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COGNITION AND PERCEIVED
INTERPERSONAL BEHAVIOR IN THE
DEPRESSIVE EXPERIENCES OF NORMALS

By

William Mark Hooker

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ABSTRACT

COGNITION AND PERCEIVED INTERPERSONAL BEHAVIOR IN THE DEPRESSIVE EXPERIENCES OF NORMALS

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The operation of depressive cognitions was studied through subjects' recall of recent experiences of normal depression. Cognitive distortions present in depression, as formulated by Aaron T. Beck, were expected to operate in subjects' idiosyncratic characterizations of themselves and significant others. Sixty-nine male and 113 female undergraduate students responded to the Beck Depression Inventory and the Structural Analysis of Social Behavior instruments under two conditions: recalled depression and recalled non-depression. Characterizations of self-rejection and oppression, significant others as invoking hostile autonomy and exercising hostile power, and responses of taking hostile autonomy and hostile compliance were found to be significantly higher in the recalled depression condition. Subjects also demonstrated lower internal consistency in their recalled depression ratings and perceived less complementariness in their relationships. It was concluded that cognitive distortions were in effect and impacted on subjects' interpersonal perceptions in a predictable manner. The results of currently depressed subjects were examined.

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CHAPTER I

INTRODUCTION

This study examines the operation of depressive cognitions through subjects' recall of recent experiences of normal depression, and will study their impact on subjects' perception of interpersonal behavior. Utilizing the Research Diagnostic Criteria for Affective Disorders (Spitzer, Endicott, and Robins, 1978) guidelines, normal depression is considered as a minor or intermittent depressive disorder in which the primary mood may be described as depressed, sad, blue, hopeless, low, or down in the dumps. It is of relatively short duration (a few hours, days, or weeks), has an identifiable beginning and end, does not require professional help, and is distinct from grief or bereavement. The manifestations of normal depression are conceptualized as the result of the activation of idiosyncratic and systematic distorted cognitions that force an individual to interpret his/her experience, his/her future, and him/herself in a negative way (Beck, 1972 (a)). Past research has explored the role of depressive cognitions in the dreams, verbal material and success behaviors of severely depressed psychiatric patients (Beck, and Hurvich, 1959; Beck, and Ward, 1961; Beck, and Beamesderfer, 1974), and in the affect of normal college men (Weintraub, Segal, and Beck, 1974). However, no known research has studied the relationship between the distorted cognitions of individuals experiencing normal depression and their perceptions of their interpersonal environment. The study of

interpersonal or psychosocial behavior has gained increasing recognition as the domain in which indices of psychopathology are formulated and measured (Freedman, Leary, Ossorio, and Coffey, 1951; Leary, and Coffey, 1955; Leary, 1957; Adams, 1964; McLemore, and Benjamin, 1979). The research question guiding the present study is: How will normal individuals characterize their perceptions of themselves and significant relations in their recall of both a depressed period and a non-depressed period in the past 12 months?

Depression is the most common psychological disorder encountered by the health profession today. A decade ago the National Institute of Mental Health established that four to eight million Americans may be in need of professional help for the depressive illnesses (Leitenberg, 1976). Accurate diagnosis and prompt treatment are essential not only to reduce human suffering but also to prevent suicide; one out of every hundred severely depressed individuals dies in suicide.

There is considerable controversy regarding the nature and causes of depression. Investigators differ in their views of the etiology and causes of depression, but what is agreed upon across the varying conceptual schemas is the behavioral description of depression. Symptoms of disturbed mood, self-castigation, self-debasing behavior, wish to die, physical and vegetative disorders, and delusions of having committed unpardonable sins are universally recognized as comprising the depressive syndrome (Beck, 1972 (a)). In fact, this syndrome has a long history as a clinical entity. As early as the fourth century B.C., Hippocrates wrote of the clinical condition called melancholia whose manifestations were observable in all aspects of behavior, including affect, cognition, and motivation.

There are several difficulties which prevent a single, comprehensive understanding of depression; one is that of semantic differences. The term depression has been used to designate a specific type of feeling or experience, a cluster or syndrome of experiences, and a well defined disease entity. Everyone experiences a sad or blue period at one time or another. A person experiencing this state may label it as depression. Thus, in this manner, a normal, transient condition is given an abnormal condition descriptor. When the term depression is used to signify a complex syndrome of changes in feelings, thoughts, and behaviors, often what is missing is an elucidation of the nature and intensity of the changes. One approach is to conceptualize each symptom as lying on a psychopathological continuum, ranging in intensity from mild to severe. Further complicating the classification task is the occurrence of a depressive syndrome confluent with a definite psychopathological disorder such as schizophrenia or an organic brain dysfunction such as cerebral atherosclerosis. Finally, when the term depression is used to denote a discrete disease entity based on characteristic signs and symptoms, a specifiable type of etiology, development, duration, outcome, and treatment are assumed. No evidence conclusively supports any of these assumptions.

The term depression is also indiscriminantly used to describe a grief reaction (Schneider, 1980). Many people who have just experienced a loss consult a health professional and are labelled as reactive depressives. The symptoms of grief--sadness, loneliness, and exhaustion--may also be interpreted by the mourner as depression. Similarities between the experience of depression and grief include the feelings of despair, meaninglessness, hopelessness, and the inability to believe that life

will ever be different. One significant difference is that the grieving person will be able to recognize the loss, whereas the depressed person may not be able to identify the cause of his/her condition.

Major conceptualizations of depression--psychoanalytic, biochemical, behavioral, and cognitive--all specify an etiology, onset, course, duration, and treatment. They differ considerably in terms of their theoretical parsimony and empirical support. Cognitive theories of depression challenge the psychoanalytic view that depression is an affective disorder stemming from an internal struggle between an introjected lost love object and superego (Abraham, 1927 (a), (b); Freud, 1917; Rado, 1927) as well as the biochemical view of depression as a discrete disease entity (Paykel, and Coppen, 1979). Rather, depression is viewed as a thinking disorder ranging in severity on a continuum from the normal experience of low, sad mood to psychotic depression. Unlike behavior theorists (Leitenberg, 1976), cognitive theorists go beyond the observable behaviors and postulate hypothetical cognitive constructs. Also, their data are primarily subjective. But, these constructs are not so far removed from the observable phenomena that they cannot be empirically tested. Aaron T. Beck (Beck, and Hurvich, 1959; Beck, and Ward, 1961; Beck, 1961, 1963, 1964, 1970, 1971, 1972 (a), 1972 (b), 1973, 1974) has contributed extensively to the understanding of depression. In the past twenty years he has performed more empirical studies than any other researcher in the field (Mendelson, 1974). Because of Beck's extensive psychological, clinical, and therapeutic studies of depression, his widely used and accepted cognitive theory of depression will be the conceptualization utilized in this study and will be discussed in depth.

Beck's Cognitive Theory of Depression

In the late 1950's Beck was involved in a broad investigation of the psychological and physiological correlates of depression. In particular, he was interested in testing his observations of female neurotic-depressive patients in psychoanalytic therapy (Beck, and Hurvich, 1959). The psychoanalytically formulated mechanisms of retroflected hostility and self-punishment seemed to be consistent with his observations of these patients. Their dreams showed a relatively high frequency of unpleasant content or affect. The content seemed to have a particular theme: "The dreamer was rejected, disappointed, thwarted, or criticized in the dream action." (Beck, and Hurvich, 1959, p. 50). Reported affect was frequently described as sadness, guilt, or humiliation. He used the term "masochistic" to describe the characteristic unpleasantness of these dreams with the meaning that the dreamer has a need to suffer. Using a masochistic content scoring manual, the first 20 dreams of six patients in treatment for depression and the dreams of six non-depressed patients were rated for masochistic content. While both depressed and non-depressed patients reported masochistic dreams, the depressed patients showed a significantly higher frequency and this finding was taken to be consistent with the psychoanalytic theory of retroflected hostility.

Further research on masochistic dream content (Beck, and Ward, 1961) replicated this finding with a larger, randomized sample (N = 218) using ratings made by two independent judges and a depression inventory operationalizing the definition of depression through specification of overt behavioral manifestations of depression. Ratings were made on the basis of the degree of depression, not the primary psychiatric diagnosis.

This was necessary because the standard nomenclature could not be used reliably. Analysis of background factors such as age, sex, race, intelligence, and socioeconomic status revealed that these variables had no influence on the results. Several additional findings were of interest because they were not to be expected given the psychodynamic formulation of retroflected hostility in depression. Many subjects who had never had a clinical depression had masochistic dreams. Furthermore, some patients reported having these types of dreams long before they became depressed. The masochistic dream was not only associated with depression nor was there any evidence that depressed patients wanted to suffer. Beck speculated that the masochistic content may more properly be associated with certain personality characteristics of individuals who may develop depression.

In the second phase of his research, Beck studied the verbalizations of depressed patients in psychotherapy (Beck, 1970). This study was conducted in order to determine whether there was a continuity between the dreams of depressed patients and their conscious experience. Free association and reports of repetitive thought content, i.e., free-flowing ideation and cognitive responses to specific external stimuli, between the therapy sessions were studied. Certain themes were found to be typical of depressed patients and atypical of non-depressed patients. The themes consisted of " . . . particular negative attitudes of the depressed individual toward himself, the outside world, and his future." (Beck, 1970, p. 50). Beck designated this phenomenon as the cognitive triad. This finding added to the evidence discounting the concept of the "need to suffer" originally used to explain the dream content. Beck postulated that instead of the depressed person having a

need to suffer, he actually viewed himself that way. This explanation accounted for what the depressed person said about himself in waking life and was also apparent on projective tests in which he identified with the "loser" in themes dealing with success and failure (Beck, 1961). In his analysis of these various results, Beck concluded that " . . . the concept of unconscious or inverted hostility was too remote from observables to be proved or disproved." (Beck, 1970, p. 50).

Integrating the material from patients' dreams, free associations, and cognitive responses to external stimulus situations produced in the research discussed earlier, as well as other work (Beck, 1963, 1964), Beck tabulated a set of symptoms which occurred significantly more often in the depressed than in the non-depressed group (Beck, 1973). Conventional psychiatric nosological categories were not used in the analysis of depressive symptomatology. Instead, patients were categorized according to the depth of depression they exhibited. Four groups were isolated: none, mild, moderate, and severe. A total of 966 patients were administered the Beck Depression Inventory and interviewed. One set of symptoms were grouped together as the emotional manifestations of depression. These symptoms referred to changes in the patient's feelings or overt behavior directly attributable to his feeling states. The symptoms are: dejected mood, negative feelings toward self, reduction in gratification, loss of emotional attachments, crying spells, and loss of mirth response.

A second set of symptoms are described as cognitive manifestations of depression. This is a diverse group of symptoms and is clustered into three subgroups. The first subgroup is composed of the patient's distorted attitudes toward himself, his experience, and his future and

includes the symptoms of low self-evaluation, distortion of body image, and negative expectations and pessimism. The second subgroups expresses the patient's notion of causality and responsibility and includes the symptoms of self-blame and self-criticism. The third subgroup involves the area of decision making and includes symptoms of difficulty in making decisions, vacillation between alternatives, and changing of decisions.

A third set of depressive symptoms are considered motivational and are regressive in nature. These symptoms are consciously experienced thoughts, feelings, and impulses that can often be inferred from the patient's overt behavior. The symptoms include a loss of positive motivation or a paralysis of the will, avoidance, escapist, and withdrawal wishes, suicidal wishes, and increased dependency.

A fourth set of symptoms are collectively considered as vegetative and physical manifestations. The symptoms include a loss of appetite, disturbance in sleep, loss of libido, and fatigability.

The fifth and six sets of symptoms involve the manifestations of extreme cognitive distortions such as delusions and hallucinations. These symptoms include delusions of worthlessness, delusions of having committed a terrible crime for which the patient expects to be punished, nihilistic delusions, somatic delusions, and delusions of poverty. Hallucinations typically involve voices condemning the patient.

Beck (Beck, 1974) viewed the manifestations of depression not as a reflection of an affective disorder, a widely held view among psychoanalytic theorists, but as a consequence of cognitive distortions. The cognitive manifestations of depression listed previously were seen as primary and the other manifestations as the effects of such depressive

cognitions. These cognitions represent varying degrees of distortion of reality and are distinct from normal inaccuracies and inconsistencies because they show a systematic error, a bias against the depressed patient. In examining these cognitive distortions, Beck abstracted three types of deviations from reality: paralogical, stylistic, and semantic. Considered paralogical in nature is arbitrary interpretation, a process of " . . . forming an interpretation of a situation, or experience where there is no factual evidence to the conclusion or when the conclusion is contrary to the evidence." (Beck, 1963, p. 328). This process is most apt to occur when environmental cues are ambiguous. This type of thinking tends not to allow alternative explanations to be considered, even if they are more plausible and probable. Another paralogical error is selective abstraction, a process of focusing on a detail taken out of context and which is used to conceptualize the totality of the experience without consideration of the other, salient aspects of the situation. A third error is overgeneralization, a process of drawing a general conclusion about one's ability or worth on the basis of a single incident.

A stylistic distortion of reality is gross minimization or magnification. These errors in evaluation such as underestimation of one's performance or achievement, and exaggerations of one's problems and responsibilities. For instance, a patient's first response to an unpleasant situation is to regard it as a catastrophe. Related to this type of distortion is the semantic error of inexact labeling. In this process, the descriptive labeling of an event reflects the distorted interpretation of the event rather than a realistic appraisal and labeling of the event.

A characteristic of all these cognitive distortions is their "automatic" quality. They are generally experienced by depressed individuals as arising without any apparent antecedent. Nor are they experienced as controllable; they have an involuntary quality and preempt more rational thoughts, even when the person intends to avoid them. Another characteristic of the depressive cognitions is their plausibility to the individual. As observed by Beck (1963), the more plausible the cognitions seemed to the depressed person, the stronger the affective reaction, i.e., the greater the cognitive distortion, the more extreme the emotional manifestation. A final characteristic noted is the perseverative nature. Across a wide variety of life situations, the depressed person tends to interpret his experience in terms of a few stereotypical ideas.

Discussion thus far has dealt with characteristics of depression which are observable or based on self-report. This type of data is easily inferred from the clinical material and does not represent a high level of abstraction. However, as Beck recognizes (1972 (a)), a higher degree of conceptualization beyond the descriptive level is necessary in order to answer questions of depression etiology, paradoxical depressive behaviors, and the relationship between cognition and affect. Beck's proposed hypothetical constructs are not experienced by the depressed person but are formulated on the basis of order and predictability in his behavior. Kelly's (1955) theory of personal constructs represents such an attempt to understand the way in which an individual perceives stimuli in his environment, interprets and transforms these stimuli in relation to already existing structures, and behaves in relation to these interpretations and transformations. "Man

looks at his world through transparent patterns or templates which he creates and then attempts to fit over the realities of which the world is composed . . . they are ways of construing the world." (Kelly, 1955, pp. 8-9). These templates or cognitive structures account for the observed regularities in behavior and personal conceptualization. Beck uses the term "schema" in its broadest sense and concentrates on the more complex schemas such as the self-concept and value judgments of good and bad.

Schemas channel thought processes. "When a particular set of stimuli impinge on the individual a schema relevant to these stimuli is activated." (Beck, 1972 (a), p. 283). The activated schema produces cognitions. Beck defines cognition as any mental activity which has a verbal content, e.g., ideas, judgments, self-instructions, self-criticisms. Cognitions may be the result of an activated schema structuring external stimuli in the environment; but they may also proceed as associations and ruminations structured by the engaged schema. Individual schemas may be simple linguistic structures or they may consist of complex premises and assumptions. A syllogistic schema will tend to interpret the data in a way that supports the underlying premise. This type of schema is the basis of the inaccuracies, misinterpretations and distortions observed in depression and all other psychopathology (Beck, 1964). Other characteristics of depressive schemas are that they are framed in absolute rather than relative terms, and are global rather than discriminative (Beck, 1972 (b)).

A depressed individual's ideation--both interpretation of external stimuli and association--is replete with themes of personal deficiency, self-blame, and negative expectations. The deeper the depression, the

greater the distortion and misinterpretation of reality until there is no logical link between reality and the individual's negative conclusions about him/herself, his/her environment, and his/her future. The cognitive distortions discussed predominate as the result of the hyperactivity of depressive schemas. These schemas, which seem to be relatively inactive during periods of non-depression, become progressively more potent as the depression deepens. This produces a process of increasing incongruity between the stimulus situation and the appropriate schema necessary to represent reality veridically. Also, as the schemas become more active, they are easily evoked by stimuli less congruent with them. Thus, ". . . only those details of the stimulus situation compatible with the schema are abstracted, and these are reorganized in such a way as to make them congruent with the schema." (Beck, 1972 (a), p. 286). The cognitions produced by these depressive schemas are exceptionally compelling and plausible and tend to overshadow the less intense, reality-bound non-depressive cognitions.

An individual predisposed to depression develops these depressive schemas on the basis of early life experiences and the reflected appraisal of significant others. A young child develops many perceptions and interpretations about him/herself and his/her surrounding environment. Given Beck's cognitive framework of development (Beck, 1974), some of these attitudes are realistic and therefore facilitate healthy adjustment, while others deviate from reality and predispose the child to potential psychological disorders later in life. The formation of an individual's self-concept (which is interrelated with his/her concepts of his/her environment and future) is a process of generalizations about him/herself he/she has made on the basis of his/her personal

experiences, the judgments significant others make of him/her, and his/her identifications with them. Once a particular self-concept is established it can influence subsequent perceptions and interpretations and become more firmly set. A negative self-concept thus facilitates a negative interpretation of an experience which in turn fortifies the negative self-concept. This positive feedback cycle will become a permanent schema in the child's developing cognitive structure unless the negative self-concept is somehow extinguished. (Beck, 1973).

Confluent with the developing negative self-concept schema will be the establishment of schemas patterning negative interpretations of not only him/herself, but his/her environment (primarily interpersonal), and his/her view of the future.

Life Stress and Depression

These depressive schemas are not active all the time and may remain latent for many years until they are activated by certain stressful conditions and supersede more realistic schemas (Beck, 1971). Predisposed individuals have a specific vulnerability to later events in life which are reminiscent of the original traumatic experiences which were initially responsible for embedding and/or reinforcing the negative schemas. These traumatic experiences are prototypes of the specific stressors that will later activate the depressive schemas. For example, an early concept of self as inept stemming from repeated experiences of failure will predispose the individual to be sensitized to situations representing competition and evaluation. A failure in such a situation would trigger a depression because the individual would interpret the experience of failure as representing a personal defeat which he/she

would regard as proof of his/her worthlessness, and for which he/she would blame him/herself and have no hope of changing, and thus would view his/her future as devoid of any satisfaction (Beck, 1973). This particular failure experience would not elicit a depression in most people. A more common response might be pain and frustration, but this state would be temporary and would not include negative self-judgments and negative expectations. Other situations of specific stress causing a depressive reaction include failure to achieve a desired goal, losing a love object, thwarting of important goals or posing of an untenable dilemma, or a physical disease or abnormality.

The impact of a specific stressor or of a series of specific stressors on the physical and mental health of individuals has been investigated by several researchers interested in life stress. Holmes and Rahe's (1967) Social Readjustment Rating Scale (SRRS) has been widely used in assessing the degree of stress in an individual's life. It evolved from Adolph Meyer's (Meyer, 1957) life chart concept and consists of 43 ranked events either indicative of the life style of the individual, or of occurrences involving the individual. Each event, e.g., death of spouse, retirement, change in residence, was construed to be either indicative of, or require a significant change in the individual's ongoing life pattern. Using this instrument with a population of naval personnel aboard six large ships on cruise, Rahe (1972) found significant positive correlations ($p < .01$) between subjects' six month pre-cruise SRRS scores and their total number of physical illnesses reported throughout the six to eight month cruise period.

In a study of changes in life events and changes in psychiatric symptomatology in a population of 720 adults in a community (Myers,

Lindenthal, Pepper, and Ostrander, 1972), a substantial and positive relationship was found between changes in life events (as measured by a modified SRRS and structured interview) and changes in psychological impairment (as measured by a mental status exam) over a two year period. An increase in life events was associated with a worsening of psychiatric symptoms whereas a decrease in events was related to an improvement. Changes of worsening psychiatric symptomatology were only significantly related to exit-related events, i.e., exit of an individual from the immediate social field of the respondent.

Finally, in a study of the relationship between life events and depression (Paykel, Myers, Dienett, Klerman, Lindenthal, and Pepper, 1969), a control group from the general population was compared with a group of depressed patients. Measuring the life events of both groups in the six month period preceding the interview with a modified SRRS, it was found that, on the average, the depressed group reported about three times as many life changes as did the controls. Events representing exits from the social field, e.g., marital separation, new job, preceded depression significantly more frequently than did entrance-related events. Desirable events (marriage, promotions) were more common in the control group than in the depressed patient group.

In addition to consideration of identifiable stressors, Beck notes that external factors in the precipitation of depression may not be easily assessed (Beck, 1972). The stressors are often insidious and the depressed individual may not be aware of their operation until he/she has passed through several depressive episodes and can identify their occurrence with the recurrent set of traumatic conditions. Non-specific, overwhelming stress may be a sufficient condition to

precipitate a depression, even if it does not relate to the specific vulnerability of the predisposed individual. Individuals not predisposed to depression may react to the same overwhelming stress with paranoia, anxiety, psychosomatic disorder, or with no symptoms at all.

Cognition and Affect, Perception, and Behavior

Focus so far has been on the schemas and depressive cognitions activated by environmental stressor(s). However, cognitive distortions are not the only manifestations of depression. As discussed previously, also evident in depression are emotional, motivational, and physical manifestations. In his clinical study of depressed patients, Beck observed that there was a logical consistency between thought and affect. His thesis was that the affective response is determined by the way an individual structures his experience (Beck, 1972 (a)). Thus, a specific evoked schema has a direct bearing on the affective response to the stimulus situation. This thesis is not new and is similar to Ellis' (1962) view that emotion is caused and controlled primarily by thinking and is indeed simply a " . . . biased, prejudiced, or strongly evaluative kind of thought." (Ellis, 1962, p. 41). A schema constructed on the theme of self-criticalness, therefore, would produce self-critical cognitions and lead to an affect of self-disgust.

Beck also finds it useful to conceptualize affects as having stimulus properties themselves. "Irrespective of its origin, the aroused affect becomes part of the stimulus field . . . and is subjected to cognitive processes such as monitoring, labeling, and interpretation in much the same way as are external stimuli." (Beck, 1972 (b), p. 153). This process would be characterized by a person thinking, "I'm feeling bad, so things must be bad." This in turn can lead to a downward spiral,

often observed in depression. The more negative the individual thinks, the worse he/she feels, and the worse he/she feels, the more negatively he/she thinks.

The loss of motivation observed in depression may be conceptualized as the result of the individual's hopelessness and pessimism; he/she has negative expectations about the likelihood his/her actions will make a difference in his/her future. Avoidance and escapist wishes are also products of the individual's expectations of a negative outcome. Suicidal wishes may be viewed as the only rational alternative to the individual who sees his/her future filled with suffering and powerlessness. The increased dependency prevalent in most depression may be attributed to the individual's self-concept of being inept, inadequate, and undesirable (Beck, 1972 (a)). Also, negative expectations about the future and an overestimation of the difficulty and demandingness of everyday life may explain why many depressed people seek others to support them and help them with their problems.

Beck (Beck, 1972 (a)) is more reserved and cautious, however, in his conceptualization of the relationships between depressive cognitions and the physical and vegetative symptoms of depression. In general, he concludes that depressed patients' verbal productions provide data too far removed from the physiological substrate to establish meaningful relationships between their symptoms and cognitive distortions. However, he does hypothesize that the physical symptoms of fatigue and retardation evident in depression represent cognitions of passive resignation to their fate. In the extreme cases of stupor, the patient may even believe he/she is already dead.

Experimental and correlational research investigating the basic thesis that the depressive affective response is determined by the way an individual structures his/her experience has been conducted by numerous investigators. In a study of differential feedback regarding depressed subjects' performance on a task as either a success or a failure (Loeb, Beck, Diggory, and Tuthill, 1967), it was demonstrated that depressed patients were significantly more pessimistic about their probability of succeeding and made significantly lower ratings of their performance, even though they performed as well or even better than a matched control group of non-depressed patients. On a second task, the experimenters controlled the type of feedback--positive or negative--regarding the subjects' task performance. It was found that success most improved the performance of the depressed group, while failure most improved the performance of the non-depressed group. However, the depressed patients in the success group still showed lower probability of success estimates and lower self-evaluations than did the successful non-depressed patients. The lowest probability of success estimates and self-evaluations were elicited by the depressed patients in the failure group. Thus, the depressed patients reacted positively given tangible evidence of a successful performance on a task.

In studies of mood induction (Velten, 1968; Strickland, Hale, and Anderson, 1975; Hale, and Strickland, 1976) it has been demonstrated repeatedly that elated and depressed moods can be manipulated in the laboratory and that they have a significant impact on self-reported affect, and cognitive and performance behaviors. Velten's (1968) methodology, which has been used as a model for the other research cited, consists of subjects reading at their own pace 60 self-referent

statements, trying to feel the mood suggested by the statements. Three groups of subjects read elation-induction statements, depression-induction statements, and neutral-induction statements, respectively. Subjects in the depression-induction condition were found to, after adjusting their scores for pre-treatment mood level and primary suggestibility, to feel significantly more depressed, anxious, and hostile on a adjective checklist. In addition, it was found that they measured as significantly less expansive on a graphic constriction-expansion test, significantly preferred more solitary and inactive behavior, wrote significantly fewer numbers on a writing speed measure, took significantly more time on a word association task, and elicited significantly fewer spontaneous verbalizations during testing, than did both the elation and neutral-induction groups. All of these findings were representative of depressive symptomatology and thus the efficaciousness of the depressed mood-induction procedure was concluded to give implicit support to a cognitive mediation theory of depression.

Researchers investigating the relationship between cognition and affect in the depressive experiences of normal men used a story completion test to measure the presence of depressive cognitions regarding the future, the interpersonal environment, and the self (Weintraub, Segal, and Beck, 1974). The rationale behind this technique, similar to that for projective tests, is that the way in which a subject structures an ambiguous stimulus is assumed to reflect the subjects' perceptions of him/herself and of his/her external reality. Indeed, significant correlations were found between this measure and Lubin's Depression Adjective Check List. Negative cognitions were found to be clearly associated with depressed moods and also to be more enduring

over time than the negative affect. Once again, the close relation between affect and cognition in this study lends support to the primacy of cognition in depression hypothesis.

Weintraub, et al.'s (1974) research demonstrated that cognitive distortions could be measured in terms of subjects' negative perceptions of themselves and in their projections of interpersonal relationships in which they envisioned themselves as being inadequate, unattractive, and incompetent, and as being rejected and thwarted by others (as opposed to being accepted and assisted). Beck's data base has consisted primarily of patients' self-reports of dream material, free-associations, and responses to external stimulus situations. It is proposed that rather than use projective or anecdotal material to measure depressed subjects' negative perceptions of themselves and their interpersonal domain, the operation of cognitive distortions would be more comprehensively and accurately measured through the use of standardized indices of current, ongoing interpersonal behavior. Thus, as has been suggested by McLemore and Benjamin (1979), the interpersonal behavior measurement would serve as a window through which to view the other domains of functioning, i.e., motoric, perceptual, cognitive, emotional, and biological. In this particular instance, the cognitive domain is of interest.

Interpersonal Taxonomies of Behavior

The usefulness of interpersonal taxonomies for making explicit what is implicit in all psychiatric diagnosis, namely, that it is social and interpersonal behavior that is classified and diagnosed, not mental illness, has been discussed extensively elsewhere (Adams, 1964; McLemore

and Benjamin, 1979) and will not be the focus of the present discussion. As a measure of cognitive distortions in depression, the most applicable taxonomy would be one based on perceived interpersonal behavior functioning as well as self-focused behaviors. Such behavioral perceptions would presumably be influenced by the operation of depressive cognitions and would reflect the distortions hypothesized by Beck as discussed earlier. Lorna S. Benjamin's Structural Analysis of Social Behavior model (SASB) (Benjamin, 1973; 1974; 1979 (a)); McLemore and Benjamin, 1979) is the most comprehensive and promising interpersonal behavior taxonomy in use today and will be used as the dependent measure of the impact of depressive cognitions on the perceptions of interpersonal behavior. It is fundamentally based on the prior interpersonal models of Leary (1957) and Schaefer (1959). However, the SASB model is far more elaborate and is built on an explicit logical and mathematical foundation. It will be described in detail later, but first a discussion of the evolution of interpersonal models is in order.

In 1951, Leary and his colleagues (Freedman, Leary, Ossorio, and Coffey, 1951) articulated the need in psychology for a comprehensive schema for the description of personality. They cited several reasons for this need: current personality theories emphasized only one of several areas of personality and/or data; most personality variables in use lacked systematic interpersonal reference; personality concepts were primarily framed in psychopathological terms; and personality variables in their present form were not amenable to objective measurement. The theoretical base of their research was the interpersonal theory of Harry Stack Sullivan. It was felt that his theory of interpersonal relations, i.e., " . . . that the essence of human happiness

and despair, success and failure, centers in the manner in which the person consistently sees, symbolizes, and communicates with others," could lend itself directly to operational definition and objective measurement (Leary, and Coffey, 1955, p. 111).

A primary task of their research was the specification and measurement of interpersonal mechanisms, which were defined as the interpersonal function of a unit of social behavior. After extensive study of the personality data of psychotherapy patients, sixteen generic interpersonal mechanisms were developed. These sixteen basic interpersonal themes were interrelated on two orthogonal dimensions: Dominance-Submission and Hostility-Affection. This allowed all generic interpersonal themes to be expressed as combinations of these four nodal points and produced a circular two-dimensional continuum or circumplex.

As noted by Foa (1961) in his review of interpersonal behavior models, Leary's circumplex of variables seems to be a *a priori* design. That is, he first rationally defined the variables' interrelationships on the circular pattern and then proceeded to demonstrate that the statistical pattern followed the conceptual one. Average correlation coefficients between variables with a given distance on the circumplex do show a systematic decrease as the intervariable distance increases (Leary, 1957). This is achieved with several sources of data. However, the units are not equidistant and the gradient of decrease of the correlation coefficients varies considerably for the different variables. Taken in sum though, Leary's empirical data demonstrates a full circle of variables systematically and predictably related to one another.

Schaefer's (1959) circumplex model of maternal behavior, on the other hand, was constructed on the basis of empirical results rather than on conceptual grounds. Schaefer ordered the intercorrelation matrices of three sets of data on maternal behavior: (1) Fifty-six mothers were rated on 18 behavior variables by trained observers during ten to twenty sessions with each mother and child; (2) Home interviews with 34 mothers and their children (ages 9 to 14 years) were rated on 18 behavior variables; (3) Ratings of eight behavioral traits from an earlier analysis of parental press variables. Ordering these sets of data by both factor analysis and Guttman's circumplex model produced two orthogonal factors with a relatively clear ordering of the variables within the two-dimensional space. These two factors were interpreted as Control-Autonomy and Love-Hostility. In a revision of his circumplex, Schaefer (1965) renamed the latter dimension as Acceptance-Rejection. These two dimensions and the points which fall between them in a circular order are very similar to Leary's interpersonal behavior circumplex, despite their different approach (a posteriori vs. a priori) and focus (maternal behavior ratings vs. psychiatric patient behavior ratings and self-reports).

Both Leary's and Schaefer's circumplexes structure two-person interactions in terms of two underlying dimensions. The Love-Hate continuum is common to both systems but Leary places Submission in opposition to Dominate whereas Schaefer places Autonomy in opposition to the Dominate pole. As Benjamin points out in her initial work on the Structural Analysis of Social Behavior model (Benjamin, 1973), "Autonomy is a logical opposite to domination while submission seems more complementary to domination." (Benjamin, 1973, p. 218). Therefore, she

concludes that Schaefer's system specifies behavioral opposites more precisely than does the Leary system and contains more logical integrity. It is therefore Schaefer's interpersonal classification scheme that Benjamin's SASB model builds upon in terms of increasing its logical integrity and explicitness.

Benjamin's Structural Analysis of Social Behavior Instrument

Benjamin (Benjamin, 1974) states that her model is one possible approach toward the goal of predicting which particular behaviors will tend to be associated with each other. It is a rational descriptive tool of dyadic human social relations. The model consists of three surfaces: Other (parentlike), Self (childlike), and Introject. On the Other surface, " . . . behaviors which are prototypically characteristic of parents are entered, and, in general, these are active in nature and concerned with what is going to be done to or for the other person." (Benjamin, 1974, p. 395). The Self surface has behaviors which are prototypically characteristic of children and are concerned with what is going to be done to or for the self. These first two surfaces describe interpersonal behaviors, and taken together, represent complementary interpersonal relationships. Benjamin defines a complementary relationship as when two individuals exhibit behavior which " . . . form a stable social compound in the sense that each is exhibiting the same amounts of the underlying dimensions of interpersonal behavior in complementary behavior." (Benjamin, 1973, p. 221).

The Introject surface describes intrapersonal behaviors. These are attitudes or behaviors which are directed toward the self rather than toward others. Entries on the Introject surface were created by

deducing what would happen if parentlike behaviors (charted on the Other surface) were directed toward the self. Thus, points on the Introject surface correspond to every topologically similar point on the Other surface. As Benjamin notes, this concept of the introject is exemplified by Sullivan's view that from early infancy, a child's self-concept reflects the way significant others thought of him and treated him (Benjamin, 1974).

All three surfaces have two underlying dimensions. The horizontal axis is termed Affiliation and is similar to both Leary's and Schaefer's models in that the poles are defined as Hate and Love. The vertical axis is named Interdependence and is similar to Schaefer's system; the poles are defined as Control and Autonomy. On the first surface, termed the Other surface, the Affiliation axis ranges from Murder to Sexuality; the Interdependence axis ranges from Total Control to Endorsing Freedom. These are the primitive basis upon which Benjamin builds her model (Benjamin, 1979 (a)).

Each surface is divided into quadrants; and each quadrant is subdivided into nine 10 degree intervals. Thus, there are 36 behavioral descriptions, including the poles, for each surface. Quadrant I of the Other surface, designated as "Encourage Friendly Autonomy," encases behaviors which fall between the Endorse Freedom pole of the Interdependence axis and the Tender Sexuality pole of the Affiliation axis. The complementary quadrant I of the Self surface is named "Enjoy Friendly Autonomy." Responses in this quadrant fall between the poles of Freely Come and Go of the Interdependence axis and the Ecstatic Response pole of the Affiliation axis. For the Introject surface, quadrant I (Other surface quadrant I behaviors turned inward on the

self), is named "Accept, Enjoy Self." Attitudes in this quadrant fall between the Happy-Go-Lucky pole of the Interdependence axis and the Love, Cherish Self pole of the Affiliation axis.

For the Other surface, Self surface, and Introject surface respectively, quadrant II is designated as "Invoke Hostile Autonomy," "Take Hostile Autonomy," and "Reject Self." Quadrant III is named "Hostile Power," "Hostile Comply," and "Oppress Self." Quadrant IV is termed "Friendly Influence," "Friendly Accept," and "Manage, Cultivate Self." The same logic demonstrated in the description of quadrant I in each surface applies to quadrants II, III, and IV, i.e., " . . . if one begins at any arbitrarily selected point and then moves stepwise within a quadrant toward a nearby pole, the subjective quality of the items changes in the direction of the pole being approached." (Benjamin, 1979 (a), p. 7).

The present research is only concerned with a quadrant level of analysis, not an item analysis. In order to present a complete picture of the SASB model it is necessary to examine the properties of individual items and the relationship between them. Appendix A contains a description of the SASB items, as well as a discussion of the instrument's reliability and validity.

Summary of Purpose and Hypotheses

In summary, schemas have been defined as stable constructs molding one's experience of the environment and are observed through cognitions such as belief, attitudes, and perceptions. Schemas may be of varying veridicality; the cognitions present in depression are hypothesized to be systematic distortions of reality and may be activated by external

specific or non-specific stressors which recapitulate a much earlier trauma of loss. Such a trauma is hypothesized to account for the pre-disposition to depression in adult life. These cognitive distortions are expected to operate in idiosyncratic characterizations of the self and significant interpersonal relationships.

The present research will study the operation of depressive cognitions through subjects' recall of recent experiences of normal depression, and will examine their impact on subjects' perceptions of themselves and their significant relationships. Such recalled depression condition perceptions will be compared to subjects' perceptions of themselves and their significant relationships under the condition of a recalled non-depressed period. It is proposed that in the process of recalling a recent period of depression, subjects will reminisce about the particular stressors during this time, and about the thoughts and feelings they had about themselves and significant others, and thus will reactivate their idiosyncratic cognitive distortions. It is hypothesized that this will be reflected on the SASB dependent measure in a manner distinct from the recalled non-depression condition in which memories of subjects' interpersonal environment, and thoughts and feelings about themselves and significant others will presumably reactivate veridical cognitions.

It is predicted that Beck's theory of the primacy of distorted cognitions in depression will be supported in this study. Cognitions typical of depression, namely, a negative attitude about one's interpersonal environment, i.e., viewing significant others as thwarting and rejecting, and negative attitudes about oneself, i.e., self-criticism and self-blame, are expected to be manifested in the SASB interpersonal

and intrapsychic measures, respectively.

Successful recall and reexperiencing of the conditions of a prior depressed period will be determined by a significant increase in subjects' level of depression score (Beck Depression Inventory). Before instructions about recall condition are given, subjects will be measured on their current level of depression. This will be compared to the criterion measure, the recalled level of depression, which is obtained after subjects are instructed to reminisce about a recent period of depression. The SASB dependent measure results will be considered valid only if subjects' recalled level of depression increases significantly from their baseline level of depression.

The guiding hypotheses and their rationale are as follows:

Hypothesis 1: In the recalled depression condition, subjects will characterize their significant others as significantly invoking more hostile autonomy and significantly exercising more hostile power than in the recalled non-depression condition.

This reflects the activation of depressive cognitions with the themes of deprivation and loss in the interpersonal domain and negative attitudes toward the outside world.

Hypothesis 2: In the recalled depression condition, subjects will characterize their response to significant others as taking significantly more hostile autonomy and significantly complying more hostilely than in the recalled non-depression condition.

This reflects the activation of depressive cognitions with the themes of personal defeat, deprivation, disparagement, and negative attitudes toward self.

Hypothesis 3: In the recalled depression condition, subjects will characterize their own attitudes toward themselves as significantly rejecting self more and significantly oppressing self more than in the recalled non-depression condition.

This reflects the activation of depressive cognitions with the themes of inadequacy, self-criticism, self-blame, and negative attitudes toward self.

Hypothesis 4: In the recalled depression condition, there will be significantly lower complementary or inter-relatedness between subjects' characterizations of significant others' focus on them and their characterizations of the focus on themselves in relation to the significant others than in the recalled non-depression condition.

This reflects the activation of depressive cognitions which result in disparity or incongruity between logical behavioral antecedents and consequences.

Hypothesis 5: In the recalled depression condition, there will be a significantly lower degree of internal consistency in subjects' characterizations of significant others' focus on them, their own focus on themselves in relation to significant others, and their focus on themselves as the objects of their own social behavior than in the recalled non-depression condition.

This reflects the activation of distorted cognitions which result in characterizations of interpersonal behavior which do not represent integrated, predictable, and stable behavior.

CHAPTER II

METHOD

Subjects

The final subject pool consisted of 69 male and 113 female Michigan State University undergraduate students. The males ranged in age from 18 to 25, the females, 17 to 30; 19 was the median age for both groups.

The subjects were volunteers receiving research credit through their MSU introductory psychology courses. Two-hundred and eighty-seven students signed up for this experiment on standard Department of Psychology forms posted in the lecture halls. The form only listed the title of the experiment and the names of the experimenter and research supervisor. These students were contacted by the investigator for an appointment time; they were informed that they would meet twice, one week apart. Subjects were tested in groups of 30 at six different testing sessions conducted on five consecutive days. Sessions were held in classrooms throughout the campus. Of 220 students who made an appointment, 193 attended both testing sessions and received full research credit. The remaining 27 students did not attend the second session and were therefore dropped from the subject pool. Eleven subjects were dropped because their data was either incomplete or they did not follow instructions properly, thus leaving the final 182 subjects.

Instruments

The criterion measure of depression for the two conditions of recalled depression and recalled non-depression was the Beck Depression Inventory (BDI) (Beck, and Beamesderfer, 1974). This is a 21-item self-report inventory based on cognitive, emotional, motivational, and physical manifestations of depression. Each item consists of four evaluative self-statements in order of increasing severity. The subject is instructed to circle the statement which best describes the way he/she feels. An example is as follows:

- 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.

The Beck Depression Inventory--Short-Form (BDI-SF) (Beck, Rial, and Rickels, 1974) was used to measure subject's current level of depression before responding to the remainder of the battery. This is 13-item self-report inventory derived from the standard BDI. Each item consists of four evaluative self-statements in order of decreasing severity of symptoms. For example:

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

In a cross-validation study of the BDI-SF (Beck, Rial, and Rickels, 1974), it was found to correlate .89 ($p < .01$) with the BDI for 169 patients hospitalized for attempted suicide. For 46 hospitalized schizophrenic patients it was found to correlate .96 ($p < .01$) with the BDI. In a general medical sample ($n = 93$), the BDI-SF correlated .67 ($p < .01$) with the physician's rating of depression. In the sample of suicide

attempters ($\underline{n} = 72$), the correlation was .55 ($p < .01$) for the BDI-SF and .49 ($p < .01$) for the BDI. Finally, for a sample of depressed non-suicide attempters ($\underline{n} = 58$), there was a correlation of .56 ($p < .01$) between the BDI-SF and the clinician's ratings. Correlations between scores on the BDI-SF and age, sex, and race were nonsignificant. It was concluded that the BDI-SF demonstrates a high degree of internal consistency, correlates highly with the original BDI and shows a strong association with clinician's ratings of depression.

The Structural Analysis of Social Behavior instrument (SASB) (Benjamin, 1979 (a)) was used to measure perceived interpersonal behavior. This instrument consists of three parts. The first is the 36-item Intrapsychic Form- Series C. This measure allows subjects to rate themselves in terms of general attitudes toward themselves and is conceptualized as a subject perceiving himself as the object of his own social behavior. Each item or phrase is rated on a scale ranging from 0 to 100 in 10 point increments, one pole labeled NOT AT ALL, the opposite pole labeled ALWAYS. A rating of 50 or above indicates a "true" response. An example phrase is:

_____ I neglect myself, don't try to develop my own potential skills, ways of being.

The second part of the SASB is the 72-Item Interpersonal Form-Series A. This measure allows subjects to rate their perceptions of their significant others' view of them in relation to the rater. Each phrase is rated in the same manner as described with the Intrapsychic Form. An example is:

_____ Constructively, sensibly, persuasively, analyzes situations involving me.

The last part is the 72-item Interpersonal Form- Series B which allows subjects to rate their perceptions of themselves in relation to their significant others and is rated in a like manner. An example is:

_____ I constructively, sensibly, persuasively analyze situations involving him/her.

A measure of specific life stress was administered. The Holmes and Rahe Social Readjustment Rating Scale was not used because it does not allow the rater to qualify their life events as desirable or undesirable. This dimension has been found to be significant in measuring stress (Vinokur, and Selzer, 1975). Therefore, the Life Experiences Survey (LES) (Sarason, Johnson, and Siegel, 1978) was used. It is a 57-item self-report inventory of events experienced during the past 12 months. It consists of a list of events which are experienced with at least some degree of frequency in the general population, e.g. marriage, death of parent, as well as events pertinent to college students, e.g., failing a course. For every event experienced, the subject is instructed to rate its impact at the time the event occurred. The ratings range from -3, indicating an extremely negative impact, to +3, representing an extremely positive impact. No impact is rated as 0.

In test-retest reliability studies of the LES (Sarason, et al., 1978), undergraduate students ($n = 58$) were administered the LES twice, five to six weeks apart. Test-retest correlations for the positive change score was .53 ($p < .001$), .83 ($p < .001$) for the negative change score, and .64 ($p < .001$) for the total change score. This demonstrates that the LES is a moderately reliable instrument, with the possibility that new positive life events occurring in the interim may account for the relatively low reliability coefficient of the positive change score.

The LES correlates significantly with a number of relevant personality and behavioral indices. For a sample of 97 undergraduate students, the LES was correlated with both trait and state anxiety measures. Negative change scores correlated .29 ($p < .01$) with trait anxiety and .46 ($p < .001$) with state anxiety, while total change scores correlated .21 ($p < .05$) and .37 ($p < .001$), respectively. In a sample of 73 undergraduate students, the negative change score correlated $-.38$ ($p < .001$) with grade point average, while the total change score correlated $-.40$ ($p < .001$). In a sample of 64 undergraduate students, the negative change score correlated .24 ($p < .05$) with the Beck Depression Inventory, and .32 ($p < .02$) with the Locus of Control scale. No significant correlations were found for either positive or total change scores. The authors conclude that the negative change score is reliable and significantly related to a number of stress-related dependent measures.

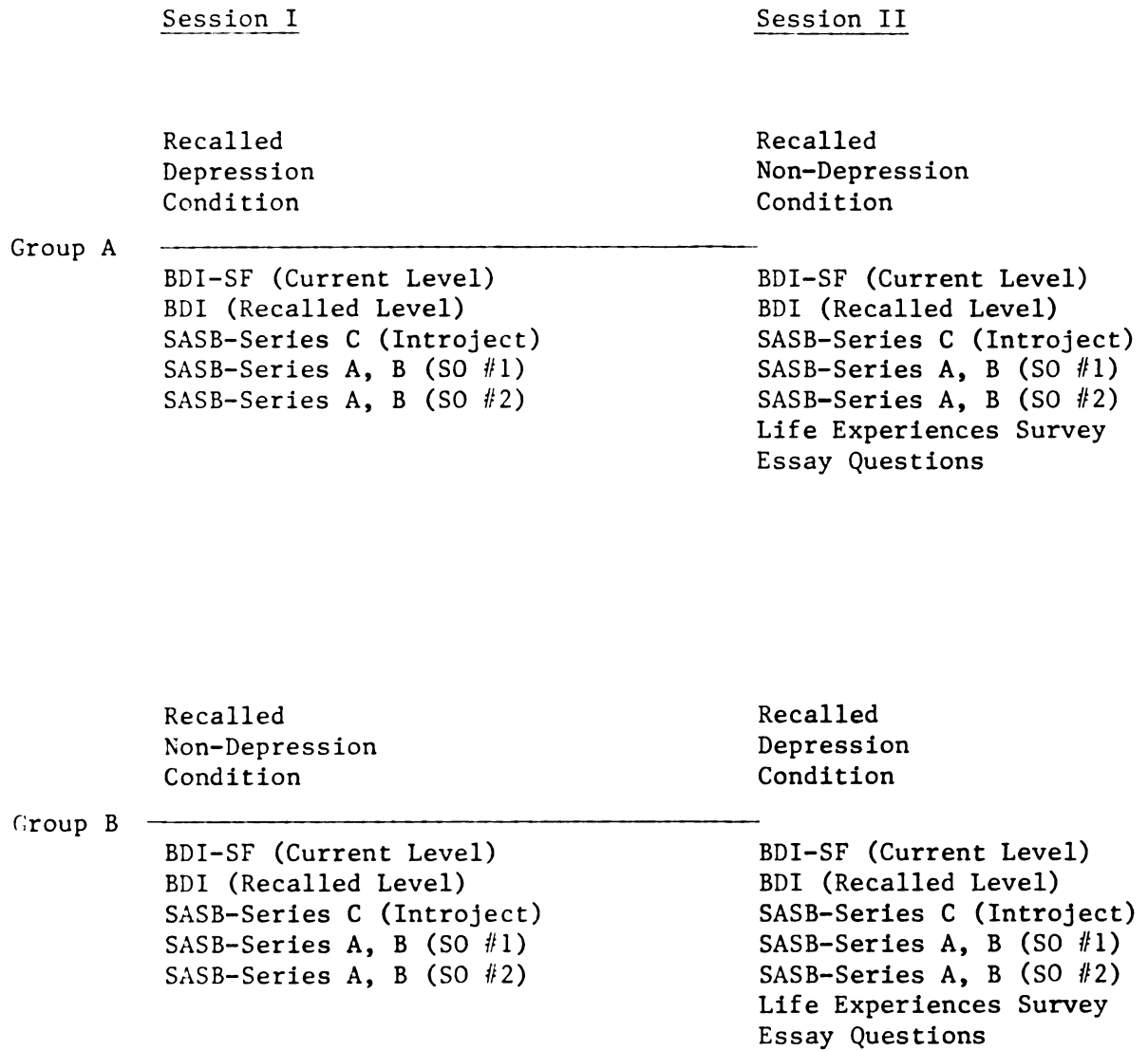
The final measures in the battery were two short essays on the subjects' personal experience of depression. One essay dealt with the attribution of depression: "People feel depressed for many different reasons--or, sometimes, for no apparent reason at all. Recalling a depressed time yourself, please describe the reason or reasons for it." The second essay asked about their reaction to their depression: "Some people feel they have no control over their depression, others have techniques or tricks to overcome it, others just wait it out. Recalling a depressed time yourself, please describe your reaction to it."

Procedure

Subjects were administered measures during two separate periods, one week apart. The one week interim was selected on the basis of convenience in scheduling subjects and for the purpose of permitting enough time to pass between administrations so as to reduce carry-over effects. The subjects were randomly divided into two approximately equal-sized groups and responded to the same measures in the reverse order of conditions for counterbalancing purposes. The experimental design is illustrated in Figure 1.

In session I, the testing packets were distributed, and the purpose of the study was read aloud while the subjects read along silently. After all questions were satisfactorily answered, Department of Psychology consent forms were read and signed. Subjects were then asked to respond to the BDI-SF as they felt at that time. Next, subjects selected two significant others to rate. Significant others were defined as those " . . . most important to you during the past year and with whom you have interacted with during both depressed and non-depressed times." No family members were allowed. Subjects identified the significant others' first name, type of relationship (spouse, lover, or intimate friend), sex, and length (months) of their relationship.

Subjects then responded to the remaining measures (BDI, SASB Introject, SASB Interpersonal Forms for both significant others) from the standpoint of a specific time in the past 12 months when they felt depressed (did not feel depressed for other group of subjects). If they could not remember a specific depressed (non-depressed) period of time in the past year, they indicated when they could remember such a specific time (# years ago). Within this condition of reminiscing about



|————— One week —————|

Experimental Design

FIGURE 1

a specific period of depression (non-depression), subjects responded to the BDI, SASB Intrapsychic Form- Series C, Interpersonal Form- Series A, and Interpersonal Form- Series B for each of their relationships with their two significant others. This battery required, on the average, 80 minutes to complete.

In Session II the purpose was again read out loud. As before, subjects were instructed to complete the BDI-SF as they felt at that time. Subjects then proceeded to respond to the measures using the same significant others they had selected in Session I, from the standpoint of a specific time in the past 12 months when they did not feel depressed (felt depressed for the other group). As before, if they could not remember a specific non-depressed (depressed) period of time in the past year, they indicated when they could remember such a time. The measures as in Session I were completed as if the subjects were reexperiencing that specific period of not feeling depressed (feeling depressed). In addition, they responded to the Life Experiences Survey and the two questions on depression attribution and reaction. Session II lasted, on the average, 75 minutes.

Session I testing packet may be found in Appendix B, Session II testing packet in Appendix C.

After the preliminary results of the study were available, feedback letter discussing the study's outcome were sent to all subjects. Enclosed with this letter was each subject's individual SASB maps, depicting their pattern of above-median responses for both recalled depression and recalled non-depression conditions. Detailed instructions on the meaning and interpretation of these displays, as well as

an offer for individual meetings with the investigator, were included in the letter. This letter may be found in Appendix D.

CHAPTER III

RESULTS

Table 1 presents means and standard deviations on all criterion and dependent variables for males, females, and the total sample. The major finding illustrated in this table is that all five hypotheses were supported for both sexes.

Test of Hypotheses

Data for Hypotheses 1, 2, and 3 is measured in terms of average quadrant scores, specifically quadrants II and III. An average quadrant score is the sum of the ratings (0 to 100 in 10 point increments) for each of the nine questionnaire items comprising the quadrant, divided by nine. T-tests were performed, comparing quadrant scores in the recalled depression and recalled non-depression conditions. Regarding Hypothesis 1, it was found that in the recalled depression condition, subjects characterized their significant others (SO) as invoking more hostile autonomy (males: $t(68) = 6.65$, $p < .001$; females: $t(112) = 6.23$, $p < .001$) and exercising more hostile power (males: $t(68) = 5.36$, $p < .001$; females: $t(112) = 3.89$, $p < .001$) than in the recalled non-depression condition. Hypothesis 2 findings were that, in the recalled depression condition, subjects characterized their responses to their SO's as taking more hostile autonomy (males: $t(68) = 6.89$, $p < .001$; females: $t(112) = 6.60$, $p < .001$) and complying more hostilely (males: $t(68) = 5.24$, $p < .001$; females: $t(112) = 6.53$, $p < .001$) than in the

TABLE 1

Comparison of Recalled Depression and Recalled
Non-Depression Conditions For Criterion and SASB Variables

<u>Variables</u>	<u>Recalled Depression Condition</u>		<u>Recalled Non-Depression Condition</u>		<u>Signif- icance</u>
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>	
Current Level of Depression					
M ^a	3.46	3.98	3.74	4.39	
F ^b	4.79	5.19	4.90	5.18	
T ^c	4.29	4.80	4.46	4.91	
Recalled Level of Depression					
M	16.59	7.70	3.25	3.81	***
F	22.31	10.45	3.49	4.05	***
T	20.14	9.88	3.40	3.95	***
Intrapsychic Reject Self					
M	37.39	16.11	22.48	11.80	***
F	38.40	18.19	22.60	12.89	***
T	38.02	17.39	22.56	12.45	***
Intrapsychic Oppress Self					
M	41.35	12.51	31.67	11.13	***
F	39.56	16.12	30.12	12.18	***
T	40.24	14.84	30.71	11.78	***
SO Invokes Hostile Autonomy					
M	26.69	14.81	17.52	10.46	***
F	18.88	14.93	12.13	10.38	***
T	21.84	15.33	14.18	10.71	***
SO Uses Hostile Power					
M	22.96	13.57	17.06	10.85	***
F	17.39	13.77	13.46	10.14	***
T	19.50	13.93	14.82	10.53	***
Subject Takes Hostile Autonomy					
M	26.40	13.70	16.60	9.04	***
F	23.36	15.51	15.16	10.46	***
T	24.51	14.89	15.71	9.95	***

TABLE 1 (Continued)

<u>Variables</u>	<u>Recalled Depression Condition</u>		<u>Recalled Non-Depression Condition</u>		<u>Signif- icance</u>
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>	
Subject Hostilely Complies					
M	30.24	15.25	23.43	14.05	***
F	27.13	17.59	20.34	13.99	***
T	28.31	16.77	21.51	14.06	***
Complementarity					
M	44.36	30.41	33.26	24.62	**
F	44.57	31.13	30.67	19.98	***
T	44.49	30.77	31.65	21.82	***
Intrapsychic RZ ^d					
M	.608	.383	.868	.274	***
F	.626	.395	.884	.256	***
T	.619	.390	.878	.262	***
SO Focuses on Subject RZ					
M	.808	.214	.871	.178	*
F	.856	.208	.927	.139	***
T	.838	.211	.906	.157	***
Subject Focuses on Self RZ					
M	.770	.257	.941	.089	***
F	.839	.218	.947	.115	***
T	.813	.235	.945	.106	***

^an = 69.

^bn = 113.

^cn = 182.

^dRZ = Internal Consistency Coefficient.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

recalled non-depressed condition. Finally, the findings of Hypothesis 3 indicate that, in the recalled depression condition, subjects characterized their attitudes towards themselves as more self-rejecting (males: $t(68) = 9.72$, $p < .001$; females: $t(112) = 9.51$, $p < .001$) and self-oppressing (males: $t(68) = 7.46$, $p < .001$; females: $t(112) = 6.88$, $p < .001$) than in the recalled non-depression condition.

Figure 2 illustrates how the SASB interpersonal and intrapsychic ratings can be transformed into weighted affiliation and interdependence scores and plotted on a two-dimensional space. The horizontal axis is Affiliation with the poles of Love and Hate, and the vertical axis is Interdependence, with the poles of Autonomy and Control. To illustrate, the (affiliation, interdependence) vector for the Introject rating of females in the recalled depression condition is (19, -11). This vector is located in Quadrant IV and is indicative of control and management of self, though with more self-love than self-hate.

The weights used in generating the weighted affiliation and interdependence scores range from -9 to +9. Affiliation weights are maximal around the Love pole and minimal around the Hate pole. Interdependence weights are maximal around the Autonomy pole and minimal around the Control pole. To compute the affiliation score, the endorsement of each item (0 to 100 by 10) is multiplied by its weight. The sum of all 36 products comprises the weighted affiliation score for that particular surface. The same procedure is followed for the Interdependence score.

As is apparent in Figure 2, regardless of recall condition, the interpersonal and intrapsychic ratings for both males and females fall on the "Love" side of the Affiliation dimension. Quadrants I and IV are considered the "healthy" quadrants and are indicative of college

Note.: Significant Other #1 and #2 ratings combined for each coordinate.

Δ : Males, $n = 69$.

\bigcirc : Females, $n = 113$.

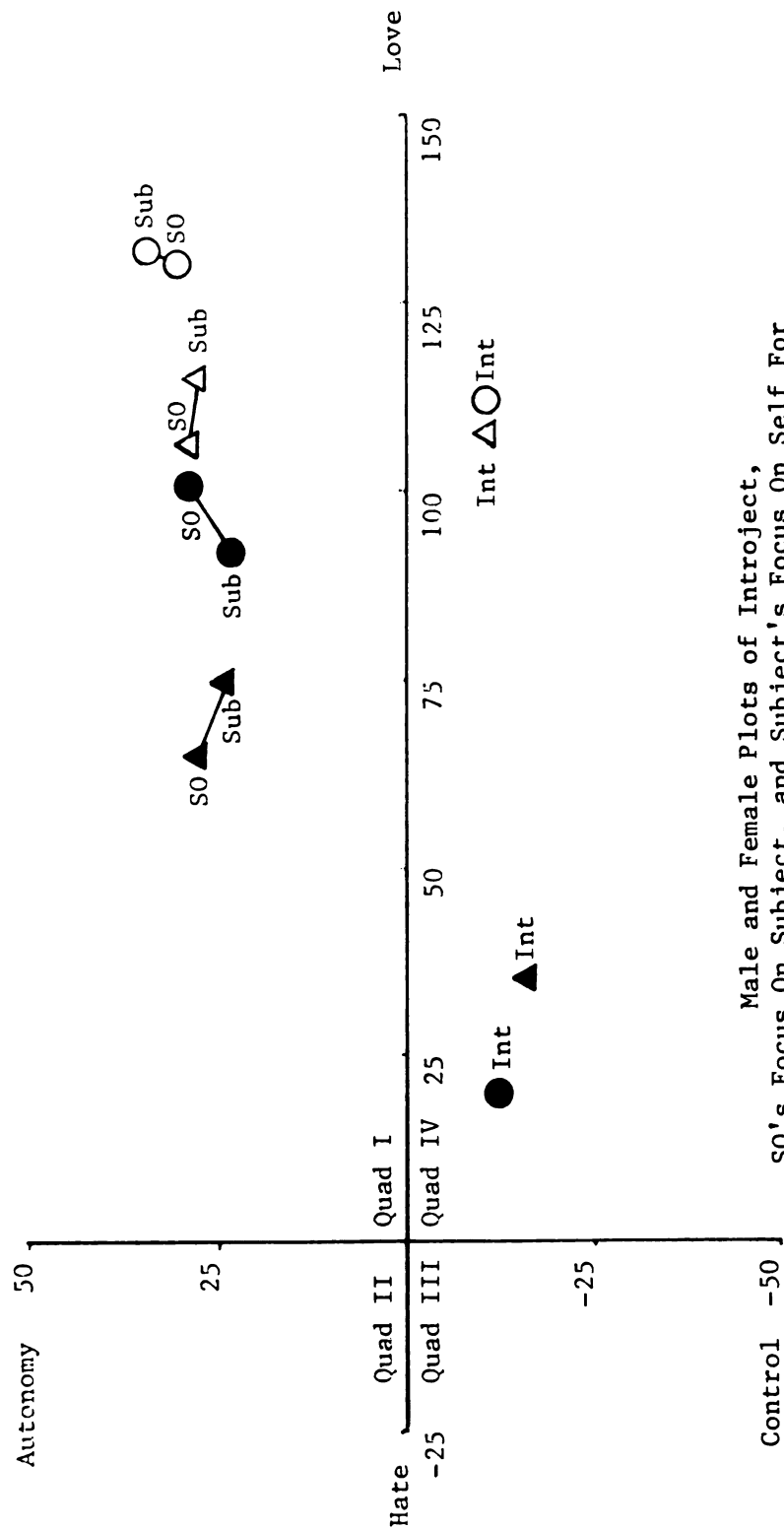
Dark symbols: Recalled Depression Condition.

Clear symbols: Recalled Non-Depression Condition.

SO: Significant others' focus on subject.

Sub: Subject's focus on self in relation to significant others.

Int: Subject's Introject.



Male and Female Plots of Introject,
SO's Focus On Subject, and Subject's Focus On Self For
Both Recalled Depression and Recalled Non-Depression Conditions

FIGURE 2

population ratings (Benjamin, 1979 (c)). Study of the differences between the recalled depression condition ratings (dark symbols) and the recalled non-depression condition ratings (clear symbols) shows a clear pattern: recalled depression ratings are significantly less affiliative, i.e., closer to the "Hate" pole, than are the recalled non-depression ratings. There are no significant differences along the Interdependence dimension.

The length of the line connecting the Significant other's focus on subject rating vector with the Subject focuses on self in relation to significant others rating vector represents the complementarity of the two corresponding ratings. The shorter the line, the more complementarity or relatedness exists between how the subjects perceive their SO focusing on them and how they subjects perceive themselves in relation to their significant other.

This degree of spatial distance between corresponding ratings is the subject of Hypothesis 4. This distance is termed the "magnitude of discrepancy in complementarity" and is generated by the Pythagorean Theorem. The discrepancy or distance between corresponding vectors is the hypotenuse of a triangle with one leg specified by the difference between the affiliation scores of the two ratings. T-tests were performed, comparing the recalled depression condition and the recalled non-depression condition. It was found that in the recalled depression condition, there was less complementarity between subjects' characterizations of their SO's focus on them and their own focus on themselves in relation to their SO's (males: $t(68) = 3.13$, $p < .003$; females: $t(112) = 4.62$, $p < .001$) than in the recalled non-depression condition.

Data for Hypothesis 5 is measured by the coefficient of internal consistency. This is a decimal number summarizing the degree to which the autocorrelation curve of a surface rating, e.g., Introject rating, corresponds to an inverted normal curve. The autocorrelation is created by correlating each of the item scores with the item scores one step away. Pairings for adjacent items continues all the way around the surface; these are first-lag correlations. The second-lag correlates are for points two steps apart, and so on up to lag 35 which completes the cycle of 36 points. The lags 19-35 are mirror images of lags 1-17 and are therefore not included in the analysis. T-tests were performed, comparing the internal consistency coefficients of all three surfaces in the recalled depression condition with the respective surfaces in the recalled non-depression condition. It was found that in the recalled depression condition, there was a lower degree of internal consistency for the SO focuses on subject rating (males: $t(68) = 2.21$, $p < .031$; females: $t(112) = 3.52$, $p < .001$), the subject focuses on self in relation to the SO rating (males: $t(68) = 6.30$, $p < .001$; females: $t(112) = 5.82$, $p < .001$), and the subjects' introject rating (males: $t(68) = 4.90$, $p < .001$; females: $t(112) = 6.13$, $p < .001$) than in the recalled non-depression condition.

Sex Differences

Significant sex differences were found for the following seven variables on the basis of both T-tests and point-biserial correlations: (1) Males characterized their SO's as invoking more hostile autonomy in the recalled depression condition than did females ($t(180) = 3.43$, $p < .001$; $r = -.248$, $p < .001$). (2) Males characterized their SO's

as invoking more hostile autonomy in the recalled non-depression condition than did females ($\underline{t}(180) = 3.39, p < .001; \underline{r} = -.245, p < .001$). (3) Males characterized their SO's as using more hostile power in the recalled depression condition than did females ($\underline{t}(180) = 2.66, p < .008; \underline{r} = -.195, p < .008$). (4) Males characterized their SO's as using more hostile power in the recalled non-depression condition than did females ($\underline{t}(180) = 2.26, p < .025, \underline{r} = -.166, p < .025$). These four sex differences may be observed in Figure 2. (5) Females characterized their SO's focus on them with more consistency in the recalled non-depression condition than did males ($\underline{t}(180) = 2.37, p < .019; \underline{r} = .174, p < .019$). (6) Females scored higher on the Life Experiences Survey positive change score, negative change score, and total change score than did males, but only the LES total change score difference was significant ($\underline{t}(180) = 2.70, p < .008; \underline{r} = .197, p < .008$). (7) Females scored higher on the BDI criterion measure, the recalled level of depression, in the recalled depression condition than did males ($\underline{t}(180) = 3.93, p < .001; \underline{r} = .281, p < .001$).

Correlations

Table 2 contains the correlations of subjects' current level of depression, their recalled level of depression, their LES negative change score, and sex with the SASB intrapsychic and interpersonal variables for the total sample.

The BDI-SF was used to measure subjects' current level of depression before they responded to the BDI criterion measure and the SASB dependent measures. It was found to significantly correlate for the total sample with the following variables. In the recalled depression condition and recalled non-depression condition respectively,

TABLE 2

Correlations of Current Level of Depression, Recalled Level
of Depression, LES Negative Change, and Sex With SASB Variables

<u>Variables</u>	<u>Current Depression</u>	<u>Recalled Depression</u>	<u>LES Neg Change</u>	<u>Sex</u>
Intrapsychic Reject Self				
Recalled Depression	.390***	.631***	.238***	.028
Recalled Non-Depression	.507***	.436***	.275***	.005
Intrapsychic Oppress Self				
Recalled Depression	.448***	.467***	.236***	-.059
Recalled Non-Depression	.464***	.410***	.196**	-.064
S0 Invokes Hostile Autonomy				
Recalled Depression	.326***	.238***	.162*	-.248***
Recalled Non-Depression	.336***	.164**	.109	-.245***
S0 Uses Hostile Power				
Recalled Depression	.322***	.300***	.148*	-.195**
Recalled Non-Depression	.278***	.196**	.093	-.166*
Subject Takes Hostile Autonomy				
Recalled Depression	.310***	.264***	.149*	-.099
Recalled Non-Depression	.339***	.163**	.155*	-.071
Subject Hostilely Complies				
Recalled Depression	.417***	.413***	.186**	-.090
Recalled Non-Depression	.423***	.266***	.147*	-.107
Intrapsychic RZ ^a				
Recalled Depression	.012	-.110	.003	.021
Recalled Non-Depression	-.372***	-.480***	-.253***	.029
S0 Focuses on Subject RZ				
Recalled Depression	-.029	-.198**	-.023	.111
Recalled Non-Depression	-.164*	-.190**	-.107	.174**
Subject Focuses on Self RZ				
Recalled Depression	-.210**	-.267***	-.135*	.143*
Recalled Non-Depression	-.381***	-.307***	-.224***	.023

Note.: N = 182.

^aRZ = Internal Consistency Coefficient.

* p < .05.

** p < .01.

*** p < .001.

intrapsychic reject self ($\underline{r} = .390, p < .001; \underline{r} = .507, p < .001$), intrapsychic oppress self ($\underline{r} = .448, p < .001; \underline{r} = .464, p < .001$) SO invokes hostile autonomy ($\underline{r} = .326, p < .001; \underline{r} = .336, p < .001$), SO uses hostile power ($\underline{r} = .322, p < .001; \underline{r} = .278, p < .001$), subject takes hostile autonomy ($\underline{r} = .310, p < .001; \underline{r} = .339, p < .001$), and subject hostilely complies ($\underline{r} = .417, p < .001; \underline{r} = .423, p < .001$). Specifically in the recalled depression condition, it was found that the BDI-SF significantly correlated negatively with the subject focuses on self in relation to the SO internal consistency coefficient ($\underline{r} = -.210, p < .002$). However, in the recalled non-depression condition, it was found to significantly correlate with all three internal consistency coefficients: intrapsychic ($\underline{r} = -.372, p < .001$), SO focuses on subject ($\underline{r} = -.164, p < .014$), and subject focuses on self in relation to SO ($\underline{r} = -.381, p < .001$).

The BDI was used to measure subjects' recalled level of depression, that is, they were instructed to respond to this measure as if they were once again experiencing their specifically recalled periods of depression and non-depression. In the recalled depression condition and recalled non-depression condition respectively, the BDI significantly correlated with intrapsychic reject self ($\underline{r} = .631, p < .001; \underline{r} = .436, p < .001$), intrapsychic oppress self ($\underline{r} = .467, p < .001; \underline{r} = .410, p < .001$), SO invokes hostile autonomy ($\underline{r} = .238, p < .001; \underline{r} = .164, p < .014$), SO uses hostile power ($\underline{r} = .300, p < .001; r = .196, p < .004$), subject takes hostile autonomy ($\underline{r} = .264, p < .001; \underline{r} = .163, p < .014$), and subject hostilely complies ($\underline{r} = .413, p < .001; \underline{r} = .266, p < .001$). In the recalled depression condition only, it was found that the BDI significantly correlated negatively with the SO focuses on

subject ($\underline{r} = -.193$, $p < .004$), and subject focuses on self in relation to SO ($\underline{r} = -.267$, $p < .001$) internal consistency coefficients. In the recalled non-depression condition, the BDI significantly correlated negatively with all three internal consistency coefficients; intrapsychic ($\underline{r} = -.480$, $p < .001$), SO focuses on subject ($\underline{r} = -.190$, $p < .005$), and subject focuses on self in relation to SO ($\underline{r} = -.307$, $p < .001$).

The LES negative change score was used to measure subjects' quantity of life experiences perceived as having negative impact. Males' average negative change score was 8.41 (S.D. = 6.15) and females' average score was 10.28 (S.D. = 7.89). For the total sample, it was found to have a high positive correlation with the LES total change score ($\underline{r} = .741$, $p < .001$) and a slight negative correlation with the LES positive change score ($\underline{r} = -.136$, $p < .034$). For the total sample, it was found to significantly correlate with, in the recalled depression condition and recalled non-depression condition respectively, intrapsychic reject self ($\underline{r} = .238$, $p < .001$; $\underline{r} = .275$, $p < .001$), and intrapsychic oppress self ($\underline{r} = .236$, $p < .001$; $\underline{r} = .196$, $p < .004$). In the recalled depression condition only, it was found to significantly correlate with SO invokes hostile autonomy ($\underline{r} = .162$, $p < .015$), SO uses hostile power ($\underline{r} = .148$, $p < .023$), subject takes hostile autonomy ($\underline{r} = .149$, $p < .023$), and subject hostilely complies ($\underline{r} = .186$, $p < .006$). Whereas in the recalled non-depression condition, it only significantly correlated with subject takes hostile autonomy ($\underline{r} = .155$, $p < .019$), and subject hostilely complies ($\underline{r} = .147$, $p < .024$). The LES negative change score significantly correlated negatively with only the subject focuses on self in relation to SO internal consistency coefficient

($\underline{r} = -.135$, $p < .034$) in the recalled depression condition. Whereas in the recalled non-depression condition, it correlated with two internal consistency coefficients: intrapsychic ($\underline{r} = -.253$, $p < .001$), and subject focuses on self in relation to SO ($\underline{r} = -.224$, $p < .001$).

Analysis of Variance of Criterion Measure (BDI)

In a further study of the BDI criterion measure for both conditions, a factor analysis was performed with the following independent variables: sex, LES negative change score, and level of current depression (BDI-SF). The latter two variables were subdivided into low, medium, and high categories for this purpose. Analysis was restricted to the 152 subjects who rated both a depressed period and a non-depressed period in the past 12 months (85.2% and 97.3% of the total sample respectively). Two analyses were performed, one for each condition of recall. The results are located in Table 3.

For the BDI in the recalled depression condition, three main effects and a two-way interaction were found. In order of declining influence, the main effects were: subjects' level of current depression ($\underline{F}(2,151) = 19.76$, $p < .001$), sex ($\underline{F}(1,151) = 8.79$, $p < .004$), and subjects' LES negative change score ($\underline{F}(2,151) = 4.46$, $p < .013$). The interaction was sex by current level of depression ($\underline{F}(2,151) = 5.16$, $p < .007$), with depressed females scoring the highest of the BDI.

Analyzing the BDI in the recalled non-depression condition, one main effect, subjects' level of current depression ($\underline{F}(2,151) = 15.18$, $p < .001$), and one interaction, LES negative change score by current level of depression ($\underline{F}(4,151) = 2.57$, $p < .041$) were found. Depressed subjects with high LES negative change scores were found to score the highest on the BDI.

TABLE 3

Analysis of Variance of Criterion Measure (BDI) For
Both Recalled Depression and Recalled Non-Depression Conditions

<u>Recalled Depression Condition</u>				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Sex	1	528.09	528.09	8.79**
LES Negative Change	2	535.75	267.88	4.46*
Current Depression	2	2374.86	1187.43	19.76***
Sex X LES Neg Ch	2	280.61	140.31	2.34
Sex X Curr Dep	2	619.64	309.82	5.16**
LES Neg Ch X Curr Dep	4	36.15	.60	.66
Sex X LES Neg Ch X Curr Dep	4	508.64	127.16	2.12
Within-groups	134	8052.66	60.10	
Total	151	14711.84	97.43	

<u>Recalled Non-Depression Condition</u>				
<u>Source</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Sex	1	2.00	2.00	.15
LES Negative Change	2	35.15	17.58	1.32
Current Depression	2	404.35	202.18	15.18***
Sex X LES Neg Ch	2	14.77	7.38	.55
Sex X Curr Dep	2	13.34	6.67	.50
LES Neg Ch X Curr Dep	4	137.09	34.27	2.57*
Sex X LES Neg Ch X Curr Dep	4	72.35	18.09	1.36
Within-groups	134	1784.52	13.32	
Total	151	2510.52	16.63	

Note.: N = 152 (Subjects rating both a depressed and non-depressed period within the past 12 months).

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Examination of Currently Depressed Subjects

Table 4 shows a breakdown of subjects who were currently depressed within each of the recall conditions. Six males (8.6%) and 26 females (23.0%) were moderately or severely depressed at the beginning of the recalled depression condition session. Ten males (14.4%) and 26 females (23.0%) were also found to be moderately or severely depressed at the beginning of the recalled non-depression condition session. Twenty subjects--five males (7.2%) and 15 females (13.3%)--were moderately or severely depressed in both conditions. This subgroup of currently depressed subjects was compared with the majority of subjects who were not currently depressed ($n = 162$) on all variables.

Table 5 presents means and standard deviations for all criterion and dependent variables for both currently depressed and currently non-depressed males and females, as well as the total sample. The results of the 64 male and 98 female subjects who were not currently depressed were very similar to the results of the total male sample ($n = 69$) and the total female sample ($n = 113$) illustrated in Table 1. In general, all five hypotheses were supported for this subgroup; the t-tests performed between the recalled depression condition and recalled non-depression condition will not be specified, though all were significant.

However, t-tests performed for the depressed subject subgroup produced interesting and significantly different results and will be considered separately. Regarding Hypothesis 1, it was found that in the recalled depression condition, only currently depressed females characterized their significant others as invoking more hostile autonomy ($t(14) = 3.24$, $p < .006$) and exercising more hostile power ($t(14) = 2.67$, $p < .018$) than in the recalled non-depression condition. Currently

TABLE 4

Current Level of Depression (BDI-SF) For Both
Recalled Depression and Recalled Non-Depression Conditions

<u>Recalled Depression Condition</u>				
	<u>None or Minimal</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>
M ^a	48(69.6%)	15(21.7%)	5(7.2%)	1(1.4%)
F ^b	63(55.8%)	24(21.2%)	21(18.6%)	5(4.4%)
T ^c	111(61.0%)	39(21.4%)	26(14.3%)	6(3.3%)

<u>Recalled Non-Depression Condition</u>				
	<u>None or Minimal</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>
M	50(72.5%)	9(13.0%)	9(13.0%)	1(1.4%)
F	66(58.4%)	21(18.6%)	21(18.6%)	5(4.4%)
T	116(63.7%)	30(16.5%)	30(16.5%)	6(3.3%)

Note.: BDI-SF score classification as follows:

0-4 none or minimal.

5-7 mild.

8-15 moderate.

16+ severe.

^an = 69.

^bn = 113.

^cn = 182.

TABLE 5

Comparison of Currently Depressed and Currently
Non-Depressed Subjects in the Recalled Depression and
Recalled Non-Depression Conditions For Criterion and SASB Variables

	Recalled Depression Condition		Recalled Non-Depression Condition		Signif- icance
<u>Variables</u>	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>	
Current Level of Depression					
M1 ^a	2.66	2.36	2.95	3.18	
M2 ^b	13.80	6.14	13.80	5.63	
F1 ^c	3.60	4.19	3.50	3.56	
F2 ^d	12.53	4.47	14.07	4.80	
T1 ^e	3.23	3.60	3.28	3.41	
T2 ^f	12.85	4.79	14.00	4.87	
Recalled Level of Depression					
M1	16.09	7.56	2.67	2.96	***
M2	23.00	7.14	10.60	6.03	*
F1	20.88	9.62	3.04	3.58	***
F2	31.67	11.15	6.40	5.65	***
T1	18.99	9.15	2.90	3.34	***
T2	29.50	10.83	7.45	5.89	***
Intrapsychic Reject Self					
M1	36.44	16.04	20.95	10.71	***
M2	49.60	12.62	42.00	6.60	
F1	36.29	16.86	21.19	12.49	***
F2	52.20	21.02	31.80	11.95	**
T1	36.35	16.49	22.00	11.79	***
T2	51.55	18.99	34.35	11.61	**
Intrapsychic Oppress Self					
M1	40.55	12.29	30.17	9.54	***
M2	51.60	11.80	50.80	13.29	
F1	36.94	14.65	27.92	9.52	***
F2	56.67	15.17	44.53	17.36	*
T1	38.36	13.84	28.81	9.57	***
T2	55.40	14.28	46.10	16.34	*

TABLE 5 (Continued)

<u>Variables</u>	<u>Recalled Depression Condition</u>		<u>Recalled Non-Depression Condition</u>		<u>Signif- icance</u>
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>	
SO Invokes Hostile Autonomy					
M1	26.20	14.70	17.00	10.23	***
M2	32.90	16.61	24.20	12.36	
F1	17.05	14.16	11.04	10.01	***
F2	30.80	14.79	19.27	10.23	**
T1	20.67	15.02	13.40	10.48	***
T2	31.33	14.84	20.50	10.68	***
SO Uses Hostile Power					
M1	22.72	13.65	16.89	11.01	***
M2	26.10	13.54	19.20	9.36	
F1	14.95	11.62	11.99	9.03	***
F2	33.30	16.42	23.07	11.99	*
T1	18.02	13.00	13.93	10.12	***
T2	31.50	15.73	22.10	11.29	**
Subject Takes Hostile Autonomy					
M1	26.56	13.94	16.52	9.16	***
M2	24.40	11.05	17.70	8.18	
F1	21.17	13.67	14.06	9.73	***
F2	37.67	19.43	22.37	12.45	***
T1	23.30	13.99	15.03	9.56	***
T2	34.35	18.40	21.20	11.52	***
Subject Hostilely Complies					
M1	29.68	14.96	22.67	13.50	***
M2	37.40	18.98	33.20	18.83	
F1	23.91	15.54	18.02	12.21	***
F2	48.17	16.03	35.50	15.83	***
T1	26.19	15.52	19.85	12.90	***
T2	45.48	16.97	34.93	16.14	***
Complementarity					
M1	42.56	28.32	31.55	23.30	**
M2	67.44	48.70	55.20	33.27	
F1	44.18	31.14	28.97	19.69	***
F2	47.09	31.98	41.79	18.80	
T1	43.54	29.98	29.99	21.16	***
T2	52.18	36.53	45.15	23.00	

TABLE 5 (Continued)

<u>Variables</u>	<u>Recalled Depression Condition</u>		<u>Recalled Non-Depression Condition</u>		<u>Signif- icance</u>
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>	
Intrapsychic RZ ^g					
M1	.624	.380	.906	.224	***
M2	.411	.415	.390	.425	
F1	.615	.406	.896	.242	***
F2	.696	.317	.806	.333	
T1	.618	.395	.900	.234	***
T2	.625	.355	.702	.392	
SO Focuses on Subject RZ					
M1	.802	.219	.877	.172	*
M2	.893	.092	.792	.247	
F1	.870	.199	.932	.134	**
F2	.766	.247	.893	.168	
T1	.843	.209	.910	.152	***
T2	.798	.223	.867	.189	
Subject Focuses on Self RZ					
M1	.776	.255	.943	.089	***
M2	.700	.309	.918	.095	
F1	.866	.196	.963	.081	***
F2	.658	.269	.841	.214	*
T1	.831	.225	.955	.085	***
T2	.669	.272	.860	.192	**

Note.: Currently depressed subjects scored 8 or higher on the BDI-SF in each recall condition.

^aCurrently non-depressed males, n = 64.

^bCurrently depressed males, n = 5.

^cCurrently non-depressed females, n = 98.

^dCurrently depressed females, n = 15.

^eCurrently non-depressed males and females, n = 162.

^fCurrently depressed males and females, n = 20.

^gRZ = Internal Consistency Coefficient.

* p < .05.

** p < .01.

*** p < .001.

depressed males were not found to demonstrate significant differences on these variables between conditions. Hypothesis 2 findings were that, in the recalled depression condition, only currently depressed females characterized their responses to their SO's as taking more hostile autonomy ($t(14) = 4.26, p < .001$) and complying more hostilely ($t(14) = 4.00, p < .001$) than in the recalled non-depression condition.

The findings of Hypothesis 3 indicate that, in the recalled depression condition, only currently depressed females characterized their attitudes towards themselves as more self-rejecting ($t(14) = 3.53, p < .003$) and self-oppressing ($t(14) = 2.80, p < .014$) than in the recalled non-depression condition. As was found in Hypothesis 1 and 2, currently depressed males did not show a significant difference on these variables between recall conditions.

Hypothesis 4 was not supported for either currently depressed males or females. No significant difference was found in degree of complementarity between the two recall conditions.

Hypothesis 5 was only partially supported, and then only for currently depressed females. It was found that in the recalled depression condition, there was a lower degree of internal consistency in the currently depressed females' ratings of the Subject focuses on self surface ($t(14) = -.290, p < .012$) than in the recalled non-depression condition. No significant differences were found between recall conditions for either sex on the degree of internal consistency of the SO focuses on subject or the Introject ratings.

Differences Between Currently Depressed and
Currently Non-Depressed Subjects

In their recall of a depressed period, currently depressed males were not found to be significantly different from non-depressed males on the BDI criterion measure, while currently depressed females scored significantly higher than currently non-depressed females ($t(111) = 3.96, p < .001$). In their recall of a non-depressed period, both males and females who were currently depressed scored significantly higher on the BDI criterion measure than did currently non-depressed males and females (males: $t(67) = 5.30, p < .001$; females: $t(111) = 3.10, p < .01$).

Currently depressed males were not found to be significantly different from currently non-depressed males in their characterization of their SO's during either recall period. However, currently depressed females were found to be significantly different from currently non-depressed females in that they viewed their SO's as invoking more hostile autonomy and using more hostile power in both the recalled depression condition ($t(111) = 3.48, p < .001$; $t(111) = 5.37, p < .001$, respectively) and the recalled non-depression condition ($t(111) = 2.96, p < .004$; $t(111) = 4.23, p < .001$, respectively).

Currently depressed males were also found to be not significantly different from currently non-depressed males in characterizing their own responses to their SO's during either recall condition. Currently depressed females, on the other hand, were found to characterize themselves as taking significantly more hostile autonomy and complying significantly more hostilely than did currently non-depressed females in both the recalled depression condition ($t(111) = 4.10, p < .001$; $t(111) = 5.61, p < .001$, respectively) and the recalled non-depression condition ($t(111) = 2.96, p < .004$; $t(111) = 4.96, p < .001$, respectively).

Males who were currently depressed were found to not significantly reject and oppress themselves more than did currently non-depressed males while recalling a depressed period, while currently depressed females did ($t(111) = 3.29, p < .001$; $t(111) = 4.84, p < .001$, respectively). However, in their recall of the non-depressed period, both currently depressed males and females significantly rejected and oppressed themselves more (males: $t(67) = 4.31, p < .001$; $t(67) = 4.53, p < .001$; females: $f(111) = 3.08, p < .003$; $t(111) = 5.53, p < .001$) than did currently non-depressed subjects.

Currently depressed males and females were not significantly different from currently non-depressed males and females in their degree of complementarity between interpersonal ratings in the recalled depression condition. But there were significant differences found in the recalled non-depression condition. Currently depressed males and females exhibited less complementarity than did currently non-depressed males and females (males: $t(67) = 2.12, p < .038$; females: $t(111) = 2.36, p < .020$).

Currently depressed males were found to be significantly different from currently non-depressed males in the internal consistency of only one rating: they demonstrated significantly less consistency in their non-depressed introject recall ($t(67) = -4.61, p < .001$). Currently depressed females were found to be significantly different from currently non-depressed females in that they demonstrated significantly less consistency in their ratings of Focus on themselves in relation to their significant others in both the recalled depression condition ($t(111) = -3.63, p < .001$) and the recalled non-depression condition ($t(111) = -4.07, p < .001$).

Figure 3 illustrates these differences on the SASB variables between currently depressed and currently non-depressed males and females. In addition to a quadrant-level analysis as explored in Hypotheses 1, 2, and 3, a two-dimensional analysis can be performed in which the relative placement of the SASB interpersonal and intrapsychic rating vectors are compared. Studying the vectors of significant others (SO), it can be seen that currently depressed males are not characterizing their SO's very differently from how currently non-depressed males characterize their SO's. However, currently depressed females view their SO's as more attacking ($t(111) = -2.52, p < .013$) and controlling ($t(111) = -2.01, p < .046$) when recalling a depressed period, and as more controlling ($t(111) = -2.17, p < .032$) when recalling a non-depressed period than do currently non-depressed females.

Currently depressed males are also not significantly different from currently non-depressed males in their characterizations of themselves in relation to their significant others (Sub). This is the case in both conditions of recall. Currently depressed females view themselves as responding with more submission in the recalled non-depression condition ($t(111) = -3.11, p < .002$), and with more protest in both the recalled depression condition ($t(111) = -3.85, p < .001$) and the recalled non-depression condition ($t(111) = -2.91, p < .004$).

Currently depressed males are significantly different from currently non-depressed males in that they view themselves (Int) with more self-hate when recalling a non-depressed period ($t(67) = -4.54, p < .001$). Currently depressed females view themselves with significantly more self-hate ($t(111) = -2.12, p < .036$) and self-control ($t(111) = -2.06, p < .042$) than do currently non-depressed females when

Note.: Significant Other #1 and #2 ratings combined for each coordinate.

△ : Currently non-depressed males, $n = 64$.

▲ : Currently depressed males, $n = 5$.

○ : Currently non-depressed females, $n = 98$.

⊙ : Currently depressed females, $n = 15$.

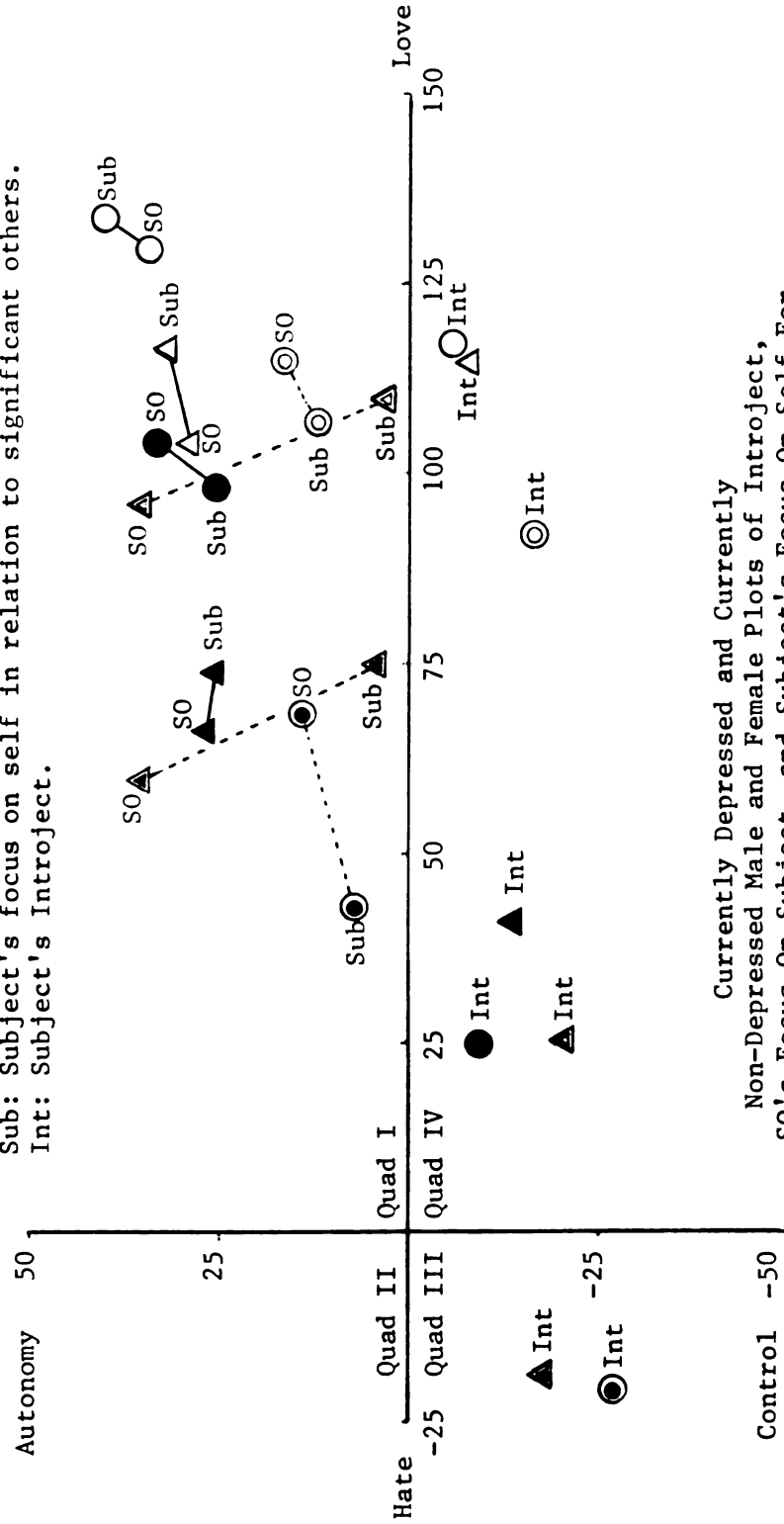
Dark symbols: Recalled Depression Condition.

Clear symbols: Recalled Non-Depression Condition.

SO: Significant others' focus on subject.

Sub: Subject's focus on self in relation to significant others.

Int: Subject's Introject.



Currently Depressed and Currently
Non-Depressed Male and Female Plots of Introject,
SO's Focus On Subject, and Subject's Focus On Self For
Both Recalled Depression and Recalled Non-Depression Conditions

FIGURE 3

recalling a depressed period.

Two significant differences were also found between currently depressed subjects and currently non-depressed subjects in terms of their LES scores. Currently depressed females had significantly fewer positive life events than did currently non-depressed females ($t(111) = -2.50, p < .014$), while there was no significant difference found between males. In addition, currently depressed males had significantly more negative life events than did currently non-depressed males ($t(67) = 2.09, p < .041$), while no such significant difference was found between females.

Essay Questions

The depression attribution and response essay items were classified into discrete categories. For males and females respectively, the depression attribution categories are listed in order of declining endorsement:

- (1) externally-based and interpersonal (39.1%; 46.0%);
- (2) internally-based and interpersonal (15.9%; 21.2%);
- (3) internally-based and non-interpersonal (15.9%; 10.6%);
- (4) multi-attribution (14.5%; 8.8%); (5) ambiguous attribution (11.6%; 8.0%); and (6) externally-based and non-interpersonal (2.9%; 5.3%).

Responses to depression were classified in one of five ways and are listed in order of declining endorsement, for males and females respectively: (1) active and externally-oriented (34.8%; 31.9%); (2) active and internally-oriented (24.6%; 30.1%); (3) passive and internally-oriented (23.2%; 20.4%); (4) passive and externally-oriented (10.1%; 11.5%); and (5) multi-response (5.8%; 5.3%).

Cross-tabulation of these two items produced the most common combination of depression attribution and response. For both males and females it was a externally-based and interpersonal attribution with an active and externally-oriented response (13.0%; 17.7%). An example of this particular set is: "The reason for my depression was due to the conflict between my roommates and I. They made me feel very left out and separated from them." and " . . . I decided to talk with my roommates because something had to be done."

CHAPTER IV

DISCUSSION

Based on a description of the symptoms and parameters of normal depression, subjects were able to recall and characterize a depressed period of time in their own lives. Over 85 percent of the subjects had experienced such a period in the past 12 months. For both males and females, the average score on the criterion measure of depression (BDI) was over 16, the cutoff point for moderate depression. This level of recalled depression was significantly higher than subjects' current baseline level of depression, thus verifying that subjects were able to successfully recall a prior depressed period. Females scored significantly higher than did males and were at the upper limit of the moderately depressed range. This finding is supported by an analysis of variance test of the BDI: sex was the single largest contributor to the total variance, with females scoring the highest on the BDI. This sex difference is not an artifact; past research with the BDI shows this to be a consistent finding (Beck, and Beamesderfer, 1974).

Thus, subjects were able to characterize a recent experience as one of moderate depression. This is in sharp contrast to the characterization of a recent experience defined as non-depressed. For both males and females, the BDI average score was very low and indicated no or minimal depression. Most subjects, 97 percent, were able to recall such a non-depressed period within the past 12 months.

Because the criterion measures do indeed show a very significant difference between the two conditions of recall, and thereby demonstrate that the depressive syndrome is being measured through the recall of such an experience, we can now examine and consider the five hypotheses. The first hypothesis is supported. In characterizing their perceptions of relations with two significant others during a time of depression, subjects portrayed their spouses, lovers, and friends as treating them with more hostile autonomy and hostile power than during other times. In describing the behavior of their significant others toward them, subjects endorsed highly such items as: "Uncaringly lets me go, do what I want"; "Starves me, fails to give me my 'due', cuts me out"; "Punishes me, takes revenge"; and "Intrudes on me, blocks, restricts me". Such statements seem to embody the depressive themes observed by Beck in his research with severely depressed psychiatric patients (Beck, 1972 (a)) as well as by Weintraub, et al. (1974) in their research with depressed college men. In these descriptors are the themes of being thwarted, blocked, deprived, and left by significant others. In general, these items represent a negative attitude toward the outside world, and in particular, the interpersonal domain.

Males were found to characterize the behavior of their significant others towards them as significantly less affiliative, i.e., higher quadrant II (invokes hostile autonomy) and III (uses hostile power) average scores, than did females for both conditions of recall. It seems that they perceived their spouses, lovers, and friends as treating them in a less friendly manner, regardless of whether they were depressed or not.

The way in which the subjects described their own behavior in relation to their significant others was the focus of the second hypothesis. It was found that subjects related to their significant others during the same depressed period of time by taking more hostile autonomy and complying more hostilely than during the specified non-depressed period. Some highly endorsed items describing their own behavior were: "Regardless of what he/she says or does, I treat him/her according to my own unwarranted and illogical assumptions about him/her"; "I hide my resentment and anger and scurry to avoid his/her disapproval"; "I depend upon him/her to take care of everything for me"; and "I comply with his/her wishes without much feeling of my own, am apathetic". Such items reflect the depressive themes of personal defeat, deprivation, disparagement, and dependency; and in sum represent the second point of the cognitive triad: a negative attitude toward self.

These themes were also detected in subjects' general attitudes towards themselves when they were depressed. Following Hypothesis 3, when subjects considered themselves as the recipients of their own social behavior during a depressed period, their attitudes about themselves were found to be more self-rejecting and self-oppressing than during the non-depressed period they selected. Common highly endorsed items were: "I let unwarranted, illogical ideas I have about myself go unexplained and unchallenged"; "I vehemently reject, dismiss myself as worthless"; "I deprive, deplete myself, making myself sacrifice for others even if it means harming myself greatly;" and "I tell myself to be unsure, that I am inadequate because others are better than me". These self-statements bring up themes that are typical of the depressed condition: self-criticism and blame, devaluation, and perceived inadequacy.

Hypotheses 1, 2, and 3 demonstrate generalized negative attitudes toward the self and the interpersonal environment during selected times defined as periods of depression, and as such, represent the activity of cognitions which are distinct from the cognitions measured in a condition defined as non-depressed. This finding suggests the existence of depressive schemas in operation during the recall and reexperiencing of a depressed period of time.

The fourth hypothesis is supported. Subjects' characterizations of their relations with two significant others during a recalled depressed period demonstrated a significantly lower degree of complementarity or interrelatedness than their recalled non-depressed period characterizations. That is, there was a greater spatial distance between the vector of the Significant others' focus on the subject and the corresponding vector of the Subjects' focus on themselves in relation to the SO's when the subjects were depressed. The SASB instrument is constructed on the basis of a logical and rational relationship between behavior antecedents (the Other surface) and consequences (the Self surface). The finding of greater disparity and incongruity between these complementary surfaces in the recalled depression characterizations of subjects may represent the activity of depressive cognitions which would distort reality and produce idiosyncratic misperceptions and misinterpretations of such interpersonal behavior.

It is conceivable that subjects may have had difficulty in recalling accurately the behavior of their significant others and their own responses during a depressed period in their past. The greater deviation from complementariness witnessed in the recalled depression condition may

in actuality reflect a lack of realism rather than depressive cognitions at work. However, this is not likely. Cognitive inaccuracies would be more random and would not manifest in the consistent manner demonstrated. The findings are uniform and support the activated cognitive distortion hypothesis.

As predicted by Hypothesis 5, subjects were found to characterize their perceptions of relations with their two significant others and their own attitudes towards themselves during a recalled depressed period of time with less internal consistency than during a recalled non-depressed period of time. Low internal consistency in a rating indicates behavior and attitudes which are not integrated, predictable, or stable. The recalled depression condition internal consistency coefficients for both males and females are well below the minimum of .90 Benjamin identifies as representing consistent and integrated behavior. This finding of low internal consistency may reflect the activity of depressive cognitions which would, by definition, distort their perceptions of themselves and their relationships. Benjamin found low internal consistency coefficients quite often depicted ratings of psychiatric patients (Benjamin, 1974).

The work of Velten and others (Velten, 1968; Strickland, Hale, and Anderson, 1975; Hale, and Strickland, 1976) has demonstrated that a significant change of mood--from non-depressed to depressed--is possible through specific mood-induction procedures. They hypothesized that the cognitive mediation function was being manipulated, thereby shaping the affective experience of depression. This procedure was not employed in the present study; subjects were instructed to remember and attempt to reexperience a prior depressive period. No information

was obtained on how they went about doing this, i.e., what methods they used. Nor was there any way to assess, in reality, what their stimulus situation consisted of. The essay questions did not provide sufficient information to help in this assessment. Thus, it is not possible to answer the question of how "accurate" their recall was. Perhaps "accuracy" is not the point however. The dependent measures are indices of the subjects' characterizations of how they viewed themselves and their relationships when they were depressed. This is their construction of depressed functioning, and as such, the data of all five hypotheses should be considered not as accurate representations of reality, but as reflections of the subjects' construction of how it was when they were depressed and how it was when they were not depressed.

Based on an analysis of variance test of the criterion measure of depression under both conditions, it was found that when recalling either a depressed or non-depressed period of time, those subjects who were currently depressed (as measured by the BDI-SF) scored as more depressed. Correlation coefficients between subjects' current level of depression and the dependent measures also show a significant relationship. An increase in current depression was strongly associated with an increase in self-rejection and oppression, an increase in perceptions of their significant others as invoking more hostile autonomy and using more hostile power, and an increase in their perceptions of responding with more hostile autonomy and compliance. This positive relationship was true for both conditions of recall. In the recalled non-depressed condition only, it was found that the more depressed subjects were, the more difficulty they had in consistently characterizing in a logical manner how they viewed themselves and their relationships. It seems as

though the hypothesized cognitive distortions of depression were indeed in operation, and were so pervasive as to make it difficult to characterize how it was when they were not depressed.

Subjects who were identified as moderately or severely depressed at the onset of the sessions were still able to demonstrate a significant shift in the criterion measure from the recalled non-depression condition to the recalled depression condition; their BDI scores reflected that they were able to characterize a recalled period of non-depression. However, relative to currently non-depressed subjects, they characterized their non-depressed period as significantly more depressed.

Currently depressed subjects also displayed more self-rejection and self-oppression when characterizing their attitudes towards themselves during recall of a non-depressed time than did subjects who were not depressed at the time. They also had more difficulty in perceiving their relationships with significant others during a non-depressed time as logically related and complementary. Apparently, depressed subjects were hindered in their capacity to select veridical schemas to accurately view themselves and their significant relationships when they were in a situation which demanded it, i.e., the recalled non-depression condition. This then raises the possibility that depressive cognitions were in operation and produced distortions in their perceptions and assessment of reality.

Subjects' frequency of recent experiences perceived as negative had significant positive correlations with their current level of depression, recalled level of depression, and their characterizations of themselves as self-rejecting and self-oppressing. Recent negative experiences had a less clear cut association with the interpersonal

behavior perception measures. This replicates Sarason, et al.'s (1978) finding that the negative change score does significantly correlate with the BDI, and supports Paykel, et al.'s (1969) research on life events and depression, in which they found a strong association between the frequency of life events and subsequent depression. Further support comes from the finding that currently depressed males had significantly more negative life events in the previous 12 months than did non-depressed males.

The eight most frequent life experiences (endorsement by more than half of subjects), in order of increasing negative impact for both males and females were: "Outstanding personal achievement", "New job", "Beginning new school experience at a higher academic level", "Leaving home for the first time", "Major change in social activities", "Change of residence", "Major change in closeness of family", and "Breaking-up with boyfriend/girlfriend". Events which are traditionally thought of as positive and desirable, e.g., personal achievement, are apparently not always experienced as such and this finding suggests the importance of recognizing the losses inherent in such "positive" events.

In light of the data developed and examined in this study, it can be concluded that the perception of interpersonal behavior as measured by the SASB can be used as a window through which to study the domain of cognition as suggested by McLemore and Benjamin (1979). Characterizations of attitudes about self, and relations with significant others during a period defined as normal depression seem to reflect the activity of idiosyncratic and systematic distorted cognitions which Beck (1972 (a)) hypothesizes as primary in the phenomenon of depression.

The methodology of instructing subjects to reminisce about a previously experienced period of depression has proved effective in that significant and meaningful differences were discovered between the two conditions of recall. Subjects were able to successfully differentiate their perceptions of self and others from the condition of recalled depression to the condition of recalled non-depression. This was true even for subjects who were currently depressed. Even though depressed, they were able to reminisce and imagine a non-depressed time. But they were unable to make the shift completely. Relative to the non-depressed subjects, they were functioning within the non-depressed condition as if mildly depressed.

One practical implication of this study is that interpersonal behavior perceptions may be studied as a manifestation of depression. Characterizations of self-rejection and oppression, important others as invoking hostile autonomy and exercising hostile power, and responses of taking hostile autonomy and hostile compliance have been found to be strongly associated with depression and as such, could be regarded as components of the cognitive manifestation of depression. The measure of interpersonal behavior perceptions also present the possibility of use as a cognitive therapy tool. Interpersonal maps of the depressed patient's relations with significant others could be used by the therapist to confront and correct the manifested distorted cognitions. SASB maps could also be utilized in the teaching of interpersonal problem-solving strategies. For instance, the "take hostile autonomy" behavior could be viewed as maladaptive because it, in effect, removes the depressed person from the interpersonal interaction and does not permit new learning to occur, e.g., the significant other may not be

consistently perceived as invoking such hostile withdrawal and separateness. Antithetical behaviors, i.e., "encourage friendly acceptance", could be taught to the depressed person and this action could conceivably alter subsequent perceptions of the relationship in the direction of greater veridicality. In this sense, the SASB instrument could be potentially an aid in the prevention of future depression.

In consideration of improvements for further research in this area, greater emphasis must be given to the criteria and measurement of depression using a college population. While use of the BDI has been validated in use with this population (Bumberry, Oliver, and McClure, 1978), Hammen's (1980) study of depression in college students has shown that " . . . the BDI indiscriminately identified students who displayed either stable or unstable depression and who subsequently revealed considerable variation in diagnosis and symptom patterns." (Hammen, 1980, p. 128). Therefore, in future work, it would be important to obtain additional information above and beyond the BDI in order to assess the type, duration, and frequency of depression.

A logical next step in future research would be a screening procedure for depressed subjects and the formation of high and low depression groups. These groups could then be compared on the SASB dependent measures. This would eliminate the procedure of subjects' recalling previously experienced depression and then responding to the measures as if they were reliving the depressed period. This would hopefully reduce the ambiguity of whether cognitive inaccuracies or cognitive distortions were in operation.

Finally, a further refinement of this basic paradigm would be to introduce a method to measure the stimulus situation, i.e., the

relationship, more objectively. This could be accomplished through the tandem administration of the SASB instruments to both partners of the relationship and repeated administrations over time. When one member of the dyad experienced depression, their perceptions of themselves and their significant other could be analyzed along with the partner's SASB data, as well as over time. Efforts in this direction would help extend and clarify our understanding of the relationship between depressive cognitions and their impact on the perception and experience of interpersonal behavior.

APPENDICES

APPENDIX A

EXPANDED DISCUSSION OF THE SASB INSTRUMENT

Each quadrant of the SASB consists of nine items. Each item is a behavioral description (the focus of which is determined by the surface containing it) in the form of a statement. For example, the behavior charted at the midpoint of quadrant I on the Other surface is "Friendly listen." Moving toward the Tender Sexuality pole the items change in a predictable manner: "Show empathic understanding"; "Confirm as OK as is"; "Stroke, soothe, calm"; and "Warmly welcome". In quadrant I of the Self surface, the complementary midpoint behavior charted is "Openly disclose, reveal". Moving toward the Ecstatic Response pole, the items are: "Clearly express"; "Enthusiastic sharing"; "Relax, flow, enjoy"; and "Joyful approach". In quadrant I of the Introject surface, the corresponding midpoint attitude toward self charted is "Explore, listen to inner self". Moving toward the Love, Cherish Self pole, the items are: "Integrated, solid core"; "Pleased with self"; "Stroke, soothe self"; and "Entertain self". All together, there are 36 complementary pairs of items (Other surface-Self surface) and 36 attitudes toward self items (Introject surface).

Opposite behaviors are located 180 degrees apart on each surface. On the Other surface, the opposite of the quadrant I behavior, "Encourage separate identity" is found in quadrant III, "Encourage conformity". The SASB model can also describe the antitheses or antidotes. An antithesis is the opposite of the complement. For example, if the Other initiates with "Accuse, blame", Self tends to respond with "Whine,

defend, justify". To intervene and change this pattern, an antidote response would be the opposite: "Openly disclose, reveal". This response would pull from the Other a complementary response, "Friendly listen", which is the opposite to the original "Accuse, blame" initiation.

Based on data generated by the SASB questionnaires, Benjamin's model has been revised several times. The most recent model is the one used in the present study (Benjamin, 1979(a)). Extensive reliability and construct validity tests have been performed and will be discussed briefly. Statistical tests to be reviewed were based on samples of (1) One hundred and seventy-one mothers rating their normal children and themselves in relation to their children; (2) Fifty-one mothers rating their children who were brought to a child psychiatry clinic and themselves in relation to their children; (3) Two hundred undergraduate students rating themselves in a class on family life; (4) Sixty normal and fifty psychiatric subjects rating themselves, a significant other, themselves in relation to the significant other, their memories of both mother and father in early and middle childhood, and of their relations to both at those times (Benjamin, 1974); (5) Two hundred and thirty-six normal women, ages 40 to 90, rating themselves on the 1978 version of the questionnaires; (6) Eighty-six psychiatric patients rating their memories of themselves in relation to their fathers during ages five to ten years old on the 1976 version of the questionnaires; and (7) Five psychiatric residents and two sociology post-doctoral fellows judging each of the 1978 questionnaire items on a scale from -100 to +100 for friendliness, influence, and focus (Benjamin, 1979(b)).

In discussing the reliability of the SASB instrument, Benjamin makes the point that because the SASB measures the perceptions of a given interaction at a given time, reliability in the sense of internal consistency is more critical than reliability in the sense of stability over time (Benjamin, 1974). Using an autocorrelation procedure as a measure of internal consistency, it was found that reliability is high (.92 for normal pediatric outpatients in sample (1)) in normal samples and low reliability is more characteristic of psychiatric samples (.68 for child psychiatry patients in sample (2)). The internal consistency coefficient is generated by pairing the scores for all adjacent points on a surface: all points one step apart, two steps apart, and so on until all 36 points have been paired. In normal subject populations it was found that " . . . when adjacent points were paired, r 's were high and positive; when orthogonal points were paired, r 's were near zero; when opposite points were paired, r 's were large and negative." (Benjamin, 1974, p. 402). When graphed, the autocorrelation appears in a inverted-normal curve form. The product-moment correlation coefficient between each autocorrelation curve and an inverted normal z curve is the single number used to represent internal consistency or reliability of the rating. This procedure also confirms the hypothesized structure of the SASB model. That is, the coefficient reflects the degree to which items hypothesized to be similar, opposite, or orthogonal to one another were rated as such by subjects. Autocorrelations were found to be invulnerable to changes of the order of the items in the questionnaire and this suggests that the language of the questionnaires (if not also the actual behaviors described by that language) conforms to the structure proposed as demonstrated by this within subjects analysis.

Based on interview data with both normal and psychiatric subjects, Benjamin (Benjamin, 1974) found that when the internal consistency coefficient was greater than or equal to .90, then the behaviors being described could be regarded as stable, predictable, and consistent from day to day. Autocorrelations showing lower internal consistency were found to usually refer to behaviors described by interviewees as unpredictable, changeable, or chaotic. Although high consistency was generally characteristic of only normals, it was occasionally evident in psychiatric subjects and often reflected psychopathology, e.g., a high degree of internal consistency oriented around self-destruction.

Turning to between-subjects analyses contributing to the construct validity of the SASB model, Benjamin constructed a circumplex table of correlations based on data from samples (1) and (2). The a priori structure of her circumplex was confirmed. Loadings near the diagonal were high and positive, those in the middle range were found to be distinctly negative, and further away from the diagonal, there was a gradual return of the r 's to the original high-positive range.

Another between-subjects analysis, factor analysis, was performed on the data from samples (1), (3), (4), (5), and (6), and demonstrated that all three SASB surfaces can be regenerated reasonably well from item factor loadings. The first four factors extracted related logically to the four poles of the model and accounted for 64 percent of the variance (Benjamin, 1974). These four factors were reduced to a simpler two-space by a singular transformation which produced coordinates. This transformation was applied to factor loadings for each item and every point was graphed, resulting in a form reasonably close to the theory. Revision to the model resulted in even closer reconstruction

of all three surfaces through factor analysis and transformation (Benjamin, 1979(b)).

Benjamin's principle of complements is confirmed by correlations between Other and Self ratings (Benjamin, 1974). Using data from sample (1), the \underline{r} between the 36 maternal parentlike behaviors and the 36 predicted complementary childlike behaviors was significant in 78 percent of the possible complementary pairings. A further test of complementarity was performed by testing whether " . . . the \underline{r} between a given pair of complementary points was greater than all other \underline{r} 's between that particular point (mother rated herself in relation to child) and all possible childlike points (mother rated child in relation to her)." (Benjamin, 1974, p. 414). The maximum \underline{r} was found for nine pairs matching exactly point for point; for seven pairs matching within one point; and for three pairs matching within two points. All together, this represents 53 percent of the pairs conforming closely to the complementary prediction and is significantly different from the random expectation of having the maximum \underline{r} occur within two points of the exact complement (14 percent).

Data obtained from judges (sample (7)) unfamiliar with the model involved having them rate each of the questionnaire items on a scale from -100 to +100 for degree of friendliness or unfriendliness, influencing and controlling others or just letting others be, and of submission or independence. The results of this dimensional rating by the seven judges were graphed on the standard SASB two-dimensional space and demonstrated very good correspondence between the data and theory for both the intrapsychic and interpersonal surfaces (Benjamin, 1979(b)).

Finally, Benjamin deals with the issue of a social desirability response set being in operation by questioning the presumption that ". . . social desirability is an artifact, and its influence must be removed from the instrument measuring personality in order for it to be valid." (Benjamin, 1974, p. 419). The SASB instrument is a "good-faith" instrument; its questionnaire items are not subtle or deceptive. It was found that subject response did relate to social desirability, but Benjamin argues that this represents normality not dissimulation; that is, if a subject gave a socially desirable response, it is presumed that he believed it to be true. Viewed in this way, unfriendly feelings toward the self and toward others is deviant and socially undesirable. In fact, there is a tendency for such negative endorsements to characterize psychiatric subjects while positive endorsements characterize normal subjects. Benjamin's conclusion is that deviation from social desirability is itself pathology (Benjamin, 1974).

APPENDIX B

SESSION I QUESTIONNAIRE PACKET

The purpose of this study is to develop a better understanding of social and psychological behavior. Of particular interest is how you view yourself and others that are important to you during a depressed period and a non-depressed period. For this study, depression will be defined as a temporary state with an identifiable beginning and end. Subjectively this state is frequently experienced as a "blue," "sad," "unhappy," "empty," "low," or "lonely" period of time. However, depression is not defined as just any simple "bad" or "upsetting" feeling. Rather, it is a period in which these feelings are more intense and last longer. Depression is further defined as a state which is not so distressing or debilitating as to cause the person to seek professional help. Common depressive complaints include: "I feel miserable," "I just feel hopeless," "I'm desperate," "I'm worried about everything," "I don't have any goals anymore," "I don't care anymore what happens to me," and "I don't see any point to living."

The idea of the questionnaires you will be asked to take is to obtain a quantified picture of your social interaction with two significant others during two periods of time in the past 12 months that you characterize as either depressed or non-depressed. In addition there is an examination of your attitudes about yourself during these two contrasting periods of time. It is hoped that these questionnaires will prove interesting to you and will increase your own understanding of the connections between your relationships with significant others and how you feel about yourself during depressed and non-depressed times. Detailed feedback about the results of your responses to these questionnaires will be mailed to you in late Spring. Also, if you request it, individual appointments will be set up to discuss these results with you.

Please respond as candidly as you can because the questionnaires are not tricky at all; if you try to paint a "rosy picture", that's what you'll get back from the computer. If, on the other hand, you wish to candidly explore these relationships, then respond honestly and don't worry about whether your responses seem contradictory or not or whether they are "accurate, realistic and fair." The idea is simply to measure your perceptions and no one is going to try to argue that your descriptions are a final statement about the way things really are. For this reason we also recommend that you do not fuss a long time over your answers but simply write down what impulsively comes first to your mind.

Your responses will be held in professional confidence through the use of code numbers instead of names on all testing materials and summary data. You are free to discontinue your participation at any time without penalty. The time commitment will be approximately four hours--two hours today and two hours next week at the same time. You will be given full experimental credit--please be sure to bring your credit card next week.

Are there any questions about what I've said?

If you agree to participate in this study and all of your questions have been answered to your satisfaction, then please fill-out and sign the Psychology Department research consent form on the next page.

MICHIGAN STATE UNIVERSITY
Department of Psychology

DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific study being conducted by: Bill Hooker

under the supervision of: Dr. Thornton

Academic Title: Professor of Psychology
2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve.
3. I understand that I am free to discontinue my participation in the study at any time without penalty.
4. I understand that the results of the study will be treated in strict confidence and that I will remain anonymous. Within these restrictions, results of the study will be made available to me at my request.
5. I understand that my participation in the study does not guarantee any beneficial results to me.
6. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed: _____

Date: _____

Sex: _____ Age: _____

Phone #: _____

Code #: _____
(leave blank)

Please turn to the next page now and complete the inventory as you feel right now.

BECK INVENTORY

On this questionnaire are groups of statements. Please read the entire group of statements of each category. Then pick out the one statement in that group which best describes the way you feel today, that is, right now! Circle the number beside the statement you have chosen. If several statements in the group seem to apply equally well, circle each one.

Be sure to read all the statements in each group before making your choice.

- 1 3 I am so sad or unhappy that I can't stand it.
 2 I am blue or sad all the time and I can't snap out of it.
 1 I feel sad or blue.
 0 I do not feel sad.
- 2 3 I feel that the future is hopeless and that things cannot improve.
 2 I feel I have nothing to look forward to.
 1 I feel discouraged about the future.
 0 I am not particularly pessimistic or discouraged about the future.
- 3 3 I feel I am a complete failure as a person (parent, husband, wife)
 2 As I look back on my life, all I can see is a lot of failures.
 1 I feel I have failed more than the average person.
 0 I do not feel like a failure.
- 4 3 I am dissatisfied with everything.
 2 I don't get satisfaction out of anything anymore.
 1 I don't enjoy things the way I used to.
 0 I am not particularly dissatisfied.
- 5 3 I feel as though I am very bad or worthless.
 2 I feel quite guilty.
 1 I feel bad or unworthy a good part of the time.
 0 I don't feel particularly guilty.
- 6 3 I hate myself.
 2 I am disgusted with myself.
 1 I am disappointed in myself.
 0 I don't feel disappointed in myself.
- 7 3 I would kill myself if I had the chance.
 2 I have definite plans about committing suicide.
 1 I feel I would be better off dead.
 0 I don't have any thoughts of harming myself.
- 8 3 I have lost all of my interest in other people and I don't care about them at all.
 2 I have lost most of my interest in other people and have little feeling for them.
 1 I am less interested in other people than I used to be.
 0 I have not lost interest in other people.

- 9 3 I can't make any decisions at all anymore.
 2 I have great difficulty in making decisions.
 1 I try to put off making decisions.
 0 I make decisions about as well as ever.
- 10 3 I feel that I am ugly or repulsive-looking.
 2 I feel that there are permanent changes in my appearance and they
 make me look unattractive.
 1 I am worried that I am looking old or unattractive.
 0 I don't feel that I look any worse than I used to.
- 11 3 I can't do any work at all.
 2 I have to push myself very hard to do anything.
 1 It takes extra effort to get started at doing something.
 0 I can work about as well as before.
- 12 3 I get too tired to do anything.
 2 I get tired from doing anything.
 1 I get tired more easily than I used to.
 0 I don't get any more tired than usual.
- 13 3 I have no appetite at all anymore.
 2 My appetite is much worse now.
 1 My appetite is not as good as it used to be.
 0 My appetite is no worse than usual.

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PLEASE STOP HERE UNTIL THE EXPERIMENTER PROCEEDS WITH THE INSTRUCTIONS.

In this study you will be asked to describe your relationship with two significant people in your life during two periods of time in the past 12 months: a depressed time and a non-depressed time. These should be adult persons who have been most important to you during the past year and with whom you have interacted with during both depressed and non-depressed times. It is preferable that these two significant others not be both men or both women, but rather, you should choose one man and one woman. These significant others could include a spouse, a lover, or other intimate friend. Please do not select parents, siblings, or other members of your family.

SIGNIFICANT OTHER #1

Name: _____
(first name only)

Relation to you: _____
(spouse, lover, intimate friend)

Sex of person: _____
(male, female)

How long has this person been significant to you?: _____
(years, months)

SIGNIFICANT OTHER #2

Name: _____
(first name only)

Relation to you: _____
(spouse, lover, intimate friend)

Sex of person: _____
(male, female)

How long has this person been significant to you?: _____
(years, months)

Now respond to the following questionnaires from the standpoint of a time in the past 12 months when you felt depressed (did not feel depressed). Try to remember a specific time when you were feeling depressed (not feeling depressed) (a few days, weeks, or even months ago) and you were interacting with each of your two selected significant others. You need not pick the same depressed period (non-depressed period) for rating each of your significant others. If you cannot remember a specific depressed period (non-depressed period) of time in the past 12 months, then go back farther--to a time when you can remember feeling depressed (not feeling depressed) and were interacting with each of your two selected significant others. Please indicate how long ago this period of time was: 1-2 years; 2-3 years; 3-4 years;

__4-5 years; or __5+ years. Once you have this depressed (non-depressed) period(s) of time firmly in mind, proceed with the questionnaires. Remember, respond as if you were once again reliving the period of feeling depressed (not feeling depressed).

BECK INVENTORY

On this questionnaire are groups of statements. Please read the entire group of statements of each category. Then pick out the one statement in that group which best describes the way you felt when you were feeling depressed (not feeling depressed). Circle the number beside the statement you have chosen. If several statements in the group seem to apply equally well, circle each one.

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 failures.
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.
3 I am dissatisfied or bored with everything.
- 5 0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite 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 any 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 bad that happens.

Beck--continued

- 9 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I 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 cry even though I want to
- 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 don't get irritated at all by the 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 of my interest in other people.
- 13 0 I make decisions about 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 make 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 more tired 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.

Beck--continued

- 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 5 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 and pains; or 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 about anything else.
- 21 0 I have not noticed any recent changes 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.

Series C* © 1979, William Alanson White Psychiatric Foundation
 36 Item Intrapsychic Form-- Series C

Please write a number in the blank indicating how well each of the following phrases describes your feelings about yourself when you were feeling depressed (not feeling depressed).

NEVER											ALWAYS
NOT AT ALL											PERFECTLY
0	10	20	30	40	50	60	70	80	90	100	

A rating of 50 or above indicates "true"; a rating of less than 50 indicates "false."

1. ___ I neglect myself, don't try to develop my own potential skills, ways of being.
2. ___ I examine, analyse myself sensibly, carefully, realistically.
3. ___ I let myself daydream and fantasize instead of actually doing what would be good for me.
4. ___ I let important choices, thoughts, issues, options slip by me unattended.
5. ___ Knowing both my faults and my strong points, I comfortably accept myself as I am.
6. ___ I am pleased with, glad about myself.
7. ___ I tell myself things to make me feel bad, guilty, ashamed, unworthy.
8. ___ I practice, work on developing worthwhile skills, ways of being.
9. ___ I love, cherish, adore myself.
10. ___ I nurture, care for, restore, heal myself as needed.
11. ___ I vehemently reject, dismiss myself as worthless.
12. ___ I let unwarranted, illogical ideas I have about myself to unexplained and unchallenged.
13. ___ I entertain myself, enjoy being with myself.
14. ___ I am very careful to restrain myself, to hold back.
15. ___ I control, manage myself according to my carefully thought out goals for myself.
16. ___ I torture, kill, annihilate myself just because "I'm me."
17. ___ I deprive, deplete myself, make myself sacrifice for others even if it means harming myself greatly.
18. ___ I stroke myself, pat myself on the back for "just being me."
19. ___ I keep an eye on myself to be sure I'm doing what I think I should be doing.
20. ___ I try very hard to make myself be as ideal as I can.
21. ___ I listen to and follow what I find deep within myself.
22. ___ I don't care if I harm myself by ignoring my own sickness or injury.
23. ___ I put a lot of energy into making sure I conform to standards, am proper.
24. ___ I vengefully, viciously punish myself, "take it out on myself."
25. ___ I "sell out", make myself do and be things which I know are not right for me.
26. ___ I am happy-go-lucky, content with "here today, gone tomorrow."

Series C--continued

NEVER					ALWAYS				
NOT AT ALL					PERFECTLY				
0	10	20	30	40	50	60	70	80	90 100

A rating of 50 or above indicates "true"; a rating of less than 50 indicates "false."

27. ___ I protect myself, take constructive steps on my own behalf.
28. ___ I drift with the moment, have no particular internal directions, standards.
29. ___ I put a lot of energy into getting myself absolutely everything I need or want.
30. ___ By just letting myself do what flows naturally and easily I do everything well enough to suit myself.
31. ___ I feel solid, integrated, "together", acceptant of my inner core.
32. ___ I am comfortable letting my basic nature unfold as it will.
33. ___ I am reckless, carelessly end up in self-destructive situations.
34. ___ I seek, try to find situations which will be very pleasant and good for me.
35. ___ I tell myself to be unsure, that I am inadequate because others are better than me.
36. ___ I approach myself with a negative, destructive attitude; I am my own worst enemy.

Series A* © 1979, William Alanson White Psychiatric Foundation
72 Item Interpersonal Form--Series A

Please place a number in the blank indicating how well the phrases describes the behavior of your Significant Other #1 _____ in relation to you when you were feeling (write first name) depressed (not feeling depressed).

NEVER										ALWAYS				
NOT AT ALL										PERFECTLY				
0	10	20	30	40	50	60	70	80	90	100				

A rating of 50 or above indicates "true"; a rating of less than 50 indicates "false."

1. ___ Constructively, sensibly, persuasively analyses situations involving me.
2. ___ Has his/her own identity, internal standards.
3. ___ Enforces conformity to norms he/she prefers, insists I be "proper"
4. ___ Puts me down, tells me that I do things all wrong, acts superior.
5. ___ Looks to me as an advisor because he/she feels he/she can learn from what I suggest.
6. ___ Complies with my wishes without much feeling of his/her own, is apathetic.
7. ___ Angrily rejects, dismisses, tells me to get the "H" out.
8. ___ Comfortably accepts help, caretaking when I offer it.
9. ___ Defies, does the opposite of what he/she thinks I want him/her to do.
10. ___ Lets me know his/her views so I can give them due consideration.
11. ___ Enthusiastically shows, shares him/herself or "thing" with me.
12. ___ Murderously attacks, annihilates me.
13. ___ Picks up on what I say/do in an irrelevant or only distantly related way; goes on his/her own trip with it.
14. ___ Reacts to my sexual touch with ecstatic joyful love.
15. ___ Invites me to be with him/her, to be in touch as often as I can.
16. ___ Lets me know where he/she is so I can maintain friendly contact with him/her if I want to.
17. ___ Freely comes and goes without special regard for what I might have to say about it.
18. ___ Tenderly, lovingly touches me sexually if I seem receptive.
19. ___ Constructively stimulates me, shows me how to understand, do.
20. ___ Accuses, blames me, tries to get me to admit I am wrong.
21. ___ Gladly, enthusiastically, warmly welcomes me.
22. ___ Depends upon me to take care of everything for him/her.
23. ___ Punishes me, takes revenge.
24. ___ Shows understanding of my view, has empathy for me.
25. ___ Asks trustingly, vulnerably; counts on me to respond to him/her with kindness and consideration.
26. ___ Willingly accepts, yields to my reasonable suggestions, ideas.
27. ___ Desperately writhes in agony as he/she protests that I am destroying, killing him/her.
28. ___ Gives "strokes", soothes, calms me.
29. ___ Intrudes on me, blocks, restricts me.

Series A--continued

NEVER					ALWAYS				
NOT AT ALL					PERFECTLY				
0	10	20	30	40	50	60	70	80	90 100

A rating of 50 or above indicates "true"; a rating of less than 50 indicates "false".

30. ___ Even if he/she feels suspicious and uneasy, he/she gives in to my arguments, ideas.
31. ___ Follows my preferred rules, standards, routines.
32. ___ Rips me off, drains, me, takes my vital supplies.
33. ___ Is so eager that I be pleased with him/her that he/she defers, checks with me on every little thing.
34. ___ Is terrified, extremely wary, very fearful of me.
35. ___ Deludes, deceives, diverts, misleads me.
36. ___ Resentfully allows my needs and wants to prevail over his/her's at his/her own enormous expense.
37. ___ Provides for, nurtures, takes care of me.
38. ___ Carefully considers my side of things, treats me fairly.
39. ___ Ignores me, acts on his/her own as if I were not there.
40. ___ Uncaringly lets me go, do what I want.
41. ___ Vehemently refuses my caretaking, my offers to assist.
42. ___ Tries as hard as he/she can to escape, to flee from me.
43. ___ Benevolently checks on me and reminds me of what I should do.
44. ___ "Gives me his/her blessing" and leaves me to develop my own identity separate from him/her.
45. ___ Forgets me, fails to remember and keep agreements or plans made with me.
46. ___ Does things the way I want but sulks quietly with resentment and anger.
47. ___ Yields, submits, gives in to me.
48. ___ Approaches me very menacingly, gathers materials he/she can use to hurt me.
49. ___ Manages, controls, oversees every aspect of my existence.
50. ___ Tells me that he/she thinks I am competent to do things on my own.
51. ___ Expresses his/her thoughts and feelings in a clear and friendly manner so I have every opportunity to understand him/her well.
52. ___ Feels, becomes what he/she thinks I want.
53. ___ Starves me, fails to give me my "due", cuts me out.
54. ___ Tries to truly understand me; actively listens in a non-judgmental and friendly way.
55. ___ Detaches from me, doesn't ask for anything, weeps alone about me.
56. ___ Tries to anticipate my every need so I don't need to do anything for myself.
57. ___ Hides his/her resentment and anger and scurries to avoid my disapproval.
58. ___ Asserts, holds his/her own without needing external support.
59. ___ Walls him/herself off from me, doesn't hear, doesn't react.
60. ___ Confirms, tells me he/she likes and appreciates me just as I am.
61. ___ Avoids me by being busy and alone with his/her "own thing."
62. ___ Relaxes, enjoys, flexibly flows, feels good about being with me.

Series A--continued

NEVER					ALWAYS				
NOT AT ALL					PERFECTLY				
0	10	20	30	40	50	60	70	80	90 100

A rating of 50 or above indicates "true"; a rating of less than 50 indicates "false."

63. ____ For my own good, he/she specifies, tells me what is best for me to do, be, think.
64. ____ Whines, squirms, painfully tries to account for, defend and justify him/herself.
65. ____ Regardless of what I say or do, he/she treats me according to his/her own unwarranted and illogical assumptions about me.
66. ____ Goes his/her own separate way.
67. ____ Looks after my interests, takes steps to protect me, actively backs me up.
68. ____ Freely and openly discloses his/her innermost self when I am listening.
69. ____ Expects to have wonderful fun with me and so approaches me joyfully.
70. ____ Just when he/she is needed most, he/she abandons me, leaves me "in the lurch."
71. ____ Neglects me, doesn't attend to my interests, needs.
72. ____ Tells me I am on my own; I can do and be whatever I want.

Series B* © 1979, William Alanson White Psychiatric Foundation
72 Item Interpersonal Form--Series B

Please place a number in the blank indicating how well the phrases describes you in relation to your Significant Other #1: _____
when you were feeling depressed (not feeling depressed)(write first name)

NEVER					ALWAYS				
NOT AT ALL					PERFECTLY				
0	10	20	30	40	50	60	70	80	90 100

A rating of 50 or above indicates "true"; a rating of less than 50 indicates "false".

1. ___ I constructively, sensibly, persuasively analyse situations involving him/her.
2. ___ I have my own identity, internal standards.
3. ___ I enforce conformity to the norms I prefer, insist he/she be "proper."
4. ___ I put him/her down, tell him/her that he/she does things all wrong, I act superior.
5. ___ I look to him/her as an advisor because I feel I can learn from what he/she suggests.
6. ___ I comply with his/her wishes without much feeling of my own, am apathetic.
7. ___ I angrily reject, dismiss, tell him/her to get the "H" out.
8. ___ I comfortably accept help, caretaking when he/she offers it.
9. ___ I defy, do the opposite of what I think he/she wants me to do.
10. ___ I let him/her know my views to he/she can give them due consideration.
11. ___ I enthusiastically show, share myself or "thing" with him/her.
12. ___ I murderously attack, annihilate him/her.
13. ___ I pick up on what he/she says or does in an irrelevant or only distantly related way; I go on my "own trip" with it.
14. ___ I react to his/her sexual touch with ecstatic joyful love.
15. ___ I invite him/her to be with me, to be in touch as often as he/she can.
16. ___ I let him/her know where I am so he/she can maintain friendly contact with me if he/she wants to.
17. ___ I freely come and go without special regard for what he/she might have to say about it.
18. ___ I tenderly, lovingly touch him/her sexually if he/she seems receptive.
19. ___ I constructively stimulate him/her, show him/her how to understand, do.
20. ___ I accuse, blame him/her, try to get him/her to admit he/she is wrong.
21. ___ I gladly, enthusiastically, warmly welcome him/her.
22. ___ I depend upon him/her to take care of everything for me.
23. ___ I punish him/her, take revenge.
24. ___ I show understanding of his/her view, have empathy for him/her.
25. ___ I ask trustingly, vulnerably; I count on him/her to respond to me with kindness and consideration.

Series B--continued

NEVER					ALWAYS				
NOT AT ALL					PERFECTLY				
0	10	20	30	40	50	60	70	80	90 100

A rating of 50 or above indicates "true"; a rating of less than 50 indicates "false".

26. ___ I willing accept, yield to his/her reasonable suggestions, ideas.
27. ___ I desperately writhe in agony as I protest that he/she is destroying, killing me.
28. ___ I give "strokes", soothe, calm him/her.
29. ___ I intrude on him/her, block, restrict him/her.
30. ___ Even if I feel suspicious and uneasy, I give in to his/her arguments, ideas.
31. ___ I follow his/her preferred rules, standards, routines.
32. ___ I rip him/her off, drain him/her, take his/her vital supplies.
33. ___ I am so eager that he/she be pleased with me that I check with him/her on every little thing.
34. ___ I am terrified, extremely wary, very fearful of him/her.
35. ___ I delude, deceive, divert, mislead him/her.
36. ___ I resentfully allow his/her needs and wants to prevail over mine at my own enormous expense.
37. ___ I provide for, nurture, take care of him/her.
38. ___ I carefully consider his/her side of things, treat him/her fairly.
39. ___ I ignore him/her, act on my own as if he/she were not there.
40. ___ I uncaringly let him/her go, do what he/she wants.
41. ___ I vehemently refuse his/her caretaking, his/her offers to assist.
42. ___ I try as hard as I can to escape, to flee from him/her.
43. ___ I benevolently check on him/her and remind him/her of what he/she should do.
44. ___ I "give him/her my blessing" and leave him/her to develop his/her own identity separate from me.
45. ___ I forget him/her, fail to remember and keep agreements or plans made with him/her.
46. ___ I do things the way he/she wants but sulk quietly with resentment and anger.
47. ___ I yield, submit, give in to him/her.
48. ___ I approach him/her very menacingly, gather materials I can use to hurt him/her.
49. ___ I manage, control, oversee every aspect of his/her existence.
50. ___ I tell him/her that I think he/she is competent to do things on his/her own.
51. ___ I express my thoughts and feelings in a clear and friendly manner so he/she has every opportunity to understand me well.
52. ___ I feel, become what I think he/she wants.
53. ___ I starve him/her, fail to give him/her his/her due, cut him/her out.
54. ___ I try to truly understand him/her; I actively listen in a non-judgmental and friendly way.
55. ___ I detach from him/her, don't ask for anything, weep alone about him/her.

Series B--continued

NEVER					ALWAYS				
NOT AT ALL					PERFECTLY				
0	10	20	30	40	50	60	70	80	90 100

A rating of 50 or above indicates "true"; a rating of less than 50 indicates "false."

56. ____ I try to anticipate his/her every need so he/she doesn't need to do anything for him/herself.
57. ____ I hide my resentment and anger and scurry to avoid his/her disapproval.
58. ____ I assert, hold my own without needing external support.
59. ____ I wall myself off from him/her, don't hear, don't react.
60. ____ I confirm, tell him/her I like and appreciate him/her just as he/she is.
61. ____ I avoid him/her by being busy and alone with my "own thing."
62. ____ I relax, enjoy, flexibly flow, feel good about being with him/her.
63. ____ For his/her own good, I specify, tell him/her what is best for him/her to do, be, think.
64. ____ I whine, squirm, painfully try to account for, defend and justify myself.
65. ____ Regardless of what he/she says or does, I treat him/her according to my own unwarranted and illogical assumptions about him/her.
66. ____ I go my separate way.
67. ____ I look after his/her interests, take steps to protect him/her, actively back him/her.
68. ____ I freely and openly disclose my innermost self when he/she is listening.
69. ____ I expect to have wonderful fun with him/her and so I approach joyfully.
70. ____ Just when I'm needed most I abandon him/her, leave him/her "in the lurch."
71. ____ I neglect him/her, don't attend to his/her interests, needs.
72. ____ I tell him/her he/she is on his/her own; he/she can do and be whatever he/she wants.

SASE-Series A and Series B 72 Item Interpersonal Forms regarding subjects' relationships with their Significant Other #2 were also administered. Instructions were as follows: "Please place a number in the blank indicating how well the phrases describes the behavior of your Significant Other #2 in relation to you when you were feeling depressed (not depressed)." and "Please place a number in the blank indicating how well the phrases describes you in relation to your Significant Other #2 when you were feeling depressed (not feeling depressed)."

APPENDIX C

SESSION II QUESTIONNAIRE PACKET

Name: _____

Date: _____

Code #: _____
(leave blank)

As you might recall from last week, the purpose of this study is to develop a better understanding of social and psychological behavior. Of particular interest is how you view yourself and others that are important to you during a depressed period and a non-depressed period. Depression was defined as a temporary state with an identifiable beginning and end. Subjectively this state is frequently experienced as a "blue," "sad," "unhappy," "empty," "low," or "lonely" period of time. However, depression was not defined as just any simple "bad" or "upsetting" feeling, but rather as a period in which these feelings are more intense and last longer. Depression was further defined as a state which is not so distressing or debilitating as to cause the person to seek professional help. Common depressive complaints include: "I feel miserable," "I just feel hopeless," "I'm desperate," "I'm worried about everything," "I don't have any goals anymore," "I don't care anymore what happens to me," and "I don't see any point to living."

Once again, please respond as candidly as you can because the questionnaires are not tricky at all; if you try to paint a "rosy picture", that's what you'll get back from the computer. If, on the other hand, you wish to candidly explore these relationships, then respond honestly and don't worry about whether your responses seem contradictory or not or whether they are "accurate, realistic and fair." The idea is simply to measure your perceptions and no one is going to try to argue that your descriptions are a final statement about the way things really are. For this reason we also recommend that you do not fuss a long time over your answers but simply write down what impulsively comes first to your mind.

If there are no questions about what I've said, please turn to the next page and complete the inventory as you feel right now.

The BDI-SF was administered as in Session I. This instrument may be referred to on page 84.

Last week you completed a set of questionnaires regarding your social interactions with two significant people you selected, as well as feelings about yourself. You responded to these questionnaires from the standpoint of a depressed period (non-depressed period) of time in the past 12 months. This time please respond to the following questionnaires from the standpoint of a time in the past 12 months when you were not feeling depressed (feeling depressed) (a few days, weeks, or even months ago) and you were interacting with each of the significant others you selected last week. You need not pick the same non-depressed period (depressed period) for rating each of your significant others. If you cannot remember a specific non-depressed period (depressed period) of time in the past 12 months, then go back farther--to a time when you can remember not feeling depressed (feeling depressed) and were interacting with each of the two significant others you selected last week. Please indicate how long ago this period of time was: ___1-2 years; ___2-3 years; ___3-4 years; ___4-5 years; or ___5+ years. Once you have this non-depressed (depressed) period(s) of time firmly in mind, proceed with the questionnaires. Remember, respond as if you were once again reliving that period of not feeling depressed (feeling depressed).

The BDI, SASB-Series C 36 Item Intrapsychic Form, and SASB-Series A and Series B 72 Item Interpersonal Forms for both Significant Others #1 and #2 were administered. These instruments are identical to those given in Session I and may be found in Appendix B on pages 88, 91, 93, and 96.

The Life Experiences Survey

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

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

SECTION I

	0 to 6 mo	6 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
1. Marriage			-3	-2	-1	0	+1	+2	+3
2. Dentention in jail or comparable institution			-3	-2	-1	0	+1	+2	+3
3. Death of spouse			-3	-2	-1	0	+1	+2	+3
4. Major change in sleeping habits (much more or much less sleep)			-3	-2	-1	0	+1	+2	+3
5. Death of close family member:									
a. mother			-3	-2	-1	0	+1	+2	+3
b. father			-3	-2	-1	0	+1	+2	+3
c. brother			-3	-2	-1	0	+1	+2	+3
d. sister			-3	-2	-1	0	+1	+2	+3
e. grandmother			-3	-2	-1	0	+1	+2	+3
f. grandfather			-3	-2	-1	0	+1	+2	+3
g. other (specify)			-3	-2	-1	0	+1	+2	+3
6. Major change in eating habits (much more or much less food intake)			-3	-2	-1	0	+1	+2	+3
7. Foreclosure on mortgage or loan			-3	-2	-1	0	+1	+2	+3
8. Death of close friend			-3	-2	-1	0	+1	+2	+3
9. Outstanding personal achievement			-3	-2	-1	0	+1	+2	+3

[illegible]

	0 to 6 mo	6 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
25. Marital reconciliation with mate			-3	-2	-1	0	+1	+2	+3
26. Major change in number of arguments with spouse (a lot more or a lot less arguments)			-3	-2	-1	0	+1	+2	+3
27. Married male: Change in wife's work outside the home (beginning work, ceasing work, changing to a new job, etc.)			-3	-2	-1	0	+1	+2	+3
28. Married female: Change in husband's work (loss of job, beginning new job, retirement, etc.)			-3	-2	-1	0	+1	+2	+3
29. Major change in usual type and/or amount of recreation			-3	-2	-1	0	+1	+2	+3
30. Borrowing more than \$10,000 (buying a home, business, etc.)			-3	-2	-1	0	+1	+2	+3
31. Borrowing less than \$10,000 (buying car, TV, getting school loan, etc.)			-3	-2	-1	0	+1	+2	+3
32. Being fired from job			-3	-2	-1	0	+1	+2	+3
33. Male: Wife/girlfriend having abortion			-3	-2	-1	0	+1	+2	+3
34. Female: Having abortion			-3	-2	-1	0	+1	+2	+3
35. Major personal illness or injury			-3	-2	-1	0	+1	+2	+3
36. Major change in social activities, e.g., parties, movies, visiting (increase or decreased participation)			-3	-2	-1	0	+1	+2	+3
37. Major change in living conditions of family (building a new home, remodeling, deterioration of home, neighborhood, etc.)			-3	-2	-1	0	+1	+2	+3
38. Divorce			-3	-2	-1	0	+1	+2	+3
39. Serious injury or illness of close friend			-3	-2	-1	0	+1	+2	+3
40. Retirement from work			-3	-2	-1	0	+1	+2	+3
41. Son or daughter leaving home (due to marriage, college, etc.)			-3	-2	-1	0	+1	+2	+3
42. Ending of formal schooling			-3	-2	-1	0	+1	+2	+3
43. Separation from spouse (due to work, travel, etc.)			-3	-2	-1	0	+1	+2	+3

	0 to 6 mo	6 mo to 1 yr	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
44. Engagement			-3	-2	-1	0	+1	+2	+3
45. Breaking up with boyfriend/ girlfriend			-3	-2	-1	0	+1	+2	+3
46. Leaving home for the first time			-3	-2	-1	0	+1	+2	+3
47. Reconciliation with boy- friend/girlfriend			-3	-2	-1	0	+1	+2	+3
Other recent experiences which have had an impact on your life. List and rate.									
48.			-3	-2	-1	0	+1	+2	+3
49.			-3	-2	-1	0	+1	+2	+3
50.			-3	-2	-1	0	+1	+2	+3
<u>SECTION 2: Student Only</u>									
51. Beginning a new school experience at a higher academic level (college, graduate school, professional school, etc.)			-3	-2	-1	0	+1	+2	+3
52. Changing to a new school at same academic level (undergraduate, graduate, etc.)			-3	-2	-1	0	+1	+2	+3
53. Academic probation			-3	-2	-1	0	+1	+2	+3
54. Being dismissed from dormitory or other residence			-3	-2	-1	0	+1	+2	+3
55. Failing an important exam			-3	-2	-1	0	+1	+2	+3
56. Changing a major			-3	-2	-1	0	+1	+2	+3
57. Failing a course			-3	-2	-1	0	+1	+2	+3
58. Dropping a course			-3	-2	-1	0	+1	+2	+3
59. Joining a fraternity/ sorority			-3	-2	-1	0	+1	+2	+3
60. Financial problems concern- ing school (in danger of not having sufficient money to continue)			-3	-2	-1	0	+1	+2	+3

From: Irwin G. Sarason, James H. Johnson, and Judith M. Siegal.
Assessing the Impact of Life Changes: Development of the Life
Experiences Survey. Journal of Consulting and Clinical Psychology,
1978, Vol. 46, No. 5, 932-946.

1. People feel depressed for many different reasons -- or, sometimes, for no apparent reason at all. Recalling a depressed time yourself, please describe the reason or reasons for it.

2. Some people feel they have no control over their depression, others have techniques or tricks to overcome it, others just wait it out. Recalling a depressed time yourself, please describe your reaction to it.

This completes the experiment. Thank you very much for your participation. Please be sure to give the experimenter your experiment credit card for his signature. The self-addressed envelope will be used to send you individual feedback about your responses. Appointments will also be available for further interpretation. Feedback will be sent in late Spring.

If you would like to discuss any feelings or thoughts that might have come up as a result of responding to these questionnaires, the experimenter will be available after the session.

APPENDIX D

FEEDBACK LETTER TO SUBJECTS

Dear research participant:

Preliminary results of the research project you contributed to are now being analyzed. Briefly, this study's purpose was to examine how a normal person characterizes his thoughts and feelings about himself and his relations with significant others during a depressed period recollection as opposed to during a non-depressed period recollection. Aaron T. Beck's cognitive theory of depression is the conceptual base of this study. His theory views the phenomenon of depression as an activation of a set of three major cognitive patterns that force the individual to view himself, his world, and his future in an idiosyncratic way. This activation is caused by a specific external stress or by a set of non-specific external stresses. It is the activation of these cognitive patterns that produces the other major manifestations of depression, namely, negative mood and loss of motivation. That is, since depressed individuals consistently make negative conceptualizations, they will produce negative affect and lose motivation for activity due to their hopelessness and pessimism.

The Benjamin Structural Analysis of Social Behavior (SASB) questionnaires you completed regarding two significant relationships during depressed and non-depressed periods are a way to measure how these cognitive patterns and their resultant symptoms are represented in an individual's interpersonal domain. The three major hypotheses of this study are based on this instrument. They are:

- (1) Subjects will characterize significant others as invoking hostile autonomy and exercising hostile power in relation to them in the depressed condition. There will be a significantly lower endorsement of these quadrants in the non-depressed condition.
- (2) Subjects will characterize their own response to significant others as taking hostile autonomy and complying hostility to the depressed condition. There will be a significantly lower endorsement of these quadrants in the non-depressed condition.
- (3) Subjects will characterize their own attitudes toward themselves as rejecting self and oppressing self in the depressed condition. There will be a significantly lower endorsement of these quadrants in the non-depressed condition.

All three hypotheses were confirmed, based on a sample of 182 subjects (113 females and 69 males). More detailed analyses of these and other hypotheses are now being performed. If you are interested, a full report will be available next fall.

Interpreting your feedback

These "maps" are based on the Structural Analysis of Social Behavior (SASB) by Lorna Smith Benjamin. You are the ultimate judge of whether these results are accurate or not. However, keep in mind that these are your perceptions--which may or may not reflect reality. That is, your perceptions of yourself (introject map) during the depressed period recall may be quite different from your perceptions during the non-depressed period recall.

There are eighteen maps: two groups of nine, the first group from the depressed period recall, the second group from the non-depressed period recall. Within each group, are three sets of ratings. The first set is your introject map. This is a measure of your attitudes about yourself. The first comparison you can make is between your depressed introject map and your non-depressed introject map.

The remaining two sets of maps speak of one person in relation to another. The second set of four maps deals with your relationship with your significant other #1; the third set of maps deals with your relationship with your significant other #2. So, the next four maps after your introject map describe your relationship with your significant other #1. The first map shows your significant other #1 focusing on you. The second map immediately below shows your significant other #1 focusing on him/herself in relation to you. The third map shows your focus on your significant other #1. The fourth map immediately below shows your focus on yourself in relation to your significant other #1. A second comparison you can make is between the first and fourth maps. This shows your significant other #1 focusing on you and your response to him/her. A third comparison is between the second and third maps. This shows you focusing on your significant other #1 and his/her response to you. A fourth comparison you can look at is contrasting this second set of depressed period recall perceptions with the corresponding second set of non-depressed period recall perceptions, both involving your significant other #1.

The third set of four maps is identical to the second set, except it deals with your relationship with your significant other #2. A fifth comparison is between your relationship with significant other #1 and significant other #2 within the depressed period recall group or within the non-depressed period recall group. Finally, a sixth comparison is to contrast within your significant others maps across the depressed and non-depressed period recall groups.

I realize that viewing these maps may cause some discomfort and questioning of self or others. If you would like to talk with me about your feedback or get assistance in further interpreting them, I would be happy to meet with you. Please feel free to call me for an appointment. Once again, thank you very much for your participation.

Sincerely,
(signed)
Bill Hooker
Department of Psychology

LIST OF REFERENCES

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