct confusion between

sociotropy and autonomy on one hand, and femininity and masculinity on the other. Curiously, both masculinity and femininity related to the SAS factors. This would seem to contradict previous literature suggesting a relationship between masculinity and mental health constructs but no relationship between femininity and mental health. Examination of the factorial composition of the constructs of masculinity and femininity and their individual relationships to the SAS factors might prove helpful in explaining this contradictory finding.

Given stereotypical definitions of femininity, a positive relationship between femininity and the Social Dependence factor might have been expected. The fact that this relationship was negligible ($r = -.10$) was perplexing. It may be that the Social Dependence factor failed to assess the full behavioral domain represented by this construct. It may also be that the BSRI and PAQ are inadequate measures of the full range of variables comprising femininity. Certainly, there has been support for the notion that femininity is a multidimensional construct; perhaps the use of BSRIF and PAQF total scores fails to reveal the true relationship of Social Dependence and femininity. Total scores for multidimensional constructs seem to "muddy the water" and dilute possible relationships among variables of interest. It would be helpful to employ the BSRI or PAQ as a set of subfactor scores instead of total scores when relating gender identity to other constructs.

Although representative of stereotypical views of men and women, existing sex-role measures, including the BSRI and PAQ, have been criticized for failing to reflect the wide range of characteristics that individuals categorize as important to their sense of

gender identity. Adequate definition and/or operationalization of the constructs of masculinity and femininity seem to be lacking and need to be addressed if we are to understand how gender identity affects mental well-being. Perhaps an analysis of these instruments in relation to a broader range of social and psychological constructs would provide insight into which behavioral domains representing gender identity are being adequately assessed and which are not, and help to identify significant differences in masculine and feminine personality characteristics.

The fact that Beck's (1983) clinical observations have led to the development of an instrument that purports to measure vulnerability to depression but is, in fact, more predictive of traits associated with masculinity and femininity underscores the importance of supporting clinical observations with research. Also, it seems exceedingly important that all mental health professionals become aware of their own biases regarding normal male and female behaviors. Literature supports the fact that preconceived notions can influence diagnostic impressions (Lopez, 1990; Potts, Burnam, & Wells, 1991); perhaps Beck's instrument can be effectively utilized as a tool in the exploration of how clinical impressions are affected by societal stereotypes.

The sex differential in the diagnosis and treatment of depression appears to emerge from a complex amalgamation of variables including biological, environmental, social and psychological (Beck, 1983; Brems, 1995; Jordon, 1997; Kaplan, 1991; McGrath, 1990; Nolen-Hoeksema, 1987, 1990; Stiver & Miller, 1997). While clinician bias and sex-role stereotyping may offer only a partial explanation for this differential, it does seem important to control for or exclude these moderating variables in research and

to facilitate awareness among clinicians who are diagnosing and treating women with these disorders. Taken together, the theoretical and empirical literature examining the SAS prompt some interesting speculations. Consider that only Sociotropy has gained strong support as a vulnerability factor in depression. Sociotropy has been observed to occur more often in females and has been found to relate to feminine gender identity but not at all to masculine gender identity (Newman et al., 1996). Women obtain higher scores on the Sociotropy subscale than do men (Barron & Peixoto, 1991; Newman et al., 1996). Sociotropy is more predictive of femininity than it is of depression. Women, on average, are more feminine than men (Bem, 1974; Landrine, 1988; Spence, Helmreich, & Stapp, 1974, 1979). Finally, there is evidence of gender-bias in the diagnosis of depression (Kupers et al., 1997; Lopez, 1990; Loring & Powell,1988; Potts, Burnam, & Wells, 1991). While fairly objective criteria for severe depression have been well-established, at milder levels, it seems highly possible that relatively normal manifestations of gender identity socialization are being described as depressive symptomotology. This scenario seems to lend support to the "gender-role hypothesis," which asserts that feminine gender identity and depression share common characteristics and may, in fact, be overlapping categories. Empirically delineating socially cultivated personality differences between the sexes and relating these to current definitions of mental health is an important area for future research.

Current conceptualizations of healthy functioning in women, may, as pointed out by researchers at the Stone Center, be lacking. There certainly is a plethora of feminist literature promoting the revision of theoretical perspectives to reflect a relational view of

both male and female development, reconceptualization of what constitutes pathology, and changes in treatment modalities for women (Gilligan, 1977; Jordon, 1997; Kaplan, 1991; Stiver, 1997). However, like Beck's Sociotropy/Autonomy theory of vulnerability to depression, these speculative theorems require empirical support. Historically, there is clear evidence that women have endured prejudice and oppression. Nonetheless, before relational perspectives can be confidently applied in the conceptualization, measurement, diagnosis, and treatment of women, they must be clearly supported by the scientific method; otherwise, these speculative views may complicate rather than ameliorate personal, psychological, and societal difficulties for women.

It should be noted that this study had several limitations. It is likely that utilization of a college sample limited variability in both depression and gender identity scores which probably created lower correlations between scales than would be expected in the general population. It is also likely that the age and developmental level of this sample differs from a population normally seeking treatment for depressive symptoms. It would be beneficial to replicate this study with both a broader spectrum of the population and within a clinical setting to resolve this concern. This study was further limited by the use of current measures of masculinity and femininity which have been criticized for failing to address the wide range of traits and behaviors encompassed in masculine and feminine gender roles. The limitation of these instruments have been well documented here and elsewhere.

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Table 1

Zero Order Correlations - Factor Scores

	BDI	BSRIF	PAQF	BSRIM	PAQM	ALN	IND	INTER	LNED	SELFC	SDEP
BDI	1.00										
BSRIF	-.04	1.00									
PAQF	.02	.70	1.00								
BSRIM	-.24	.02	-.03	1.00							
PAQM	-.36	-.10	.01	.73	1.00						
ALN	.07	-.02	-.05	.11	.11	1.00					
IND	-.08	.05	.07	.45	.45	.30	1.00				
INTER	-.28	.23	.28	.12	.12	-.27	-.12	1.00			
LNED	-.31	-.31	-.29	.25	.25	.19	-.04	.12	1.00		
SELFC	-.24	-.41	-.38	.20	.24	.08	.01	.16	.54	1.00	
SDEP	.36	-.10	-.10	-.31	-.37	-.23	-.42	-.12	-.33	-.30	1.00

Table 2

Variance Assoicated with the Factors

Factor	Eigenvalue	Percentage of Variance	Cumulative Percentage of Variance
1	9.06	15.1	15.1
2	5.08	8.5	23.6
3	3.44	5.7	29.3
4	2.03	3.4	32.7
5	1.71	2.9	35.5
6	1.60	2.7	38.2

Table 3

Factor Analyses of Items on the Sociotropy/Autonomy Scale

SAS Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Communality
1	.08	.06	.05	-.56	-.10	-.15	.33
2	-.18	.51	-.05	.01	.18	.07	.32
3	.51	.38	-.06	-.01	.18	.06	.36
4	.11	.22	.24	-.33	-.16	-.23	.31
5	.09	-.06	.01	-.63	.-07	-.35	.45
6	-.05	.35	-.22	-.06	.16	-.06	.23
7	.27	-.13	-.06	-.52	-.05	-.35	.38
8	.39	-.04	-.09	-.31	-.21	-.35	.35
9	-.32	.48	-.03	.10	.31	.03	.31
10	-.04	.11	-.27	-.01	.21	.02	.16
11	.51	-.15	-.36	-.33	-.01	-.32	.42
12	-.17	.48	.12	.16	.10	.02	.33
13	.28	-.00	-.33	-.14	.05	-.20	.24
14	-.24	.32	-.12	.02	.11	-.05	.22
15	.37	-.09	-.28	-.41	.05	-.20	.38
16	.03	.08	-.06	-.11	.57	-.17	.32
17	.48	-.20	-.17	-.42	-.01	-.28	.41
18	.26	-.04	-.14	-.19	-.21	-.27	.23
19	.40	-.03	-.16	-.29	-.07	-.47	.37
20	-.23	.33	-.07	.19	.08	.08	.20
21	-.17	.58	-.11	-.00	.16	-.09	.39

(Table continues)

SAS Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Communality
22	-.08	.12	-.43	.10	.17	.17	.29
23	-.18	.35	-.09	-.13	.06	-.00	.23
24	.39	-.07	-.37	-.43	-.11	-.35	.45
25	-.13	.25	-.04	-.35	.12	-.08	.23
26	.13	-.16	-.02	-.12	-.37	-.33	.27
27	.47	-.16	-.29	-.34	-.10	-.51	.46
28	.08	.06	-.46	.03	.10	.09	.27
29	.38	-.16	-.27	-.44	-.13	-.35	.41
30	-.18	.45	-.24	.06	.05	-.01	.32
31	.01	.08	.09	-.28	-.12	-.58	.40
32	-.63	.41	-.19	-.09	.15	-.06	.50
33	.16	-.14	-.30	-.51	-.03	-.30	.37
34	.29	-.18	-.03	-.30	-.35	-.57	.45
35	.13	.02	.16	-.39	-.10	-.63	.46
36	-.21	.53	-.19	-.06	.34	.05	.36
37	-.34	.36	-.16	.10	.49	.32	.44
38	.52	-.22	-.18	-.44	-.11	-.40	.45
39	-.25	.34	-.39	.02	.13	-.02	.29
40	.18	.13	.22	-.29	-.40	-.40	.39
41	.07	-.02	-.51	-.12	-.14	-.14	.35
42	-.20	.24	-.29	-.02	.42	.02	.27
43	.12	.17	-.40	-.06	.17	-.09	.24
44	.50	-.10	-.35	-.41	-.11	-.37	.48

(Table continues)

SAS Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Communality
45	-.37	.58	-.02	.04	.24	-.04	.37
46	.21	-.16	-.14	-.53	.01	-.36	.38
47	.52	-.08	-.08	-.56	-.24	-.43	.53
48	-.46	.38	-.20	-.13	.22	-.05	.45
49	.27	.10	.19	-.41	-.25	-.55	.49
50	.45	-.06	-.28	-.43	-.08	-.42	.46
51	-.03	.20	-.27	-.02	.72	.12	.46
52	.21	-.13	-.01	-.56	-.01	-.32	.43
53	.08	.05	.02	-.30	-.13	-.49	.36
54	.11	.14	-.23	-.13	.06	-.33	.25
55	-.07	.17	-.35	-.08	.16	-.14	.27
56	.17	-.19	-.36	-.30	-.11	-.22	.27
57	-.03	.13	-.09	-.03	.15	-.18	.17
58	.24	-.06	-.09	-.26	-.13	-.60	.38
59	.22	-.04	-.12	-.24	-.00	-.51	.31
60	-.32	.49	.06	.06	.19	.02	.34

Table 4

Items Comprising the Six Factors Derived from the Sociotropy/Autonomy Scale

Factor 1 - Social Dependence.

3. (-.51) It is more important that I know I've done a good job than having others know it . (A)

11. (.51) I am concerned that if people knew my faults or weaknesses they would not like me. (S)

17. (.48) I am more concerned that people like me than I am about making important achievements. (S)

27. (.47) If a friend has not called for a while, I get worried that he or she has forgotten me. (S)

32. (-.63) When I achieve a goal I get more satisfaction from reaching the goal than from any praise I might get. (A)

38. (.52) If somebody criticizes my appearance, I feel I am not attractive to other people. (S)

44. (.50) I am uneasy when I cannot tell whether or not someone I've met likes me. (S)

47. (.52) It is important to me to be like and approved of by others. (S)

48. (-.46) I enjoy accomplishing things more than being given credit for them. (A)

50. (.45) When I am with other people, I look for signs whether or not they like being with me. (S)

Factor 2 - Independence.

2. (.51) It is important to me to be free and independent. (A)

9. (.48) I prize being a unique individual more than being a member of a group. (A)

12. (.48) If I think I am right about something, I feel comfortable expressing myself even if others don't like it. (A)

21. (.58) It is very important that I feel free to get up and go wherever I want. (A)

30. (.45) If a goal is important to me, I will pursue it even if it may make other people uncomfortable. (A)

32. (.41) When I achieve a goal I get more satisfaction from reaching the goal than from any praise I might get. (A)

36. (.53) I prefer to make my own plans, so I am not controlled by others. (A)

45. (.58) I set my own standards and goals for myself rather than accepting those of other people. (A)

60. (.49) The possibility of being rejected by others for standing up for my rights would not stop me. (A)

Factor 3 - Interdependence.

22. (-43) I value work accomplishments more than I value making friends. (A)

28. (-.46) It is more important to be active and doing things than having close relations with other people. (A)

41. (-51) I don't like to answer personal questions because they feel like an invasion of my privacy. (A)

43. (-.40) In relationships, people often are too demanding of each other. (A)

Factor 4 - Social Self-Confidence.

1. (-.56) I feel I have to be nice to other people. (S)

5. (-.63) I am afraid of hurting other people's feelings. (S)

7. (-.52) I find it difficult to say "no" to people. (S)

15. (-.41) I do things that are not in my best interest in order to please other people. (S)

17. (.42) I am more concerned that people like me than I am about making important achievements. (S)

24. (-.43) I get uncomfortable when I am not sure how I am expected to behave in the presence of other people. (S)

29. (-.44) I get uncomfortable around a person who does not clearly like me. (S)

33. (-.51) I censor what I say because I am concerned that the other person may disapprove or disagree. (S)

38. (-.44) If somebody criticizes my appearance, I feel I am not attractive to other people. (S)

44. (-.45) I am uneasy when I cannot tell whether or not someone I've met likes me. (S)

46. (-.53) I am more apologetic to others than I need to be. (S)

47. (-.56) It is important to me to be liked and approved of by others. (S)

49. (-.41) Having close bonds with other people makes me feel secure. (S)

50. (-.43) When I am with other people, I look for signs whether or not they like being with me. (S)

52. (-.56) If I think somebody may be upset at me, I want to apologize. (S)

Factor 5 - Comfort with Solitude.

16. (.57) I like to take long walks by myself. (A)

37 (.49) I can comfortably be by myself all day without feeling a need to have someone around. (A)

40. (-40) I like to spend my free time with others. (S)

42. (.42) When I have a problem, I like to go off on my own and think it through rather than being influenced by others. (A)

51. (.72) I like to go off on my own, exploring new places — without other people. (A)

Factor 6 - Low Social Need.

19. (-.47) I don't enjoy what I am doing when I don't feel that someone in my life really cares about me. (S)

27. (-.51) If a friend has not called for a while, I get worried that he or she has forgotten me. (S)

31. (-.58) I find it difficult to be separated from people I love. (S)

34. (-.57) I get lonely when I am home by myself at night. (S)

35. (-.63) I often find myself thinking about friends and family. (S)

47. (-.43) It is important to me to be like and approved of by others. (S)

49. (-.55) Having close bonds with other people makes me feel secure. (S)

50. (-.42) When I am with other people, I look for signs whether or not they like being with me. (S)

53. (-.49) I like to be certain that there is somebody close I can contact in case something unpleasant happens to me. (S)

58. (-.60) The worst part about growing old is being left alone. (S)

59. (-.51) I worry that somebody I love will die. (S)

Note:

A = Autonomy Scale Item

S = Sociotropy Scale Item

Table 5

Factor Correlation Matrix

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Factor 1	1.00					
Factor 2	-.33	1.00				
Factor 3	-.09	-.10	1.00			
Factor 4	-.23	.01	.11	1.00		
Factor 5	-.18	.22	-.20	.07	1.00	
Factor 6	-.26	-.03	.11	.41	.13	1.00

Table 6

Multiple Regression Summary Table - PAQF

Step	SAS Factor Entered	Multiple R	F Equation	Significance of F for Equation	R^2 Increment	F Increment	Significance of F Increment	Zero Order r
1	Social Self Confidence	.377	114.666	.000	.142	114.666	.000	-.38
2	Interdependence	.513	123.332	.000	.121	113.353	.000	.28
3	Social Dependence	.549	99.079	.000	.038	37.518	.000	-.09
4	Low Social Need	.571	83.351	.000	.025	25.289	.000	-.29
5	Comfort with Solitude	.575	67.778	.000	.004	4.292	.039	-.04
6	Independence	.575	56.400	.000	.000	.001	.969	.07

Table 7

Multiple Regression Summary Table - BSRIF

Step	SAS Factor Entered	Multiple R	F Equation	Significance of F for Equation	R^2 Increment	F Increment	Significance of F Increment	Zero Order r
1	Social Self Confidence	.409	138.850	.000	.167	138.850	.000	-.41
2	Interdependence	.506	118.450	.000	.088	81.813	.000	.23
3	Social Dependence	.549	99.290	.000	.046	45.642	.000	-.10
4	Low Social Need	.573	84.251	.000	.027	27.625	.000	-.31
5	Comfort with Solitude	.578	68.916	.000	.005	5.412	.020	-.02
6	Independence	.580	57.969	.000	.002	2.489	.115	.05

Table 8

Multiple Regression Summary Table - PAQM

Step	SAS Factor Entered	Multiple R	F Equation	Significance of F for Equation	R^2 Increment	F Increment	Significance of F Increment	Zero Order r
1	Independence	.454	179.058	.000	.206	179.058	.000	.45
2	Low Social Need	.529	134.246	.000	.074	71.234	.000	.25
3	Interdependence	.549	99.178	.000	.021	21.186	.000	.12
4	Social Self Confidence	.556	76.803	.000	.007	7.062	.008	.24
5	Social Dependence	.559	62.537	.000	.004	4.093	.043	-.37
6	Comfort with Solitude	.562	52.829	.000	.003	3.259	.071	.10

Table 9

Multiple Regression Summary Table - BSRIM

Step	SAS Factor Entered	Multiple R	F Equation	Significance of F for Equation	R^2 Increment	F Increment	Significance of F Increment	Zero Order r
1	Independence	.526	264.122	.000	.277	264.122	.000	.52
2	Low Social Need	.577	172.283	.000	.057	58.475	.000	.21
3	Interdependence	.587	120.598	.000	.011	11.824	.001	.07
4	Social Self-Confidence	.590	91.737	.000	.004	3.723	.054	.20
5	Comfort with Solitude	.590	73.502	.000	.001	.716	.398	.15
6	Social Dependence	.591	61.231	.000	.000	.266	.606	-.31

Table 10

Multiple Regression Summary Table - BDI

Step	SAS Factor Entered	Multiple R	F Equation	Significance of F for Equation	R^2 Increment	F Increment	Significance of F Increment	Zero Order r
1	Social Dependence	.359	101.965	.000	.129	101.965	.000	.36
2	Interdependence	.430	78.218	.000	.056	47.596	.000	-.28
3	Low Social Need	.465	63.500	.000	.032	27.953	.000	-.30
4	Comfort with Solitude	.482	51.951	.000	.015	13.772	.000	.07
5	Independence	.482	41.631	.000	.001	.500	.480	.07
6	Social Self-Confidence	.482	34.686	.000	.000	.203	.653	-.24

Table 11

Sociotropy/Autonomy Scale Items

1. I feel I have to be nice to other people.
2. It is important to me to be free and independent.
3. It is more important that I know I've done a good job than having others know it.
4. Being able to share experiences with other people makes them much more enjoyable for me.
5. I am afraid of hurting other people's feelings.
6. It bothers me when people try to direct my behavior or activities.
7. I find it difficult to say "no" to people.
8. I feel bad if I do not have some social plans for the weekend.
9. I prize being a unique individual more than being a member of a group.
10. When I feel sick, I like to be left alone.
11. I am concerned that if people knew my faults or weak essess they would not like me.
12. If I think I am right about something, I feel comfortable expressing myself even if others don't like it.
13. When visiting people, I get fidgety when sitting around and talking and would rather get up and do something.
14. It is more important to meet your own objectives on a task tan to meet another person's objectives.
15. I do things that are not in my best interest in order to please others.

16. I like to take long walks by myself.
17. I am more concerned that people like me than I am about making important achievements.
18. I would be uncomfortable dining out in a restaurant by myself.
19. I don't enjoy what I am doing when I don't feel that someone in my life really cares about me.
20. I am not influenced by others in what I decide to do.
21. It is very important that I feel free to get up and go wherever I want.
22. I value work accomplishments more than I value making friends.
23. I find it is or importance to be in control of my emotions.
24. I get uncomfortable when I am not sure how I am expected to behave in the presence of other people.
25. I feel more comfortable helping others than receiving help.
26. It would not be much fun for me to travel to a new place all alone.
27. If a friend has not called for a while, I get worried that he or she has forgotten me.
28. It is more important to be active and doing thaings that having close relations with other people.
29. I get uncomfortable around a person who does not clearly like me.
30. If a goal is important to me, I will pursue it even if it may make other people uncomfortable.
31. I find it difficult to be separated from people I love.
32. When I achieve a goal I get more satisfaction from reaching the goal than from any praise I might get.

33. I censor what I say because I am concerned that the other person may disapprove or disagree.
34. I get lonely when I am home by myself at night.
35. I often find myself thinking about friends and family.
36. I prefer to make my own plans, so I am not controlled by others.
37. I can comfortably be by myself all day without feeling a need to have someone around.
38. If somebody criticizes my appearance, I feel I am not attractive to other people.
39. It is more important to get a job don than to worry about people's reactions.
40. I like to spend my free time with others.
41. I don't like to answer personal questions because they feel like an invasion of my privacy.
42. When I have a problem, I like to go off on my own and think it through rather than being influenced by others.
43. In relationships, people often are too demanding of each other.
44. I am uneasy when I cannot tell whether or not someone I've met likes me.
45. I set my own standards and goals for myself rather than accepting those of other people.
46. I am more apologetic to others than I need to be.
47. It is important to me to be liked and approved of by others.
48. I enjoy accomplishing things more than being given credit for them.
49. Having close bonds with other people makes me feel secure.

50. When I am with other people, I look for signs whether or not they like being with me.
51. I like to go off on my own, exploring new places — without other people.
52. If I think somebody may be upset with me, I want to apologize.
53. I like to be certain that there is somebody close I can contact in case something unpleasant happens to me.
54. I fee confined when I have to sit through a long meeting.
55. I don't like people to invade my privacy.
56. I feel uncomfortable being a nonconformist.
57. The worst part about being in jail would be not being able to move around freely.
58. The worst part about growing old is being left alone.
59. I worry that somebody I love will die.
60. The possibility of being rejected by others for standing up for my rights would not stop me.

Table 12

Means, Standard Deviations, and Mean Differences by Sex

	SOC	AUT	BDI	PAQF	BSRIF	PAQM	BSRIM
Male	64.12	75.85	7.48	30.69	93.81	31.03	105.51
Female	68.04	74.32	8.12	33.32	103.28	29.25	98.24
F	8.53	2.81	1.21	65.09	89.33	21.59	36.10
Significance	.0036	.0941	.2526	.0000	.0000	.0000	.0000

Appendix A

Prospectus

The Relationship of Structural Components of Sociotropy and Autonomy with Gender Identity and Depression

by Elizabeth A. Gray

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Chapter I

Introduction

Background of the Problem

Researchers have consistently reported that women are diagnosed and treated for unipolar depressive disorders on average twice as often as men (Chino & Funkabiki, 1984; McGrath, Keita, Strickland, & Russo, 1998; Weissman & Klermon, 1985). The meaning of this difference has been examined and discussed extensively throughout relevant literature; yet, the etiology of this imbalance remains unclear. Several explanations have been offered including biological, environmental, and psychological hypotheses.

The pervasiveness of the 2:1 sex differential in unipolar depressive disorders has led to the suggestion that women have a genetic predisposition for the development of these conditions. However, when examined, chromosomal and hormonal explanations have not received convincing empirical support.

A stronger body of evidence exists in support of a environmental basis for the sex differential in depression. Differences in physical and sexual power between men and women often make women more vulnerable to certain acts of violence. Additionally, women have fewer employment opportunities and financial resources, lower social status, and less political power than do men. Symptoms of depression, which include helplessness and hopelessness, may, in part, result from women's relative powerlessness in our culture.

Psychological explanations are entwined with both biological and environmental hypotheses. According to classic psychoanalytic theory, women are more vulnerable to

depressive symptoms than men due to their psychosexual development which is predetermined by their biological sex. When females realize they are deprived of a penis and the power and status that accompany being male, their self-worth often declines (Mitchell, 1974). While penis envy is no longer a popular explanation for psychology difficulties, the recognition that society grants higher status to males is likely to be a source of frustration, resentment, and emotional conflict for women. Psychodynamic theorists downplay predetermination and attribute the development of personality structures which cause vulnerability to depression to socialization and the environment.

A number of researchers have observed that depression and traditional descriptions of femininity are remarkable (eg., dependency, helplessness, passivity, tendency to cry easily, difficulty with decisionmaking, feelings of inferiority). This similarity has led to the "gender-role hypothesis," which suggests that depression and women's traditional social category are overlapping (Landrine, 1988). Tinsley, Sullivan-Guest, and McGuire (184) have suggested that "Helplessness and symptoms of depression may...be considered an intensification of once considered normal female sex-role behaviors, such as passivity, dependence, self-sacrifice, self-deprecation, fearfulness, naivete, and lack of self confidence" (p. 26). This socialization may lead to the development of cognitive personality structures which predispose women to depressive disorders.

Beck (1983), in his cognitive theory of depression hypothesized that two cognitive personality variables (or modes of psychological functioning), sociotropy and autonomy, predispose individuals to reactive depression. According to Beck,

sociotropy refers to investment in social relationships and positive feedback. Autonomy refers to a strong commitment to personal rights and goal attainment. Individuals are believed to be more vulnerable to depression when negative events coincide with these personality variables. Thus, a highly sociotropic individual is more likely to react with depressive symptoms to threats to interpersonal relationships while a highly autonomous person is more likely to react with depressive symptoms to stressors threatening independence or success. While Beck (1983) has not drawn an association between these cognitive personality structures and the sex differential in depression, he has observed that females are more likely to develop sociotropic clusters of cognitive schema and males are more likely to develop autonomous clusters.

Beck has operationalized sociotropy and autonomy on a 60-item Sociotropy/Autonomy Scale (SAS). Empirical research utilizing the SAS has produced mixed results regarding the validity of its subscales. Generally, strong support for the construct validity of the sociotropy subscale has been reported, while relatively little such evidence exists with respect to the autonomy subscale. Sociotropy has been found to correlate positively with self-report measures of depression as would be expected, while autonomy has not. Fundamental questions regarding what is being measured by the Autonomy subscale have been raised. Some authors have speculated that the Autonomy subcale may acutally measure the "absence of dependency." Others have suggested that while sociotropy may act as a general vulnerability to depression, autonomy, contrary to Beck's theory, may actually serve as a "buffer" against depression.

Newman, Gray, and Fuqua (1996) observed that the definitions of sociotropy and autonomy appear to overlap in some fundamental ways with traditional definitions of femininity and masculinity. To explore this relationship, these authors factor analyzed subscale scores from the SAS with four instruments designed to measure sex role orientation. This procedure resulted in a two-factor solution. The first factor quite clearly represented a feminine dimension while the second factor clearly represented a masculine dimension. As predicted, sociotropy loaded cleanly on the feminine factor and not at all on the masculine factor, while autonomy loaded cleanly on the masculine factor and not at all on the feminine factor. The obvious conclusion from these findings is that autonomy is largely a masculine construct while sociotropy is a feminine construct.

Statement of the Problem

The overlap between measures of gender identity and the constructs of sociotropy and autonomy is apparent. This study was designed to extend the Newman et al. (1996) study in two important ways. First, factor analysis of the SAS will be conducted on item scores rather than on subscale scores as in the early study, thereby permitting a more thorough examination of the underlying structure of the instrument. Second, in addition to examining the relationship of the structural components of the SAS with masculinity and femininity, their relationships with depression will also investigated.

Research Questions

1) What are the underlying structural dimensions of sociotropy and autonomy?

2) How do these dimensions relate to masculinity and femininity?

3) How do the dimensions of sociotropy and autonomy relate to depression?

Chapter II

Review of Literature

Introduction

Research has generally reported that women are diagnosed and treated for unipolar affective disorders on average twice as often as men (Nolen-Hoeksema, 1987; Weissman & Klerman, 1977; Wittchen, Essau, von Zerssen, Krieg, & Zaudig, 1992). Although it has been suggested that these differences are simply an artifact due to variability in help-seeking behaviors and/or socioeconomic status, when these variables are controlled, the differences in rates of depression between men and women remain constant (Bryson & Pilon, 1984; Clancy & Gove, 1974; Ensel, 1982; King & Buchwald, 1982; Radloff, 1975). Researchers have examined biological, social, and psychological explanations in an attempt to understand the overrepresentation of women in this diagnostic category.

Biological Explanations

Sex differences in documented reports of depression are consistent across race, occupation, education, and income in industrialized cultures (McGraff, Keita, Strickland, & Russo, 1990). The pervasiveness of the 2:1 sex differential in unipolar depressive disorders has led to the suggestion that women have a genetic predisposition for the development of these conditions.

Chromosomal Abnormalities

Some investigators have argued that the sex differential in depression is probably due to an abnormality on the X chromosome. Because women have two X chromosomes, they should be twice as likely as men to develop depressive disorders

and to share these disorders with relatives who have similar genetic makeups. This assertion has not received empirical support. Studies examining rates of transmission of affective disorders from parents to children provide evidence that more father-son pairs share diagnoses of depression than mother-daughter pairs (Fieve, Go, Dunner, & Elston, 1984; Green, Goetze, Whybrow, & Jackson, 1973). Further, relatives of males and females diagnosed with depression are equally likely to have similar diagnoses (Merikangas, Weissman, & Pauls, 1985).

Hormonal Differences

An alternate biological explanation is that sex differences in depression are a result of hormonal variances between the sexes (Hamilton, Parry, & Blumenthal, 1988; Nolen-Hoeksema, 1987, 1990). Because differences in rates of depression are seldom reported in childhood or old age, it has been hypothesized that depression is related to changes in hormonal levels during the premenstrual period, the postpartum period, and menopause.

The idea that women experience depression during intervals of hormonal fluctuation, although popular, has not generated strong support (Arplanap, Haskett, & Rose, 1979; Atkinson & Rickel, 1984; O'Hara, Rehm, & Campbell, 1982; Pitt, 1973). While some studies have reported significant mood fluctuations before and during women's menstrual cycles (Halbreich, 1983; Janowsky, 1967), they have been criticized for utilizing retrospective ratings. Recall as a reliable measure of mood fluctuations has been questioned (Parlee, 1973). In one study, of the 63% of women who reported mood changes retrospectively, only 7% reported affective changes concurrent with their premenstrual period. In fact, when women were asked to

document mood fluctuations during perimenstrual periods by keeping daily records, most did not report significant affective changes (Abplanap, Haskett, & Rose, 1979; Persky, O'Brien, & Kahn, 1976; Schuckit, Daly, Herrman,& Hineman, 1975). When perimenstrual mood changes have been reported by women, they have been described as mild to moderate in nature. Even the small percentage of women who suffered from pre-menstrual syndrome described symptoms which were milder than those typically found in depression (Hamilton et al., 1988). Some researchers believe that the retrospective reporting of mood fluctuations around the menstrual cycle are attributable to women's recall of physical discomfort and their reaction to the negative social stigma surrounding menstruation (Paige, 1971; Ruble & Frieze, 1978). Additionally, there are apparently no differences in hormonal levels (aldosterone, estrogen, progesterone, and prolactin) between PMS sufferers and normal controls (Andersch, Hahn, Anderson, & Isaksson, 1978; Andersen, Larsen, Steenstrup, Svendstrup & Neilson, 1977; Backstrom, Sanders, & Leask, 1983). The lack of evidence that hormonal fluctuations are the catalyst for some depressive symptoms caused the exclusion of involutional melancholia (menopausal depression) from the Diagnostic and Statistical Manual of Mental Disorders after its first two editions.

There is also little evidence that hormonal changes linked to postpartum depression contribute significantly to the sex differential in depression. It has been reported that most women recover from postpartum depression within 1 day (Pitt, 1973) and that women who remain depressed for several weeks following childbirth are generally depressed prior to delivery as well (Atkinson & Rickel, 1984; O'Hara, Rehm, & Campbell, 1982).

The hypothesis that sex differences in depression result from hormonal differences is also limited by the fact that these differences emerge in adolescence, peak in mid-life, and disappear in old age (approximately age 80), long after menopause (Jorm, 1987). If hormonal differences are the key to the over-representation of women with depressive symptoms, one would expect that peak differences would occur at puberty and at menopause when hormonal changes are the most pronounced.

Genetic and hormonal variations also fail to account for the absence of sex differences in rates of depression in some specialized populations, e.g., university students (Hammen & Padesky, 1977), Old Order Amish (Egeland & Hosletter, 1983), some rural, nonmodern cultures (Bash & Bash-Liechti, 1969), and bereaved adults (Bornstein, Clayton, Halikas, Maurice, & Robins, 1973). While hormonal fluctuations may in some way impact affective changes, empirical evidence does not support this as a major contributor to the sex differential in depression.

Environmental Explanations

A stronger body of evidence has suggested that the sex differential in depression is due to dissimilarities in the life experiences of men and women. Sex differences in social, political, economic, and sexual power are well-documented in this society.

Women and Violence

It has been well-established that females in our society are more vulnerable to certain types of physical and sexual victimization than males. Research has revealed that approximately 22%-37% of women have experienced childhood sexual abuse; 25%-50% of women have been battered by an intimate partner; 95% of domestic

violence victims have been women; 21% of pregnant women have been physically abused; 12-14% of women have been raped by an acquaintance or spouse; 10% of women have been raped by a stranger; and as many as 71% of women have experienced sexual harassment in the workplace (McGrath et al., 1990; Vazquez, 1996). While these statistics are staggering, it is likely that violence against women is underreported (Koss, 1988; Valzuez, 1996). Not surprisingly, such experiences frequently result in psychological difficulties (Kilpatrick, Veronen, Saunders, Best, Amick-McMullan, & Paduhovich, 1987). Women who experience interpersonal violence are more likely to suffer from depression, anxiety, alcohol abuse, eating disorders, and multiple personality disorders (Blumenthal, 1996). In fact, the majority of psychiatric inpatients report past histories of interpersonal abuse (Carmen, Reiker, & Mills, 1984; Gidyez & Koss, 1989; Jacobson & Richardson, 1987; Jehu, 1989).

Women and Economics

Differences in economic power between men and women are also well-documented. It has been over 30 years since the passage of the Equal Pay Act. Nonetheless, while women have attained comparable levels of education and work experience, their estimated earnings for similar work are only 72% of earnings for men (Dunn, 1996). Women with a college education earn only slightly more than men with a high school education and approximately $10,000 a year less than men with similar schooling (Denmark, Novick, & Pinto, 1996). This differential manifests in less purchasing power, less social power, and lower standards of living for women.

While women currently make up approximately 45% of the labor force, the majority of women are concentrated in female-dominated occupations (sometimes called

the "pink ghetto"; Denmark, Novick & Pinto, 1996). Female-dominated occupations consistently pay 40 cents to a dollar less per hour than male-dominated occupations even when cognitive, social, and physical skill-levels and working conditions are taken into account (England, 1992; England & McCreamy, 1987). There is also evidence that in male-dominated fields, women are less likely to be hired, are paid less initially, and receive fewer subsequent pay raises (Betz & Fitzgerald, 1987). Women in male-dominated professions are less able to find mentors and to establish peer groups (Betz & O'Connell, 1992).

Blum (1991) has stated that rather than being based on real value, merit, or market forces, what society esteems is based on power relationships. It may be that the sex differential in rates of depression is, at least partially, explained by women's relative powerlessness in this society. The inequity of power between men and women has been and continues to be prescribed by cultural definitions of gender roles and gender-appropriate behaviors as discussed in the following review.

Gender Identity and Social Power

Cultural definitions of gender roles and gender identity have been characterized as probable contributors to the sex differences in the occurrence of depressive disorders and other psychological difficulties. Conceptualizations of psychological well-being in terms of gender identity have included three principal models: (a) the gender constancy model, (b) the male model, and (c) the androgyny model (Whitley, 1984). Early conceptualizations proposed that to be psychologically healthy was to be "gender constant," or to conform to one's gender role as defined by the dominant culture (Whitely, 1984). Historically, the ideal female has been characterized as subservient,

reticent, dependent, and frail; therefore, to conform to the female gender role meant to accept ancillary status.

The second model, the male model, suggested that the possession of masculine attributes promoted psychological well-being, regardless of biological sex (Bassoff & Glass, 1982; Taylor & Hall, 1982). Traits that have been traditionally attributed to masculine gender identity have consistently generated the strongest empirical support as contributors to current definitions of psychological adjustment (Bem, 1974; Whitley, 1984).

The third model suggested that "androgyny," i.e., high masculinity and high femininity combined, might contribute to a healthier mental status in both males and females (Bem, 1974; Cook, 1985). It was speculated that this balance would foster flexibility and adaptability, allowing the individual to draw on a variety of cognitions and behaviors, in lieu of being limited by traditional gender-role conventions (Helmreich, Spence & Holahan, 1979). While this proposal has much intuitive appeal, it has not generally been supported by empirical studies. Most of the variance in the androgyny model can be explained by the presence of masculine traits alone (Antill & Cunningham, 1979, 1980; Lamke, 1982, Silvern & Ryan, 1979; Taylor & Hall, 1982, Whitley, 1983); the presence of feminine traits emerges as extraneous to androgyny's relationship to psychological well-being (Bassoff & Glass, 1982, Whitley, 1984). Thus, the androgyny model is simply a recapitulation of the male model of mental health.

There has been strong support for the male model in relation to current definitions of psychological health. Two meta-analyses conducted in the mid-1980s

revealed a positive relationship between the possession of masculine traits and adjustment, while femininity was minimally or not at all related to psychological well-being (Bassoff & Glass, 1982; Whitley, 1984). It should be noted that effect sizes in the studies examined varied as a function of the dependent variable used, e.g., depression, psychological adjustment, psychological well-being, and self-esteem.

Whitley (1984), in his meta-analytic study, included 32 studies examining the relationship between gender identity and depression or other measures of general adjustment. Masculinity was found to have a moderately strong relationship with both depression and general adjustment, while femininity emerged as having little or no relationship to either depression or general adjustment. Neither the androgyny model nor the congruence model was supported.

Bassoff and Glass (1982) reported that both androgyny and masculinity were related to higher levels of psychological well-being than femininity in their meta-analysis of 26 studies. Statistical differences between masculinity and femininity as well as between androgyny and femininity were large, whereas differences between masculinity and androgyny were insignificant. In fact, the authors stated, "The masculinity component of androgyny is correlated to the extent that androgyny is correlated with mental health" (Bassoff & Glass, 1982, p. 109). In other words, it was the masculinity component of androgyny that was related to psychological well-being. Differences in psychological health between high-femininity and low-femininity scores in both males and females were insignificant. On the other hand, high masculinity was associated with better adjustment when compared to low masculinity, providing further support for the male model of mental health. Subsequent research has supported these

findings (Craighead & Green, 1989; Feather, 1985; Nezu & Nezu, 1984; O'Heron & Orlofsky, 1990; Roos & Cohen, 1987; Whitley & Gridley, 1993; Wilson & Cairns, 1988).

While most studies indicate that it is the lack of masculine characteristics that is associated with vulnerability to psychological difficulties, a handful of studies implicate feminine traits in the mental health/gender identity equation. The majority of these studies employ measures of interpersonal competence as their dependent variable, e.g., loneliness, social self-esteem, and social satisfaction (Krames, England, & Flett, 1988; Payne, 1987; Wheeler, Reis, & Nezlek, 1983). Given that femininity scales are composed of expressive, interpersonally-oriented traits, this is not surprising. Nevertheless, feminine traits which engender interdependency and social competence do not seem to buffer one against depression as it is currently defined.

The Gender-Role Hypothesis. Some of the similarities between traditional descriptions of femininity and descriptions of depression are remarkable, e.g., helplessness, tendency to cry easily, passivity, difficulty with decision-making, and feelings of inferiority. These similarities have led to the "gender-role hypothesis," which suggests that the clinical category of depression and women's traditional social category are overlapping; that is, "the clinical category is an extreme version (a caricature) of aspects of women's gender role" (Landrine, 1988, p.528). In examining this hypothesis, Landrine (1988) found that individuals who scored highly on femininity tended to score highly on measures of depression, whereas individuals who scored highly on masculinity tended to score highly on measures of self-esteem and lowly on measures of depression.

Landrine (1988) also provided evidence that descriptions of women's social roles overlap with descriptions of depression. Respondents in her study described individuals experiencing depressive symptoms largely with the same terms they used to describe White, middle-classed, middle-aged women, e.g., dependent, passive, helpless, incompetent, unassertive, and emotionally dependent, to name a few. Additionally, individuals described as severely depressed in vignettes were commonly identified as married women, whereas those with milder depressive symptoms were categorized as women of no specific marital status. Further, when respondents were asked to describe different categories of people, their descriptions of married women differed from descriptions of individuals considered to be functioning normally on 90% of the items presented.

Interestingly, the rates of depression for married females do appear to be higher than for single females, while the rates of depression for married males are lower than for single males (Gove, 1972; Rothblum, 1983). Landrine (1988) concluded that:

> Depressives are generally women, and those women are usually married. Given that men and women do not change genetically and/or physiologically as their marital status changes from single to married (let alone in opposite directions!), these Gender x Marital Status interaction data have been interpreted as suggesting that role, role expectations, and role stereotypes of women — and of married women in particular are related to depression (p. 528).

The implication that feminine personality may be a mild variant of depression is not new (Hirschfeld, 1986; Kaplan, 1986; Klerman & Hirschfeld, 1988). Tinsley,

Sullivan-Guest, and McGuire (1984) suggested that "Helplessness and symptoms of depression may...be considered an intensification of once considered normal female sex-role behaviors, such as passivity, dependence, self-sacrifice, self-deprecation, fearfulness, naivete, and lack of self-confidence" (p.26). In fact, McGrath et al. (1990) stated that:

> For disorders such as depression that are congruent with gender role stereotypes, prevalence rates for women are markedly higher than for men. For disorders that are incongruent with society's idealized view of femininity and the "good" woman (e.g., alcoholism is not congruent with the idealized view), women's needs have been neglected and may go untreated or misdiagnosed" (p.34).

This suggestion has been supported by empirical studies which conclude that base rates for psychiatric disorders influence clinical judgment (Lopez, 1990; Loring & Powell, 1988). Clinical judgment is influenced by reports that specific maladies are more prevalent among one gender than the other. This elicits concern that certain diagnoses are applied as a function of group membership and that members of these groups may be overpathologized and overdiagnosed in selected categories and underdiagnosed in others (Lopez, 1990).

Devaluation of Feminine Traits

Cultural standards appear to prescribe different characteristics and behaviors for each sex. The fact that men and women are socialized to exhibit certain traits seems to indicate that one set of traits is valuable in women and another in men. Interestingly, this may not be the case. When Grimmell & Stern (1992) asked participants to describe

the ideal person (gender was not specified), both men and women in their study depicted the ideal as more masculine than themselves. Neither males nor females rated any masculine item as lower for the ideal person than for self. In fact, the ideal person was rated by both sexes as much more masculine than feminine, even though most females described themselves as more feminine than masculine. Although only a single study, these findings suggest that masculine characteristics may be considered more valuable than feminine characteristics in this society by both men and women.

Psychological Explanations

Psychological explanations for the sex differential in rates of depression often intermesh with both biological and environmental perspectives. For example, classic psychoanalytic theory posits that women's personality structures make them more vulnerable to depressive symptoms than men. Within this theory, personality structure is formed through psychosexual development which is determined by biological sex. According to this perspective, when a female child discovers she does not possess a penis, her self-concept suffers. Absence of a penis may not, in and of itself, lead to low self-worth; however, the realization that one is deprived of the power and status that accompanies this organ may engender affective reactions.

Later psychodynamic theorists de-emphasized psychosexual development and credited the patriarchal culture, restraint of expression, inferior status, social pressures, and the over-valuation of love relationships for the development of personality structures that predispose females to depressive symptoms (Nolen-Hoeksema, 1987).

Personality and Cognition

Cognitive theorists maintain that human behavior and emotion are guided by thinking, or more specifically, by information processing which depends on "organized representations of prior experience," or schemata (Kovacs & Beck, 1978, 526). Schemata, which are relatively stable, allow people to classify, interpret, and respond to stimuli by accessing knowledge gained through previous exposure to similar conditions (Kovacs & Beck, 1978). According to Beck (1987), a leading researcher in the area of cognition and depression, maladaptive schemata are often responsible for depressive states. These maladaptive schemata are constructed based on a "biased sample" (p.9) of negative experiences to which an individual attributes idiosyncratic meaning. Beck, (1983) has suggested that two cognitive personality structures, "sociotropy" and "autonomy," due to latent maladaptive schema, predispose individuals to depression.

While Beck (1983) has not directly linked these personality structures to the sex differential in depression, he has observed that these structures differ in males and females. He has suggested that sociotropic schema acts as a predisposing variable in exogenous, or reactive, depression and occurs most frequently in females.

On the other hand, autonomy acts as a predisposing variable in endogenous depression and is more frequent in males. Review of the literature examining the sociotropy and autonomy constructs has revealed some interesting relationships which collectively lead to some intriguing hypotheses.

Sociotropy and Autonomy. According to Beck (1983), sociotropic schema, more frequent among women and associated with exogenous, or reactive, depression:

> ... refers to the person's investment in positive interchange with other people. This cluster includes passive-receptive wishes (acceptance, intimacy, understanding, support, guidance); "narcissistic wishes" (admiration, prestige, status); and feedback --validation of beliefs and behaviors. The individual is dependent on these social "inputs" for gratification, motivation, direction, and modification of ideas and behavior and attitudes that place a high value on interpersonal relations. Because of this, highly sociotropic persons frequently experience a strong desire to be loved and accepted by others. The motif of this cluster is "receiving" (p. 272).

Autonomy, on the other hand, has been described as being more prevalent in males (Beck, 1983) and associated with endogenous depression (Peselow, Robins, Sanfilipo, Block & Fieve, 1992; Robins, Hayes, Block, Kramer, & Villens (1995), consists of:

> ...the person's investment in preserving and increasing his independence, mobility, and personal rights; freedom of choice, action and expression; protection of his domain; defining his boundaries. The person's sense of well-being depends on preserving the integrity and autonomy of his domain; directing his own activities; freedom from outside encroachment, restraint, constraint, or interference; and attaining meaningful goals. The motif of this cluster is "doing" (p. 272).

According to Beck's (1983)"specific life events hypothesis," when an environmental stimulus matches one of these personality structures, the associated

maladaptive schema is triggered and may precipitate depressive symptoms. More simply, a sociotropic individual is more likely to react with depression to stressors affecting interpersonal relationships, while an autonomous person is more likely to become depressed in response to threats to independence or goal achievement. These depressive symptoms are attributable to the idiosyncratic meaning the individual attaches to these events.

Beck (1983) has operationalized the sociotropy and autonomy constructs in his Sociotropy/Autonomy Scale (SAS). As the name implies, the instrument consists of two subscales, one to assess sociotropic schema and the other to measure autonomous schema.

Sociotropy. Research has consistently revealed a positive relationship between the SAS-Sociotropy subscale and self-report measures of depression (Alford & Gerrity, 1995; Baron & Peixoto, 1991; Bartelston & Trull, 1995; Gilbert & Reynolds, 1990; Reynolds & Gilbert, 1991; Robins & Block, 1988; Sahin, Ulusoy, & Sahin, 1992), with correlations ranging from .23 to .51 (Clark & Beck, 1991). This subscale has also been found to correlate with measures of interpersonal dependency (Barnett & Golib, 1988; Gilbert & Reynolds, 1990, Philon, 1989; Robins, 1985), which is consistent with descriptions of sociotropy.

Support for the specific life-events hypothesis (negative events specific to maladaptive schema) in relation to sociotropy has been mixed. Several studies have produced results indicating that sociotropy is a vulnerability factor when events match this cognitive personality structure (Bartelston & Trull, 1995; Clark, Beck, & Brown, 1992, Hammen, Ellicott, & Gitlin, 1989; Robins, 1990, Study 1). However, in some

cases authors have concluded that sociotropy acts as a vulnerability factor in response to stressors that match with its schema and with stressors that should match with autonomous schema (Clark, Beck, & Brown, 1992; Hammen, Ellicott, Gitlin, & Jamison, 1989; Robins & Block, 1988; Robins, Hayes, Block, Kramer, & Villena, 1995; Rude & Burnham, 1993). In fact, Robins and Block (1988) have suggested that "Sociotropy may ... simply be a general vulnerability factor for any type of negative event" (p. 850).

Further, sociotropy may also act as a predisposing variable to anxiety (Alford & Gerrity, 1995; Clark , Beck, & Steward, 1990). This has led to the hypothesis that sociotropy is either a general vulnerability marker in relation to psychological well-being or simply an overlapping category with psychological distress (Alford & Gerrity, 1995). Empirical evaluation of the sociotropy construct relative to its association with other measures of psychological health seems warranted to determine the specificity of this personality variable's impact.

While Beck has stated that there is a higher prevalence of sociotropic schema in females, few studies have specifically examined this assertion. Those studies that have analyzed sex as a variable related to sociotropy have generally supported Beck's statement (Baron & Peixoto, 1991; Newman, Gray, & Fuqua, 1996). It appears that women, as a group, may have a more relational orientation that men.

Beck (1983) has reported that the Sociotropy subscale is defined by three underlying dimensions that are internally consistent, Concern about Disapproval, Attachment/Separation, and Pleasing Others. However, in a more recent analysis of the Sociotropy subscale, Rude and Burnham (1995) concluded that a two-factor solution

would be more appropriate and that the two factors appeared to be orthogonal. The first factor reflected a seemingly healthy interdependence and was labeled Connectedness. The second factor appeared to represent what is commonly viewed as dependency and was labeled Neediness. Women scored higher on the Connectedness factor than males. There were no significant sex differences on Neediness scores. While the Neediness factor was related to depression, the Connectedness factor was not. Because these results differ somewhat from Beck's findings, further examination of the dimensions of the Sociotropy subscale are needed to clarify its structure.

In summary, it appears that sociotropic schemata are clearly related to depression, and when depression does occur as a result of these schemata, it manifests in symptoms which are identified with reactive depression (Peselow, Robins, Sanfilipo, Block, & Fieve, 1992; Robins, Hayes, Block, Kramer, & Villena, 1995). Given that reactive depression has been observed more often in females (Beck, 1983), the SAS Sociotropy subscale may be a pivotal variable in research examining the sex differential in depression. Nonetheless, the correlational nature of most studies examining sociotropy's relationship to depression leaves open the possibility that these relationships are spurious. It may be that a third factor, e.g., cultural and environmental conditions, serves as the catalyst to depressive symptomotology.

Autonomy. Support for the validity of the SAS-Autonomy subscale as a predisposing variable to depression has been less encouraging than for sociotropy. Correlations of autonomy with self-report measures of depression have consistently been low (Baron & Peixoto, 1991; Bartelstone & Trull, 1995; Reynolds & Gilbert, 1991; Robins & Block, 1988; Sahin, Ulusoy, & Sahin, 1992). Similarly,

studiesexamining the relationship of autonomy to negative events which are specific to its schema have been disappointing (Bartelston & Trull, 1995; Clark, Beck, & Brown, 1992; Moore & Blackburn, 1993; Robins, 1990; Robins & Block, 1988; Robins, Hayes, Block, Kramer, & Villena, 1995; Rude & Burnham, 1993). Finally, contrary to Beck's assertion that males were more autonomous than females, similar scores for men and women on the Autonomy subscale have been reported in several studies (Newman, Gray, & Fuqua, 1996; Sahin, Ulusoy, & Sahin, 1993)

There have been relatively few studies that support the role of autonomy as a causal factor in depression, and those that do are ladened with methodological flaws. For example, Hammen, Ellicott, and Gitlin (1989) found a positive relationship between autonomy and depression congruent with life events but no relationship for sociotropy in a clinical sample. The authors classified patients as either sociotropic or autonomous if one score exceeded the other by three points; thus a person could be classified as autonomous even if her/his score fell below the mean on autonomy and above the mean on sociotropy and vis-a-vis (Lakey & Ross, 1994). The results of this classification system produced a sample of which only seven participants were sociotropic and eight were autonomous. Further, a one-tailed within subjects t-test was used in the data analysis to increase statistical power due to the low sample size. When the groups were analyzed separately, no significant differences were found.

Support for the concurrent validity of the SAS-Autonomy subscale has also been mixed. While the Autonomy subscale has been found to correlate moderately with other scales designed to measure autonomy, e.g., the Personality Research Form Autonomy subscale, and the Interpersonal Dependency Inventory Assertion of

Autonomy subscale, it has failed to correlate with other measures believed to be associated with autonomy, e.g., self-criticalness (Barnett & Gotlib, 1988; Blaney & Kutcher, 1991; Robins, 1985; Sutter & Epstein, 1983). However, the Autonomy subscale has been found to have correlate negatively with the Dependency subscale of the Depressive Experiences Questionnaire. This finding has led to the suggestion that the SAS Autonomy subscale may actually be a measure of the "absence of dependency...or counterdependency" (Blaney & Kutcher, 1991).

In summary, autonomy has received limited support as a vulnerability factor in depression or as a predictor of depression in reaction to specific life stressors. In fact, it has been suggested that autonomy may instead act as a buffer to depression. These results have led to questions about what the Autonomy subscale actually measures.

Maladaptive Schemata and Gender Identity

In examining the contents of the schemata related to sociotropic and autonomous personality structures, it is difficult to ignore their seemingly fundamental relationships to traditional definitions of femininity and masculinity, respectively. In fact, Jack (1991) has suggested that traditional definitions of feminine roles promote the development of relationship schemata, "collectively known as silencing the self" (Thompson, 1995, p. 338). Silencing the self theory posits that the "centrality of relationships to women's sense of self" (Thompson, 1995, p. 338) coupled with traditional prescriptions for female roles encourages perceptions and behaviors that lead to emotional distress. Females are socialized to be selflessness, to repress feelings of anger, and to censor personal perceptions. According to Jack (1991) when adherence to these prescriptions fails to establish or maintain satisfying intimate relationships,

women are likely to experience depressive symptoms. The following review of the historical progression of gender instruments and their construction may further illustrate the similarities between the concepts of sociotropy and femininity and between masculinity and autonomy.

Gender Measurement

Gender is a major organizing variable in relation to self concept, world view, and self- and other-imposed limitations (Bem, 1984). Yet, decades of research have failed to clarify what it means to be female or male in terms of psychological well-being. Clearly, definitions of mental health are imbued with societal values. Historically, what constitutes psychological well-being has been defined primarily by three institutions, "religion, medicine, and the law" (Shafter, 1989). Traditionally, these institutions have been dominated by males. It is, therefore, not surprising that characteristics which are stereotypically attributed to males emerged as positive predictors of mental health. Although it has been suggested that traits stereotypically attributed to females might also positively influence psychological well-being (Bem, 1974; Spence, Helreich, & Stapp, 1974), research has not supported this idea. These two leading researchers in the area of gender identity have hypothesized that a combination of masculine and feminine traits would lead to flexibility and adaptability across situations; however, masculinity alone has emerged as being related to psychological well-being.

Early instruments measuring the constructs of masculinity and femininity were developed by using different methods to determine sex-based differences in responses,

e.g., word associations, opinions, and inkblot descriptions. Masculinity and femininity were thought to be polar opposites.

Second generation instruments, developed in the 1940s and 1950s utilized empirical item selection, criterion keying, and summing of responses into a global score. The scores resulting from these gender scales were utilized in combination with other scales to produce unified personality profiles as evident in the CPI and MMPI. Although empirical studies utilizing first generation instruments provided support for the multidimensionality of the masculinity and femininity constructs, these instruments continued to present masculinity and femininity as opposite points of a single bipolar continuum (Anastasi, 1988).

In the early 1970s, Constantinople (1973) questioned the usefulness of existing methods of measuring masculinity and femininity. She maintained that while the constructs might have some usefulness for the general population in "construing reality" (p. 389), psychologists should use more exacting standards in the "prediction, control and understanding of behavior" (p. 389). Her criticisms of existing measures of masculinity and femininity included (a) the lack of precise definition of these constructs; (b) the assumption that deviance from culturally prescribed gender norms was a reflection of aberrant sexual orientation; (c) the presumption of unidimensionality or bipolarity of the constructs of masculinity and femininity while empirical evidence suggested multidimensionality; (d) item selection based on differential response patterns for males and females which failed to tie responses to conceptual definitions of masculinity and femininity; (e) obvious item content which might be vulnerable to

socially desirable response sets; (f) cultural lag; and (g) traditional biases of the researchers.

Third generation instruments, including the Bem Sex Role Inventory (BSRI; Bem, 1974) and the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, and Stapp, 1974), were developed in response to Contantinoples's review and addressed her objection to placing masculinity and femininity on opposite ends of a continuum by defining orthogonal categories for masculinity and femininity. They also strived to define masculinity and femininity in contemporary terms and to tie their items to these definitions. However, these instruments have been criticized for failing to capture the multidimensionality of masculine and feminine identity. Instruments used in the current study assess gender-role identity from two different perspectives: (a) gender constancy and (b) androgyny.

Gender Constancy

Theories of gender constancy propose that the best indicator of psychological health is congruence with socially prescribed gender expectations. The Minnesota Multiphasic Personality Inventory-2-Masculinity-Femininity Scale (MMPI-2-Mf) and the California Psychological Inventory-Femininity/Masculinity Scale (CPI-F/M) were both developed based on this theoretical position.

Minnesota Multiphasic Personality Inventory-2-Masculinity-Femininity Scale (MMPI-2-Mf). The MMPI-2-Mf scale was constructed based on the assumption that masculinity and femininity lie at opposite ends of a continuum. Items for this scale were selected by contrasting nonpathological gay males with male soldiers and female airline employees. The scale was designed to differentiate males from females, and

heterosexual from homosexual males. Current researchers suspect that the scale is more multidimensional than originally thought. In fact, a factor analysis (Graham, Schroeder, & Lilly, 1971) of the MMPI-2-Mf scale led to the development of six subscales (Serkownek, 1975), including Narcissism-Hypersensitivity, Stereotypic Masculine Interests, Denial of Stereotypic Masculine Interests, Heterosexual Discomfort-Passivity, Introspective-Critical, and Socially Retiring.

Identical items are used to assess masculinity and femininity on the MMPI-2-Mf scale, with items being scored as deviant if answered differently than the normed values for males and females. It was initially assumed that because both sexes could produce a pattern of endorsement reflecting opposite gender characteristics, the scale could be interpreted similarly for males and females. This assumption has been challenged: "Immense differences exist, however, between the behavioral correlates of males and females at various elevations on scale 5; thus separate interpretations for males and females must be used" (Greene, 1991, p. 157). This can be seen in Greene's description of the correlates of this scale:0

> High scoring males [scoring toward the feminine end of the scale] in psychiatric populations are described as passive, socially sensitive and perceptive, having a wide range of aesthetic and social interests, and inner-directed. They are seen as being dependent and insecure regarding their masculine role. Depression, anxiety, tension, and guilt are frequently reported. High-scoring normal males are generally described in positive terms: curious, socially perceptive, peaceable, tolerant, and

psychologically complex. They also are described as passive and prone to worry.

Among females in psychiatric populations, high scorers [scoring toward the masculine end of the scale] are seen as being aggressive, unfriendly, dominating, and competitive. ....High scoring normal females are seen as being adventuresome. ....The lack of additional correlates of high scores in normal females reflects the infrequency with which such scores occur.

Low scoring males [extreme masculine end of the scale] are easygoing, adventurous, and coarse. ...They tend to lack individuality and originality. Low-scoring females [feminine] are likely to be constricted, self-pitying, faultfinding, and self-deprecating. ....They appear helpless and utterly dependent on significant others to take care of them. This behavior is often manipulative and can occasionally represent genuine helplessness (pp. 157-158).

Highly educated males generally respond in the feminine direction. Education has a lesser impact on females' scores, but tends to push them toward the masculine end of the scale.

While the MMPI-2 has generated a massive amount of research, investigation of this scale in particular has been limited. Little information is available regarding the actual behavioral correlates of the Mf scale.

California Psychological Inventory - Femininity/Masculinity Scale (CPI-F/M). The MMPI served as the foundation for the development of the CPI (Gough, 1987),

with approximately half of the CPI items being drawn from it. However, the CPI was developed for use in normal adults, whereas the MMPI emphasizes pathology.

Items for the CPI-F/M scale were selected primarily on the basis of their ability to discriminate between male and female respondents and, secondarily, on their ability to discriminate between heterosexual and homosexual males. The F/M scale maintains its original structure with masculinity and femininity at opposite ends of a single bipolar continuum. The scale is standardized separately for males and females, yielding different standard scores for men and women with identical raw scores. Current instruction for interpretation places little emphasis on deviation from socially acceptable sexual preference and behavior.

Individuals scoring at the feminine end of the CPI are described in the following terms: "sympathetic; helpful; sensitive to criticism; tends to interpret events from a personal point of view; often feels vulnerable" (Gough,1987, p. 7). Scorers at the masculine end of the scale are described as follows: "decisive; action-oriented; takes the initiative; not easily subdued; rather unsentimental" (Gough, 1987, p. 7).

Androgyny

The term androgyny, when used as a psychological construct, refers to the presence of high degrees of both masculine and feminine characteristics in the same individual. It has been suggested that androgynous individuals might be more likely to exhibit characteristics and employ behaviors that are more flexible and adaptive in life roles and activities because they are not limited by cultural expectations of gender constancy. Initially it was believed that this flexibility would promote better mental health. Nonetheless, masculinity alone appears to contribute to psychological well-

being and general adjustment while femininity appears largely unrelated. The Bem Sex Role Inventory (Bem, 1974) and the Personal Attributes Questionnaire (Spence, Helmreich, & Stapp, 1974) were developed to measure masculinity and femininity as independent dimensions thereby enabling simultaneous endorsement of characteristics of both dimensions. While these instruments were developed utilizing similar criteria and apparently measure similar constructs, their authors endorse different theoretical views.

The Bem Sex Role Inventory (BSRI) and Gender Schema Theory. The Bem Sex Role Inventory (Bem, 1974), according to its author, was developed to assess internalization of sex-typed standards of desirable behavior. Items were selected from a list of adjectives compiled by Bem and several of her students which, in their estimation, reflected socially desirable traits and differentiated males from females. To be selected as a masculine or feminine scale item, the trait had to be judged as significantly more desirable for one sex than the other by both male and female judges. The items comprising the neutral scale were judged to be no more desirable for one sex than the other. The 20 items comprising the feminine scale are generally expressive in nature (interpersonal, affective), while the 20 items on the masculine scale are instrumental (goal-directed, independent). The 20 neutral items, 10 positive and 10 negative, which originally served to ensure that individuals were not simply endorsing socially desirable traits, now are thought to act as neutral contrasts for masculine and feminine items.

An individual was originally considered to be androgynous if item endorsement on the two scales was balanced, regardless of the strength of endorsement of masculine

or feminine traits. Bem's method of scoring was highly criticized for its lack of differentiation between individuals with high scores for both masculinity and femininity and those with low scores (Spence, Helmreich, & Stapp, 1975). Scoring has since been adjusted to reflect this difference, identifying high scoring balances as androgynous and low scoring balances as "undifferentiated."

Bem's current opinion is that the BSRI measures the degree to which an individual organizes her/his perceptions, self-concept, and cognitions around gender rather than other relevant information. Bem (1984) believes that "gender schema theory is a theory of process, not content" (p. 188). It is not an attempt to define the possession of traits; it is a postulate regarding cognitive processing relative to socially defined parameters.

According to Bem (1984) children understand and incorporate traditional sex-role behaviors early in their development. Because our society defines individuals in terms of gender, Bem has suggested that there is

> ...a generalized readiness on the part of the child to encode and to organize information--including information about the self--according to the culture's definitions of maleness and femaleness (p. 186).

Gender identity is viewed as a learned phenomenon which is mediated by the individual. It is, therefore, neither innate nor immutable. As an individual ascertains society's expectations of the self, she or he also interprets which dimensions of the self are appropriate to maleness and which are appropriate to femaleness. In general, society and significant others differentially reinforce behaviors in an effort to inculcate sex-role characteristics viewed as appropriate to the child's biological sex. Children,

therefore, learn to regulate behavior in accordance with prescribed cultural dictates and to incorporate self-concepts and world views which are inescapably linked to gender. Gender schema theory assumes that sex-typed (masculine or feminine) individuals organize perceptions and attitudes around culturally-sanctioned, sex-linked schemata, while androgynous individuals, due to their more flexible sex roles, utilize a wider variety of information in processing translations of stimuli and responses to environmental cues.

Bem (1984) has theorized that society has advanced gender as a principal organizing factor for its constituents, and that this causes sex-typed individuals to form intricate cognitive networks which determine their performance. Generations of gender-based socialization have created a society that places greater importance on cognitive organization around gender than is necessary. She, therefore, suggests that society would be wise to rear its children with a broader cognitive base in order to promote better psychological health for future generations.

While studies utilizing the BSRI have generally failed to reveal significant relationships between gender identity and gendered behaviors, Bem (1984) has argued that many of these studies have misinterpreted the instrument's purpose in assuming it can predict every aspect of a person's gender psychology. The BSRI was designed to identify information-processing in terms of stereotypical sex roles. Therefore, studies utilizing the instrument to assess behaviors are irrelevant to the support of or opposition to her theory. Bem believes that individuals who are sex-typed tend to organize information into gender-based classes that conform to society's definition of masculinity and femininity. She has reported several studies which, in her opinion, demonstrate

empirical support for gender schema theory. Unfortunately, effect sizes for these studies have often been small and have not been consistently replicated (Archer & Smith, 1990; Bem and Lenney, 1976; Deaux, Kite, & Lewis, 1985).

In 1992, Ballard-Reisch and Elton examined the continuing validity and reliability of the BSRI by measuring population agreement with adjectives utilized to represent positive aspects of both masculinity and femininity. Results indicated that contemporary ideals for males and females may not correspond to Bem's original definitions. Only two out of 20 items, "cheerful" and "loyal," were viewed as positive traits on the feminine scale and four out of 20 items, "self-reliant," "has leadership abilities," "willing to take a stand," and "ambitious" were perceived as positive on the masculine scale. The 20-item neutral scale contained the most agreed upon positive items including: "happy," "truthful," "sincere," "reliable," "conscientious," "likeable," "adaptable," and "friendly." While the BSRI may continue to measure traits that correspond to biological sex, the degree to which these traits are considered to be desirable by current standards may be less than at the time of its original development.

Grimmell and Stern (1992) examined the influence of gender identity on psychological health and reported that both sexes devalued at least some of the items on the BSRI feminine scale, whereas they devalued none of the items on the masculine scale. Male participants devalued "shyness." Female participants devalued "shyness," "femininity," and "gullibility." This finding may prove to be an important variable in explaining why femininity is not related to psychological health. If the content of the BSRI feminine scale contains multiple independent dimensions, the scale may lack

internal consistency. This multidimensionality may confound observed relationships of the scale with psychological health.

Ballard-Reisch and Elton (1992) did find that the original suggestion that the BSRI contained two-factors was supported; however, several items loaded differently than in earlier studies. For example, "sincere," "friendly," "helpful," and "truthful," which were originally classified as neutral items, loaded on the feminine factor. Further, seven of the masculinity items failed to load on the masculine factor as expected. The items "masculinity" and "femininity" failed to load on either factor, leading Ballard-Reisch and Elton (1992) to suggest that "self-directed" and "other-oriented" were probably more accurate descriptions of the derived factors. Because the construct of androgyny was based on a combination of masculine and feminine traits, Ballard-Reisch and Elton (1992) questioned the utility of its continued use in a society that no longer views these traits in the same way.

Other factor analytic studies have varied in methodology and results. Several authors (Bledsoe, 1983; Carlsson, 1981; Thompson & Melancon, 1986) have reported two-factor solutions with masculine and feminine factors. However, such studies have been criticized for inadequate explanation of a large amount of variance. More often a four-factor solution has been reported (Collins, Waters, & Waters, 1979; Gross, Batlis, Small, & Erdwins, 1979; Ruch, 1984; Schmitt & Millard, 1988; Waters & Popovich, 1987; Waters, Waters, & Pincus, 1977), although Martin and Ramanaiah (1988) suggested that the two- and four-factor models provide approximately the same fit. Several researchers (Blanchard-Fields, Suhrer-Roussel, & Hertzog, 1994; Gaa, Liberman, & Edwards, 1979; Maznah & Choo, 1986; Sassenrath & Yonge, 1979) have

concluded that the BSRI is multidimensional in nature and has anywhere from six to eleven factors. In some cases factors could be differentiated; however, several of the factors were so highly correlated that it could be argued that combining these factors would provide a better fit. Blanchard-Fields et al. (1994) stated that "the BSRI most appropriately assesses two multifaceted factors, global Masculinity and Femininity, with the possibility of an additional second-order masculinity factor" (p.453).

Factor analytic studies of the BSRI have described the derived feminine factor as expressiveness, empathy, sensitivity, nurturant affiliation, personal warmth, tender concern for others, and self-subordination, to name a few. Similarly, labels assigned to the derived masculine factor have included autonomy, independence, instrumentality, dominance, and competition (Martin & Ramaniah, 1988). While the BSRI continues to differentiate males and females, it may be more appropriate to suggest that it measures instrumental and expressive traits which contribute to an individual's sense of gender identity rather than global constructs of masculinity and femininity.

The Personal Attributes Questionnaire (PAQ) and Gender Identity. The Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Strapp, 1974) was developed concurrently with the BSRI and utilized similar selection criteria. The instrument consists of three 8-item scales consisting of desirable expressive (interpersonally-oriented) and instrumental (self-assertive) traits. The original scale names were Masculinity, Femininity, and Masculinity/Femininity. The authors have defended their use of these terms by stating, "...belief that the sexes differ in these clusters of attributes is widespread," that "...the sexes do in fact differ, so that the labels cannot be said to be false," and that avoidance of the use of these terms would

"invite those interested in sex differences to ignore our findings and their implications" (p. 181). However, they have also pointed out that these labels are not accurate descriptors of the content of the PAQ scales and have changed the subscale names to reflect this fact, i.e., Instrumentality, Expressiveness, and Instrumentality/Expressiveness. The current version of the PAQ has been described as a "...self-report instrument tapping limited types of abstract personality traits that stereotypically and in self-report have been shown to be gender-differentiating" (Spence & Helmreich, 1983, p. 2). Further, the authors have clearly denied any intention of measuring intangible concepts such as masculinity, femininity, or sex-role orientation, which they describe as "multidimensional" in nature.

While Spence (1991) agrees that gender is a central component of self-concept, she has been highly critical of Bem's assertion that the BSRI measures global masculinity and femininity. She has suggested that scales which tap a limited number of traits associated with male and female stereotypes cannot provide empirical evidence for global constructs. She stated that while children seem to incorporate gender-specific behaviors in "exaggerated form," the function of gender identity in development of gendered traits is minimized by other variables including sex-role attitudes, environmental factors, abilities, temperament, etc. Spence (1991) has proposed that while individual experience creates substantial variability in qualities corresponding to gender, most individuals do develop a clear sense of identity relating to their biological sex, which she labels gender identity. However, once gender identity is established, it is unlikely to be consciously utilized.

Spence (1991) has also been critical of Bem's assertion that the BSRI is capable of predicting cognitions, attitudes, or behaviors. She has pointed out that the BSRI and PAQ often generate nonsignificant relationships with sex-typing, sex-role attitudes, and behaviors (Bem, 1988; Spence, 1993; Spence & Helmreich, 1978). Spence (1991)believes that instruments like the BSRI and PAQ simply tap gender identity, the "existential conviction that one is male or female" (p. 59). While not all sex-related behaviors would be expected to relate to expressive and instrumental traits, this "existential conviction" does seem to impact behavioral patterns that are aligned with self-assertive and interpersonal orientations. Spence has concluded that the mixed results of empirical studies employing the PAQ and/or the BSRI to predict behaviors related to masculinity/femininity, sex-typing, gender schema, and sex-role orientation clearly fail to justify their use in these areas.

The BSRI and PAQ were similarly designed and apparently measure similar constructs. Empical research has generally revealed high correlations between the masculinity (.72 to .84) scales of the BSRI and PAQ and moderate to high correlations between the femininity scales (.52 to .71) (Archer, 1989; Lemke, 1982; Spence, 1991). Both instruments have been criticized for failing to distinguish emotionality, passivity, and dependency from expressiveness and for failing to differentiate between autonomy and instrumentality (Gill, Stockard, Johnson, & Williams, 1987). In spite of these criticisms, both the BSRI and PAQ have continued to be widely utilized in gender research, perhaps because no better alternatives exist. Additionally, these instruments continue to differentiate males from females and to provide measurements of individuals' sense of identity relating to their biological sex.

Vulnerabilities to Depression or Construct Confusion?

The obvious similarities between descriptions of sociotropic and autonomous schema and traditional definitions of femininity and masculinity led Newman, Gray, and Fuqua (1996) to factor analyze Beck's Sociotropy and Autonomy subscales with the gender instruments described above, the Personal Attributes Scale (PAQ; Spence, Helmreich, & Stapp, 1974, 1979), the Bem Sex Role Inventory (BSRI; Bem, 1974), the California Psychological Inventory - Femininity/Masculinity Scale (CPI-F/M;), and the Minnesota Multiphasic Personality Inventory-2-Masculinity-Femininity Scale (MMPI-2-Mf;). Results of this analysis produced only two factors which exceeded eigenvalues of 1.0, Kaiser's rule for rotating factors. These two factors accounted for 61.9% of the total variance across variables. It was evident from the factor loadings that the first factor was clearly feminine and the second factor clearly masculine. Sociotropy's factor loading of .60 on the first factor confirmed a substantial overlap with the feminine factor. Sociotropy shared 36% of its variance with the feminine factor, while it had a factor loading of only -.14 on the masculine factor. The obvious conclusion is that sociotropy is largely a feminine construct.

One the other hand, the SAS-Autonomy subscale had a factor loading of .69 and shared 47.61% of its variance with the masculine factor. Its loading on the feminine factor was -.01. These results reflect the clearly masculine nature of the autonomy construct.

Newman et al. then calculated factor scores for each participant and utilized these as dependent variables in independent t-tests between men and women. The mean score for women on the feminine/sociotropy factor was found to be significantly higher

than the mean score for men. In contrast, the means for men and women did not differ on the masculinity/autonomy factor. In order to better understand the contribution of sociotropic and autonomous schema to these sex differences, the authors examined scores on the SAS. Given the sex differences on the two factors, it is not surprising that the mean score for women on the Sociotropy subscale was found to be significantly higher than the mean score for men, There were no significant sex differences in mean scores on the Autonomy subscale. These results raise fundamental questions about the discriminant validity of the SAS Sociotropy subscale. Seemingly, this subscale has significant validity as a measure of vulnerability to depression. However, it also appears to have significant validity as a measure of femininity. Because femininity has generally been found not to relate to depression, it would be useful to clarify which structural components of the SAS Sociotropy subscale cause it to relate to depression and which cause it to relate to femininity. In the case of autonomy, its failure to relate to depression is somewhat curious given its relationship to masculinity. We know that masculinity has routinely been found to relate to depression.

Method

Participants

Participants will be solicited from an organized pool of students enrolled in introductory psychology classes at a large southwestern university.

Instruments

Participants will complete a short demographic questionnaire, four gender role measures, and a measure of vulnerabilities to depression.

Bem Sex Role Inventory (BSRI). The BSRI (Bem, 1974) consists of 60 adjectives representing traits which are considered to be stereotypically more desirable for either males or females. The adjectives contained in the BSRI are scored on a 7-point scale ranging from "never or almost never true" to "always or almost always true." The BSRI was designed to test the hypothesis that masculinity and femininity are orthogonal constructs. Orthogonality would allow for individuals to exhibit both masculine and feminine traits, i.e., androgyny (Bem, 1974). While it has been proposed and supported by some research that androgyny is predictive of psychological well-being (Cook, 1985), most of the variance in androgyny appears to be associated with high masculinity scores (Whitely, 1983).

Initial analyses of the scales yielded internal consistency reliabilities of .86 and .82 for masculinity and femininity, respectively (Bem, 1974). In their 1992 study, Ballard-Reish and Elton reported alpha coefficients of .78 for masculinity and .86 for femininity. Test-retest reliability of .90 has been reported for both scales. Statistical independence of the constructs was demonstrated in two separate samples (Stanford University, $r = .11$ for males and $r = -.14$ for females; Foothill Junior College, $r = -.02$ for males an $r = -.14$ for females).

Personal Attributes Questionnaire (PAQ). Like the BSRI, the PAQ (Spence, Helmreich, & Stapp, 1974, 1979) was also designed to measure distinct constructs which can be combined to produce an androgyny score. The PAQ consists of three scales, Expressiveness (E - formerly Femininity), Instrumentality (I - formerly Masculinity), and Expressiveness/Instrumentality (E/I - formerly Femininity/Masculinity). The E and I scales include traits that are desirable for both

sexes but which are more characteristic of one sex or the other. The E/I scale includes traits for which desirability differs for the two sexes. Each scale consists of 8 bipolar adjectives presented on a 5-point scale. Spence and Helmreich (1979, 1981) have asserted that rather than measuring global self-image, the feminine scale assesses expressive/communal (language oriented, sensitive to interpersonal needs) attributes, while their masculine scale measures instrumental (goal-directed, task-oriented) qualities. Spence, Helmreich, and Stapp (1974) reported Cronbach coefficient alphas for college students to be .85, .82, and .78 for the Masculinity, Femininity, and Masculinity/Femininity scales, respectively, for the original version of the PAQ.

While the authors of the BSRI and PAQ report somewhat different theoretical perspectives and methodologies in the development of their instruments, research suggests that the instruments are highly correlated and measure similar constructs (Lamke, 1982; Lubinski, Tellegen, & Butcher, 1983; Marsh & Myers, 1986). Both instruments were developed utilizing empirical methods and clearly state that the intention of the instruments is to measure stereotypical traits related to sex roles; however, both have been used to evaluate gender-orientation and have been highly criticized on theoretical and methodological grounds (Gill, Stockard, Johnson, & Williams, 1987; Kelly, J.A. & Worell, J., 1977).

Minnesota Multiphasic Personality Inventory-2-Masculinity-Femininity Scale (MMPI-2-Mf. The 56 true/false items of the MMPI-2 Masculinity/Femininity scale(Butcher, J.N., Dahlstrom, W.G., Graham, J.R., Tellegen, A.M., & Kaemmer, B., 1989; Hathaway, 1956) were originally designed to differentiate males from females and heterosexual males from male homosexual inverts. The scale was

developed based on the assumption that masculinity and femininity were constructs at opposite ends of a bipolar continuum. However, research suggests that the scale has more dimensions than originally thought. Because specific validity information is available only for the MMPI rather than the MMPI-2, further verification of behavior correlates of the M/F scale are necessary before validity can be established. Test-retest reliabilities of .82 for men and .73 for women over a one-week interval have been reported (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989).

The California Personality Inventory-Femininity/Masculinity Scale (CPI-F/M). The CPI was designed for use with normal adults and is intended to measure folk concepts, "everyday variables that ordinary people use in their daily lives to understand, classify, and predict their own behavior and that of others" (Gough, 1987, p. 1). The CPI's Masculinity/Femininity scale (M/F) was developed utilizing criterion keying, peer ratings, and self-report. Item selection for the M/F scale was based primarily on the ability to differentiate males from females and secondarily on the ability to detect atypical sexual orientation. High scores on the M/F scale represent feminine responses and low scores represent masculine responses. Like the MMPI, the scores are reported in the form of T-scores. The reported alpha coefficients and test-retest reliabilities for the M/F scale in the normative sample were .45 and .68 for males and .39 and .53 for females, respectively. Alpha coefficient for the combined sample on this scale was .63 (Gough, 1987). Responses to the M/F scale of the CPI are reported to correlate .64 to .78 with gender (Marsh & Myers, 1986).

Sociotropy-Autonomy Scale (SAS). The SAS (Beck, Epstein, Harrison, & Emery, 1983) is a 60-item self-report questionnaire designed to measure vulnerability

to depression. The SAS consists of two subscales measuring sociotropy, "an investment in positive interchanges with other people," and autonomy, "investments in preserving independence, mobility and freedom of choice" (Clark & Beck, 1991, p. 370). Beck has proposed that individuals who are highly sociotropic are more likely to be vulnerable to negative events in relation to disapproval by others and loss of relationships, whereas autonomous individuals are more likely to be vulnerable to negative events related to achievement and control.

The SAS is answered by indicating "what percentage of time" (0% = 0 points, 25% = 1, 50% = 2, 75% = 3, 100% = 4) each statement applies to oneself. Beck et al. (1983) reported a factor analysis of the Sociotropy subscale resulting in a three-factor solution. The three factors included: Concern about Disapproval, Attachment/Separation, and Pleasing Others, with internal consistencies for the factors ranging from .68 to .90. They similarly reported a three-factor solution for the Autonomy subscale consisting of the following dimensions: Individualistic Achievement, Freedom from Control by Others, and Preference for Solitude. These subscales are reportedly more heterogenous in nature.

Although a six-factor solution is reported for the SAS, the Sociotropy and Autonomy subscales yielded high internal consistency reliabilities, i.e., .90 and .83 (.80), respectively in two independent samples (Beck et al., 1983; Robins, 1985). Test-retest reliabilities across a four to six week interval were .75 for the Sociotropy subscale and .69 for the Autonomy subscale (Robins, 1985). Studies indicate that the Sociotropy subscale has high concurrent validity with measures of dependency and affiliation (Barnett & Gotlib, 1988; Blaney & Kutcher, 1991) and with self-report

measures of depression (Barnett & Gotlib, 1988; Gilbert & Reynolds, 1990; Philon, 1989). Correlations of the Autonomy subscale with both measures of dependency and affiliation and self-report measures of depression have routinely been low, leading to the conclusion that autonomy may measure a lack of dependency, or "counterdependcy" (Blaney & Kutcher, 1991). Further, this evidence raises serious questions regarding the role of this construct as a predispositional variable in depression (Robins & Block, 1988).

Research suggests that individuals who score highly on the Sociotropy subscale do show a vulnerability to depression when confronted with congruent life events and may, in reality, have a general vulnerability to any type of negative event. Support for the Autonomy subscale has been less impressive. In fact, Robins and Block (1988) reported that "far from being a vulnerability factor, our results suggest that autonomy may even serve an event-buffering role" (p. 851).

The Beck Depression Inventory (BDI). The BDI (Beck, Ward, Mendelson, Mock & Erbaugh, 1961,1978) is a self-report instrument developed to measure severity of depression. The BDI consists of 21 items each consisting of four self-descriptive statements ordered from neutral (0) to most severe (3). Each item describes a specific depressive symptom or attitude (Beck, 1970). The authors recommend evaluating scores based on the following ranges: 0-9 Normal Range; 10-15 Mild Depression; 16-19 Mild-Moderate Depression, 20-29 Moderate-Severe Depression; and 30-63 Severe Depression. In a study of psychiatric patients, Beck (1970) reported a test-retest reliability of above .90, a correlation coefficient of .86 for internal consistency, and a

Spearman-Brown correlation of .93. Validity studies document strong support for the BDI (Keyser & Sweetland, 1984).

Procedures

Participants will be solicited on a voluntary basis from undergraduate courses in psychology. Following a brief description of the study and an explanation of informed consent, participants will complete all instruments. A trained administrator will be available to answer questions and collect instruments. Students will receive course credit for their participation.

Data Analysis

A factor analysis will be conducted on the items from the SAS. Factor scores will then be computed for all participants on the SAS factors. Separate multiple regression analyses will then be conducted utilizing SAS factor scores to predict sex-role scores and depression scores.

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Appendix B

Institutional Review Board Approval

The University of Oklahoma
OFFICE OF RESEARCH ADMINISTRATION

September 6, 1995

Ms. Elizabeth A. Gray
Educational Psychology
University of Oklahoma

Dear Ms. Gray:

Your research proposal, "Sociotropy and Autonomy: Vulnerabilities or Construct Confusion?" has been reviewed by Dr. Laurette Taylor, Chair of the Institutional Review Board, and found to be exempt from the University of Oklahoma-Norman Campus Policies and Procedures for the Protection of Human Subjects in Research Activities.

The exempt status of your protocol is for a period of 12 months from this date, provided that the research procedures are not changed significantly from those described in your "Application for Approval of the Use of Human Subjects" and attachments. Should you wish to deviate from the described protocol, you must notify me and obtain prior approval from the Board for the changes. If the research is to extend beyond 12 months, you must contact this office, in writing, noting any changes or revisions in the protocol and/or informed consent form, and request an extension.

If you have any questions, please contact me.

Sincerely yours,

Karen M. Petry
Administrative Officer
Institutional Review Board

KMP:sg
96-020

cc: Dr. Laurette Taylor, Chair, IRB
Dr. Jody L. Newman, Educational Psychology

1000 Asp Avenue, Suite 314, Norman, Oklahoma 73019-0430 PHONE: (405) 325-4757 FAX: (405) 325-6029

Appendix C

Permission to Use the

Beck Depression Inventory

and the

Sociotropy-Autonomy Scale

UNIVERSITY OF PENNSYLVANIA HEALTH SYSTEM
Department of Psychiatry
Psychopathology Research Unit

Aaron T. Beck, M.D.
University Professor

Dear Ms. Gray,

On behalf of Aaron T. Beck, M.D., I am responding to your recent inquiry regarding our research scales.

You have Dr. Beck's permission to use and reproduce the scale(s) checked below only for the designated research project that you described in your letter. There is no charge for this permission.

[illegible] reports, reprints, or publications you prepare in which our materials are used. These will be catalogued in our central library as a resource for other researchers and clinicians.

_X_ Beck Depression Inventory (BDI)
___ Beck Anxiety Inventory (BAI)
___ Hopelessness Scale (HS)
___ Beck Scale for Suicide Ideation (BSI)
___ Scale for Suicide Ideation (SSI)
___ Suicide Intent Scale (SIS)
_X_ Sociotropy-Autonomy Scale
___ Dysfunctional Attitude Scale (DAS)
___ Daily Record of Dysfunctional Thoughts
___ Patient's Guide to Cognitive Therapy (PGCT)
___ Weekly Activity Schedule
___ Personality Belief Questionnaire (PBQ)
___ Beck Self-Concept (BSCT)
___ Cognition Checklist
___ Other _____

If you have any further questions, feel free to contact me.

Sincerely,

Jessica R. Grisham

Jessica R Grisham
Research Assistant to Dr. Beck

NOTE: Permission for inclusion of the BDI, BAI, HS, BSI, SSI and BSCT in any publication must be obtained from The Psychological Corporation, telephone # 1-800-228-0752.

Room 754 Science Center • 3600 Market Street • Philadelphia, PA 19104-2648 Tel: 215-898-1198 • Fax: 215-573-5717
Email: becka@landru.cpr.upenn.edu

FROM : PSYCHOPATHOLOGY RESEARCH PHONE NO. : 2155732717 Jan. 05 1998 12:34PM P2

Appendix D

Permission to Use the

Personal Attributes Questionnaire

DEPARTMENT OF PSYCHOLOGY
THE UNIVERSITY OF TEXAS AT AUSTIN

Mezes Hall 330 · Austin, Texas 78712

TO WHOM IT MAY CONCERN:

Students and colleagues frequently request permission to use one of our self-report questionnaires in their research. We have therefore prepared this form letter.

We automatically grant permission to use any of our instruments to colleagues who have a graduate degree in Psychology or a related field and to students working directly under the supervision of such colleagues, with the following provisions. First, anyone who uses the instruments agrees to follow the code of ethics of the American Psychology Association or other similar codes, with particular attention to confidentiality of the results. Second, the instruments are to be used only for research or for educational purposes. They are not to be used for individual diagnosis or treatment. With respect to educational purposes we have no objections to individuals who have taken one of our attitude measures (listed below) as part as a research project or classroom exercise to be informed of their scores if individual respondents so desire. However, because of potential harm, we ask that you not supply respondents to whom you have administered any of our personality instruments with their scores, even if they request the information. Respondents should answer the questionnaires anonymously whenever possible, which automatically means that respondents cannot receive feedback about their own answers.

By this letter we grant you permission to use any of our measures, provided that you meet the criteria and use them for the purposes described. We also grant permission to students using them in a thesis or dissertation to reproduce a copy in the appendix of their report.

Janet T. Spence
Professor

Robert L. Helmreich
Professor

Attitude Measures

Attitude towards Women Scale (AWS)
Male-Female Relations Questionnaire (MFRQ)
Gender stereotype measures

Appendix E

Permission to Use the

Bem Sex Role Inventory

MIND GARDEN
Palo Alto California

Bem Inventory

Test Booklet (Short and Original)

Permission to reproduce for one year starting from date of purchase: September 1, 1994

by Sandra Lipsitz Bem

Distributed by MIND GARDEN
P.O. Box 60669 Palo Alto California 94306 (415) 424-8493

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