THE INFLUENCE OF SEX AND SEX ROLE IDENTITY
ON THE ACCURACY OF SELF-PERCEPTIONS
AMONG DEPRESSED AND NONDEPRESSED COLLEGE STUDENTS

A THESIS

Presented in Partial Fulfillment of the Requirements for
the degree Master of Arts in the
Graduate School of
The Ohio State University

By

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* * * * *

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1980

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ACKNOWLEDGMENTS

There are several people to whom I would like to extend my sincere thanks for aiding me in the completion of this thesis:

First and foremost, to Dr. Gill Hackett, without whom this study would not have been possible. Her wise advisement, warm support and encouragement, and steadfast patience and interest enabled me to believe that "yes, this can be done!" Gill, you have taught me more than I can ever appreciate;

To Dr. Richard Kelney, for allowing me the freedom and independence to pursue this endeavor in the manner which I chose, and for his helpful suggestions;

To all the graduate students who served as observers in this research study;

To Cindy Wilson, for serving as experimenter and diligently assisting me in the scoring of the numerous instruments;

To the Office of Women's Studies, for their financial aid;

To Jolaine Scholl for her statistical assistance;

To Marilynne Burrett for her careful typing of the manuscript;

To my dearest friends, Christine Tender, Frank LaVecchia, and Pam Besty, for keeping me sane throughout the duration, and constantly reminding me that "yes, Kate, you will get this finished!";

To my family, especially my mother and father, for instilling in me the confidence, determination and belief in myself, which enabled
me to make it, not only through this project, but through graduate school as well. Thank you for molding me into the person who I am;

And finally, a special word of thanks to my sister, Jean, who provided for me the personal inspiration and private motivation to pursue this study.
ABSTRACT

This study addresses itself to hypotheses derived from the cognitive-behavioral models of depression and to the preponderance of female depressives. Beck (1967) holds that what lies at the heart of depression is a set of negative cognitive schemas through which depressed individuals perceive themselves, their world, and their future. Recent studies (Nelson and Craighead, 1977; Alloy and Abramson, 1979; Levinsohn, Mischel, Chaplin and Barton, 1980) have reported evidence which contradicts Beck's contention that depressed individuals engage in negative cognitive distortions, and suggest that depressed individuals may actually be more realistic and accurate than are nondepressed persons.

Feminists have argued that a major reason for the greater number of depressed women as compared to men is that women face inherently depressing environments due to sexist societal structure. This stance views the source of depression among women as coming from the social environment rather than resulting from internal, psychological processes.

The present study sought to further explore the role of cognitions in depression, specifically controlling for sex and sex-role orientation with a nonclinical population. Eighty-two students from The Ohio State University participated as subjects in the study. They were randomly assigned to groups of six by diagnostic category and sex. The subjects participated in a 45-minute getting-acquainted, unstructured discussion.
At the conclusion of the group interaction subjects were rated by themselves, each other and trained observers on a rating scale of social competence.

Two three-way analyses of variance on mean social competence scores were performed. It was found that self-ratings made by depressed subjects were significantly lower than the self-ratings made by non-depressed subjects. Other subjects in each group rated the depressed subjects significantly lower than the nondepressed subjects. Trained observers rated both depressed and nondepressed subjects significantly lower than these subjects rated themselves. There was no significant effect for the sex and sex-role orientation factors.

Contrary to Beck's theory, these findings suggest that individuals are accurate in their self-perceptions. Furthermore, it appears that depressed subjects lack the social skills that nondepressed subjects possess.
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CHAPTER I
INTRODUCTION

Depression ranks as a major national mental health problem, second only to schizophrenia (Beck, 1967). It has been estimated that approximately ten percent of the general population will have a significant depressive episode at some time in their lives, and that of the 22,000 suicides reported annually, upwards of 80 percent can be traced to a precipitating depressive episode (Friedman and Katz, 1974). According to Kline (1964), more human suffering has resulted from depression than from any other single disease or condition affecting humankind. The condition that today we label depression has been described by ancient writers under the classification of "melancholia." Although depression has been recognized as a clinical syndrome for over 2,000 years (the first description of depression was made by Hippocrates in the fourth century B.C.), there are still major unresolved issues regarding its nature, its classification, and its etiology (Beck, 1967). Among these are the following:

1. Is depression an exaggeration of a normal, but low mood, or is it qualitatively different from a normal mood?

2. Is depression caused primarily by psychological stress and conflict, or is it related primarily to biological
derangements? What roles do environmental factors play in the etiology of depression?

3. Is depression a type of reaction (Nevian concept), or is it a specific clinical entity or disease (Kraepelin concept)?

In surveying the rather voluminous body of literature dealing with depression, one quickly becomes aware that depression is an overwhelmingly complex problem, as evidenced by the numerous and various conceptual models of depression being utilized by theorists and researchers in the field.

Stepping aside from these issues for a moment, another somewhat confusing phenomenon has recently been receiving much attention by researchers of depression; namely, the disproportionate incidence of depression among women as compared to men. Women more frequently than men report depressive symptoms, are diagnosed as depressed, and seek out-patient treatment for depression (Chesler, 1972; Silverstein, 1968; Weissman and Paykel, 1974). Whereas men predominate among cases of alcoholism and schizophrenia, the ratio of women to men in cases of depression is conservatively estimated to be two to one (Weissman and Klerman, 1977). Beck and Greenberg (1974) have estimated the prevalence of depression in the general population to be eight percent for women and four percent for men. The preponderance of women is not just in absolute numbers of depressed persons, but more significantly, in rates per population group adjusted for age (Weissman and Klerman, 1977). In addition, there is evidence (Bernard, 1976) for a shift in the peak age of onset of depression among women. Whereas pre-World War II literature
characterized the onset of depression as rising at about age forty, recent reports are emphasizing depressions among younger females.

Numerous controversies exist regarding the preponderance of female depressives. These are as follows:

1. Do women, in fact, suffer more from depression than men, or do they merely report depressive symptoms more frequently?

2. Do women weigh life events as being more stressful than men and thus suffer from depression more often?

3. Do men and women manifest distress in different, but perhaps equivalent disorders? For example, do women suffer from depression whereas men suffer more from alcoholism?

4. Can female endocrine physiology cause depression? If so, do biological explanations account for the excess of depressed women?

5. Are women’s environments inherently more depressing than are men’s?

Although a review of the literature related to the controversies mentioned above will be discussed in the following chapter, those explanations which focus on the environmental and societal stresses confronting women will be briefly provided here, since they are directly related to the present study.

Feminists (Bernard, 1973; Chessler, 1977; Freidan, 1974; Rawlings and Carter, 1977) contend that women face an environment that is inherently depressing. Essentially, as a result of socialization and sexist oppression, women are devoid of power in their personal lives as well as in societal structure. The inferior status of women leads them to experience chronic low self-esteem, low aspirations, helplessness and
depression. Cheesler (1972) describes women as facing a "no win" situation, in that a woman who behaves in accordance with her ascribed sex-role and is passive, dependent, and emotional is viewed as being neurotic and incompetent. Yet if a woman behaves assertively, rationally, and dominantly she is said to be rejecting her "femaleness." Further, Cheesler conceives depression among women as merely an intensification of traits which normal socialization induces in women: passivity, self-deprecation, self-sacrifice, naivete, fearfulness and failure.

Others (Gove and Tudor, 1973; Radiolo, 1975; Ray and Bristow, 1978) have advocated the role of sex role identity as a determinant of susceptibility to depression. That is, regardless of an individual's sex, he or she may be more or less susceptible to this syndrome depending on the degree to which he or she exhibits masculine and/or feminine traits. In recent studies attempting to disentangle sex from sex role identity as precipitating factors of depression, it has been found that once sex roles are taken into account, females are no more susceptible than males to learned helplessness, a analog of depression (Baucom and Banker-Brown, 1979). It would appear that sex roles contribute overwhelmingly to the sex ratio in depression.

Returning now to the discussion of depression in general, the investigator of any aspect of depression is faced with a myriad of complex and diverse conceptual models through which depression may be viewed. Due to the obvious necessity for a reasonably high level of clarity and consistency in communication, the present study approached depression primarily through the cognitive and behavioral models.

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1 The term sex role refers to the sex role identity of a particular individual, that is, the level of masculinity and femininity adopted by that individual.
offered by theorists, Aaron T. Beck (1967) and Peter M. Levinsohn (1974). Where appropriate, other theories (e.g., Seligman's learned helplessness model) were utilized to clarify or expand upon those issues under discussion. Although a thorough description and explication of these models are presented in the following chapter, it may be of value to briefly examine the basic structure of these models here.

In essence, Beck (1967) holds that what lies at the heart of depression is a triad of cognitive sets or schemas, through which depressed individuals consistently view themselves, their experiences and their future in a negative manner. Through the use of what Beck terms paralogical, stylistic and semantic distortions in logic the overall configuration of the depressive schemas is maintained and supported, even in the face of contradictory data. A focal point in this model is the thesis that affective responses are a function of the manner in which individuals mediate their experiences, and if individuals predominately construe their experiences via depressive schemas, the consequent affective responses to these experiences will be correspondingly depressed in nature. Once elicited and subjectively experienced, this depressed affect feeds back into and consequently reinforces the schemas which preceded it. Beck argues that models of depression based solely on the concept of loss of reinforcement are incomplete because they exclude consideration of the cognitive processes by which a person interprets events.

Therapy based on Beck's cognitive model of depression focuses on encouraging the client to more accurately (positively) perceive his or her environment.
Lewinsohn's (1974) behavioral model assumes depression to be a continuous variable which can be conceptualized as a "state" which fluctuates over time as well as a "trait" (some people are more prone to becoming depressed than others). This model is based on the assumption that a low rate of response-contingent positive reinforcement acts as an eliciting (unconditioned) stimulus for some depressive behaviors (Friedman and Katz, 1974). Lewinsohn views cognitive processes (which are central to Beck's theory) to be secondary to low rates of response-contingent positive reinforcement. The total amount of response-contingent positive reinforcement received by an individual is presumed to be a function of three sets of variables: a) the number of events and activities that are potentially reinforcing for the individual, b) the number of potentially reinforcing events that can be provided by the environment, and c) the extent to which the individual possesses the skills and emits those behaviors that will elicit reinforcement from the environment.

The goal of therapy, based on Lewinsohn's model, is to increase the rate of response-contingent positive reinforcement. First, it must be ascertained which variable (a, b, or c above) is accounting for the low rate of response-contingent positive reinforcement. The therapist would then attempt to either help the individual adapt to the environment (e.g. by learning new skills) or adjust the environment so as to make it more positively reinforcing.

A third model of depression is Martin Seligman's (1974) learned helplessness model. The learned helplessness theory of depression claims that it is not trauma per se that produces depression, but having control over that trauma. Seligman and Maier (1974), from their experiments
with dogs, found that organisms learn to be helpless when exposed to stressful conditions in which no behavior the organism emits reduces the stress. When later placed in situations where behavior would eliminate stress, the organism fails to do so and instead becomes withdrawn and passive, exhibits sexual and somatic disturbances, and does not fight back when attacked. Thus, when organisms learn that responding and trauma are independent, learned helplessness occurs. Translating these findings into an etiology of depression, Seligman explains that when a person has learned, or believes that he or she cannot control those elements that relieve suffering or bring gratification, then the individual believes he or she is helpless. Therapeutic strategies based on this theory would involve getting clients to act on their environments so as to demonstrate that they are not helpless and controlled by external events and other people (Emelings and Carter, 1977).

The present study addresses itself to hypotheses derived from these psychological theories of depression and to the preponderance of female depressives.

The cognitive model of depression as proposed by Beck, emphasises the role of distorted thought processes in the promotion and maintenance of depression. It assumes that depressed persons have a special penchant for perceiving their world, themselves and their future in a negative light. Conversely, it assumes that nondepressed persons accurately perceive their environments and thus are less prone to depression. But how does this theory account for the greater number of depressed women? If depressed persons negatively distort situations and most
depressed persons are female, then is not this theory implying that females have some special propensity for negatively distorting reality? Taking these associations a step further leads one to a critical question. Do women cognitively distort life situations in a negative manner more than men and thus experience depression more often, or do women experience life situations that are, in fact, more negative and depressing? Put another way, is depression among women a result of an inherently depressing environment, unhealthy, sexist socialization, and rigid sex-role identities; or as Beck proposes, does depression result from the internal cognitive processes of the individual?

Recent studies have provided some intriguing evidence regarding this line of thinking. In a study designed to test hypotheses derived from cognitive-behavioral theories of depression, Nelson and Craighead (1977) found that, consistent with Beck's theory, depressed subjects recalled less positive and more negative feedback than controls when in a high rate of reinforcement condition. This finding particularly supports Beck's contention that depressed persons are "hypersensitive to stimuli suggestive of loss and blind to stimuli representing gain" (Beck, 1967). However, a second finding revealed that nondepressed subjects underestimated the frequency of negative feedback, while depressed were accurate in their recall of negative feedback when in a low rate reinforcement condition. These findings are clearly inconsistent with Beck's theory. Nelson and Craighead did not examine sex differences in their analysis.

De Mornbrun and Craighead (1977), in a study of 48 male veterans, found that when rates of positive feedback were high, depressed subjects distorted the most, however, when rates of feedback were low, there was
little or no distortion for depressed or nondepressed subjects. These findings are similar to those found by Nelson and Craighead (1977).

In an analog study with depressed and nondepressed students, Alloy andAbramson (1979) found that depressed subjects were actually more accurate in their estimates of contingency between their response and outcome, than were nondepressed. Nondepressed subjects, in fact, overestimated the degree of contingency between their response and outcome. These findings suggest that nondepressed individuals succumb to various "cognitive illusions" (Mischel, 1973) and engage in distortions of negative or neutral environmental feedback in a positive direction. These findings, which are contrary to Beck's theory of depression, indicate that depressed individuals perceive their environments accurately and that nondepressed individuals engage in self-aggrandizing illusions of reality.

Lewinsohn, Mischel, Chaplin, and Barton (1980) have recently explored the role of self-perceptions with clinically depressed subjects. These writers point out that Beck's (1967) postulation that a partial cause of depression is an "unrealistically negatively view of self" is confounded by the possibility that a negative self-image may partly reflect an accurate recognition of one's own lack of positive interpersonal characteristics and competence.

In their recent study, these researchers sought to disentangle unrealistic negative self perceptions from actual social deficits. It was found that depressed subjects were more accurate in their self perceptions than were controls. That is, depressed subjects' self-ratings were congruent with the ratings of observers, whereas nondepressed subjects perceived themselves more positively than did observers.
Nondepressed subjects engaged in self-enhancing distortions whereas depressed subjects were surprisingly realistic. This study also provided no insight into sex or sex role differences among depressed and nondepressed subjects.

In summary, the support for Beck's contention that depressed individuals construe their experiences via negatively distorted cognitive sets is inconsistent. There seems to be little question that cognitive mechanisms play some role in the maintenance of depressive episodes, but to assign primary causal significance to these cognitive mechanisms appears to be unwarranted. The theories proposed by Levinsohn and Seligman may provide better explanations for why depression occurs and why women more frequently suffer from it.

The implications of this issue are far reaching for women. Cognitive therapy, based on Beck's model, may be inappropriate for women in that it views the primary source of her distress as coming from within herself as opposed to resulting from environmental stress. Cognitive therapy may harmfully encourage women to adjust to unhealthy, destructive social conditions, or at least to blame herself for her unhappiness.

The purpose of the present study was to provide evidence which might bridge the gap between the social-external and psychological-internal sources of depression. More specifically, the present study sought, first of all, to attempt replication of the results described by Levinsohn et al. (1980), with a nonclinical depressed population. Further, this study aimed at examining this relationship sex and sex-role identity may have to depressed and nondepressed subjects.
CHAPTER II
REVIEW OF THE LITERATURE

Overview

In this chapter, the cognitive-behavioral models of depression, as proposed by Beck (1967), Lewinsohn (1974), and Seligman (1972) will be described. Special attention will be given to how these respective theorists propose various dynamics to directly or indirectly contribute to the support and maintenance of the depressive mode of functioning. Following this, relevant literature dealing with the influence of sex roles on the development of depression will be reviewed. The convergence of these two lines of thought, which serves as the conceptual foundation for the present study, will be delineated in the summary of this chapter.

Cognitive Model of Depression

According to Beck (1967) depressive behaviors are manifested through four domains: the affective, motivational, cognitive, and physical/vegetative. These depressive symptoms may be summarized as follows:

1. Affective: depressed mood; negative feelings toward self; reduction in gratification; loss of emotional attachments and involvements; crying spells; loss of mirth response.

2. Motivational: paralysis of will; avoidance, escapism, and withdrawal wishes; suicidal wishes; increased dependency.
3. Cognitive: low self-evaluations, negative expectations, self-blame; and self-criticism; indecisiveness; distortion of body image.

4. Vehement/Physical: loss of appetite, fatigability, loss of libido; sleep disturbances.

Any or all of these symptoms may be present in varying degrees and combinations in any individual case, depending upon the severity of the depression, according to Beck.

Beck conceptualizes the dynamics of depression in terms of a set of three related cognitive patterns, or "schemata," through which depressed individuals consistently view themselves, their experiences, and their future. Beck refers to these cognitive patterns as the "cognitive triad." The term "schema," borrowed from Piagetian theory, is defined as: "the complex pattern, inferred as having been imprinted in the organismic structure by experience, that combines with the properties of the presented stimulus object or of the presented stimulus idea to determine how the object or idea is to be perceived and conceptualized" (English & English, 1958). A schema, then, is a structure for screening, coding, and evaluating environmental input. It is a mode by which an individual may break down and organize information into psychologically relevant facets. The schema condenses and molds raw data into "cognitions." Beck (1967) refers to cognitions as "any mental activity which has verbal content; hence it includes not only ideas and judgements, but also self-instructions, self-criticisms, and verbally-articulated wishes."

Beck purports that a system of logic exists which serves to sustain the cognitive triad, and that this system of logic is an integral part of the cognitive schema. This system of logic consists of premises, assumptions and syllogisms, but the development of these elements of
logic may vary in terms of quality and quantity, depending on numerous factors.

In depression, a consistently negative bias underlies the cognitive triad. Depressed individuals see themselves as inadequate, deficient, unworthy, and defective. On the basis of these presumed (and Beck contends unrealistic) defects, depressed individuals regard themselves as worthless and undesirable. In terms of their experiences, depressed individuals see their lives (unrealistically) as filled with burdens, obstacles, frustrations and inevitable suffering, thus resulting in feelings of deprivation and defeat. Finally, depressed individuals anticipate (again, unrealistically) an indefinite continuation of present difficulties and suffering. Thus, this describes the depressive cognitive triad.

At the heart of depression, according to Beck, then, is this "negative bias," or some degree of reality distortion (i.e. fitting reality to the schema, rather than vice versa) on the part of the depressed individual. Beck contends that the depressive schema is maintained and supported through the use of what he terms paralogical, stylistic and semantic distortions in logic, even when faced with contradictory, realistic data. Beck defines these distortive mechanisms as follows:

1. **Arbitrary Inference:** the process of drawing a conclusion from a situation, event, or experiences, when there is no evidence to support the conclusion, or when the conclusion is contrary to the evidence.

2. **Selective Abstraction:** the process of focusing on a detail taken out of context, ignoring other more salient features of the situation, and conceptualizing the whole experience on the basis of this element.
3. **Overgeneralization**: the process of drawing a general conclusion about one's abilities, performance, or worth on the basis of a single incident.

4. **Magnification and Minimization**: errors in evaluation so gross as to constitute distortion, e.g., exaggeration of problems and failures, minimization of abilities and successes.

5. **Inexact labelling**: wherein the affective response to a situation is a function of the descriptive labelling of the event, rather than the actual intensity of the event.

Another point of importance in Beck's model is the thesis that affective responses are a function of the manner in which the individual structures personal experiences, that is, the schema through which the experiences are mediated. Thus, if an individual predominately construes his experiences via depressive schemas, the consequent emotional responses to these experiences will be correspondingly depressed in nature. However, the relationship between cognition and affect is not as one-directional as this formulation may seem to imply, for, once elicited and subjectively experienced, the depressed affect feeds back into and consequently reinforces the schema which preceded it. This constant interaction between cognition and affect is referred to by Beck in terms of what he calls a circular feedback model, illustrated quite simply as follows: the more negatively the individual thinks, the more negatively he or she feels; the worse he or she feels, the more negatively he or she thinks. This "downward spiral" in depression is, for the unfortunate individual caught in it, usually quite difficult to break out of without some form of outside help and support, and may, in extreme instances, culminate in attempted suicide.

Beck (1967, 1973) has outlined therapeutic strategies based on his theoretical orientation, which basically entail breaking down the
existing negative cognitive patterns and replacing them with more realistic positive ones.

There have been a number of studies to support Beck's theory of depression. Mischel, Ebbeson, and Zeiss (1973) have reported findings in which depressed persons (depression experimentally induced) tended to spend more time examining negative feedback about themselves than did controls, when given a choice between examining positive or negative information about oneself. These findings lend support to the notion that depressed persons selectively attend to negative aspects regarding oneself and one's experiences.

Nelson and Craighead (1977) and De Membre and Craighead (1977) reported evidence indicating that depressed subjects recalled having less positive feedback than did controls at a high (but not low) rate of feedback, thus supporting Beck's contention that depressed individuals distort environmental feedback to make it consistent with their negative self-image and negative expectations regarding their ability to perform adequately and receive positive feedback. Lishman (1972) and Lloyd and Lishman (1975) found that severely depressed subjects tended to recall negatively toned material more readily than positively toned material, thus demonstrating that depressed persons are especially sensitive to the negative aspects of situations and that they selectively screen environmental input in a negative manner.

Wener and Rehm (1975) further support Beck's theory with the finding that depressed subjects underestimated the percentage of correct feedback they received on a pseudosocial intelligence task.

Finally, Loeb, Beck, and Diggory (1971) found that depressed out-patients were significantly more pessimistic about their performance on
a task than were a matched control group of nondepressed patients, even though the depressed patients actually performed as well as the control group.

All these studies lend credence to various aspects of Beck's theory of depression. There is also evidence, however, which contradicts Beck's model, which will be discussed later in this chapter. For now let it suffice to say that Beck provides a plausible explanation for the development and maintenance of depression.

Behavioral Model of Depression

Peter Lewinsohn and his associates (1974) at the University of Oregon have developed a model of depression based on the relationship between a loss or decrease of reinforcement from the environment and depressive behaviors. Lewinsohn's work is based upon and is a refinement of earlier research by Ferster (1965, 1966, 1973), who, drawing upon analogue research with animals, defined depression as a reduction in the frequency of behaviors that are positively reinforced (Craighead, Kazdin, and Mahoney, 1976). Lewinsohn (1974) maintains that a low rate of response-contingent positive reinforcement accounts for the depressed person's low rate of behavior. Lewinsohn specifies three major assumptions that underlie his model. They are as follows:

1. A low rate of response-contingent positive reinforcement acts as an eliciting (unconditioned) stimulus for some depressive behaviors, such as feelings of dysphoria, fatigue and other somatic symptoms.

2. A low rate of response-contingent positive reinforcement constitutes a sufficient explanation for other parts of the depressive syndrome such as the low rate of behavior. Thus, the depressed person is considered to be on a prolonged extinction schedule.
3. The total amount of response-contingent positive reinforcement received by an individual is presumed to be a function of three sets of variables: (a) the number of events (including activities) that are potentially reinforcing for the individual (this is assumed to be a variable subject to individual differences), (b) the number of potentially reinforcing events that can be provided by the environment, i.e., the availability of reinforcements in the environment, and (c) the instrumental behavior of the individual, i.e., the extent to which s/he possesses the skills and emits those behaviors that will elicit reinforcement from the environment (Friedman & Katz, 1974). Furthermore, according to Lewinsohn, depression may be predicted when the probability of an individual's behavior being followed by positive reinforcement is low and also when the probability is high that an individual will be "reinforced" when no behavior is emitted (Friedman and Katz, 1974). Both of these conditions constitute a low rate of response-contingent positive reinforcement situations.

Lewinsohn contends that the cognitive and somatic manifestations of depression are a by-product of low rates of reinforcement and that dysphoria, self-deprecation, fatigue, guilt and other such symptoms will improve as overt behavior patterns and schedules of reinforcement are modified (Craighead, Zarin, and Mahoney, 1976). Additional factors come in to play, which serve to maintain depressive behaviors. Initially, depressed persons elicit social reinforcement for their behavior, in the form of sympathy, interest and concern from others. However, the depressed person's complaints, problems, crying, and suicidal threats eventually become a noxious stimulus for others, who then seek to avoid the depressed person. This in turn results in further social isolation which feeds back into the low rate of response-contingent reinforcement schedule (Surges, 1969; Robinson and Lewinsohn, 1973). It has been postulated (Perese, 1973;
Lewinsohn, 1980) that depressed persons are less effective as a group, than nondepressed persons in eliciting social reinforcement from others in their environment. Perzer (1973) has suggested that depressed individuals attempt to maximize environmental reinforcement, but do so via ineffective means. Complaining, crying, and threatening suicide may initially generate some positive reinforcement, but in the long run, this becomes a self-defeating strategy in that other people soon find such behavior to be aversive and thus avoid the individual. Indeed, several studies of the interpersonal behavior of depressed and nondepressed subjects have indicated that, in general, depressed individuals are less effective than nondepressed individuals in eliciting social reinforcement from others (Lewinsohn and Atwood, 1969; Libet and Lewinsohn, 1973; Patterson and Rosenberry, 1969; Rosenberry, Weiss and Lewinsohn, 1968).

The goal of therapy, based on Lewinsohn's behavioral model, is to increase the rate of response-contingent positive reinforcement the individual receives from the environment. This may be accomplished by aiding the client in identifying activities that are potentially reinforcing and available in the current environment. Or, therapy might focus on manipulating the environment itself in order that there may be more reinforcing events and activities available to the client. Another approach may be to assist the client in acquiring new skills, so as to more effectively elicit positive reinforcement from others.

Empirical findings have been reported to support the major tenets of Lewinsohn's behavioral model of depression.

Paykel, Meyers, Dienelt, Klerman, Lindenthal, and Pepper (1969) matched 185 depressed subjects with 185 normal control subjects on several socio-demographic variables and surveyed the life events of the preceding six months for each subject. They found that, in general, the
depressed subjects had experienced more stressful events during that time period, more events generally regarded as undesirable, and more of these "involving losses or exists from the social field." In short, the depressed subjects had experienced more events that might be associated with an overall loss of positive reinforcement (Craighead, et al., 1976).

Levinsohn and Libet (1972) and Levinsohn and Uraf (1973) reported similar findings. These researchers examined the relationship between depressed subjects' self-recorded mood and participation in pleasurable activities, which was employed as an index of the amount of positive reinforcement received. It was found that indeed, a positive correlation exists between mood and pleasurable activities.

Hammen and Glass (1975) reported findings which suggest that inducing depressed subjects to increase participation in enjoyable (reinforcing) activities does not necessarily reduce their depression, as Levinsohn's theory would proclaim. Rather, these researchers conclude that the relation between mood and activity depends upon mediating cognitions.

Levinsohn (1975) however, cautions that the Hammen and Glass study should not be considered conclusive, because an initial low pleasurable-activities level was not established prior to the introduction of the experimental treatment, nor was a significant association between mood and pleasurable-activity level.

Schaffer and Levinsohn (1971) and Libet and Levinsohn (1973) report that depressed individuals elicit fewer behaviors from other people than control subjects (psychiatric and normal groups). Assuming that it is positively reinforcing to be the object of attention and interest, this finding suggests that depressed subjects receive less social reinforcement than do nondepressed subjects.
Similarly, Coyne (1976) found that following telephone conversations, subjects who had spoken to depressed subjects were themselves significantly more depressed, anxious, hostile and rejecting, however, there was not a lowering in rate of response or activity level. Coyne suggests that depressed persons may lack the special social skills necessary to overcome the effects of their negative mood induction on others.

Finally, Wener and Rehm (1975) report findings which lend support to Lewinsohn's model. These researchers found that a low rate of reinforcement on a pseudosocial intelligence task led to increased depressive affect, less self-confidence and slower responding. In addition, they found that depressed subjects underestimated the percentage of correct feedback they received. Although this finding lends some support to Beck's view that depressed persons negatively construe their experiences, it also lends support to Lewinsohn's idea that depressives are more sensitive to negative than positive reinforcement.

Although further research on the various aspects of the behavioral model of depression is required, the current research indicates that this theory indeed, provides a reasonable explanation for the development and maintenance of depression.

Learned Helplessness Model

Martin Seligman (1972, 1973, 1975; Miller and Seligman, 1973) has proposed a model of depression which combines the concepts of loss of reinforcement and cognitive distortion. In his formulation, Seligman contends that cognitive factors interact with specific environmental variables to produce and maintain depression (Craighead, et al., 1976).
In earlier research, Seligman and his associates (Seligman and Maier, 1967; Seligman and Grooves, 1970) found that after dogs had been exposed to several trials of inescapable shock by being restrained in a harness, they would not learn to escape shocks when escape response was allowed. The animals learned to escape only after being repeatedly dragged to the safe side of the shuttlebox. Seligman described this phenomenon as learned helplessness.

Numerous studies (Friedman and Katz, 1974) with animals exposed to uncontrollable trauma, reveal six effects that relate to depression. These are as follows:

1. Animals become passive in the face of trauma, i.e. they are slower to initiate responses to alleviate trauma and may not respond at all.

2. Animals are retarded as learning their responses control trauma, i.e., if the animal makes responses that produce relief it has trouble 'catching on' to the response-relief contingency.

3. Helplessness dissipates in time. Twenty-four hours after one session of inescapable shocks, dogs were helpless, but if intervals exceeded forty-eight hours, responding was normal.

4. Uncontrollable shock induced weight loss as compared with animals who received controllable shock.

5. More anorexia was reported in animals given uncontrollable shock, as compared with those who received controllable shock.

6. Whole-brain norepinephrine was depleted in animals that could not control shocks, while those who could control shocks showed elevated norepinephrine levels. (Norepinephrine depletion has been hypothesized as a cause of depression in humans.) (Friedman and Katz, 1976).

The learned helplessness model of depression in humans suggests that it is not trauma per se that produces depression, but the real or perceived (cognitive component) control over that trauma. It is believed that when organisms learn that responding and trauma are independent,
learned helplessness occurs. Learning that trauma is uncontrollable has three effects. First, there is a motivational effect. Uncontrollable trauma reduces the probability that the subject will initiate responses to escape, because part of the incentive for the escape responses is the expectation that they will bring relief. This motivational effect underlies passivity in learned helplessness. Secondly, there is a cognitive effect, which is, learning that responding and trauma are independent, makes it more difficult to learn that responding does produce relief. It is this mechanism that produces the "negative expectations" of depression. Finally, there is an emotional effect associated with exposure to uncontrollable trauma. Uncontrollable trauma produces conditioned fear, sadness, and pain.

The learned helplessness model of depression does not capture the whole spectrum of depressions, but rather, is an attempt to explain reactive depressions in which the individual is slow to initiate responses, believes himself to be powerless and hopeless, and has a negative outlook on the future, which was initiated by perceived inability to control those elements which relieve suffering or bring gratification (Friedman and Katz, 1976).

Two types of experiences are hypothesized to account for depressed persons' perceived inability to control environmental trauma. First, persons who continually face stressful situations may develop a negative expectancy of success in coping with any new stressors. Depressed individuals, when faced with a situation representing loss of reinforcement or potential loss of reinforcement are prone to "giving up," even when appropriate coping strategies are available. Second, depression may result when a person is continually
reinforced, but noncontingently. These individuals may never have learned the complex skills necessary to elicit reinforcement from the environment.

Seligman has proposed no specific treatment strategies based on his model, however, it would seem that according to the helplessness view, successful therapy would be having the depressed individual discover, and come to believe, that his responses can produce gratification and that he is an effective human being.

Seligman and his colleagues have conducted experimental studies which have consistently supported the same fundamental hypothesis: If helplessness is a model of depression, depressed subjects and non-depressed subjects made helpless should show the same deficits relative to normal controls.

Miller and Seligman (1975) report findings that support the learned helplessness model of depression by showing parallel effects of depression and helplessness. Depressed and nondepressed college students first received escapable, inescapable, or no noise. Next, the subjects were faced with a test task that provided measures of response initiation and learning. These researchers found that nondepressed subjects in the inescapable noise group (helplessness induced) exhibited response initiation (motivational factor) and learning (cognitive factor) deficits on anagrams relative to nondepressed subjects in the escapable noise group and no noise group. These results replicate the findings of Hirsh and Seligman (1975).

Klein and Seligman (1976) report results that add evidence to the hypothesis that learned helplessness can be produced in humans. Further, these investigators report findings which lend support to the learned
helplessness model of depression in that a) depressed controls showed escape deficits paralleling those of nondepressed, but helpless subjects; b) solvable problems reversed escape (motivational) deficits produced by inescapable noise (helplessness); and c) solvable problems reversed escape deficits among depressed subjects. In a second experiment by the same researchers, it was investigated whether distorted perceptions of response-reinforcement independence associated with depression and helplessness could be reversed by therapy with solvable problems. It was discovered that helpless and depressed subjects showed smaller skill expectancy changes than nondepressed and nonhelpless subjects.

Solvable problems therapy wholly reversed perceptions of response-reinforcement independence in helpless and depressed subjects. The findings replicate those reported by Miller and Seligman (1973). Klein and Seligman conclude from these experiments that cognitive distortions (belief that responding will be ineffective) undermine the motivational deficits in helplessness and depression.

Further support for the learned helplessness model of depression is offered by Teasdale (1978), who reported that depressed and nondepressed subjects receiving unsolvable problems showed deficits in anagram performance and some evidence of lowered mood compared with nondepressed receiving no unsolvable problems. Experience with solvable problems reversed anagram deficits and low mood associated with learned helplessness.

There have been a number of studies which have reported findings that are contradictory and inconsistent with the above mentioned studies (see Journal of Abnormal Psychology, 1978, 87, 4). Of the formulations discussed in this chapter, the learned helplessness model of
depression is the most recent, and consequently it has received the least amount of research attention. As this theory undergoes more rigorous, systematic investigation, it will become better refined and better understood as a model of depression.

Recent Empirical Findings

Having now completed a thorough description of the three major theories of depression, (Beck, 1967; Lewinsohn, 1974; Seligman, 1972), a review of the recent inconsistent empirical findings regarding the role "negative cognitive distortion" in the development and maintenance of depression is in order.

Beck (1967) and, to a large extent, Seligman (1974) contend that what lies at the root of depression—that is, what basically causes and maintains depressive episodes—is a "negative cognitive set." Beck (1967) further postulates that a motivation to maintain consistency between attitudes and behaviors causes depressed people to negatively distort messages from their environments in a way that is consistent with their negative cognitive structure, that is—they distort reality in a negative direction.

The four recent studies, about to be described, have provided evidence which conflict to some degree with the "cognitive distortion" postulation. These studies have all pointed to indications that depressed individuals process their environments accurately and that nondepressed individuals take environmental input and distort it in a positive direction. These findings indirectly lend support to Lewinsohn's contention that depression is a result of loss of response-contingent positive reinforcement from the environment and that the cognitive manifestations are secondary.
In a study designed to test hypotheses derived from cognitive behavioral theories of depression, Nelson and Craighead (1977) found that, consistent with Beck's theory, depressed subjects recalled less positive and more negative feedback than controls, when in a high rate of reinforcement condition. This finding particularly supports Beck's contention that depressed persons are "hyperresponsive to stimuli suggestive of loss and blind to stimuli representing gain" (Beck, 1967). A second finding however, was that nondepressed subjects underestimated the frequency of negative feedback, while depressed subjects were accurate in their recall of negative feedback, when in a low rate of reinforcement condition. This finding is clearly inconsistent with Beck's theory.

De Membreu and Craighead (1977) in a study of 48 male veterans, found that when rates of positive feedback were low, there was little or no distortion for depressed or nondepressed subjects. These findings are similar to Nelson and Craighead's (1977).

In an analog study with depressed and nondepressed students, Alloy and Abramson (1979) found that depressed subjects were actually more accurate in their estimates of contingency between their response and outcome, than were nondepressed. Nondepressed subjects, in fact, overestimated the degree of contingency between their responses and outcome. These findings suggest that nondepressed individuals succumb to various "cognitive illusions" (Mischel, 1973) and engage in distortions of negative or neutral environmental feedback in a positive direction. These findings, which are contrary to both Beck's and Seligman's theories of depression, indicate that depressed individuals engage in self-aggrandizing illusions of reality.
Finally, Lewinsohn, Mischel, Chaplin, and Aarons (1980) have recently explored the role of self-perceptions with clinically depressed subjects. These writers point out that Beck's (1967) postulation that a cause of depression is an "unrealistically negative view of self" is confounded by the possibility that a negative self-image may partly reflect a recognition of one's own lack of positive interpersonal characteristics and competence.

In their recent study, these researchers sought to disentangle unrealistic negative self-perceptions from actual social deficits. It was found that depressed subjects were more accurate in their self-perceptions than were controls. That is, depressed subjects' self-ratings were congruent with those of observers, whereas nondepressed subjects perceived themselves more positively than did observers. Non-depressed subjects engaged in self-enhancing distortions whereas depressed subjects were surprisingly realistic.

The underlying rationale for the present study should now be more clearly evident. This investigation, following the work of Lewinsohn, et al. (1980), seeks to further explore the accuracy of self-perceptions with a nonclinical population. It is hoped that such examination will further elucidate the role of cognitions in depression.

The discussion now turns to the influence that sex and sex-role identity have on the development of depression. Following this, it will be explained how the issue of sex-roles in depression is related to the issue of "cognitive distortion" in depression.
Sex, Sex-Roles, and Depression

Despite the enormous methodological problems inherent in any assessment of prevalence of mental illness in any form, the findings with regard to male versus female depressives show amazing consistency—females preponderate among depressives. The evidence that women suffer from depression more than men comes from four sources: 1) clinical observations of patients coming in for treatment; 2) surveys of persons not under treatment; 3) studies of suicide and suicide attempters; 4) studies of grief and bereavement (Weissman and Klerman, 1977).

One hypothesis for the disproportionately high rate of female depressives holds that response set and labelling processes serve to overestimate the number of depressed females. Simply stated, the high rate of depressed females is not real, but merely reflects the"fact" that men and women perceive, acknowledge, report and seek help differently. Phillips and Segal (1969) postulate that men are more reluctant to admit unpleasant feelings since they do not believe such behavior is masculine. Further, men are less likely to seek assistance when they are experiencing psychological distress, whereas it is more socially acceptable for women to be expressive about their difficulties. Women's willingness to express affective symptoms, their perceptions of appropriate stress-coping responses and the high frequency with which they seek medical attention is presumed to account for the high rate of depression among women. Cove and Tudor (1973) point to some evidence which suggests that Phillips and Segal's (1969) explanation of sex differences among depressed persons is inadequate. They found that regardless of the selection process—that is, regardless of whether self-selection (treatment by physicians and therapists), no selection
(community surveys), or someone else initiates treatments (admissions to hospitals), women have higher rates of depression than do men. This evidence appears to preclude the contention that the preponderance of female depressives is a function of reporting bias.

The hypothesis that women feel freer to acknowledge depressive symptoms is countered by Clancy and Gove's (1974) evidence that men did not judge having psychiatric symptoms as less desirable than did women. Nor did women report the expression of psychiatric symptoms as more socially acceptable.

Although women do, in fact, utilize health care services more frequently than do men, this does not account for the preponderance of depressed women in community surveys, which consist of persons not under psychiatric treatment. When all these findings are considered, the preponderance of female depressives appears to be real, and not an "artifact" of reporting bias (Weissman and Klerman, 1977).

Sociological, psychological and biophysical explanations have been offered for the sex differences in the frequency of depression. While vast research findings focusing on the relationship between female endocrinology and depression have accounted for some portion of the sex differences in depression, physiological factors do not account for the large differences (Weissman and Klerman, 1977). The sociological explanations focus on the low social status and legal and economic discrimination faced by women, while the psychological explanations emphasize the internalization of role expectations, which result in a state of learned helplessness.
Examining the sociological view first, feminists and sociologists (Bernard, 1973; Chesler, 1972; Friedan, 1974; Rawlings and Carter, 1977) propose that many women experience depression due to the inherently depressing situation in which they find themselves. Due to social discrimination, it becomes difficult for them to achieve mastery by direct action and self assertion. Essentially, as a result of sexist oppression, women are devoid of power in their personal lives as well as in societal structure and this inferior status leads women to experience chronic low self-esteem, low aspirations, helplessness and depression.

Gove (1974) has found that the higher overall rates of mental illnesses for females are largely accounted for by higher rates of married women. Gove attributes the disadvantages of married women to several factors: role restriction; housekeeping being frustrating and of low prestige; the unstructured role of wife, allowing time for brooding; and even if the married woman works, her position is usually less favorable than a working man's. Marriage it seems, has a detrimental effect for females due to the traditional stereotyped role of wife. Marriage is a disadvantage to women in that it serves to exaggerate the low social status that women, in general, share.

In considering the sociological view, it may be said that this perspective attributes the source of depression among women as existing in the social environment.

The psychological explanations for the high rates of depression among women vary widely. However, with the emergence of the feminist critique, traditional psychoanalytic explanations for female depression have been replaced with explanations focusing on the internalization of unhealthy societal role expectations.
Classic "feminine" values, which are induced in young girls via socialization, consist of dependency, passivity, emotionalism, naivete, and fearfulness. These values, which closely parallel depressive symptomology, are internalized in females during childhood, so that they come to believe that the stereotype of femininity is expected, valued, and normative. Women, thus, develop a limited repertoire of coping skills, and a cognitive set against assertion.

Chesler (1972) describes women as facing a "no win" situation, in that a woman who behaves in accordance with her ascribed sex-role and is passive, dependent, and emotional is viewed as being neurotic and incompetent. Yet, if a woman behaves assertively, rationally, and dominantly, she is said to be rejecting her "femininity." The psychological view of female depression emphasizes the internalized beliefs and expectations that have been induced in women.

Although the research literature regarding sex-roles in depression is scant, Ray and Bristow (Note 1) provide some evidence supporting their importance. They administered the Benson Sex-Role Inventory (BSRI, 1974) to depressed and nondepressed women and found feminine sex-typed identities significantly more frequently than androgynous or masculine sex-typed identities among depressed women. These findings must be viewed cautiously however, because it is unknown if the pattern of sex role scores were the same before the women became depressed.

Contrary to these findings, Jones, Chernovetz, and Hasson (1978), using the BSRI, concluded that there are no sex-role differences in susceptibility to learned helplessness, the analog of depression. This finding too, must be viewed cautiously since the helpless and nonhelpless
groups did not differ significantly on any dependent variable, indicating that their helpless manipulation was not effective.

Baumom and Danker-Brown (1979) report results indicating that masculine sex-typed and feminine sex-typed persons are particularly susceptible to the development of helplessness. These findings are somewhat confusing, since the frequently observed sex difference in the incidence of depression is hypothesized to be due to the increased susceptibility of feminine sex-typed persons.

The present investigation addresses itself to the role of sex and sex-role identity in depression, in an attempt to shed further light on the sex-ratio phenomenon in the incidence of depression.

Summary

The purpose of the present study is twofold. First this study attempts to explore the role of cognitions in depression by comparing self-ratings of depressed and nondepressed on a social competence rating scale with the rating made by others. In this manner it is hoped that self-perceptions (cognitive factors) will be disentangled from reality. Second, this study will attempt to further elucidate the role of sex and sex-role stereotypes in depression by comparing these variables with depressed and nondepressed subjects. Further, comparisons between self-rating and others ratings will be analyzed controlling for sex and sex-role stereotype in order to determine whether self-perceptions and reality vary by these factors.
CHAPTER III

METHOD

Overview

Ninety-six undergraduate students at The Ohio State University served as subjects in the study. Only the data collected on eighty-two of these subjects were included in the analyses, since fourteen students who were classified as depressed at the time of screening were not considered depressed at the time of treatment. Diagnostic categories were determined by scores on the Beck Depression Inventory (Beck, 1967). Subjects participated in small discussion groups for 45 minutes, which were observed by trained graduate students. Following the group interactions, subjects rated themselves and each other on a rating scale of social competence (Numoz, Note 2); observers rated them as well.

A 2 x 2 x 2 (diagnostic category, depressed, nondepressed; by the type of rating, self or observer; by sex, male or female) design was employed. Scores on the rating scale of social competence served as the dependent variables.

A second analysis consisted of another three-way (2 x 2 x 2) ANOVA, this time with diagnostic category, type of rating, and sex-role orientation as factors. The third factor for this analysis consisted of stereotyped (masculine or feminine) versus nonstereotyped (androgynous or
undifferentiated) sex role categories. Appropriate post hoc tests were employed to further explore the significant findings of both these analyses.

**Measures**

The following measures were used in the study:

1. The Beck Depression Inventory (BDI; Beck, 1967; see Appendix A) is a "trait"-oriented depression instrument composed of twenty-one groups of statements concerning depressive symptoms and attitudes. Respondents indicate answers by circling the statement in each group which most closely reflects their mode of functioning. The scores below represent estimates of depression levels:

   - 0 - 4  None or minimal depression
   - 5 - 7  Mild depression
   - 8 - 15 Moderate depression
   - 16 - 63 Potentially serious depression (Lewinsohn, Munoz, Youngren, & Zeiss, 1978)

   All depressed subjects in the present study had BDI scores of nine or above at both time of screening and time of treatment, and thus were considered to be moderately depressed.

   Beck (1967) reported a split-half reliability coefficient of 0.93 (with Separman-Brown correction) in a sample of ninety-seven cases for this instrument and has summarized a great number of validity studies utilizing this scale, all of which tend to support the utility of the BDI as a valid measure of depression (Beck, 1967: pp. 195-207).

2. The Depression Adjective Check List (DACL; Lubin, 1965; see Appendix B), from G (general) is a "state"-oriented instrument composed of a list of thirty-four adjectives from which the
respondent is to check those which characterize his or her current mood. The list is comprised of twenty-two positive adjectives and twelve negative adjectives. Lubin (1965) reports a split-half reliability coefficient of 0.93 for this scale, while Nunnally, Wittig, Hamilton, and Kurland (1963) found scores on the DAQL to correlate 0.66 with BDI scores. Further data relevant to this scale has been reported by Lubin (1965). The DAQL, in this study, was used to measure transient mood changes occurring during treatment.

3. The Bem Sex Role Inventory (BSRI; Bem, 1974; see Appendix C) consists of a masculinity and femininity scale, each of which contains twenty personality characteristics. The BSRI also includes a social desirability scale that is completely neutral with respect to sex. Items for the masculinity and femininity scales were selected if they were judged to be more desirable in American society for one sex or the other. Specifically, judges were asked to utilize a seven-point scale ranging from 1 ("not at all desirable") to 7 ("extremely desirable") in order to rate the desirability in American society of each approximately 400 personality characteristics.

The BSRI requires the respondent to indicate on a seven-point scale how well each of the sixty masculine, feminine, and neutral personality characteristics describes him or herself. The scale ranges from 1 ("Never or almost never true") to 7 ("Always or almost always true"). On the basis of his or her responses, each person receives four major scores: a masculinity score, a femininity score, an androgyny score, or
an undifferentiated score. The androgyny score reflects relatively strong masculine and feminine characteristics. The undifferentiated score reflects relatively low amounts of both masculine and feminine characteristics that the person included in his or her self-description.

Be(1974) reported internal consistency data on the BSRI based on 444 male and 279 female Stanford University students and 117 males and 77 females at Foothill Community College. The results showed masculinity, femininity and social desirability scores to be highly reliable in both the Stanford sample (Masculinity $\alpha = .80$; Femininity $\alpha = .80$; Social desirability $\alpha = .75$) and in the Foothill sample (Masculinity $\alpha = .86$; Femininity $\alpha = .82$; Social Desirability $\alpha = .70$). The reliability of the androgyny difference score was .85 for the Stanford sample and .86 for the Foothill sample. Test-retest reliabilities proved to be high when the inventory was administered to a sample of fifty-six males and females:

Masculinity $r = .90$; Femininity $r = .90$; Androgyny $r = .93$;

Social Desirability $r = .90$. Undifferentiated scores were not included in these analyses. In the present study, the BSRI was used to categorize subjects into "stereotype" (masculine or feminine typed individuals) or "nonstereotype" (androgynous or undifferentiated) groups.

4. The Rating Scale of Social Competence (RSSC; Mm, Note 2; see Appendix D) consists of the following seventeen desirable attributes (1) friendly, (2) popular, (3) assertive, (4) attractive, (5) warm, (6) communicates clearly, (7) socially skillful,
(8) interested in other people, (9) understands what others say, (10) humorous, (11) speaks fluently, (12) open and self-disclosing, (13) reasonable, (14) confident, (15) trusting, (16) has a positive outlook on life, (17) notices good experiences. Ratings are made on a seven-point scale (1 = "Not at all characteristic," 7 = "Extremely characteristic"). Items 1-12 are assumed to measure "social skill" and items 13-17 are assumed to be reflective of thoughts and attitudes, which should be interpersonally observable and important according to Beck (1967). Lewinsohn, et al. (1980) used the RSSC in a study closely similar to the present study. In order to determine whether combining these seventeen items into a single measure, labelled "social competence" is justified, these researchers assessed the internal consistency of this aggregate measure using the Kuder-Richardson Formula 20 (coefficient alpha). For the observer ratings, the KR-20 values were .95 and .97 at two separate assessment times. For self-ratings the values were .89 and .91. These high KR-20 values indicate that the items used in this study all reflect aspects of the same construct.

In the present study, the RSSC was used by observers to rate the behavior of subjects participating in discussion groups and by the subjects, to rate themselves and each other. Pilot runs were conducted prior to the experiment, in order to determine inter-rater reliability among the trained observers participating in the study.
Subjects

Three hundred and eighty students enrolled in Education Special Services 289 (Freshman Early Experience Program) were screened to serve as subjects in this study. All students participating in the study were between the ages of 18 and 23, and all were either freshmen or sophomores. Selection of subjects was based on a screening process whereby the investigator administered the Beck Depression Inventory (Beck, 1967) to prospective subjects five to fourteen days prior to treatment. A cutoff score of nine and above on the BDI was used to identify "depressed" subjects; those scoring below five were identified as "nondepressed."

One hundred and forty-one students, scoring between five and eight, inclusive, were disqualified from participating in the study. Forty-two depressed and one hundred and one nondepressed subjects declined participation in the study, or were unable to be contacted by the investigator. The remaining ninety-six students, who agreed to participate as subjects, were then randomly assigned by sex and BDI score to groups of six members. Within these groups there were three males and three females, three of whom were depressed and three of whom were not depressed. Mean BDI scores were 12.6 and 1.5 for depressed and nondepressed, respectively.

Upon assignment to groups, subjects were contacted by the investigator and asked to participate in a "getting acquainted group activity." Due to scheduling problems, random groups of six were not possible in every case. Some groups consisted of slightly more or less than six persons (actual mean group size was 5.6), but all groups contained at least two males and two females, half of whom were depressed and nondepressed.
Observers

The eighteen group observers were graduate students recruited from an introductory psychological assessment course at The Ohio State University. The observers were not paid for their services, but instead received course credit. All observers were trained for their role in the study. Training included approximately six hours of practice with videotaped groups as well as lecture-discussion type instruction. In addition, an observer’s instruction sheet (see Appendix E) was provided which briefly described the rating form and the importance of reliability, although specific instructions on how to rate individuals on social skill attributes was not provided. Post-training inter-rater reliability proved to be .88.

All observers were blind to the diagnostic categorization of the subjects and to the hypotheses of the study. They were aware only that the study was concerned with “how mood affects group interaction.” An explanation of the experimental design and hypotheses was provided once all the data had been collected.

Procedures

Upon arrival, subjects were greeted by an experimenter who was blind to the hypotheses of the study. Subjects were asked to complete a research consent form (see Appendix F), the BDI (Beck, 1967), the BAQ (Lubin, 1965), and the BSEI (Rem, 1974).

Subjects were not made aware that the study concerned depression. Rather, all participants were told that as part of the study, the investigator was interested in learning more about how “mood” influences how people who are strangers relate to one another.
Treatment groups took place in an experimental room containing one-way windows on two adjacent walls. The seating arrangement was circular. The following instructional set was read by the experimenter:

Thank you for agreeing to participate in this part of the research study. Before we begin let me explain that your participation in the group interaction is strictly voluntary and you are free to leave at any time. All information obtained as a result of your participation in the study will be kept strictly confidential. The investigator of this study is interested in learning how "mood" influences how people who are strangers relate to one another. During the next 45 minutes you will get acquainted with each other. Each of you will take approximately three minutes to tell the group about yourself and after everyone has been introduced you may continue conversing with one another for the remaining time. At the conclusion of the group interaction, you will be asked to complete some questions and you will then be finished. The investigator will inform you of the details of the study at that time.

At the conclusion of the group interactions, subjects were asked to complete the DACL (Lubin, 1965) once again. Participants then rated themselves and each other, on the basis of their performance in the group, using the Rating Scale of Social Competence (Munox, Note 2). Subjects were debriefed by the investigator and paid three dollars for their participation in the study.

Of the ninety-six subjects who participated in treatment groups, data collected on fourteen subjects were eliminated from the analyses because their BDI scores changed from ten or above at the time of screening to below nine at the time of treatment. The remaining eighty-two subjects consisted of thirty-three depressed and forty-nine nondepressed subjects. More specifically, there were twelve depressed males, twenty-one depressed females, twenty-eight nondepressed males and twenty-one nondepressed females. Forty-four subjects were classified
as stereotyped and thirty-eight as nonstereotyped, on the basis of their responses to the BSEI (Rom, 1974).

**Statistical Hypotheses**

\( H_1 \) A significant main effect for the diagnostic category factor (depressed, nondepressed) will be demonstrated on the dependent variables. Specifically, nondepressed subjects will rate themselves higher than will observers or others. Depressed subjects will show no significant difference in their self-ratings as compared to others or observers. That is, depressed individuals will be more "realistic" in their self-appraisals.

\( H_2 \) A significant main effect for the sex factor (male, female) will be demonstrated on the dependent variables. Specifically, nondepressed men will rate themselves higher than will any other group (nondepressed women or depressed men and women) as compared to ratings given by observers or others.

\( H_3 \) A significant main effect for the sex-role factor (stereotyped, nonstereotyped) will be demonstrated on the dependent variables. Specifically, stereotyped (masculine, feminine) subjects will rate themselves lower than nonstereotyped (androgyneous, undifferentiated) subjects as compared to others' or observers' ratings.

**Design and Analysis**

The experimental design for this investigation is the Ex Post Facto design described by Campbell and Stanley (1963). The first analysis was a 2 x 2 x 2 analysis of variance on the mean "social competence" scores. The first factor consisted of the diagnostic category (depressed, nondepressed) of the subjects. The second factor consisted of type of rating (self or observer). Sex (male, female) constituted the third factor.

The second analysis consisted of another three-way (2 x 2 x 2) ANOVA, this time with diagnostic category, type of rating, and sex-role as factors. The third factor for this analysis consisted of stereotyped
(masculine or feminine) versus nonstereotyped (androgynous or undifferentiated) sex-role categories.

Significant interactions were followed up with Scheffé post-hoc analyses (Kennedy, 1978).

Reliability tests were conducted to determine inter-rater reliability during treatment.
CHAPTER IV

RESULTS

Depressed Versus Nondepressed Categories

Since the major analyses of this study are concerned with the differential ratings between depressed and nondepressed subjects, it is important that the criterion used to identify depressed and nondepressed subjects be valid and reliable. As mentioned in the preceding chapter, the Beck Depression Inventory (Beck, 1967) was the criterion used in this study. The eighty-two subjects who participated in this study all rated either four and below (nondepressed group) or ten and above (depressed group) on the BDI at the time of screening. Five to fourteen days later, at the time of treatment, subjects who rated four and below on the BDI were considered nondepressed, while subjects who scored nine and above were considered depressed. The stability of these scores over time indicate that those subjects identified as depressed were indeed experiencing at least a mild depressive episode.

Another instrument, the Depression Adjective Checklist (Lubin, 1965) measures more transient depressive moods. Ten minutes before the subjects participated in the discussion groups they completed both the Depression Adjective Checklist and the Beck Depression Inventory. Prior to treatment, nine percent (8 subjects) of those subjects who were identified as depressed on the BDI were not depressed according to the DACL. Nine percent (8 subjects) who were identified as nondepressed on
the BDI were depressed according to the DAACL, prior to treatment. Immediately following the group interaction, the DAACL was administered again. Scores on the checklist changed for 23% (19 subjects) of the subjects. Sixteen subjects (19.5%) who were depressed on the DAACL prior to treatment were not depressed immediately following treatment according to their post-group DAACL scores. Three subjects (3.5%) who were non-depressed according to the DAACL prior to treatment were identified as depressed immediately following treatment. The Pearson's reliability coefficient between the pre-group DAACL scores and post-group DAACL scores was .58 (p < .0001).

The post-group DAACL scores matched perfectly with the pre-group BDI scores, with the exception of two subjects who were identified as depressed on the BDI, but non-depressed on the DAACL. The reliability between pre-group BDI scores and pre-group DAACL scores was .64 (p < .001) and reliability between pre-group BDI scores and post-group DAACL scores was .37 (p < .0001).

In sum, while the DAACL was sensitive to minor mood fluctuations and some changes did occur, for the most part, those subjects identified as depressed were indeed depressed as were those who were identified as non-depressed.

**Observer Reliability**

It is important to establish the reliability of the observer ratings since the major analyses of this study compared self- and observer ratings. Eighteen trained observers rated small subsets of the eighty-two subjects and thus, simple correlations of pairs of observer ratings across all subjects was not possible. Instead, it was necessary to identify pairs
of observers who saw the same subset of common subjects, and then compute separate reliability coefficients for those pairs. Separate reliability coefficients for all pairs of observers who rated four or more subjects in common were computed, and then the average of these correlations served as an estimate of observer reliability. This method of computing reliability was employed by Levinsohn, et al. (1980) in a similar study. Eight pairs of observers rated four or more subjects in common. Their mean number of common subjects was six and the eight reliability coefficients had a mean (computed using r to t transformations) reliability of .75.

In sum, although the inter-rater reliability for observations made of the treatment groups (r = .75) was not as high as the reliability of observations made of the videotaped training groups (r = .88), it was still high enough to allow a test of the major hypotheses of this study.

Perceptions of Depressed and Nondepressed Males and Females

The first analysis of this study was a 2 x 2 x 2 (diagnostic category x sex x type of rating) analysis of variance on mean "social competence" scores. Table 1 shows the means and standard deviations of the scores for each of the cells in this design. Higher means indicate that the attributes on the social competence scale were seen as more generally descriptive of these individuals. Table 2 summarizes the results of the analysis.

A significant main effect emerged for the diagnostic category factor $[F(1,78) = 0.7820, p < .05]$. No significant main effect was demonstrated for the sex factor. A main effect for the type of rating factor was significant $[F(2,178) = 84.0210, p < .0001]$ and a significant
Table 1
Means and Standard Deviations of the Ratings Received by the Two Groups (Sex nested within Diagnostic Category)

<table>
<thead>
<tr>
<th>Group</th>
<th>Self Ratings Mean (SD)</th>
<th>Observer Ratings Mean (SD)</th>
<th>Others' Ratings Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>89.8 (16.4)</td>
<td>70.2 (8.9)</td>
<td>91.7 (9.3)</td>
</tr>
<tr>
<td>Females</td>
<td>85.1 (12.1)</td>
<td>70.7 (10.5)</td>
<td>84.2 (12.4)</td>
</tr>
<tr>
<td>Nondepressed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>91.1 (11.3)</td>
<td>69.5 (6.6)</td>
<td>93.5 (7.4)</td>
</tr>
<tr>
<td>Females</td>
<td>88.1 (21.6)</td>
<td>70.6 (9.2)</td>
<td>89.3 (11.1)</td>
</tr>
</tbody>
</table>

Note: N = 12, 21, 28, 21 for depressed males, depressed females, nondepressed males, and non-depressed females, respectively. Ratings are on a 7-point scale, with higher scores indicating that the adjectives were seen as being more descriptive of the individuals.
<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Category (DC)</td>
<td>1,78</td>
<td>881.834</td>
<td>0.782</td>
<td>.05</td>
</tr>
<tr>
<td>Sex (S)</td>
<td>1,78</td>
<td>3.174</td>
<td>0.0001</td>
<td>N.S.</td>
</tr>
<tr>
<td>DC x S</td>
<td>1,78</td>
<td>226.000</td>
<td>0.961</td>
<td>N.S.</td>
</tr>
<tr>
<td>Error</td>
<td>78</td>
<td>233.168</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rating (R)</td>
<td>2,176</td>
<td>7,454.478</td>
<td>80.021</td>
<td>.0001</td>
</tr>
<tr>
<td>DC x R</td>
<td>2,176</td>
<td>296.833</td>
<td>3.186</td>
<td>.01</td>
</tr>
<tr>
<td>S x R</td>
<td>2,176</td>
<td>61.552</td>
<td>0.660</td>
<td>N.S.</td>
</tr>
<tr>
<td>DC x S x R</td>
<td>2,176</td>
<td>34.946</td>
<td>0.375</td>
<td>N.S.</td>
</tr>
<tr>
<td>Error</td>
<td>176</td>
<td>93.159</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
interaction occurred between type of rating and diagnostic category \( F(2,176) = 3.1860, p < .0138 \). In order to explore the significant findings further, the Scheffe method of analysis of factor effects (Kennedy, 1978) was employed to compare the means of the two diagnostic categories by self, observer, and other ratings. Table 3 shows the mean scores and standard deviations for depressed and nondepressed subjects (sex combined) for all three ratings, and Figure 1 depicts the scores graphically. At the .05 significance level, this test yielded a between means critical difference of 3.6932. The differences between the self and observer ratings were 14.75 for depressed subjects and 19.59 for nondepressed subjects, both of which exceed the critical difference largely. Observers perceived both depressed and nondepressed subjects as significantly less "socially competent" than the subjects perceived themselves.

The differences between the means of the self and other's ratings were 1.26 and 2.82 for depressed and nondepressed subjects respectively, revealing no significant differences between how subjects perceived themselves as compared to how others saw them.

The differences between the means of the observer's and others' ratings were 13.9 for depressed subjects and 21.41 for nondepressed subjects, indicating that observers rated both depressed and nondepressed subjects significantly lower than did other subjects.

Depressed subjects rated themselves significantly lower than nondepressed subjects rated themselves, the difference between means being 4.555. There was no significant difference between how observers rated depressed and nondepressed subjects, however, others rated depressed
Table 3
Means and Standard Deviations of the Ratings Received by Depressed and Nondepressed Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Self-Ratings</th>
<th>Observer Ratings</th>
<th>Others' Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(SD)</td>
<td>(SD)</td>
</tr>
<tr>
<td>Depressed</td>
<td>85.1</td>
<td>70.7</td>
<td>83.8</td>
</tr>
<tr>
<td></td>
<td>(12.2)</td>
<td>(10.5)</td>
<td>(12.4)</td>
</tr>
<tr>
<td>Nondepressed</td>
<td>89.8</td>
<td>70.0</td>
<td>92.0</td>
</tr>
<tr>
<td></td>
<td>(16.41)</td>
<td>(7.8)</td>
<td>(9.3)</td>
</tr>
</tbody>
</table>

Note: N = 38 and 49 for the depressed and nondepressed groups, respectively. Ratings are on a 7-point scale, with higher scores indicating that the adjectives were seen as being more descriptive of the individuals.
subjects significantly lower than they did nondepressed subjects (difference between means being 7.63).

In summary, depressed subjects perceived themselves as less socially competent than nondepressed subjects perceived themselves. Others also saw depressed persons as less socially competent as compared to non-depressed subjects. There was no significant difference between how subjects rated themselves and how others rated them. Simply stated, self-ratings and others' ratings were congruent. Observers perceived both depressed and nondepressed subjects significantly lower than the subjects saw themselves and lower than how others perceived both groups.

Because there was no significant main effect for the sex factor follow up tests were not employed. However, Table 4 shows the means and standard deviations of the ratings received by males and females, and Figure 2 depicts these scores graphically.

Perceptions of Depressed and Nondepressed, Stereotyped and Nonstereotyped Subjects

The second analysis consisted of another 2 x 2 x 2 (diagnostic category x sex-role orientation x type of rating) analysis of variance. Table 5 shows the means and standard deviations for each of the cells in this design. Again, higher means indicate that the attributions on the social competence scale were seen as more generally descriptive of these individuals. Table 6 summarizes the results of this analysis.

This analysis revealed a significant main effect for the diagnostic category factor ($F = (1,78) 4.62, p < .05$). No significant main effect emerged for the sex-role orientation factor. The type of rating factor again interacted significantly with the diagnostic
Table 4

Means and Standard Deviations of the Ratings Received by Males and Females

<table>
<thead>
<tr>
<th>Group</th>
<th>Self-Ratings</th>
<th>Observer Ratings</th>
<th>Others' Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Males</td>
<td>89.3 (11.9)</td>
<td>69.5 (6.9)</td>
<td>90.1 (10.6)</td>
</tr>
<tr>
<td>Females</td>
<td>86.6 (17.4)</td>
<td>72.2 (10.4)</td>
<td>87.3 (11.7)</td>
</tr>
</tbody>
</table>

Note: N = 40 and 42 for males and females, respectively. Ratings are on a 7-point scale, with higher scores indicating that adjectives were seen as being more descriptive of the individuals.
Table 5
Means and Standard Deviations of the Ratings Received by the Two Groups (Sex-Role nested within Diagnostic Category)

<table>
<thead>
<tr>
<th></th>
<th>Self-Ratings</th>
<th>Observer Ratings</th>
<th>Others' Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereotyped</td>
<td>83.7 (12.2)</td>
<td>69.6 (10.6)</td>
<td>85.2 (13.7)</td>
</tr>
<tr>
<td>Nonstereotyped</td>
<td>86.0 (12.8)</td>
<td>71.5 (10.6)</td>
<td>83.4 (11.7)</td>
</tr>
<tr>
<td>Nondepressed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereotyped</td>
<td>86.7 (19.1)</td>
<td>69.6 (8.5)</td>
<td>91.9 (10.1)</td>
</tr>
<tr>
<td>Nonstereotyped</td>
<td>95.0 (9.5)</td>
<td>70.4 (67.7)</td>
<td>93.0 (8.1)</td>
</tr>
</tbody>
</table>

Note: N = 14, 19, 30, 19 for depressed, stereotyped subjects; depressed, nonstereotyped subjects; nondepressed, stereotyped subjects; and nondepressed, nonstereotyped subjects, respectively. Ratings are on a 7-point scale, with higher scores indicating that the adjectives were seen as being more descriptive of the individuals.
Table 6
Results of the 2 x 2 x 2 Analysis of Variance
(Diagnostic Category x Sex-Role x Rating)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Category (DC)</td>
<td>1,78</td>
<td>1,062.385</td>
<td>4.617</td>
<td>.03</td>
</tr>
<tr>
<td>Sex Role (SX)</td>
<td>1,78</td>
<td>280.765</td>
<td>1.220</td>
<td>N.S.</td>
</tr>
<tr>
<td>DC x SX</td>
<td>1,78</td>
<td>115.984</td>
<td>0.504</td>
<td>N.S.</td>
</tr>
<tr>
<td>Error</td>
<td>78</td>
<td>230.078</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rating (R)</td>
<td>2,156</td>
<td>7,934.965</td>
<td>86.388</td>
<td>.0001</td>
</tr>
<tr>
<td>DC x R</td>
<td>2,156</td>
<td>356.428</td>
<td>3.815</td>
<td>.02</td>
</tr>
<tr>
<td>SR x R</td>
<td>2,156</td>
<td>132.430</td>
<td>1.441</td>
<td>N.S.</td>
</tr>
<tr>
<td>DC x SR x R</td>
<td>2,156</td>
<td>57.989</td>
<td>0.631</td>
<td>N.S.</td>
</tr>
<tr>
<td>Error</td>
<td>156</td>
<td>91.852</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
category factor \[ F = (2,156) 86.39, \ p \ < .0001] \]. Scheffe post hoc comparisons were employed once more to explore the significant differences. This time, the Scheffe test yielded a between means critical difference of 3.666. This critical value is just slightly lower than the critical value computed for the first analysis and thus, the significant differences between mean scores given by self, observers or others for depressed and nondepressed subjects are the same as those which emerged for the first analysis.

Although there was no significant main effect or interaction on the sex-role orientation factor, Table 7 is provided which shows the means and standard deviations of the ratings received by stereotyped and nonstereotyped subjects, and Figure 3 depicts these scores graphically.

Status of the Hypotheses

A summary of the above findings as they relate to the statistical hypotheses specified in Chapter III is as follows:

<table>
<thead>
<tr>
<th>Accepted</th>
<th>( H_1(a) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Accepted</td>
<td>( H_1(b) )</td>
</tr>
<tr>
<td>Accepted</td>
<td>( H_1(c) )</td>
</tr>
<tr>
<td>Not Accepted</td>
<td>( H_2(a) )</td>
</tr>
<tr>
<td>Not Accepted</td>
<td>( H_2(b) )</td>
</tr>
</tbody>
</table>

- A significant main effect for the diagnostic category (depressed, nondepressed) will be demonstrated on the dependent variable.
- Nondepressed subjects will rate themselves higher than will observers or others.
- Depressed subjects will show no significant difference in their self-ratings as compared to ratings given by others or observers.
- A significant main effect for the sex factor (male, female) will be demonstrated on the dependent variables.
- Nondepressed men will rate themselves higher than any other group (nondepressed
Table 7
Means and Standard Deviations of the Ratings
Received by Stereotyped and Nonstereotyped Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Self-Ratings</th>
<th>Observer Ratings</th>
<th>Others' Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Stereotyped</td>
<td>85.7 (16.9)</td>
<td>69.6 (0.0)</td>
<td>90.0 (11.5)</td>
</tr>
<tr>
<td>Nonstereotyped</td>
<td>90.6 (12.0)</td>
<td>70.9 (8.7)</td>
<td>88.2 (11.1)</td>
</tr>
</tbody>
</table>

Note: N = 44 and 38 for stereotyped and nonstereotyped, respectively. Ratings are on a 7-point scale, with higher scores indicating that adjectives were seen as being more descriptive of the individuals.
Table 7
Means and Standard Deviations of the Ratings
Received by Stereotyped and Nonstereotyped Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Self-Ratings</th>
<th>Observer Ratings</th>
<th>Others' Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Stereotyped</td>
<td>85.7 (16.9)</td>
<td>69.6 (10.0)</td>
<td>90.0 (11.5)</td>
</tr>
<tr>
<td>Nonstereotyped</td>
<td>90.4 (12.0)</td>
<td>70.9 (8.7)</td>
<td>88.2 (11.1)</td>
</tr>
</tbody>
</table>

Note: N = 44 and 38 for stereotyped and nonstereotyped, respectively. Ratings are on a 7-point scale, with higher scores indicating that adjectives were seen as being more descriptive of the individuals.
women or depressed men and women) as compared to ratings given by observers or others.

Not Accepted -- $H_3(a)$

A significant main effect for the sex-role orientation factor (stereotyped, nonstereotyped) will be demonstrated on the dependent variables.

Not Accepted -- $H_3(b)$

Stereotyped (masculine, feminine) subjects will rate themselves lower than nonstereotyped (androgynous, undifferentiated) subjects as compared to others' and observers' ratings.
CHAPTER V
DISCUSSION

Restatement of the Problem

The present study addresses itself to hypotheses derived from the cognitive-behavioral models of depression and to the preponderance of female depressives.

The cognitive model of depression, as proposed by Beck (1967), emphasizes the role of distorted thought processes in the promotion and maintenance of depression. It assumes that depressed persons have a special penchant for perceiving their world, themselves and their future in a negative light. Conversely, it assumes that nondepressed persons accurately perceive their environments and thus are less prone to depression. But how does this theory account for the greater number of depressed women?

Feminists (Bernard, 1973; Chesler, 1972; Friedman, 1974; Rawlings and Carter, 1977) contend that women face an environment that is inherently depressing, due to socialization and sexist societal structure. Behavioral theories of depression (Lewinsohn, 1974), which indirectly support this line of thinking, propose a low rate of response-contingent reinforcement as the precipitating factor leading to depression. Still others (Gove and Tudor, 1973; Radloff, 1975; Ray and Bristow, 1978), have advocated the role of sex-role identity as a determinant of susceptibility to depression. Baucom and Damer-Brown

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(1979) found that once sex-roles were taken into account, females were no more susceptible than males to learned helplessness, an analog of depression.

Recent studies (Nelson and Craighead, 1977; DeMombreum and Craighead, 1977; Alloy and Abramson, 1979; Lewinsohn, et al., 1980) have reported evidence which contradict Beck's contention that depressed individuals negatively distort messages from their environments. Lewinsohn, et al. (1980) specifically, investigated the accuracy of self-perceptions of depressed and nondepressed (clinical sample) subjects and found that depressed individuals were surprisingly more accurate in their self-appraisals than were controls. That is, self-ratings made by depressed individuals generally matched the ratings given by trained observers, whereas the controls perceived themselves more positively than others saw them.

The present study sought to further explore the findings of the Lewinsohn study, specifically controlling for sex and sex-role identity factors with a nonclinical population. In this manner, it was hoped that the role of cognitions in depression might be further elucidated as well as the influence sex and sex-role identity may have in the promotion of depression.

Findings

Two three-way analyses-of-variances were conducted on three dependent variables: self-ratings, observer ratings, and others' ratings. The first analysis (diagnostic category by sex by type of rating) revealed no significant effect for the sex factor. It was found however, that depressed subjects rated themselves significantly
lower than nondepressed subjects rated themselves. Others rated depressed subjects significantly lower than they did nondepressed subjects. Simply stated, subject's self-ratings were congruent with the ratings made by others.

There was no significant difference between how observers rated depressed and nondepressed students. The ratings given by observers for both depressed and nondepressed students were significantly lower than the self-ratings or ratings made by others.

The second analysis (diagnostic category by sex-role orientation by type of rating) revealed no significant effect for the sex-role factor. The significant differences between means which emerged for the first analysis were identical to those which emerged for the second.

Conclusions

The significant difference between the self-ratings of depressed and nondepressed students, indicate that depressed students perceived themselves less positively than nondepressed students perceived themselves. In order to determine whether these differences in perceptions are accurate or distorted, they must be compared to some measure of reality. Comparisons between self-ratings and trained observers ratings showed that the observers rated both depressed and nondepressed subjects lower than either group perceived themselves.

To the extent that social reality may be defined in terms of these objective observer ratings of behavior, this finding seems to indicate that both depressed and nondepressed subjects were distorting positively; depressed less so than nondepressed. In other words, while both depressed and nondepressed students engaged in self-enhancing distortions, the
depressed subjects were significantly more realistic than nondepressed students. This finding, however, is obscured somewhat by the relationship found between self-ratings and ratings made by other subjects. There was no significant difference between how others rated depressed and nondepressed students and how these students rated themselves, thus demonstrating congruence between how students saw themselves and how other students saw them. Others rated depressed students as significantly less socially effective than nondepressed students. This finding indicates that both depressed and nondepressed subjects were accurate in their self-perceptions and that depressed subjects are in reality less socially effective than are nondepressed.

The question crucial to the interpretation of these findings is which index—observers or other's ratings—is the most valid measure of reality? The original design of this study specified the trained observer's ratings as the reality measure, with other's ratings intended to be a supplemental index, serving as a validity check on the observer ratings. The large and surprising difference between how other's rated subjects and how observers rated the same subjects may be accounted for in two ways. First, the difference between the ratings given by observers and those given by others may be the result of a response set bias, on the part of the observers. Observers received extensive training, during which the importance of inter-rater reliability was stressed. Observers practiced, repeatedly, rating the behavior of students participating in a group discussion on a videotape. After each practice trial, the observers discussed with one another how and why they rated each subject as they did, so that they could reach
agreement as to what specific behaviors should be noticed for each of the attributes on the rating scale of social competence. In addition, the observers discussed to what extent behavior should be present or lacking to justify a rating of one, two, three and so on. Because it was so heavily stressed that the observers come to a strong agreement as to how to use the rating scale and how to observe the subjects, the reliability of the observers' ratings was high, however, the validity of their ratings is questionable. Because observers were so concerned with the reliability of their ratings, unless very atypical behavior was observed, subjects received a standard rating of four on each attribute. Their concern for inter-rater consistency prohibited them from discriminating between subtle interpersonal skill differences, to which other subjects (no training received) were more sensitive. To the extent that social reality may be defined by the normative behavior expected of an individual by other people in the same social group, the ratings made by other subjects would seem to be the more valid measure of social reality.

A second explanation for the difference between observer and other's ratings may be that, in fact, there was no largely noticeable behavioral difference between depressed and nondepressed students. Perhaps observers were extremely objective, closely observant, and from a behaviorally, realistic perspective saw no real difference between depressed and nondepressed students. If this explanation is true, however, it would seem that the observer ratings are an inadequate index of social competence, since these ratings were limited to strictly behavioral assessment. Social competence is comprised of a complex
network of skills involving emotions and cognitions, as well as behavior. For example, a socially competent individual might be one who feels comfortable in a social group, and has the ability to make others feel comfortable and relaxed. This person might be described as warm, friendly, open, confident, or trusting (all attributes on the rating scale). These kinds of skills are difficult to behaviorally define and assess. The observers who were attempting to be objective and realistic were attentive to nonverbal gestures—smiling, eye contact, body posture, as well as specific verbal behavior—tone of voice, rate of speech, and content (positive or negative, serious or humorous) of verbal messages. The observers resisted any "intuitive" feelings that they may have had regarding the individuals they observed and looked only for concrete, behavioral evidence of skill attributes or deficits. This approach to observing and rating subjects, while objective and reliable, results in indiscriminant ratings between depressed and nondepressed normal subjects. Perhaps with a more seriously depressed population, the observer ratings between depressed and nondepressed subjects would be significant. Normal depressives would not be expected to behaviorally manifest their depressive symptoms as dramatically as clinically depressed individuals. Thus, a more sensitive assessment of the behavior of normal depressives is necessary. Objective observers outside the group may be unaware of the subtle interpersonal nuances, to which other group members may be sensitive. Thus, group members would be more discriminant in their ratings. This explanation accounts to some degree for the discrepancy between other's and observer's ratings. The large discrepancy between observer and
and other ratings is probably due to the differential manner in which the rating form was seemingly used by observers and others. Observers discussed with one another specifically what kind of behavior would rate a "1," versus a "4," versus a "7" on the rating scale. Observers gave subjects a rating of "4" for each attribute that was perceived as being typically or normally descriptive of the individual. Higher ratings indicated that the attributes were seen as more generally descriptive of the individual. Subjects, however, were simply asked to rate themselves and each other. The scale ranged from "1" (not at all characteristic) to "7" (extremely characteristic), implying that a rating of "4" (the mid-point) would indicate that the attribute was perceived to be typically or normally characteristic of the individual. While observers used the scale consistently in this precise manner, the subjects were inclined to give higher scores to everyone in the group, including themselves. Subjects more freely gave ratings of "6's" and "7's" to others for whom the attributes were perhaps only slightly more descriptive. Ratings of "2" or "3" were rare. Observers frequently gave a rating of "3" when an attribute was seen as slightly less characteristic of the individual than would be normally expected. It seems as though the subjects resisted giving any ratings below a "4," perhaps due to the belief that such a "below average" rating would be unkind. Although it is difficult to say for certain, it seems that subjects were prone to give higher ratings in general, than were observers, due possibly to the fact that they were not explicitly informed that a "4" would represent a typical or average rating.
In sum, it appears that other's ratings is the most valid measure of social efficacy for a normal population. Comparisons between self and other's ratings indicated that depressed students perceived themselves less positively than nondepressed students saw themselves. The ratings between self and other's were congruent, indicating that both depressed and nondepressed students were accurate in their self-perceptions and that depressed subjects, in fact, possess more social deficits than do nondepressed.

No significant differences were demonstrated on the dependent variables for the sex or sex-role orientation factors. Specifically, there was no significant differences between how males perceived themselves as compared to how females perceived themselves, nor did observers or others perceive males and females significantly differently. These findings suggest that there is no special propensity on the part of the males or females to cognitively distort, either positively or negatively.

There was no significant difference between the self-ratings and ratings made by others or observers, for stereotyped and nonstereotyped subjects, indicating that neither stereotyped or nonstereotyped subjects engaged in any cognitive distortions, in a positive or negative direction.

These findings suggest that sex and sex-role orientation play no role in accurate self-perceptions among depressed and nondepressed subjects.
Limitations

The prime limitation of this study is the problem of generalization to a clinically depressed population. Lewinsohn et al. (1980) in a similar study with clinically depressed subjects and psychiatric and normal controls found that depressed subjects were accurate in their self-perception of social competence whereas controls distorted in a positive direction. The findings of this study with normal depressives and nondepressed normals indicate that neither group distort either positively or negatively.

The generalization of the present findings to a college student population relies upon the extent to which the sample examined represents the target population. The difficulty with obtaining an adequate number of depressed males limits the generalizability of these findings, since all males identified as depressed were included in the study and were thus not randomly selected.

A further limitation of this study is the problem involved in defining social reality. It appears that training effects account for the significant difference between observer ratings and other ratings. However, since no untrained observers were included to control for this effect, no definite conclusions can be made. Future research, including both trained and untrained observers is necessary to explore these effects. In addition, further studies will be necessary to adequately assess the reliability and validity of social competence as a viable measure.
Implications

The major finding of this study—that depressed students accurately perceived themselves as less socially competent than nondepressed students accurately perceived themselves—lends support to Peter Lewinsohn's theory of depression. The findings contradict Beck's (1967) contention that depressed individuals cognitively distort themselves, their experiences and the future in a negative direction. In regard to Lewinsohn's theory, the findings specifically support the notion that "the amount of response-contingent positive reinforcement received by an individual is a function of the instrumental behavior of the individual, i.e., the extent to which s/he possesses the skills and emits those behaviors that will elicit reinforcement from the environment." The findings from this study clearly demonstrate that depressed individuals lack social skills that nondepressed individuals possess. Coyne (1976) has found that depressed individuals induce nondepressed others to feel more anxious, hostile and rejecting. To the extent that depressed individuals become an aversive stimuli to others, they receive less positive reinforcement from others. Clearly, further research investigating amount of response-contingent positive reinforcement is necessary to conclude that lack of social competence leads to a lowering of positive reinforcement.

While this study failed to reveal any significant effects or interactions for the sex or sex-role orientation factors, it is necessary to point out that the stereotyped and nonstereotyped classifications used in this study were quite general in nature. Future studies investigating the influence of these factors on self-perception.
among depressed and nondepressed subjects, will need to more precisely define the sex-role orientation groups. In order to analyze sex-role orientation in terms of masculine, feminine, androgynous and undifferentiated groups, a large sample size is required. This is especially true when an analysis on self-perceptions is made by diagnostic category by sex by sex-role orientation.

Summary

The purpose of this experiment was to perform an analysis of the accuracy of self-perceptions among depressed and non-depressed college students, controlling for sex and sex-role orientation.

Of the three hundred and eighty students screened, eighty-two students participated in the study and were included in the analyses. These subjects were randomly assigned by diagnostic category and sex to treatment groups of six members each. Subjects participated in a 45-minute group discussion which was observed by trained graduate students. Following the group discussion, subjects rated themselves and each other on the rating scale of social competence, as did the observers.

Two three-way analyses of variance were computed on the mean "social competence" scores. The first analysis (diagnostic category by sex by type of rating) revealed main effects for the diagnostic category and type of rating factors. These two factors interacted significantly. Scheffe post hoc comparisons revealed that depressed individuals rated themselves significantly lower than nondepressed subjects rated themselves. Other's rated depressed individuals lower than nondepressed individuals as well. There was no significant
difference between how subjects rated themselves as compared to how others rated them, for both groups, thus indicating that subjects' self-perceptions were accurate. Observers did not rate depressed and nondepressed subjects significantly differently, but rated both groups lower than the subjects rated themselves or other's rated them. There was no significant effect for the sex factor.

The second analysis (diagnostic category by sex-role orientation by type of rating) revealed main effects again for the diagnostic category factor and type of rating factor. These factors interacted significantly once again. Scheffe follow up comparisons revealed the same differences between means as the first analysis. No significant main effect was revealed for the sex-role factor.
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APPENDIX A

The Beck Depression Inventory

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On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describe the way you have been feeling the last week. EXPLANATION: Circle the number beside the statement you pick. If several statements in the group seem to apply equally well, circle each. Be sure to read all the statements in each group before making your choice.

1. 0 I do not feel sad.
   1 I feel sad.
   2 I am sad all the time and I can’t snap out of it.
   3 I am so sad or unhappy that I can’t stand it.

2. 0 I am not particularly discouraged about the future.
   1 I feel discouraged about the future.
   2 I feel I have nothing to look forward to.
   3 I feel that the future is hopeless and that things cannot improve.

3. 0 I do not feel like a failure.
   1 I feel I have failed more than the average person.
   2 As I look back on my life, all I can see is a lot of failure.
   3 I feel I am a complete failure as a person.

4. 0 I get as much satisfaction out of things as I used to.
   1 I don’t enjoy things the way I used to.
   2 I don’t get real satisfaction out of anything anymore.

5. 0 I don’t feel particularly guilty.
   1 I feel guilty a good part of the time.
   2 I feel guilty most of the time.
   3 I feel guilty all of the time.

6. 0 I don’t feel I am being punished.
   1 I feel I may be punished.
   2 I expect to be punished.
   3 I feel I am being punished.

7. 0 I don’t feel disappointed in myself.
   1 I am disappointed in myself.
   2 I am disgusted with myself.
   3 I hate myself.

8. 0 I don’t feel I am worse than anybody else.
   1 I am critical of myself for my weaknesses and mistakes.
   2 I blame myself all the time for my faults.
   3 I blame myself for everything that happens.

9. 0 I don’t have any thoughts of killing myself.
   1 I have thoughts of killing myself, but would not carry them out.
   2 I would like to kill myself.
   3 I would kill myself if I had the chance.

10. 0 I don’t cry anymore than usual.
    1 I cry more now than I used to.
    2 I cry all the time now.
    3 I used to be able to cry, but now I can’t even though I want to.

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11 0 I am no more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time now.
3 I have got irritated at all by things that used to irritate me.

12 0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all my interest in other people.

13 0 I make decisions as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make decisions at all anymore.

14 0 I don't feel I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that makes me look unattractive.
3 I believe that I look ugly.

15 0 I can work about as well as before.
1 It takes an extra effort to get started at doing something.
2 I have to push myself very hard to do anything.
3 I can't do any work at all.

16 0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.

17 0 I don't get tired anymore than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.

18 0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.

19 0 I haven't lost much weight, if any lately.
1 I have lost more than 0 pounds.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.

20 0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches or pains; upset stomach; or constipation.
2 I am very worried about physical problems and it's hard to think of much else.
3 I am so worried about my physical problems, that I cannot think of anything else.

21 0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.
APPENDIX B

The Depression Adjective Checklist
CHECK LIST

DAEL FORM G

By Bernard Lubin

Name __________________________ Age ________ Sex ________

Date __________________________ Highest grade completed in school ________

DIRECTIONS: Below you will find words which describe different kinds of moods and feelings. Check the words which describe how you feel now — today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all of the words which describe how you feel today.

1. ☐ Heartstich __________________________ 18. ☐ Enthusiastic
3. ☐ Sad __________________________ 20. ☐ Grieztinchen
5. ☐ Lonesome __________________________ 22. ☐ Drained
6. ☐ Fine __________________________ 23. ☐ Desolate
7. ☐ Alive __________________________ 24. ☐ Miserable
8. ☐ Gloomy __________________________ 25. ☐ Merry
10. ☐ Alive __________________________ 27. ☐ Melancholy
11. ☐ Heavy—hearted __________________________ 28. ☐ Interested
12. ☐ Failure __________________________ 29. ☐ Unwanted
14. ☐ Despondent __________________________ 31. ☐ Whole
15. ☐ Bank __________________________ 32. ☐ Oppressed
16. ☐ Optimistic __________________________ 33. ☐ Lifeless
17. ☐ Joyful __________________________ 34. ☐ Elated
APPENDIX C

The Ben Sex Role Inventory
LAST 4 DIGITS OF YOUR SOCIAL SECURITY NUMBER: __ __ __ __

DIRECTIONS:

On the opposite side of this sheet, you will find a list of personality characteristics. We would like you to use these characteristics to describe yourself, that is, we would like you to indicate, on a scale from 1 to 7 how true of you each of these characteristics is. Please do not leave any characteristic unmarked.

Example: Sly

Write a 1 if it is never or almost never true that you are sly.
Write a 2 if it is usually not true that you are sly.
Write a 3 if it is sometimes but infrequently true that you are sly.
Write a 4 if it is occasionally true that you are sly.
Write a 5 if it is often true that you are sly.
Write a 6 if it is usually true that you are sly.
Write a 7 if it is always or almost always true that you are sly.

Thus, if you feel it is sometimes but infrequently true that you are "sly", you would rate this characteristic as follows:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sly</td>
<td>3</td>
</tr>
<tr>
<td>Malicious</td>
<td>1</td>
</tr>
<tr>
<td>Irresponsible</td>
<td>7</td>
</tr>
<tr>
<td>Carefree</td>
<td>5</td>
</tr>
<tr>
<td>Personal Quality</td>
<td>Never or almost never true</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Defend my own beliefs</td>
<td>Adaptable</td>
</tr>
<tr>
<td>Aficionado</td>
<td>Tolerant</td>
</tr>
<tr>
<td>Independent</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Hypocritical</td>
<td>Willing to take a giant leap</td>
</tr>
<tr>
<td>Moody</td>
<td>Insensitive</td>
</tr>
<tr>
<td>Assertive</td>
<td>Sensitive to needs of others</td>
</tr>
<tr>
<td>Negative to needs of others</td>
<td>Reflective</td>
</tr>
<tr>
<td>Reliable</td>
<td>Strong</td>
</tr>
<tr>
<td>Strong Personality</td>
<td>Understanding</td>
</tr>
<tr>
<td>Assumptions</td>
<td>Economic</td>
</tr>
<tr>
<td>Understanding</td>
<td>Moral</td>
</tr>
<tr>
<td>Jealous</td>
<td>Practical</td>
</tr>
<tr>
<td>Forceful</td>
<td>Reasonable</td>
</tr>
<tr>
<td>Courageous</td>
<td>Rational</td>
</tr>
<tr>
<td>Compassionate</td>
<td>Relaxed</td>
</tr>
<tr>
<td>Reckless</td>
<td>Responsible</td>
</tr>
<tr>
<td>Truthful</td>
<td>Resourceful</td>
</tr>
<tr>
<td>Rare leadership abilities</td>
<td>Resourceful</td>
</tr>
<tr>
<td>Eager to solve others' problems</td>
<td>Resourceful</td>
</tr>
<tr>
<td>Educative</td>
<td>Resourceful</td>
</tr>
<tr>
<td>Willing to take risks</td>
<td>Resourceful</td>
</tr>
<tr>
<td>Warm</td>
<td>Resourceful</td>
</tr>
<tr>
<td>Considerate</td>
<td>Resourceful</td>
</tr>
</tbody>
</table>
APPENDIX D

The Rating Scale of Social Competence
SELF-RATING SCALE

INSTRUCTIONS: (1) The following words were selected to enable you to record your perceptions of yourself as you were in the group interaction. Please rate yourself by circling a number between 1 (not at all characteristic of you) and 7 (extremely characteristic of you). (2) Please complete a rating form for each member in your group. Rate each member according to how you perceive their interaction in the group.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendly</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Popular</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Assertive</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Attractive</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Warm</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Communicates Clearly</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Socially Skilful</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Interested in Other People</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Understands What Others Say</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Humorous</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Speaks Fluently</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Open and Self- Disclosure</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Reasonable</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Characteristic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</tr>
<tr>
<td>CONFIDENT</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>TRUSTING</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>HAS POSITIVE OUTLOOK ON LIFE</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>NOTICES GOOD EXPERIENCES</td>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
APPENDIX E

Observer's Instruction Sheet
A Word About Reliability

"Reliability indicates the extent to which individual differences in test scores are attributable to "true" differences in the characteristics under consideration and the extent to which they are attributable to chance error." (Anastasi, 1976). Reliability is concerned with the degree of consistency or agreement between two individually derived set of scores.

For the purposes of this study, inter-rater reliability, or the consistency between how one observer rates a subject and how another observer rates the same subject, is of utmost importance. I must be certain that every observer rates each subject along the same set of criteria. Thus, the purpose of this training session is to orient you to your responsibilities as a research observer, and to assure that there is agreement between all observers as to what each attribute on the rating scale means.

The Rating Scale

For each attribute you are asked to rate the behavior of the subject on a scale from 1 (not at all characteristic) to 7 (extremely characteristic). A rating of 1 or 7 should be reserved for only very extreme behavior. A rating of 2 or 6 would indicate quite noticeable behavior, a rating of 3 or 5 would indicate somewhat atypical behavior, and a rating of 4 indicates quite average or typical behavior.

The Attributes

During the training session we will be discussing the meaning of and behaviors associated with each of the attributes on the rating scale. As a guideline however, I have loosely defined each attribute.

FRIENDLY—The subject smiles, laughs, and talks with other subjects. Initiates "small talk."

POPULAR—Subjects talk to this subject more than others. Asks more questions of this subject. Listens to and watches this subject more than other subjects.

ASSERTIVE—Subject states openly what is on her/his mind. May challenge another subject's ideas. Defends his/her right to ideas or behaviors.

ATTRACTIVE—The subject indicates that he/she has similar attitudes and beliefs to most group members. May discuss experiences similar to those others have experienced. Compatible.
WARMLY: Smiles and maintains good eye contact when talking to other subjects. Makes personal remarks; self-discloses.

COMMUNICATES CLEARLY: The subject expresses his/her thoughts and ideas in a manner that is understandable to other subjects. Speaks smoothly, with ease.

SOCIA LLY SKILLFUL: Subject listens to other subjects and participates appropriately. Does not dominate, intimidate, or offend other subjects. Is not exceedingly passive.

INTERESTED IN OTHER PEOPLE: Subject asks questions of other subjects. Listens and maintains eye contact with others. Pays attention to what's happening in the group.


HUMOROUS: Makes comical remarks. Laughs and jokes with other subjects.

SPEAKS FLUENTLY: Similar to "Communicates Clearly." Refers more specifically to precise vocabulary and speaking manner.

OPEN & SELF-DISCLOSING: Similar to "Warm." Subject shares personal thoughts and feelings. Nondefensive; participates freely, in an unrestrained manner.

REASONABLE: Makes appropriate remarks that are logical and sensible. Is rational and realistic.

CONFIDENT: Subject appears relaxed; at ease in the group. Does not appear threatened or intimidated. Voice is moderate and clear. Gestures are natural. Good eye contact.

HAS POSITIVE OUTLOOK ON LIFE: Makes positive, optimistic remarks. Seems fairly happy and content.

NOTICES GOOD EXPERIENCES: Subject makes comments about good experiences mentioned by others. Is reminded of and comments on good experiences in his/her own past.
APPENDIX F

Subject's Consent Form
I consent to participating in (or my child's participation in) a study entitled "The Influence of Mood on Group Interaction."

Kathleen McNamara

(explained the purpose of the study and procedures to be followed. Possible benefits of the study have been described as have alternative procedures, if such procedures are applicable and available. I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Further, I understand that I am (my child is) free to withdraw consent at any time and to discontinue participation in the study without prejudice to me (my child). The information obtained from me (my child) will remain confidential and anonymous unless I specifically agree otherwise.

Finally, I acknowledge that I have read and fully understand the consent form. I have signed it freely and voluntarily and understand a copy is available upon request.

Date: ___________________ Signed: _____________________

(Participant)

(Investigator/Project Director or Authorized Representative)

(NOT APPLICABLE)

(Person Authorized to Consent For Participant - If Required)

PA-027 (1/79) — To be used only in connection with social and behavioral research for which an Ohio State Review Committee has determined that the research poses no risk to participants.