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Stango, Michael, Ph.D.

Hofstra University, 1989

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The Effect of Increased Self-Focusing and Differential Evaluation on Dysphoria and Self-Criticism Among the Depressed

by Michael Stango

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Abstract

According to the "integrative theory of depression" (Lewinsohn, Hoberman, Teri, & Hautzinger, 1985), self-focused attention has a significant role in the maintenance of depression. In the present study, the effect of increased self-focusing and differential success vs. failure performance evaluation, in depressives and nondepressives, was investigated on self-report and behavioral measures of dysphoric mood and self-criticism.

Sixty-four undergraduate students were screened for depression (n=32) and nondepression (n=32) according to the Beck Depression Inventory and the Hamilton Rating Scale. Subjects were randomly assigned to a self-focus/no self-focus, success/failure evaluation condition. Self-focus was manipulated through the presence or absence of a mirror during the performance task (Carver & Scheier, 1978). The success or failure of the subject was manipulated, such that, half of the subjects received solvable anagrams with success evaluation, while the other half received unsolvable anagrams with failure evaluation (Pyszczynski & Greenberg, 1985). The dependent measures included pre-test and post-test self-report of dysphoria (MAACL-D scale), self-criticism (Depressive Experiences Questionnaire-Revised), and self-focus (Self-Consciousness Scale; Self-Focus Sentence Completion), as well as post-test behavioral observations, by two independent raters, of sad facial expression (Izard, 1980) and negative

statements exhibited during a video-taped interview. The results of a 2 (depressed vs. nondepressed) x2 (success vs. failure) x2 (self-focus vs. non self-focus) ANCOVA, with pre-test measures as covariates, indicated self-focused depressives reported more self-criticism (DEQ-R) than the other groups, $p<.01$. Based on the findings of Pyszczynski and Greenberg (1985), a three-way interaction of the independent variables of depression, self-focus, and differential evaluation was predicted but not supported by a separate 2x2x2 ANOVA. However, subjects in the self-focus group were more self-focused (SFSC), and dysphoric (MAACL), $p<.05$, than those in the non-self-focus group. Subjects in the failure group were more self-critical (DEQ-R) and dysphoric (MAACL) than those in the success group, $p<.01$. Furthermore, depressives were more consistent than non-depressives in their self-report of dysphoria and facial expression of sadness, $p<.05$. These findings can be viewed as supportive to Lewinsohn et al.'s observation that depressives', in general, tend to be self-focused, and as a result self-critical, regardless of success or failure experiences.

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I would like to dedicate this dissertation to the memory of my loving parents, whose values and ideals provided me with the inspiration to accomplish this work.

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Chapter I

Introduction

Depression is considered to be one of the most common, and yet more serious mental health problems found in society today (Wing & Bebbington, 1985). In a report completed by the National Institute of Mental Health (1973), a central finding indicated that approximately 15% of the American adult population between the ages of 18 and 74 exhibited symptoms of depression. One in eight individuals will require psychiatric attention for depression at some point during his or her lifetime. Translated, this means that depression accounts for roughly 75% of psychiatric hospitalizations in the United States (Secunda, Katz, Friedman, & Schuyler, 1973). This is a rather striking finding in view of the relationship between depression and suicide. Approximately one in every two hundred depressives commits suicide (Minkoff, Bergman, Beck, & Beck, 1973).

Given the significance of this problem, the cognitive-behavioral models of depression have gained increased research interest, in recent years. Studies have investigated several aspects of depression inclusive of self-blame, perceptions of hopelessness, guilt, loss of self-esteem, and a negative view of the self (Shaw, Vallis, & McCabe, 1985). In general, depression has been described as including an increased preoccupation with the self (Alloy, 1988). This preoccupation with the self (self-focused attention) has been of investigative interest in more recent depression literature (Alloy, 1982; Smith & Greenberg, 1981).

With respect to particular effects of depression, like self-criticism and dysphoria, self-focused attention has been shown to produce comparable effects in non-depressed samples (Carver & Scheier, 1981; Duval & Wicklund, 1972; Fenigstein, Scheier, & Buss, 1975). It is the similarity of these effects that has sparked interest into the investigation of the relationship between depression and self-focused attention. Do increased levels of self-focused attention play a role in the development of depression? Does self-focused attention exacerbate depression? Are depressives more prone to self-focusing than non-depressives?

The concept of self-focused attention has its roots in the objective self-awareness theory of social psychology. It has been defined as that state where conscious attention is directed at the self, and the self is viewed as an object (Duval & Wicklund, 1972). Since its effects on behavior have been found to be similar to the effects produced by depression (Smith & Greenberg, 1981), researchers have sought answers to the above questions in a variety of experiments generally with analogue samples. Some authors have advanced a case for self-focused attention triggering or accessing depressive affect (Ingram, Lumry, Cruet, & Sieber, 1987). Others have suggested that depressives persist in a self-regulatory cycle that produces a constant state of self-focused attention (Pyszcznski & Greenberg, 1987). Although the semantics used to describe the phenomenon have varied, these and other major theoretical explanations of depression have referred to the

concept of self-awareness (self-focusing) as integral in the process of depression (Beck, 1967; Rehm, 1977; Abramson, Seligman & Teasdale, 1978; and Lewinsohn, 1984). Even though these perspectives may differ with respect to the precise mechanism by which self-focused attention promotes dysphoric mood states, they are in agreement that it is influential in either the etiology or maintenance of depression.

Lewinsohn, Hoberman, Teri, and Hautzinger (1985) hypothesized that disruptions in an individual's behavior pattern may produce increased self-focused attention, which serves to mediate the common cognitive and behavioral features of depression. Lewinsohn further postulated, in this revision of his interpersonal theory, that past cognitive and reinforcement models offered too simplistic an explanation for depression. For example, depression was not always just the result of distorted perceptions or lack of sufficient pleasant events (Lewinsohn & Hoberman, 1982; Lewinsohn, Mischel, Chaplin, & Barton, 1980). Rather, he described depression as a complex and interactive process, and therefore, included features from cognitive and reinforcement theory in his explanation of depression. Lewinsohn developed an 'integrative theory of depression' that included the variable of self-focused attention as central to the etiology and maintenance of depression.

With this in mind, the present study will seek to further investigate the influential role self-focused attention may play in depression. The main purpose of the present study is

to examine the relationship between these two variables (depression and self-focused attention) through a more objective measure, in the form of behavioral observation, under the circumscribed experimental conditions of success and failure evaluation. In the present study convergent validity between self-report measures of self-focused attention, self-report measures of depression, and the exhibited behavior of depressed and non-depressed subjects will be investigated. Further, the present study may provide confirmation of earlier research (Pyszczynski & Greenberg, 1986, 1987; Gibbons, Smith, Ingram, Pearce, Brehm, & Schroeder, 1985) which suggested that self-focusing exacerbates and prolongs negative affect, and differential feedback influences the level and direction of focus of attention with respect to negative affect.

Cognitive/Behavioral Theories of Depression

The work of Seligman (1975), Beck (1967, 1976), Rehm (1977), and Lewinsohn (1974) have provided a foundation for the empirical testing of cognitive/behavioral formulations regarding depression (Reiss & Bootzin, 1985; Eysenck & Martin, 1987). Therefore, these theories will be reviewed regarding their definitions of depression and their major parameters. In addition, the findings of empirical studies that support and criticize the contentions of each theory will be examined pertinent to self-focused attention.

The Learned Helplessness Model. The original model as proposed by Seligman (1975) stated that helplessness and

depression are likely to occur subsequent to an inability to control the outcome of an event. The theory suggests that after experience with uncontrollable outcomes, an individual is prone to develop low expectations for ability to exert control over the outcome of future events. Past experience with uncontrollable outcomes produces a deficit in future performance. Depression is characterized by the lack of motivation to attempt behaviors directed at controlling the outcome of a future event based on a perception of helplessness. Learned helplessness theory originated with the laboratory finding that dogs who experienced inescapable shock later failed to escape from escapable shock, unless they were dragged from one side of the shuttle box to the other (Overmeir & Seligman, 1967). Therefore, according to this theory, learned helplessness reduces motivation and performance.

Brehm and Wortman (1975) added to the theory by suggesting that the importance of the outcome of an event will contribute to the perception of lack of control over the outcome. These authors posited that important events will require greater exposure to an uncontrollable outcome than do less important events.

Abramson, Seligman, and Teasdale (1978) proposed a revision of the original model by suggesting that an individual's attributions for loss of control played a mediating role between absence of control, helplessness and depression. The "reformulated model of learned helplessness",

as it was called, stated that depressives possess an attributional style that consists of "internal", "stable" and "global" attributions that predispose depression when uncontrollable outcomes are perceived. For Abramson et al., depression is likely to occur when an individual experiences an inability to produce a desired outcome or likewise, avoid an aversive outcome. The attributions formed, as a result, tend to affect self-esteem, affect, and performance. Depression is characterized by a decrease in self-esteem, an increase in sad affect, and a decrease in performance. Abramson, Seligman and Teasdale (1978) viewed causal attributions as directly related to the etiology of depression.

The hypothesis regarding causal attributions or explanations being related to the dimensions of "internal", "global", and "stable" for depressives has been empirically tested by Seligman, Abramson, Semmel,and von Baeyer (1979). They administered the Attributional Style Questionnaire, a measure of explanatory style for events, to a sample of college students, along with the short form of the Beck Depression Inventory (BDI Beck, 1972). As predicted by the authors, the BDI scores correlated significantly with internal ($r=.41$, $p<.001$), stable ($r=.34$ $p<.001$), and global ($r=.35$, $p<.001$) attributions for bad events.

Peterson, Bettes, and Seligman (1982) investigated the relationship between spontaneous explanations and the dimensions of "internal", "stable", and "global"

in depressives. They had adults write essays from which causal explanations for events were extracted and rated for internality, stability, and globality. The explanations were consistent and converged with the corresponding scales of the Attributional Style Questionnaire. These subjects also completed the short form of the Beck Depression Inventory. The authors reported significant composite results, $r=.45$, $p<.001$.

In an effort to show the "depressive " style as specific to depression, Raps, Peterson, Reinhard, Abramson, and Seligman (1982) administered the Attributional Style Questionnaire to groups of unipolar depressed inpatients, nondepressed schizophrenics, and nondepressed medical and surgical patients as diagnosed according to medical records. Depressives explained bad events with more internal, stable and global causes, as predicted by the authors.

Although the semantics differ, the "internality" dimension of this theory represents the concept of self-focused attention. If an individual makes an internal attribution for a negative event, this leads to a decrease in self-esteem, as well as a decrease in motivation and performance (Dweck & Licht, 1980; Peterson, Schwartz, & Seligman, 1981). The "reformulated theory" makes a distinction between the concept of universal and personal helplessness. In personal helplessness, the cause for a negative event is attributed to internal factors (factors within the individual) which render the individual unable to exert control over the

outcome of an event. In universal helplessness, the cause of an event is attributed to external factors (factors outside of the individual) being uncontrollable. In personal helplessness, the individual focuses on perceived internal inadequacies as an explanation for negative outcome.

Criticism regarding this model has centered on the fact that it does not seem possible to make an external attribution to an event that is perceived to be controllable. The emphasis on perceived controllability within the theory means that the attributional dimensions are not separate or orthogonal to the controllability dimension (Power, 1987). In addition to this issue, several of the main predictions of the model have received a considerable amount of empirical testing.

Although a summary of this evidence has been presented as supportive to the theory (Peterson & Seligman, 1984), some studies have been critical regarding the evidence for predicted style of attribution being causal in the onset of depression, even though correlations have been demonstrated between "explanatory style" and self-report of depression (Coyne & Gotlib, 1983; Brewin, 1985). Coyne and Gotlib (1983), in their review of the literature, stated that depressed individuals present themselves negatively on a variety of self-report measures, but less consistently than the "learned helplessness" model suggests. Further, helplessness does not necessitate depression, nor does depression necessitate helplessness (Power, 1987). It has also been shown that

learned helplessness can be the result of contingent and noncontingent reinforcement independent of phenomenal experiences such as attributions and awareness (Oakes & Curtis, 1982). Recently, Abramson (1987) proposed "the hopelessness theory", a revision of the model.

The "reformulated helplessness theory" failed to adequately explain that helplessness consistently triggered and maintained depression. It also did not adequately explain the role of hopelessness in the etiology and maintenance of depression. Where "internality" was the important variable in the "reformulated helplessness model", "globality" and "stability" are the key variables that determine depression in the recent updated version of the theory of hopelessness (Abramson, Metalsky, & Alloy, 1987). The extent to which a negative life event is inferred to be "global" and "stable" determines the degree of hopelessness an individual experiences. Abramson, Metalsky, and Alloy (1987) describe three types of inferences that combine with environmental influences to create depression. They are as follows: the inference one makes regarding the "stability" and "globality" of a negative event; the inference that negative consequences will occur as a result of a negative event; and, the inference one makes about the self in view of the negative event.

Depression is defined in terms of eight features produced by hopelessness, according to Abramson, Metalsky and Alloy (1987). They are as follows: the retarded initiation of

voluntary responses, negative associations regarding self and life events, sad affect, lowered self-esteem, suicidal ideation, brooding, dependency, and an increasing spiral of hopelessness cognition.

This model is a diathesis-stress model, in that, stressful life events will combine with attributional style to trigger an episode of hopelessness depression. Self-focusing is considered to be "a very powerful variable" in the mediation of the above described features, according to Abramson (personal communication). In this context, self-focusing is considered to impact on the "stable" and "global" attributions given to a particular event. It appears that this recent reformulation of the theory is an attempt to better explain
the relationship between cognitive style, i.e.,the inferences an individual makes regarding events in the environment, and depression; however, it has only recently begun to be empirically tested and requires additional research before conclusions on validity can be made.

Beck's Model. According to Beck (1967, 1976), depression prone individuals exhibit a "depressive triad" which consists of a negative outlook regarding the self, the future, and the world. The major parameters of this theory include this "negative cognitive triad", in conjunction with the idea that depressives distort information and make errors in thinking. He posited that stressful life events, or a significant loss, activates a schemata that consists of distortions of thoughts

and perceptions. Beck describes these distortions in terms of a variety of processes, such as, arbitrary inference, selective abstraction, magnification and minimization, and overgeneralization. According to the theory, these processes serve to distort the interpretation of events for depressives. Beck's original theory (1967, 1976) was based on systematic observation of clinical case studies. He observed that depessives were preoccuppied with negative, gloomy and unpleasant thoughts (Beck, Rush, Shaw, & Emery, 1979). Automatic thoughts and cognitive distortions are examples of processes involved in a negative self-schema.

Beck's theory can be divided into a structural component and an information-processing component. In the structural part of the theory, information about the self, the future and the world is represented in a hierarchical ordered set of schemata. In the second part of the theory, a set of information-processing strategies are considered to lead to typical depressive distortions or errors in perception. Depressives, by virtue of a negative self-schemata tend to recall negative information about themselves over positive information, more readily. The information that does not correspond to the negative self-schema becomes distorted so that it suits the depressive schema. Negative self-schema exerts a negative influence on a variety of cognitive abilities, inclusive of memory, inference and perception (Kuiper, Derry, & McDonald, 1982). In Beck's model (1976) depressed individuals are hypothesized to possess negative

schemata involving the depressive themes of personal deficiency, worthlessness, self-blame, guilt, deprivation, and rejection.

Depression is defined by sad affect, increased dependency on others, lack of energy, apathy and psychomotor retardation (Beck, 1967). This model also includes hopelessness as a component of "negative triad depression", which means that low self-esteem is viewed as a cause of depression in this case (Alloy, 1988). Again, the semantics of the theory differ from other theories, but essentially, self-focused attention is referred to in the context of "negative view of the self" which results in feelings of inadeqacy, guilt and a belief that one is inept and undesirable. Beck (1972) described cognitive distortion as a core component of depression. Negative distortion seems to be more apparent when evaluation is of oneself or one's own behavior (Rehm, 1982). Therefore, a major component of cognitive distortion may involve self-monitoring, which often is self-evaluative in nature. In an effort to correct these distortions, Beck has advocated self-monitoring as a means of controlling "automatic thoughts", which are the negative assumptions that underlie depressive perceptions. Beck has argued that depressives characteristically blame themselves for negative events, thereby intensifying dysphoria.

Beck's model has evolved since the original formulation. Beck and Rush (1978) have suggested that schemas may be latent until activated by stressful situations. More

recently, Beck amended the original theory to include personality organization as an ingredient in vulnerability to depression (Beck, 1982). As part of the evolution, several empirical investigations have been conducted to evaluate the model for efficacy based on its theoretical and clinical application.

Shaw (1977) compared the effectiveness of cognitive and behavior therapy with depressed college students recruited from a university outpatient clinic. A total of 16 hours of group treatment was presented over 4 weeks. The results generally favored Beck's cognitive therapy, in that only the cognitive treatment group showed significant improvement as compared to a non-directive control group and a no-treatment control group. At follow-up assessment, one month later, the groups did not differ significantly.

Several studies have been conducted examining the efficacy of cognitive therapy as compared to other therapies, including pharmacotherapy. Rush, Beck, Kovacs, and Hollon (1977) compared cognitive therapy to imipramine therapy over a 12 week period and found that although both treatments were significantly effective, cognitive therapy showed a greater pre-post improvement. However, at 3 and 6 month followups, the differences were not statistically significant. Kovacs, Rush, Beck, and Hollon (1981) conducted a similar study which resulted in similar findings. However, Taylor and Marshall (1977), randomly assigned subjects with BDI scores greater than 13 to a group treated with cognitive therapy, a group

treated with behavior therapy, and a third group treated with a combined approach of cognitve and behavior therapy. Response measures included self-ratings of depression, self-acceptance, and self-esteem. The findings indicated that for all measures the results did not differ significantly; however, for results on the depression inventories, self-esteem and self-acceptance measures, the combined treatment was superior to either treatment alone.

In a more recent study, Hammen, Marks, de Mayo, and Mayol (1985) examined the self-schemas of college students according to the extent to which memories of recent experiences about the self were organized. These experiences were studied in terms of worth and satisfaction relative to interpersonal relations or accomplishment of achievement. These students were dependent and self-critical types similar to Beck's subtypes (Beck, 1982). Participants were followed longitudinally and were assessed by questionnaire and interview for occurrence of stressful life events and depression levels at four monthly intervals. The results were in the expected direction. Self-critical individuals experienced more depression associated with negative achievement events than with interpersonal events, while dependent individuals experienced more depression relative to negative interpersonal events. These findings substantiated Beck's contention that a "negative view of the self" is strongly related to depression because of the self-evaluative component that promotes self-criticism and exacerbates

depression as part of the depressogenic cycle (Beck, 1976).

However, in another study, by the same authors, to evaluate the stress and cognition interaction effect (Beck & Rush, 1978), college students were followed in a longitudinal design with periodic assessment of stressful life events and depression. Multiple regression analysis indicated no significant effect for life event and schema interaction in the predicted direction of depression. There did not appear to be a triggering effect of negative life events on schema to produce depression.

Although, some empirical findings have supported Beck's model, they have not been conclusive. In fact, research documenting the accuracy of depressives perceptions contradict Beck's contention that depressives distort information in a negative bias, unrealistically, all the time (Lewinsohn, Mischel, Chaplin, & Barton, 1980). Therefore, Beck's assumption that the thinking of normals is more rational, logical and realistic than depressive thinking is challengeable. Power and Champion (1986) suggest that depressives may be more accurate with negative information that is correct because their conclusions are more congenial with their models of a negative view of the self. Another criticism of the theory lies in the fact that it seems unlikely that critical schemata concerned with issues of loss and failure are latent between episodes of depression, given that they are of such importance (Power, 1987). Also, Beck has described methods such as arbitrary inference, etc. as

forms of cognitive distortion; however, from a theoretical perspective, he has not specified the psychological processes which underlie these various forms of distortion (Kanfer & Karoly, 1982).

Rehm's Self-Control Theory. Rehm has developed a self-control model of depression based on Kanfer's theory of self-regulation (Kanfer, 1970; Kanfer & Karoly, 1972). In Kanfer's model, the self-control process occurs within a feedback loop that includes self-monitoring, self-evaluation of performance, and self-reinforcement. Rehm (1977) offers clear definitions for each concept. He explains self-monitoring as theobservation of one's own behavior in the context of its situational antecedents and consequences. Self-evaluation refers to a comparision between an estimate of performance and an internal standard, and self-reinforcement is the administration of either overt or covert rewards to oneself. In Kanfer's model, self-evaluation plays an important role, in that, it deals with the manner in which individuals make judgments about the quality of their performance. These judgments are based upon standards against which individuals compare their performances. Further, when behavior is viewed as dysfunctional, it becomes the object of attention. In Rehm's self-control model, self-monitoring and self-evaluation processes determine self-reinforcement. Self-reinforcement serves the function of maintaining behavioral consistency over time. This is done by compensation. Immediate reinforcement for alternative

behavior is used to compensate for the lack of external reinforcement that is not immediately available (Rehm, 1977). Self-evaluation is more significant when behavior is judged to be caused by internal factors related to an individual rather than external factors related to the environment (Rehm, 1982).

This theory is an attempt to specify those processes underlying cognitive distortions. According to Rehm, negative distortion occurs when evaluation is of the self and of an individual's own behavior. Depressives are basically accurate in their perceptions except when ambiguity exists or a reconstruction and interpretation of an event is necessary. Distortion is likely to occur then, because depressed individuals attend more to negative aspects than positive aspects of events. This influences their interpretation and reconstruction of the event. The self-control model of depression (Rehm, 1977) attempts to account for the low self-esteem seen in depression in terms of rigid self-evaluative standard setting. A number of studies have examined the self-evaluations of depressed and non-depressed samples.

Vasta and Brockner (1979) had undergraduate college students self-monitor positive and negative self-evaluative statements. They predicted that self-esteem was related to the nature of the self-evaluative statements. Their findings indicated that a measure of self-esteem correlated significantly with the number of negative self-evaluations

and with a ratio of the number of negative to the total number of self-statements. High self-esteem subjects recorded approximately equal numbers of positive and negative self-statements. They concluded that self-esteem was related to self-statements and particularly negative self-statements.

An earlier study done by Shrauger and Terbovic (1976) asked depressed and non-depressed college students to assess themselves on a concept-formation task. One week later, they asked the students to assess a videotape of themselves or of another subject who, in fact, was a model replicating the subject's responses. They found that low self-esteem subjects rated themselves as lower than high self-esteem subjects. Low self esteem subjects also rated themselves as lower than the model who, in fact, was identical to the subjects in actual performance. High self-esteem subjects rated their performance as equal to that of the model.

Depression, in the self-control model, is characterized by low self-esteem exhibited through negative self-evaluations. In addition, it is defined by increased self-punishment, decreased persistence due to lack of self-reinforcement, decreased self-reward, deficits in self-monitoring, performance deficits, and feelings of helplessness. This model views helplessness as a product of faulty self-attribution, which is seen as a modifier to the self-evaluative process (Rehm, 1977). In this respect, there is some overlap with the reformulated learned helplessness model. However, the reformulated learned helplessness model

claims that the resulting performance deficit effect can be due to individuals' inability to generate hypotheses for complex problem solving. The self-control model explains performance deficits in terms of lack of self-reinforcement, possibly due to negative self-monitoring and rigid self-evaluative criteria.

Self-focusing clearly is related to the concepts of self-monitoring and self-evaluation in the self-control model. Self-monitoring is the directing of conscious attention toward particular aspects of the self, usually in the form of observing one's own behavior (Kanfer, 1970). Self-evaluation is an extension of self-monitoring; it is a judgment based on an individual's standards for ideal performance as compared to the actual observed behavior. Many empirical studies have been done testing the efficacy of this model from a theoretical and a clinical perspective, as well.

In an early study, Fuchs and Rehm (1977) compared a six week version of the self-control program to a non-specific group therapy control condition and a waiting list condition. Of the original 36 subjects screened for the study, 28 completed the study after being randomly assigned to the various conditions. The MMPI was used as a screening device and the dependent measures were scores on the MMPI, the Beck Depression Inventory, the MacPhillamy and Lewinsohn Pleasant Events Schedule, and measures of verbal activities. The results indicated that the self-control condition was the most improved and was significantly more improved than either

of the other conditions. Results were maintained at a six week follow-up. Although these results and the results of other studies that followed were promising, a more recent study did not yield such an unequivocal outcome.

Based on the Fuchs and Rehm manual, Fleming and Thornton (1980) assigned clinic subjects to a self-control program and a cognitive therapy program (Shaw, 1977). Another group of subjects was seen in a nondirective group therapy condition. Subjects were screened for depression according to the Beck Depression Inventory, the MMPI-D-scale, and an interview. All three conditions demonstrated a positive effect at post-test and at a six week follow-up. However, the self-control group was significantly better only on measures of negative self-references and overall depression, when assessed at post-test.

Although, self-management models in general, and the self-control model in particular, have demonstrated some successes, the results are equivocal at best. An adequate model of self-management needs to take into account a variety of variables inclusive of negative self-evaluation, self-monitoring, self-reinforcement and inferences (Rehm, 1988). Studies of self-monitoring in depression, although not always consistent in their findings, have suggested that depressives record fewer positive and more negative events regarding their experiences. Depressives distribute their attention differently between positive and negative events, and they may have different standards for

identifying daily events. Finally, the research indicates that depressives infer and interpret events more negatively due to their selective attention to negative aspects of events. According to Rehm (1977) this results in various self-control deficits which sum to produce low levels of contingent self-reward and high levels of self-punishment. Recently, it has been suggested that these factors need to be studied in an integrated fashion in order to better understand the etiology of depression (Rehm, 1988).

Lewinsohn's Interpersonal Model. Lewinsohn developed a model for depression that emphasized the reduced frequency of activity as the hallmark of depression. The model is based on behavioral theory and is a somewhat simplified version of Ferster's (1973) earlier model. Ferster proposed a variety of environmental conditions that can contribute to depression. He suggested that changes in the environment which result in loss of reinforcement can promote depression. Also, he suggested that "ratio strain", a situation where large amounts of behavior being emitted produces very little result, can lead to depression. Ferster characterized depressives as complainers and explained that this behavior was effective for depressives in reducing or avoiding aversive stimuli. The process is otherwise known as negative reinforcement. Depressives seem to have a behavioral repertoire of negatively reinforced behaviors rather than positively reinforced behaviors due to their experience of the environment (Ferster, 1973).

Lewinsohn (1974) developed a model in which a low rate of response contingent positive reinforcement serves as a principle antecedent of depression. The low rate of response is the result of influences in the individual's environment. When someone experiences a low rate of response-contingent reinforcement, behaviors are correspondingly emitted at a reduced rate. The low rate of behavior makes positive reinforcement even more unlikely. The individual becomes the victim of a vicious cycle that results in inactivity and withdrawal. According to Lewinsohn (1974), social skills play an important role in determining an individual's proficiency in getting reinforcement from the environment. If someone lacks adequate interpersonal skills, he or she will not be able to effectively respond to environmental stimuli, in the form of other people or events, to be adequately rewarded. In addition to social skills, a person's prior history of reinforcing events plays a role in achieving positive reinforcement, as does having a necessary array of available reinforcers in the immediate environment. Therefore, pleasant events play an important role in the process of depression according to this formulation (MacPhillamy & Lewinsohn, 1974)

In an early study, Lewinsohn and Libet (1972) found a relationship between mood and the number of pleasant activities undergraduate students participated in. College students were divided into three groups (depressed, other clinical diagnosis, and normal). Subjects derived individual pleasant activities scales from the Pleasant Events Schedule

(MacPhillamy & Lewinsohn, 1971). The subjects completed self-report questionnaires on activities engaged in over a 30 day period. The results were correlated with scores on the Depression Adjective Checklist (Lubin, 1965). The finding was in the predicted direction, substantiating that pleasant mood was related to self-reports of participating in pleasant events, $t=9.3$, $p<.001$. However, large individual differences among subjects did exist.

In a replication of the above study, Lewinsohn and Graf (1973) assigned subjects from mental health clinics to the three groups. They again found a significant relationship between pleasant activities and dysphoric mood in the predicted direction. The correlation was significantly higher for the depressed ($r=-.36$) and psychiatric ($r=-.43$) groups than for the normal ($r=-.25$) group. However, in both studies, only one or two days had elapsed when the activity rate was measured. This was not enough time to get a reasonable measure of activity regarding pleasant events (Blaney, 1977).

Although the findings of several empirical studies appear consistent with respect to a relationship between pleasant activites and mood, it is unclear as to whether pleasant events are an antecedent or a consequence of mood. Here again the question of etiology has not been clearly answered by these findings. However, low rates of social reinforcement have been found by other authors to influence levels of depression (Coyne, 1976). At the level of overt behavior, depressives have been shown to manifest social

skill difficulties that affect their behavior in social interactions (Gotlib, 1982; Hautzinger, 1980). Also, depressives have been shown to have fewer friends and intimates (Brown & Harris, 1978), and to have a negative social impact on others (Coyne, 1976a; Hammen & Peters, 1977; 1978; Lewinsohn, Mischel, Chaplin, & Barton, 1980). What effect does this inability to interact interperonally have? It reduces their ability to adjust in important life roles (Weissman & Paykel, 1974).

Although the above findings have produced significant correlations with respect to social skill competency, lack of positive reinforcement, and depression, they have not documented a causal role (Blaney, 1977). Perhaps because of this, Lewinsohn began to investigate the role of cognitions relative to depression. Lewinsohn, Steinmetz, Larson, and Franklin (1981), in a longitudinal study investigated the role of cognitions with respect to antecedent or consequent effects related to depression. A sample of community volunteer subjects completed a questionnaire and were interviewed. Subjects were either depressed at the time of assessment, had a history of depression, or became depressed during the follow-up period. Depression related cognitions and self-esteem were measured by several instruments, including the Personal Beliefs Inventory and the Subjective Probability Questionnaire. The results were generally consistent with the hypothesis that depression-related cognitions are concomittant with an episode of depression.

Current depressed subjects differed from non-depressed subjects as expected. Depressive cognitions did not seem to be permanent residuals of an episode. Further, depressive related cognitions did not predict future depression.

In another study designed to clarify the dimensionality and degree of interrelatedness of measures of cognition, Lewinsohn, Larson, and Munoz (1982) divided subjects into three groups (depressed, psychiatric control, normal control) and administered a series of questionnaires (Subjective Probability Questionnaire, Personal Beliefs Inventory, and the Cognitive Events Schedule). The findings indicated that depressives had a higher expectancy for negative events and a lower expectancy for positive events pertaining to the "self", but not pertaining to the "world". A similar finding was reported for positive and negative thoughts. In general, an inter-relationship among irrational beliefs, distortions, expectancies and other cognitions was reported to have a correlation of approximately .60 on the factors computed. These findings suggested support for the role of cognition, in conjunction with reinforcement, regarding the maintenance if not the etiology of depression.

In a longitudinal and prospective study by Lewinsohn and Hoberman (1982) neither the frequency of pleasant nor unpleasant events predicted the later occurrence of depression, suggesting that the number of such events by themselves are not immediate antecedents for depression. Only the aversiveness of unpleasant events emerged as predicting

later depression, while the number of severe stressors predicted depressive onset. The implication of this finding suggests that the appraisal of an event may play an important role in accounting for individual psychological differences. This study did not support a main premise of the behavioral theory, namely that rate of reinforcement, alone, accounts for the occurrence of depression. It did satisfy some of the criticism made against many of the earlier studies, particularly with respect to its longitudinal design.

As a result of this finding and the fact that major predictions of both cognitive and reinforcement theories did not provide support for particular antecedents for depression, Lewinsohn felt that a theory of depression should, therefore, include a mechanism that allows for a varied symptom pattern with large individual differences and multiple causal points of entry (Lewinsohn, Hoberman, Teri, & Hautzinger, 1985). He also felt that the functional systems of cognitive, behavioral, and somatic were related and tended to change together.

Integrative Theory. Lewinsohn (1985) presented a model of depression that attempts to integrate the findings of epidemiological and treatment outcome studies with a body of work from social psychology based on the objective self-awareness theory of Duval and Wicklund (1972). The integrative model postulated that the chain of events leading to the occurrence of depression begins with an antecedent or evoking event usually called a stressor in the literature

(loss of loved one, loss of job, etc...). This relationship has been well documented in the literature (Brown & Harris, 1978). These antecedents disrupt substantial and important behavior patterns, many of which are well-established and predictable. Vulnerable individuals tend to get by in their lives with well-established behavior patterns because of the regularities in their environment (Coyne, 1982). The presence of a stressor serves to disrupt this regularity. In addition, it produces a negative emotional reaction. The degree of the negative reaction is related to the importance of the antecedent event (Taylor & Fiske, 1978). The result of this interaction serves to shift the balance of the quality of reinforcement an individual receives from the environment in a negative direction (Lewinsohn, Youngren, & Grosscup, 1979). The inability to reverse the impact of the stress through either increasing positive reinforcement or decreasing aversive experiences, is hypothesized to lead to a heightened state of self-awareness.

Lewinsohn suggests that the initial negative emotional response that follows the stressor and the subsequent emotional impact regarding the inability to reverse the impact of the stress increases self-awareness. Further, he hypothesized that reduced positive reinforcement and increased negative experience produces an increase in self-focused attention (Lewinsohn, Hoberman, Teri, & Hautzinger, 1985). The effects of increasing self-awareness are similar to the effects of depression

(Ganellen & Blaney, 1981; Ingram & Smith, 1984; Smith & Greenberg, 1981). Lewinsohn hypothesized further that increased self-awareness and dysphoria can affect positive self-perception and self-protective illusions (Lewinsohn, Mischel, Chaplin, & Barton, 1980) and produce many of the cognitive, emotional and behavioral changes equated with depression. These changes, in turn, contribute to the exacerabation and maintenance of the depressive state. In summary, an episode of depression results as a consequence of a chain of events beginning with the occurrence of an antecedent stressor that leads to a heightened state of self-focused attention. A continuing increase in self-focused attention provides the basis for a large number of affective, behavioral, and cognitive changes that exacerbate depression and serve to maintain the episode.

The integrative model allows for feedback loops, such as, becoming depressed and behaving as such would interfere with problem-solving skills which would affect the individual's ability to reverse the disruption in behavior. Also, an episode of depression produces complaining behavior that is aversive to others (Coyne, 1976a) which leads to a state of withdrawal and rejection by others. Being depressed would also affect an individual's energy level, which in turn would affect the potential to produce pleasant events, which would serve to increase self-awareness and influence capacity to reverse the depressive episode. The feedback loops set the stage for a vicious cycle, according to Lewinsohn's

formulation. He allows for many points of entry into the cycle or chain of events leading to depression, and therefore, allows for multiple causes that can produce and maintain an episode. The model assigns a central role to dysphoria because it is necessary to evoke the consequences of change in thinking and behavior related to depression. According to this model, individuals can ameliorate depression by changing the consequences of depression, distracting themselves, reducing self-awareness, increasing pleasant activities, decreasing unpleasant activities, enhancing coping skills and eliminating the antecedent stressor perhaps by changing the environment.

Depression, according to this revised model, is defined by reduction in activity level, dysphoric mood, sadness, reduced social competence, withdrawal, increased self-awareness and preoccupation, feelings of guilt and low self-esteem, difficulty with memory and concentration, and a number of somatic manifestations including fatigue and sleeplessness.

Overview of Cognitive/Behavioral Theories. The theories of Seligman (1975), Seligman, Abramson and Teasdale (1978), Beck (1967; 1976), Beck, Rush, Shaw and Emery (1979), Rehm (1977; 1988), and Lewinsohn (1974) share certain elements in common, and in some instances actually overlap. They all define depression in terms of reduced rate of activity (fatigue) and dysphoria (sad affect). Rehm (1977; 1988), Beck (1967; 1976), and Seligman, Abramson, and Teasdale (1978)

include a negative self-image or self-critical self-evaluation in their characterization of depressives. Seligman (1975), Rehm (1977) and Lewinsohn (1974) all espouse the importance of control in the onset and maintenance of depression. Beck (1967; 1976) is similar to Seligman (1975), Seligman, Abramson, and Teasdale (1978) and Rehm (1977; 1988) with respect to the role of perception, particularly distorted perception. The revised versions of all of the theories include a role for the self in the maintenance of a depressive episode, albeit in varying forms, inclusive of self-evaluation, self-attribution, self-monitoring, and self-awareness. However, none of the theories has been able to definitively show a universal cause of depression. Invariably, the parameters of each theory reflect the impact of feedback, particularly negative feedback, on rate of behavior and mood. In some instances, this feedback has implications for self-esteem as reflected by self-critical thoughts or views.

From the empirical standpoint, all of the theories have been tested through correlational designs, for the most part. Therefore, they all share in the criticism of being unable to answer etiological questions regarding depressive onset (Blaney, 1977; Power, 1987). This has led to the use of the longitudinal design in more recent studies.

Also with respect to design, self-report measures have been the major if not only dependent measure utilized, particularly regarding expression of mood or affect. This

need not be the case since behavioral measures for emotion do exist. Izard (1980) developed a system for maximal discriminative facial movement coding (MAX) where the facial expression of emotion can be classified. According to his method, raters would code sadness according to a facial expression that consisted of corners of the mouth drawn down and the inner corners of the eyebrows drawn up. For happiness, the corners of the lips are back, the cheeks and the lower eyelids are raised. This system has been based on prior research regarding facial expression of emotion (Ekman & Friesen, 1975; Izard, 1971, 1977). It has recently been updated (AFFEX) by Izard, Dougherty, and Hembree (1980).

From a theoretical perspective, further criticism has been directed at the suggestion of only cognitive variables accounting for depressive episodes, particularly by Beck, and Seligman, Abramson and Teasdale, to the exclusion of behavioral variables (Coyne & Gotlib, 1983). However, perhaps the strongest criticism each theory shares in common has to do with its linear design model regarding the maintenance and causality of depression. In this design there is no room for multiple entry points nor interactive effects regarding stressors, personal and environmental resources, and an individual's appraisal and coping responses.

The fact that empirical results have failed to definitively answer the question of etiology has led to requests that investigators not attempt to define depression on the basis of a particular model (Craighead, 1980). Because

of the breadth and depth of the disorder, updated models proposing an integrative design that is interactive in nature have been suggested (Johnson & Laird, 1983; Lewinsohn, Hoberman, Teri, & Hautzinger, 1985). The "integrative model" allows for a variety of causal factors, and a variety of different results interacting in a cyclical process to create and maintain a depressive episode. Lewinsohn, Hoberman, Teri, and Hautzinger (1985) have offered a model that attempts to integrate the parameters of the other cognitive/behavioral theories, while delineating a central role for self-focused attention in the depressive process. In this model, self-focused attention is referenced in the self-awareness theories of social psychology literature.

Self-Awareness Theories

Objective Self-Awareness Theory. Duval and Wicklund (1972) proposed a theory of objective self-awareness in an effort to explain personality processes and human behaviors. The main contention of the theory defines awareness as dichotomous. It is either objective or subjective. Objective self-awareness is the state in which a person takes the self to be the object of attention, while subjective self-awareness is the state in which the person as subject directs attention outward toward the environment. In a laboratory experiment with undergraduate college students, Duval and Wicklund (1972) used a camera to induce self-awareness and found that students in the camera present condition became dependent on others and very aware oftheir inabilities, while students in

the camera-absent condition behaved as competent and attended to the task at hand. The authors concluded that the camera induced subjects into a state of objective self-awareness which caused them to focus more on themselves than the performance task, while subjects low in objective self-awareness were able to focus externally on the performance task.

According to Duval and Wicklund (1972), scope of awareness begins with a limited scope of objects that lie within the immediate range of awareness. Direction of attention is controlled by this scope of awareness, with subjective self-awareness existing as the more primary state. A stimulus must trigger a diversion of attention towards the self. In laboratory experiments, the camera, the mirror, and the tape recorder (Davis & Brock, 1975; Carver & Scheier, 1978) have been employed as such a stimulus. Attention is usually controlled by forces in the environment, according to the authors, and is not under the control of the will.

Objective self-awareness theory is a motivational theory. The authors assumed that objective self-awareness generated a negative affect because of the discrepancies that exist between aspiration and attainment when attention is focused on the self. Self-observation tends to reveal the shortcomings within an individual, and produces an aversive state when such shortcomings are salient. In another study, college students were given a self-esteem measure and then asked to read a passage aloud while being audiotaped. The

results indicated that intraself discrepancies increased when objective self-awareness was induced by the audiotape, and the effect was most pronounced soon after the induction. Lowered self-esteem resulted on post-measurement and was related to objective self-awareness (Ickes & Wicklund, 1971).

Gibbons and Wicklund (1976) updated the theory and suggested that while in a state of objective self-awareness, an individual will experience either a positive or negative affect depending on the nature of the discrepancy revealed under such conditions. The degree of affect depends on the amount of attention focused on the discrepancy as well as the size of the discrepancy. The authors propose that self-evaluation is the reaction to the state of objective self-awareness. Self-evaluation will either be favorable or unfavorable depending upon the direction of the discrepancy. If the discrepancy is in a positive direction and indicates that an individual has exceeded his or her standard for performance, then the self-evaluation will be favorable. However, if the discrepancy is in a negative direction indicating that the individual has failed to achieve their standard for performance, then the self-evaluation will be negative and self-critical. Self-critical self-evaluation tends to occur particularly when the features under evaluation are personal and fairly stable, for example, intelligence or creativity.

Liebling and Shaver (1973), in a study with undergraduate college students, presented favorable task performance as

highly correlated with intelligence and found that self-focused attention increased among subjects to the point of interfering with task performance. In another study, Duval, Wicklund, and Fine (1972) gave subjects favorable and unfavorable evaluations on both intelligence and creativity at the beginning of the experiment. The subjects were then placed in a room where they had to view or avoid a mirror image of themselves. The measure of avoidance was structured to be the latency period prior to subjects leaving the room. The findings indicated that unfavorable feedback produced a high discrepancy, which led to significant avoidance. The mirror image had little effect when the discrepancy was low. Subjects tended to remain in the room for a longer period.

Empirical studies have examined focus of attention in terms of several variables based on objective self-awareness theory (Duval & Wicklund, 1972). These studies have been done with normal subjects from an undergraduate college student population. Self-esteem (Ickes, Wicklund, & Ferris, 1973) and attribution (Duval & Wicklund, 1973; Buss & Scheier, 1976; Gibbons, 1977) have been two of the more prominant variables studied, in addition to aggression, private and public self-consciousness, and self-reinforcement. This research has produced findings that are quite similar to the findings of recent studies on depression (Alloy, 1988; Lewinsohn, Hoberman, Teri, & Hautzinger, 1985; Pyszczynski & Greenberg, 1987).

As outlined by Smith and Greenberg (1981), the parallels

that exist between a state of objective self-awareness and a state of depression are in the areas of causal attributions, affective responses, self-esteem, and self-report accuracy. Individuals in each of the described states have shown evidence of lowered self-esteem and increased self-evaluative tendencies in terms of self versus ideal-self comparisons (Beck, 1967; Ickes, Wicklund, & Ferris, 1973). Both depressed and self-focused individuals demonstrate a tendency to attribute negative outcomes internally (Duval & Wicklund, 1973; Seligman, Abramson, Semmel, & von Baeyer, 1979). Negative affect has been associated with increases in self-focused attention in both psychiatric subjects (Gibbons, Smith, Ingram, Pearce, Brehm, & Schroeder, 1985), and non-psychiatric subjects (Scheier, 1976).

Objective self-awareness theory has been integrated with a cybernetic model of self-regulation by Carver and Scheier (1981). These authors disagree regarding the issue of self-focus being aversive whenever a negative discrepancy is salient. Carver and Scheier (1981) argue that only when a low probability of reducing a negative discrepancy exists, is self-focus aversive.

Cybernetic Model of Self-Regulation. Carver (1979) and Carver and Scheier (1981) conceptualize self-focus as part of a self-regulatory negative feedback cycle which helps keep an individual focused in its pursuit of important goals. These authors, although maintaining many of the tenets of Objective Self-Awareness Theory (Duval & Wicklund, 1972),

view self-focus as part of the test portion of a test-operate-test-exit sequence. When attention is self-focused and a standard for behavioral comparison is present, the individual tends to compare current state of the self with that standard. If the individual meets or exceeds the standard, an exit of the cycle occurs and the self-focusing is terminated; however, if the standard is not reached, then the individual enters into an operate phase where behavior is directed at reducing the discrepancy. In the depressed, because of skills deficits in problem solving (Gotlib & Asarnow, 1980; Miller, 1975) and social interaction (Coyne, 1976; Gotlib, 1982; Lewinsohn, Mischel, Chaplin, & Barton, 1980) discrepancy reduction becomes difficult. According to this model, self-focusing increases when the standard is not reached. As a result, the individual ultimately withdraws from further attempts at discrepancy reduction and experiences negative affect.

Carver, Blaney and Scheier (1979) in a study with undergraduate college students offered results that supported the contention that self-focus is aversive only when there is low probability of successful discrepancy reduction. Subjects completed questionnaires on anxiety and expectancy regarding a "fear of snakes" at pre-test. Attention was manipulated through the use of a mirror during the experiment, which required subjects to approach and handle a live snake. The subjects completed post-test questionnaires on anxiety and arousal. The results were significant and indicated that

subjects in the self-focusing condition reported greater anxiety. This effect was most reliable among those subjects who had a doubtful expectancy regarding ability to handle the snake at pre-test. In addition, it was predicted that heightened self-focus would interfere with subjects ability to approach the snake, and therefore, cause earlier withdrawal from the testing. This prediction was significantly supported with doubtful subjects. The authors concluded that self-focus interacted with expectancy to affect behavior.

Steenbarger and Aderman (1979) offered further support regarding the aversiveness of self-focusing, and the experience of negative affect, only in the presence of an irreducible negative discrepancy. Undergraduate college students were assigned to flexible and inflexible trait conditions. Attention was manipulated through the use of a tape recorder. Results indicated that subjects in the high self-awareness /inflexible trait condition experienced significantly more negative affect than other subjects. A significant main effect for trait flexibility indicated that subjects in the inflexible trait condition rated their chances for improvement as "very low", while subjects in the flexible trait condition rated their chances as "very high". The authors concluded that Carver and Scheier's modification of objective self-awareness theory was valid. However, more recent investigation has not produced such unequivocal results, but rather a compromise between the self-regulation

formulation (Carver & Scheier, 1981) and the objective self-awareness theory (Duval & Wicklund, 1972).

Pyszczynski and Greenberg (1987) suggested that the role of negative affect in motivating discrepancy reduction was not very clear, and certainly less clear than the aversiveness of self-focusing in a situation of low probability discrepancy reduction. These authors offered a compromise position. In proposing a self-awareness theory of reactive depression, they concurred with Carver and Scheier (1981) regarding the emphasis on the adaptive self-regulating function of self-focused attention, but agreed with Duval and Wicklund (1972) regarding the issue of self-focus on negative discrepancies producing negative affect regardless of the probability of discrepancy reduction. In addition, these authors posited, regarding the onset of depression, that the initial response to disruptions, failures and frustrations is an increase in self-focusing. By focusing inward, the individual activates a self-regulatory cycle that facilitates the pursuit of important goals. This shift in attentional focus produces a comparison of current and desired states, where exceeding the standard produces positive affect and not meeting the standard produces negative affect (as Duval and Wicklund suggested). Whether the resulting affect leads to an attempt at discrepancy reduction or escape depends on the probability of successful reduction. High probability will lead to an attempt at discrepancy reduction, while low probability will lead to withdrawal from the situation

(as Carver and Scheier suggested).

Implications of Self-Awareness for Depression Research. Pyszczynski's and Greenberg's self-awareness theory of reactive depression (1987) is based on the formulations of Duval and Wicklund (1972) and Carver and Scheier (1981), and their own research (Pyszczynski & Greenberg, 1985; 1986; Pyszczynski, Holt, & Greenberg, 1987).

In a study designed to measure preference for self-focusing stimuli after differential feedback (success vs. failure) in depressed and non-depressed subjects, Pyszczynski and Greenberg (1985) hypothesized that depressed subjects would prefer self-focusing after failure, while non-depressed subjects would prefer self-focusing after success. By measuring preference, the authors attempted to determine under which circumstance (success or failure) depressed individuals would engage in increased self-focusing. Subjects were screened for depression with the BDI then asked to work on an anagram puzzle after which they received either positive or negative feedback. The subjects then worked on another series of tasks either in a mirror-present or mirror-absent condition. Self-report of preference for tasks worked on by the subjects served as the dependent measure. Results confirmed the authors predictions. Non-depressives significantly preferred the self-focusing puzzle after success, while depressives preferred the self-focusing puzzle after failure. In addition, the authors reported that depressed subjects were less pleased with their performance

regardless of whether they succeeded or failed on a task.

In another study, Pyszczynski, Greenberg and Holt (1987) screened female college students for depression with the BDI and the MAACL. Subjects rated the liklihood of occurrence for positive and negative future life events for self and for others. Results indicated that depressed subjects were generally less optimistic than non-depressed subjects. Depressives rated positive events as less likely to occur to self and more likely to occur to others at a significant level. Non-depressives rated positive events as more likely to occur to themselves. In a second study designed to measure the mediating effect of self-focused attention, a similar group of subjects were required to perform the same tasks in addition to completing a self-focus manipulation story-writing exercise (Fenigstein & Levine, 1984). Results supported the hypothesis that high levels of self-focus partially mediate depressive pessism: self-focused depressed subjects were more pessimistic than non-depressed subjects, while externally focused depressed subjects were not. Other findings have supported the hypothesis that self-focused attention affects aspects of depression (Ingram, Lumry, Cruet, & Sieber, 1987; Ingram & Smith, 1984; Strack, Blaney, Ganellen, & Coyne, 1985).

Based on these findings, Pyszczynski and Greenberg (1987) concluded that self-focused attention plays an important role in the onset and maintenance of depression. Self-regulatory perseveration theory, as their theory is

called, converges with the integrative theory of depression regarding the importance of self-focused attention (Lewinsohn, Hoberman, Teri, & Hautzinger, 1985). However, each model was developed independent of the other. Lewinsohn et al's model is more explicitly derived from the self-awareness literature. Both models agree that extreme negative affect and the disruption of daily activites caused by stressful life events (such as loss of a loved one or loss of a job) encourages an increment in self-focused attention which, in turn, encourages or exacerbates a variety of depressive symptoms (such as negative affect and self-criticism). However, the theories are not in accord with respect to the heightened expression of self-focused attention. Lewinsohn (1985) proposes a general increment of self-focusing in depressives, while Pyszczynski and Greenberg (1987) propose that self-focus is high after negative outcomes and low after positive outcomes in depressives. Pyszczynski and Greenberg suggest that because of the tendency to persist in self-focus after negative outcomes and avoid self-focus after positive outcomes, rather than a general tendency to self-focus, depression is maintained and exacerbated.

It is the aim of the present study to examine and test these postulates regarding the heightened expression of self-focus, and determine if the tendency to self-focus is general in depressives or differentially related to success and failure outcomes. In order to accomplish this goal, the

present study included differential evaluation, following a success and failure experience. This methodology has been utilized in past studies on depression and self-focused attention.

Differential Evaluation. In the context of experimental social psychology research, differential evaluation has been employed as non-contingent feedback, for the most part (Abramson, Seligman, & Teasdale, 1978; Duval & Wicklund, 1973; Carver & Scheier, 1976). This kind of evaluation is different from the traditional learning theory concept of evaluation (feedback) which tends to be defined as contingent feedback based on actual performance. Non-contingent evaluation (feedback) is not based on actual performance, but rather is given relative to the manipulated perception of success and failure on contrived tasks. However, non-contingent evaluation does derive its meaning from the learning theory concept that positive feedback is positively reinforcing, while negative feedback is aversive. Success experiences, in the form of pleasant events and positive reinforcement, have been related to performance and depression by Lewinsohn (1974) and Lewinsohn, Hoberman, Teri, and Hautzinger (1985).

It has been hypothesized that differential evaluation, in this context, influences performance as a function of increasing or decreasing self-esteem or feelings of competency. This is based on the findings of Buss and Scheier (1976), Kuiper (1978), and Duval and Wicklund (1973) which

demonstrated that both depressives and self-focused non-depressives have an increased tendency to report internal attributions for negative outcomes. This has also been suggested by Abramson, Seligman, and Teasdale (1978) and Abramson, Metalsky, and Alloy (1987).

Brockner (1979) suggested that manipulations of attentional focus and success/failure evaluation have similar effects on performance. Based on the results obtained by Scheier and Carver (1977), where low self-esteem subjects provided with success evaluation and then made self-aware, experienced self-focus characterized by more positive and fewer anxiety-provoking thoughts, Brockner (1979) studied the effects of self-esteem, success-failure, and self-consciousness on task performance. He administered a self-esteem measure and the private subscale of the self-consciousness scale (Fenigstein, Scheier, & Buss, 1975) to 100 undergraduate college students. The subjects then completed a "social insight test" after which positive or negative evaluation was given by the experimenter. Subjects then estimated their expectations for performance on a concept formation problem-solving task which followed. Attentional focus was manipulated through the use of a mirror (self-focus and no self-focus). Results indicated that the author's predictions were supported. Low self-esteem subjects performed worse than high self-esteem subjects in the failure condition, and made more errors when self-focused, after failure evaluation.

Strack, Blaney, Ganellen, and Coyne (1985), while measuring pessimistic self-preoccupation in both depressed and non-depressed undergraduate college students, found that performance deficits characteristic of depressed subjects occur with the convergence of negative expectancy and a focus on one's adequacy with respect to the task. In the second of three studies, the authors screened for depression with the BDI short form. Subjects received negative evaluation or no evaluation after completing an empathy task. Attentional focus was manipulated through the use of a mirror. Results indicated inferior performance by the lowered expectancy/enhanced self-focused group, as predicted by the authors. A significant main effect for sex, with women reporting lower expectancies and greater self-focus, was reported also. In a follow-up study designed to reverse the effects of study two, the authors manipulated self-focus and expectancy with a similar group of subjects drawn in the same manner. The procedure of study two was duplicated, except for changes in manipulation of expectancy and self-focus. Positive evaluation, instead of negative evaluation was given, and subjects were coached to concentrate on the task. Results indicated that expectancy due to evaluation influenced attentional focus, significantly. Subjects who were led to believe that they would do well were more task focused. Results were in the predicted direction although less than significant in other conditions.

Based on the findings that depressives tend to self-focus even when it may be aversive (Ingram & Smith, 1984; Smith & Greenberg, 1981), Pyszczynski and Greenberg (1985) manipulated positive and negative evaluation in an effort to determine whether depressives increase self-focus after success or failure experiences (the methodology was reviewed earlier in this chapter). Results were as predicted: Success subjects were more pleased with their performance. Depressed subjects indicated that they were less pleased with their performance regardless of whether they succeeded or failed, and preferred the self-focusing puzzle more after failure than after success.

Further, Nelson and Craighead (1977) in a study measuring the recall of positive and negative feedback, discovered that depressives did not show the biases typically demonstrated by non-depressives with respect to attributions for positive and negative outcomes. In three studies conducted to examine cognitive processes involved in self-consciousness behavior, (Hull, Van Treuren, Ashford, Propsom, & Andrus, 1988) findings indicated that the manipulation of success and failure feedback cues did affect the self-referent processing of high self-conscious individuals. In contrast, low self-conscious individuals exhibited less of an effect with respect to self-referent encoding as influenced by differential feedback. Based on these findings, and the implications regarding the effects of success-failure experiences on behavior, the present study was intended

to further examine the role of differential evaluation as it related to self-focusing and the depressive features of self-criticism and sad affect.

Since it was also an intention in this study to test the propositions of "the integrative theory of depression", the variables of dysphoria and self-criticism were measured after differential evaluation regarding task performance, as influenced by level of self-focus. Self-report measures were compared to behavioral observation for convergence, as well. Depressives have been shown to exhibit poor social skills (Coyne, 1976) and self-preoccupation in social interaction (Jacobson & Anderson, 1982); therefore, they may be dysphoric and self-critical on interview as well as on self-report.

Depressed and Nondepressed Self-Report Styles.

In the present study self-report responses on dependent measure questionnaires were compared to observed behavior that was video-taped. Depressives have been shown to be realistic in their self-perceptions (Alloy & Abramson, 1979; Lewinsohn, Mischel, Chaplin, & Barton, 1980). Gibbons, Smith, Ingram, Pearce, Brehm, & Schroeder (1985) demonstrated that self-focus can increase depressives accuracy about the self even further. They had depressed psychiatric inpatients fill out questionnaires regarding their problems in the presence and absence of a mirror. Those subjects who responded in the mirror condition were more accurate regarding the report of number of prior hospitalizations, length of hospitalization, and duration of their problem. The authors concluded that

self-focusing enhances accuracy in depressives.

An increased level of self-focused attention has been found to influence the accuracy of self reports by others. Scheier, Buss and Buss (1978) demonstrated that normal subjects high in private self-consciousness gave more accurate ratings of their hostility than subjects low in private self-consciousness. Pryor, Gibbons, Wicklund, Fazio, and Hood (1977) tested whether an individual's self-reported behavior would correlate more highly with observed behavior under conditions of heightened self-focus. The findings revealed a correlation of .66 between self-report and observed behavior for those individuals in the self-focused condition. As pointed out earlier in this chapter, depression and self-directed attention share common features. Increased accuracy of self-report is one of these features. Therefore, it would appear reasonable to suggest that depressives who are self-focused will provide the greatest accuracy on self-report, consistent with observable behavior.

However, the fact that the observed behavior was viewed as a function of a video-taped interview must be considered. It has been shown that non-depressives protect their self-image better than depressives through the use of illusory self-perception, particularly as it pertains to social interaction (Lewinsohn, Mischel, Chaplin, & Barton, 1980). Therefore, non-depressives may present a different profile on "public" interview as compared to "private" self-report. In two studies designed to assess private

versus public conditions of behavior, non-depressives reported more optimistic cognitions in public than in private (Sacco & Hokanson, 1978, 1982).

Kuiper and McCabe (1985) studied the effects of cognitive vulnerability to depression on judgments of socially appropriate topics of discussion. Subjects made self and other-referent ratings regarding a variety of negative self-disclosure topics. As the authors predicted, depressives found negative self-disclosure topics as more appropriate for discussion, by themselves and others in social interactions, than did normal subjects. Apparently, depressives seem to be less illusory, less appropriate and socially aware in interpersonal interaction with others, and more apt to self-disclose negative information of a personal nature than are non-depressives. The fact that depressives are preoccupied with the self, for example refer to themselves inappropriately and frequently during social interaction (Anderson & Jacobson, 1982), further suggests a lack of social awareness that would promote self-disclosure of negative self-evaluations.

Present Study

The "integrative theory of depression" is an attempt to integrate the findings of several major theories of depression into a consolidated framework, for the purpose of better explaining and defining those variables involved in the etiology and maintenance of depression. Self-focused attention is one such variable

(Lewinsohn, Hoberman, Teri, & Hautzinger, 1985).

The present study represents an attempt to clarify the role of self-focused attention in the maintenance of depression based on the suppositions of the "integrative theory of depression" (Lewinsohn, Hoberman, Teri, & Hautzinger, 1985). Several questions regarding the role of self-focused attention were addressed: 1) Does reduced positive experience and increased negative experience, in the form of success or failure (non-contingent differential evaluation) increase self-focusing in depressives and non-depressives? 2) Does increased self-focusing exacerbate the self-report of self-criticism anddysphoria? 3) Does the self-report of self-criticism and dysphoria converge with the exhibited behavior of each as presented in an interview? Self-focusing, in this study, was defined as the direction of attention to the self, as measured by the number of self-references stated on the Self-Focus Sentence Completion (Exner, 1973).

Based on the theory of Lewinsohn, Hoberman, Teri, and Hautzinger (1985), depressed and non-depressed subjects were provided differential evaluation after succeeding or failing on a "test of verbal intelligence" (anagrams task). The degree of self-focusing was measured on self-report after evaluation. Self-criticism and dysphoria were assessed and compared within and between subjects. This comparison included results of the self-report questionnaires and observable behavior as presented during a video-taped

interview and scored by independent raters.

Experimental social psychology literature is replete with studies utilizing manipulations of success/failure experiences, particularly with respect to the assessment of attributions in a college student population (Alloy & Abramson, 1979; Brockner, 1979; Rizley, 1978). Recent studies examining the relationship between depression and self-focused attention have also used manipulations of success/failure experiences and reported significant findings (Greenberg & Pyszczynski, 1985, 1986).

Hypotheses

1. Negative evaluation serves to heighten self-focused attention in depressives (Lewinsohn, Hoberman, Teri, & Hautzinger, 1985; Pyszczynski & Greenberg, 1987), while positive evaluation heightens self-focused attention in normals (Carver & Scheier, 1981). Therefore, a three way interaction of depression, differential evaluation, and self-focused attention was predicted, such that:
   A. The depressed group in the self-focused, failure condition would be significantly more self-focused on the self-report Self-Focus Sentence Completion (SFSC) than any other depressed and nondepressed group.
2. Depressed individuals have been described as self-critical and exhibiting sad affect (Beck, 1967). Self-focused attention has been shown to increase negative affect in a depressed sample (Gibbons, Smith, Ingram, Pearce, Brehm, & Schroeder, 1985). Therefore, a two-way interaction was

predicted between depression and self-focused attention:

A. The depressed group in the self-focus condition would be significantly more self-critical on the Depressive Experiences Questionnaire-Revised (DEQ-R) and report more sad affect on the Multiple Affect Adjective Checklist (MAACL) than the nondepressed group in the self-focus condition.

3. Consistent with experimental social psychology literature and the literature on depression, a two-way interaction between depression and differential evaluation was expected:

   A. The depressed group in the failure condition would be more self-critical on the DEQ-R and report more sad affect on the MAACL than the nondepressed group in the failure condition.

4. Consistent with the literature review on the cognitive models of depression, a main effect for depression was expected:

   A. The depressed group would exhibit more self-criticism on the DEQ-R and more sad affect on the MAACL than the nondepressed group on post-manipulation self-report.

   B. The depressed group would exhibit more self-criticism (frequency of negative statements) and sad affect (frequency of sad facial expression) in their observed behavior during interview than the nondepressed group.

5. Based on the literature that suggests depressives have less illusory self-perceptions of competency than nondepressives

(Lewinsohn, Mischel, Chaplin, & Barton, 1980), and are more preoccupied with the self during social interaction (Jacobson & Anderson, 1982), an exploratory hypothesis investigated the relationship between the consistency of self-report and observed behavior in both depressives and nondepressives with respect to sad affect and self-criticism.

A. The depressed group would exhibit more convergence between self-report (DEQ-R, MAACL) and observed behavior (judgments of independent raters) than the nondepressed group.

Chapter II

Method

Subjects

Demographics. Sixty-four subjects were selected from a population of students in attendance at Hofstra University and Nassau Community College. The sample consisted of 46 female and 18 male students who were attending undergraduate psychology classes. The mean age of the entire sample was 24.09 (SD= 7.31).

Selection Criteria. The depressed group consisted of 32 subjects who scored 13 or above on the BDI at screening, and 13 or above on the day of the experiment. This score is considered to represent a cutoff for mild depressive mood (Beck, 1976; Burns, 1987). In addition, these subjects were individually interviewed using the Hamilton Rating Scale for Depression (Hamilton, 1967) as a cross validation of the classification of depression. The BDI and the Hamilton Rating Scale have been shown to correlate at .80 (Hammen, 1980). Subjects needed to score above 10 on the Hamilton in order to be classified as depressed. Approximately twenty-nine percent (nine) of those subjects who met the screening criterion on the BDI did not meet the necessary criteria on the day of the experiment, and had to be excluded from the study.

The non-depressed group consisted of 32 students who scored 8 or below on the BDI at screening, and 8 or below on the day of the experiment. Approximately nine percent (three)

of those subjects who met criterion at screening for the non-depressed group failed to do so on the day of the experiment and were excluded from the study. Means and standard deviations for the depressed group's screening BDI, day of experiment BDI, and Hamilton Rating Scale were respectively: 17.97 (SD=6.14), 17.63 (SD=6.07), 13.56 (SD=1.86). Means and standard deviations for the non-depressed group's screening BDI and day of experiment BDI were respectively 4.16 (SD=2.10), 2.91 (SD=2.19).

Apparatus

The mirror has been the preferred instrument for the induction of a state of self-focused attention in the experimental literature of social psychology (Buss & Scheier, 1976; Carver & Scheier, 1978). An early review on mirror image stimulation by Gallop (1968) suggested that humans as opposed to animals, exhibit self-directed behavior rather than other-directed behavior when in the presence of a mirror. In a latter review, Gallop (1977) stated that self-recognition is a learned phenomenon that has only been successfully demonstrated in man and great apes. However, Skinner and Epstein (1982) have also shown that pigeons are capable of responding to a mirror image of themselves.

Carver and Scheier (1978) demonstrated the validity of the mirror as an induction device for self-focused attention. They had college students complete the Self-Focus Sentence Completion (Exner, 1973) in the presence and absence of a mirror, and found significantly more self-focused responses

by students in the mirror-present condition. Since then, the mirror has gained increasing favor in more recent research regarding the effect of self-focused attention on depression (Pyszczynski & Greenberg, 1985; Strack, Blaney, Ganellen, & Coyne, 1985). The present study also utilized the mirror as an induction device for self-focused attention.

The size of the mirror was 25"x 20". It was placed on a wall directly in front of the subject, approximately 30" from where the subject was seated while working on the task.

Experimental Design

A 2x2x2 factorial design with independent variables consisting of 2 levels of depression, 2 levels of evaluation and 2 levels of focus of attention was employed. Non-contingent success and failure evaluation was given to subjects after completion of a bogus anagrams task, based on the condition the subjects were alternately assigned to prior to the testing. Focus of attention was manipulated through the use of the mirror. The self-focus condition had the mirror present, while the non-self-focus condition did not have the mirror present. There were eight conditions with eight subjects per condition. Subjects were first divided according to depression or nondepression classification, and then alternately assigned to the various conditions. Table 1 presents the design of the study.

The dependent variables included the self-report of self-focusing (SFSC), self-criticism (DEQ-R), and dysphoria

Table 1

Dysphoria and Self-Criticism as a Function of Depression, Differential Evaluation, and Self-Focus

	Depressed		Non-Depressed	
	Evaluation			
	Positive	Negative	Positive	Negative
Self-Focus	(n=8)	(n=8)	(n=8)	(n=8)
No Self-Focus	(n=8)	(n=8)	(n=8)	(n=8)

(MAACL-D), as well as the behavioral observation of negative self-statements and sad facial expression (judgments of independent raters).

Self-criticism was measured pre and post-test through the administration of the Depressive Experiences Questionnaire- Revised (DEQ-R, Welkowitz, Lish & Bond, 1985). In addition, self-criticism was scored by two independent raters who viewed the video-taped interview. The interview was scored for the frequency of negative statements about the self the subject made during a four minute interview session with the experimenter. The results of the DEQ-R was compared with the results of the interview to examine similarities and differences between self-report and behavioral observations of self-criticism.

Dysphoria, defined as a negative emotional state reflective of sadness, was measured pre and post-testing through the administration of the Multiple Affect Adjective Checklist, Depression Scale (MAACL-D, Zuckerman & Lubin, 1965). The MAACL-D was administered on the day of the testing just prior to the anagrams task, and again after completion of the anagrams task following the administration of the SFSC and the DEQ-R.

In addition, two independent raters scored the video-taped interview of each subject for sad affect in facial expression (Izard, 1980). The criteria for scoring was based on the frequency of a sad facial expression as opposed to other facial expressions during the interview.

Assessment Instruments

Beck Depression Inventory. The BDI has been the primary scale used to distinguish depressed from non-depressed subjects in many empirical studies (Alloy & Abramson, 1979; Clark & Teasdale, 1982; Ingram & Smith, 1984; Pyszczynski & Greenberg, 1985; 1986; Pyszczynski, Holt & Greenberg, 1987). It was used for such a purpose in the present study. The instrument is a paper and pencil self-report measure that consists of a graded series of 4 self-evaluative statements.

The inventory consists of twenty-one items which represent "overt behavioral manifestations of depression and do not reflect any theory regarding the etiology or the underlying psychological processes in depression" (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). The various symptom, attitude categories that make up the inventory are as follows: pessimism, mood, lack of satisfaction, sense of failure, sense of punishment, guilt, self-accusations, self-hate, irritability, social withdrawal, indecisiveness, self-punitive thoughts, crying spells, work inhibition, sleep disturbance, loss of appetite, weight loss, loss of libido, somatic preoccupation, fatigue, and body image.

The inventory has been shown to be both reliable and valid. Internal consistency has been demonstrated by an average-item-total correlation and split-half correlation with a psychiatric patient population (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). All of the categories were significantly related to the total beyond the .001 level,

except for the weight loss category which was beyond the .01 level. The Split-half correlation with a Spearman-Brown correction was .93. External validity was determined by a comparison with clinical judgements made by diagnosticians. The inventory effectively discriminated among the varying degrees of depression and was also able to reflect changes in the intensity of depression over time (Beck et al., 1961). In addition, the inventory was able to show concurrent validity with a college student population, and had a Pearson product-moment correlation of .77 upon comparison with psychiatic ratings of depth of depression (Bumberry, Oliver, & McClure, 1978).

Cut-off scores have varied, depending upon specific studies, from a low of 9 to a high of 13 in a college student sample (Alloy & Abramson, 1979; Pyszczynski, Holt, & Greenberg, 1987; Rizley, 1978). Beck (1961) has suggested that non-depressed scores range from zero to nine, while mild depression is indicated by a score in the range of 10 to 15. Mild to moderate depression scores range from 16 to 19; scores of 20 to 29 usually reflect moderate to severe depression and scores above 30 indicate severe clinical depression. In the present study, the BDI was administered on the day of screening and the day of testing by the experimenter.

Hamilton Rating Scale for Depression. This scale has been used in many studies as an assessment device for depression (Derry & Kuiper, 1981; Dunbar & Lishman, 1984; Gotlib, 1983, 1981). It was administered as an interview for

features of depression and served to cross-validate the classification of depression. The scale was administered on the day of the experiment. The Hamilton Rating Scale for Depression consists of a structured interview which assesses frequent features of depression, such as affect disturbances, sleep, appetite, motivation, hopelessness, ideations of helplessness, suicide, and energy level. Interrater reliability for the total score ranges from .87 to .95 while reliability for individual items ranges from .45 to .78 (Sartorius & Ban, 1986).

Multiple Affect Adjective Checklist-Depression Scale. The MAACL-D state scale, "the Today Form", was used for repeated measurement of affect over time (MAACL Manual, 1965). The entire instrument consists of 132 items which describe different kinds of moods and feelings. The subject was required to place a check mark next to the words that described his or her feelings at the present time.

Normative data for the scale consist of results from a college student sample, employment applicant sample and psychiatric samples. Zuckerman, Lubin, Vogel and Valerius (1964) validated the scale in a sample of college students and found the depression scale was significantly affected on post-test by the threat of an exam and low exam grades.

Reliability data in a sample of college students indicated a coefficient of .92 internal reliability on the "Today" form depression scale (MAACL Manual, 1965). The depression scale on the "Today" form has been shown to

correlate with the depression scale of the MMPI at .49 for males and .41 for females, (MAACL Manual, 1965). The scale has been used as a measure of affect, along with the BDI, in a study on mood, self-awareness, and alcohol intoxication (Schare & Lisman, 1985). It also has been used with the BDI in a study on depression, self-focused attention and expectancies (Pyszczynski, Holt, & Greenberg, 1987). The MAACL has been shown to have a positive correlation with the BDI, $r=.66$ $p<.001$ (Bloom & Brady, 1968).

The Depressive Experiences Questionnaire-Revised. The DEQ-R was used in the present study to measure self-criticism in both depressed and nondepressed subjects on pre and post-test measurement. The original scale is a 66 item questionaire developed to measure depressive experiences characterized by dependency needs or by self-criticism (Blatt, D'Afflitti, & Quinlan, 1976). Results from four studies done by Zuroff (1983) provided construct validation for the scale. In a sample of 414 college students the DEQ was shown to be sensitive and stable to self-criticism and dependency over a 13 week interval. The self-criticism factor of the original scale was shown to correlate with the Zung Self-Rating Depression Scale at .54 in a sample of college students (Blatt, D'Afflitti, & Quinlan, 1976). The DEQ was revised by Welkowitz, Lish, and Bond (1985) and reduced to 44 items. The 15 item self-criticism subscale was found to have reliability (Cronbach's alpha) of .86 when administered to a sample of undergraduate students by these authors. The

revised DEQ was found to correlate significantlywith the BDI for both men and women at .60.

Self-Consciousness Scale The SCS (Fenigstein, Scheier, & Buss, 1975) was constructed to assess individual differences in self-consciousness. It has been used in several studies involving the assessment of self-focused attention as a dispositional tendency, consisting of public and private aspects, related to depression (Ingram & Smith, 1984; Scheier & Carver, 1977; Smith & Greenberg, 1981; Smith, Ingram, & Roth, 1985). It was used to measure each individual's predisposition to self-focused attention in the present study, in an effort to determine the extent of any covariation of self-focused attention, pre and post manipulation. The scale consists of 23 items in total, 10 items tapping private self-consciousness, seven items tapping public self-consciousness, and six items tapping social anxiety. An example of a private self-consciousness item is "I reflect about myself a lot", while a public self-consciousness item is "I'm concerned about the way I present myself".

Private self-consciousness has been described as an awareness of the more personal and covert aspects of the self (Carver & Scheier, 1978). Fenigstein, Scheier, and Buss (1975) found that the scale correlated in total score on test-retest reliability at .80. The subscales correlated as follows: public self-consciousness, .82; private self-consciousness, .79; social anxiety, .73.

Carver and Scheier (1978) validated the scale in a study with undergraduate college students. Froming, Walker, and Lopyan (1982) used the scale to assess private and public self-aspects with respect to self-evaluation and standards of performance. Smith, Ingram, and Roth (1985) used the scale in a correlational study of depression and self-consciousness, and found that depression and private self-consciousness were correlated with increased discrepancy between real and ideal self as exemplified by low self-esteem. Ingram and Smith (1984, Study 1) found private self-consciousness to be significantly related to depression as measured by the BDI in three separate samples, $r=.23$ $p<.01$, $r=.32$ $p<.001$, and $r=.28$ $p<.001$.

The Self-Focus Sentence Completion. The SFSC was used as a measure of the state of self-focused attention post-test, in the present study. The questionnaire consists of 30 sentence stems. The subject was asked to complete the thought begun in each, for example, "I'm at my best" _____. Responses were scored based on the content of each sentence as either self-focused, externally- focused or other. The scale was developed by Exner as part of a cross-validation study of Rorschach responses (Exner, 1969). Reliability was determined through three studies that used graduate students in psychology as raters. Protocols that were not scored from the original sample were used for reliability scoring, and the results yielded reliability coefficients of .94 for self-focused responses and .91 for externally-focused

responses (Exner, 1974).

Validation studies have been done using a pre and post-treatment design, where SFSC performance was compared with specific behaviors, (video-tape of subjects viewing themselves in a mirror after completing SFSC) (Exner, 1974). Outcome results indicated that, for a psychiatric group, self-focused responses shifted significantly to externally-focused responses on post-treatment measurement for within and between subject comparisons. For the group of normal subjects, the difference between mean self-focused scores for high and low self-focused subjects was 12.2 to 8.3, $p<.05$ (Exner, 1974).

The SFSC has been used in studies assessing the state of self-focused attention in a college student population for a normal sample (Carver & Scheier, 1978), and a depressed sample (Ingram & Smith, 1984; Pyszczynski & Greenberg, 1986).

Behavioral Observation. Two independent raters, psychology students, who had been trained regarding the rating criteria for sad and other facial expressions (Izard, 1980) scored the video-tape interview for facial expression. These same students also scored the video-tape for the number of self-critical statements each subject uttered during the interview. Self-critical statements were defined in this study as statements of self-blame or denigration regarding performance or personal characteristics, such as intelligence, creativity, etc...(Lewinsohn, Hoberman, Teri, & Hautzinger, 1985). In addition, two different raters scored the SFSC

protocols. Each of the raters demonstrated inter-rater reliability, after training for scoring technique.

Reliability of Independent Raters. A graduate student in psychology was trained to score the Hamilton Rating Scale for Depression in conjunction with the experimenter. This student and the experimenter, independently scored each of the 10 subjects that had been interviewed by the student and the experimenter together. Reliability was computed by the formula: Agree divided by the total number of Agree + Disagree responses, combined. The result was .93 relaibility for classification of depression. The graduate student and the experimenter then randomly scored four depressed subjects during the study, to insure that reliability was maintained.

Two independent raters, graduate students in psychology, scored the behavioral observations of sad facial expression and negative statements made during the post-experimental interview. Each rater was trained according to the Affex Manual (Izard, 1980) regarding the criteria for sad facial expression. The raters reviewed the manual and then viewed a video-tape with instructions and examples of scoring technique. Both raters were required to score six 30 second frames of video-tape for each of 10 subjects. The same formula for reliability was used, and the result was .78 for sad facial expressions.

The same two independent raters were trained to score the negative statements. Again, each rater viewed a practice segment of video-tape and received a list of negative

statements that might appear during the interview. Both raters were required to score 10 subjects (seven 20 second segments per subject). The same formula was used to compute reliability, and the result was .89.

Two non-psychologists were trained to score the SFSC for self, external or other responses (Exner, 1974). Each rater was provided with examples of each kind of response. Both raters were given a practice session with the experimenter where two questionnaires were scored. Each rater was then asked to score 10 questionnaires with 30 questions on each. Reliability was computed by the formula: Agree divided by the total number of Agree + Disagree, and the result was .81.

Procedure

Sixty-four subjects were screened for depression and nondepression through the administration of the BDI. This initial screening was done in group administration during class sessions, by the experimenter. Those subjects who scored 13 or above were considered for the depressed group, while those subjects who scored 8 or below were considered for the nondepressed group. The subjects who met the screening criteria were invited to participate in the study, and were scheduled for an appointment with the experimenter. On the day of the appointment, the subject was required to read, sign, and date the consent form agreeing to participate in the study (Appendix A). The purpose of the study was explained, and another BDI was administered. The subject had to score 13 or above or 8 or below once again, in order to

continue in the study. In the case of the depressed group, the Hamilton Rating Scale for Depression was administered by the experimenter, and the subject had to score above 10 in order to be classified as depressed.

Subjects were told that their ability to create words out of a series of scrambled letters would be evaluated, while under a 15 minute time constraint, in an effort to measure their "verbal intelligence" as it relates to problem-solving. The subject was then asked to complete the dysphoria scale of the MAACL (Zuckerman & Lubin, 1965). The subject was also asked to complete the self-criticism scale of the DEQ-R (Welkowitz, Lish, & Bond, 1985). In addition, the subject was asked to complete the Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975).

At this point, the the experimental manipulation was given. The subject was seated at a desk with the puzzle task in front of him or her. Depending on the group assignment, the subject either received a series of anagrams that were easily solvable (the success condition where 18 of 20 words were solvable) or not so easily solvable (the failure condition where 5 of 20 words were solvable). Also, depending on the group, the subject was either seated in front of a mirror (the self-focus condition) or had no mirror in the room (the non-self-focus condition) while working on the task. After 15 minutes of time had elapsed, the subject was asked to stop working. His/her performance was evaluated by the experimenter. The subject was told "You did very well

and exceeded the average performance for people taking this test. You have [x] correct, that's one of the highest scores I've seen. You did very well", or "You didn't do very well. You scored below the average performance for people taking this test. You have [x] correct, that's one of the lowest scores I've seen. I guess you're not very good at this sort of thing" (Pyszczynski & Greenberg, 1985). For the success group, a subject had to succeed on 7 items, as a cutoff, in order to be included in the study. All subjects met criterion in the success group.

Immediately following the evaluation, the subject was asked to complete the following questionnaires, the depression scale of the MAACL (Zuckerman & Lubin, 1965), the self-criticism scale of the DEQ-R (Welkowitz, Lish, & Bond, 1985), and the SFSC (Exner, 1973). When this was completed, the subject was led to another room and interviewed by the experimenter. With the consent of the subject, the interview was taped through the use of a video-camera recorder. This allowed for the subjects responses to be scored for frequency of sad facial expression (Izard, 1980) and frequency of negative statements. The interview consisted of a four minute session during which the subject was asked the following: "Since we don't have much backgroun information on those people participating in this study, I'm going to ask you a few questions. First, I'd like you to describe yourself as a student. Please describe the kind of student you are now, in college, and compare this to the kind of student you were in

highschool." When the subject completed his/her statements, each was then asked, "Now I would like you to describe the kind of person you are socially, again talking about yourself as you are now, and comparing this to what you were like in highschool."

At the conclusion of the interview, each subject was debriefed regarding the fact that the anagrams task was contrived, and told the true nature of the experiment involved evaluating how self-focused attention influences a person's mood state. Subjects were also told that they could receive information regarding the results of the study, when it was concluded, by leaving their mailing address with the experimenter. In addition, those subjects who were in the self-focus condition were asked if they were aware of the mirror while working on the tasks. This was done as a manipulation check of the mirror as an induction device for self-focusing.

Chapter III

Results

Overview of Data Analysis

A 2x2x2 factorial design examining two levels of depression (depressed and non-depressed), two levels of evaluation (success and failure), and two levels of focus of attention (self and non-self) was employed to evaluate five experimental hypotheses. All three factors were between-group factors. The data was gathered on three self-report dependent measures (MAACL, DEQ-R, SFSC) and two behavioral dependent measures (frequency of negative statements and frequency of sad facial expression, both observed during the post-manipulation interview.

Manipulation Check of the Independent Variables of Self-Focus and Differential Evaluation

The 2x2x2 Analysis of Variance (ANOVA) performed on the SFSC (the self-report dependent measure of self-focus) indicated there was a significant main effect of self-focus for the entire sample, $F(1,56)=5.31$, $p<.05$. Consistent with the manipulation, subjects in the self-focus condition ($M=16.36$, $SD=2.58$) scored significantly higher on the SFSC than those in the non self-focus condition ($M=14.75$, $SD=2.73$). In addition, during a post-experimental debriefing session, each subject in the self-focus condition was asked if he or she was aware of the presence of the mirror while working on the anagrams task. All 32 subjects in the self-focus condition stated that they

were aware of the presence of the mirror. These results supported the use of the mirror as an induction device for self-focusing.

Justification for the success/failure evaluation was largely drawn from the literature on self-focused attention and differential evaluation (Brockner, 1979; Hull, Van Treuren, Ashford, Propsom, & Andrus, 1988; Pyszczynski & Greenberg, 1985, 1986; Scheier & Carver, 1977; Strack, Blaney, Ganellen, & Coyne, 1985). To test the veridicality of the success/failure differential evaluation which was provided after performance on the anagrams task, a pilot study was conducted. Six Hofstra students enrolled in an undergraduate psychology class were divided into two groups, success and failure, and given differential evaluation (feedback) after their performance on the anagrams task. When interviewed during a debriefing session after the experiment, each student was asked, "What did you think of the feedback I gave you about your performance". All six of the students indicated their belief in the results and the evaluation as presented by the examiner.

Treatment of Pre-Test Measures

Pre-Test Correlations With Post-Test Measures. Table 2 presents the results of a Pearson Correlation examining the relationship between pre-test and post-test measures. Since two dependent measures (DEQ-R, MAACL) were given as pre-test and post-test measures, it was necessary to examine the extent to which they correlated with each other. If a

Table 2

Correlations of Pre-Test and Post-Test Dependent Measures

(N=64)

	Post-Tests				
	MAACL	DEQ-R	SFSC	RNEG	RSAD
Pre-Tests	r	r	r	r	r
MAACL	.82***	.61***	.14	.35**	.43***
DEQ-R	.56***	.94***	.06	.41***	.33**
SCS	.21*	.08	-.07	.41***	.09

Note: MAACL= Multiple Affect Adjective Check List, Depression Scale; DEQ-R= Depressive Experiences Questionnaire-Revised; SCS= Self-Consciousness Scale; SFSC= Self-Focus Sentence Completion; RNEG= Observation of negative statements during video-taped interview; RSAD= Observation of sad facial expression during video-taped interview.
***p<.001 significance is one-tailed
**p<.01 significance is one-tailed
*p<.05 significance is one-tailed

strong relationship was shown between the measures, then the question of covariance analysis would have to be considered in the testing of any relevent hypotheses.

The Pre-MAACL scores correlated significantly with the Post-MAACL scores for the entire sample, $r(62)=.82$, $p<.001$. Within the depressed group ($r(30)=.81$, $p<.001$) there was a stronger positive correlation of scores than within the non-depressed group ($r(30)=.56$, $p<.001$)

There was also a significant relationship between Pre-DEQ-R and Post-DEQ-R scores for the entire sample, $r(62)=.94$, $p<.001$. The non-depressed group showed a slightly stronger correlation ($r(30)=.94$, $p<.001$) than the depressed group ($r(30)=.86$, $p<.001$).

The SCS (the trait measure of self-consciousness) did not correlate significantly with the SFSC (the state measure of self-focused attention), $r(62)=-.07$. The SCS was given as a pre-test measure and the SFSC as a post-measure.

Since two of the three self-report post-test dependent measures (DEQ-R, MAACL) did have a significant relationship with their respective pre-test measures, an analysis of covariance (ANCOVA) had to be used to determine the more precise effects of the experimental manipulation on these two dependent measures. The results on the SFSC were analyzed by a separate ANOVA.

An underlying assumption of ANCOVA is that the regression coefficients, based only on the data from each treatment group, are the same or homogenous. In order to verify this assumption,

a test for homogeneity of regression was done. The results of this testing supported the assumption as tenable for the DEQ-R, $F(7,48)=.05$, $p=.99$, and also the MAACL, $F(7,48)=1.03$, $p=.43$.

Evaluation of Experimental Hypotheses

Table 3 presents the means and standard deviations, for the depressed and non-depressed groups, on the five post-experimental dependent measures across different levels of the self-focus and evaluation conditions. Hypothesis one, which involved testing for a three-way interaction among depression diagnosis (depressed/non-depressed), differential evaluation (success/failure), and self-focused attention (mirror/no mirror) was not supported. The depressed group was predicted to become more self-focused after failure evaluation than any other depressed or non-depressed group. In addition, the non-depressives in the success condition were predicted to become more self-focused than non-depressives in the failure conditions. A 2x2x2 ANOVA on the SFSC did not show a significant three-way interaction effect, $F(1,56)=.00$, $p=.95$.

Hypothesis two, which involved testing for a two-way interaction between self-focused attention and depression was supported on the DEQ-R, a dependent measure of self-criticism. The depressed group in the self-focus condition was predicted to be more self-critical and more expressive of sad affect than the non-depressed group in the self-focus condition.

Table 3

Means and Standard Deviations for Post-Experimental Dependent Measures

	Depressed (n=32)			
	Self-Focus			
	Present		Absent	
	M	SD	M	SD
Success				
DEQ-R	75.50 (60.67)*	15.09	65.88 (51.77)*	10.01
MAACL	21.38 (16.81)*	6.95	17.00 (13.58)*	5.86
SFSC	16.63	1.25	14.56	3.22
RNEG	2.88	1.60	2.81	.65
RSAD	1.94	1.72	1.19	1.53
Failure				
DEQ-R	71.75 (61.59)*	10.79	64.25 (57.08)*	20.15
MAACL	23.50 (19.56)*	6.58	20.50 (17.08)*	3.96
SFSC	17.00	3.52	14.31	3.22
RNEG	2.62	.92	1.56	1.15
RSAD	1.69	2.19	1.19	1.44

(Continued)

Table 3 continued

Means and Standard Deviations for Post-Experimental Dependent Measures

	Non-Depressed (n=32)			
	Self-Focus			
	Present		Absent	
	M	SD	M	SD
Success				
DEQ-R	46.75 (53.47)*	14.08	37.25 (55.34)*	12.31
MAACL	11.00 (14.26)*	4.60	12.50 (14.41)*	2.45
SFSC	15.75	2.79	15.13	1.22
RNEG	1.25	1.69	1.44	1.61
RSAD	.56	1.05	.31	.53
Failure				
DEQ-R	47.25 (58.28)*	13.80	48.63 (59.05)*	13.11
MAACL	15.50 (20.23)*	5.07	14.00 (19.46)*	5.01
SFSC	16.06	2.54	15.00	3.25
RNEG	1.00	.76	1.88	1.38
RSAD	.75	1.56	.63	1.06

Note: DEQ-R= Depressive Experiences Questionnaire-Revised; MAACL= Multiple Affect Adjective Checklist, Depression Scale; SFSC= Self Focus Sentence Completion; RNEG= Negative Statements (Video); RSAD= Sad Affect (Video).
* = Adjusted Means

A 2x2x2 ANCOVA indicated a significant two-way interaction for depression and self-focus (mirror-present) on the DEQ-R, $F(1,55)=7.64$, $p<.01$. (Figure 1). A post hoc analysis further indicated that those subjects in the depressed/self-focus group reported significantly more self-criticism than the non-depressed/self-focus group $F(1,55)=6.59$, $p<.05$. Also, those subjects in the depressed/self-focus group reported significantly more self-criticism than subjects in the depressed/non-self-focus group, $F(1,55)=10.72$, $p<.05$.

However, hypothesis two was not totally supported. There was no significant interaction effect between depression and self-focus as the result of a 2x2x2 ANCOVA on the MAACL, $F(1,55)=2.87$, $p=.10$.

A main effect of self-focus (mirror-present) did result. Those subjects in the mirror-present condition, regardless of depression diagnosis and differential evaluation, reported significantly more sad affect than those subjects in the mirror-absent condition on the MAACL, $F(1,55)=4.48$, $p<.05$.

Hypothesis three, which involved testing for a two-way interaction between depression diagnosis and differential evaluation, was not supported on the DEQ-R or the MAACL. The depressed group in the failure condition was predicted to be more self-critical and more expressive of sad affect than the non-depressed group in the failure condition. No significant interaction resulted from a 2x2x2 ANCOVA on the

Figure 1

Two-Way Interaction of Depression and Self-Focus on Self-Criticism

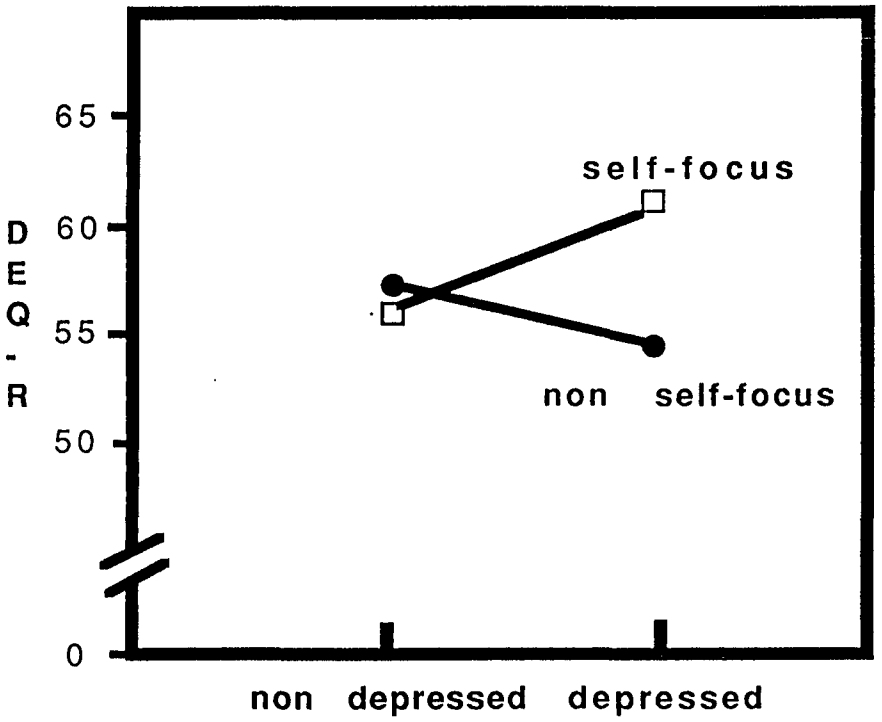


Table of Adjusted Means

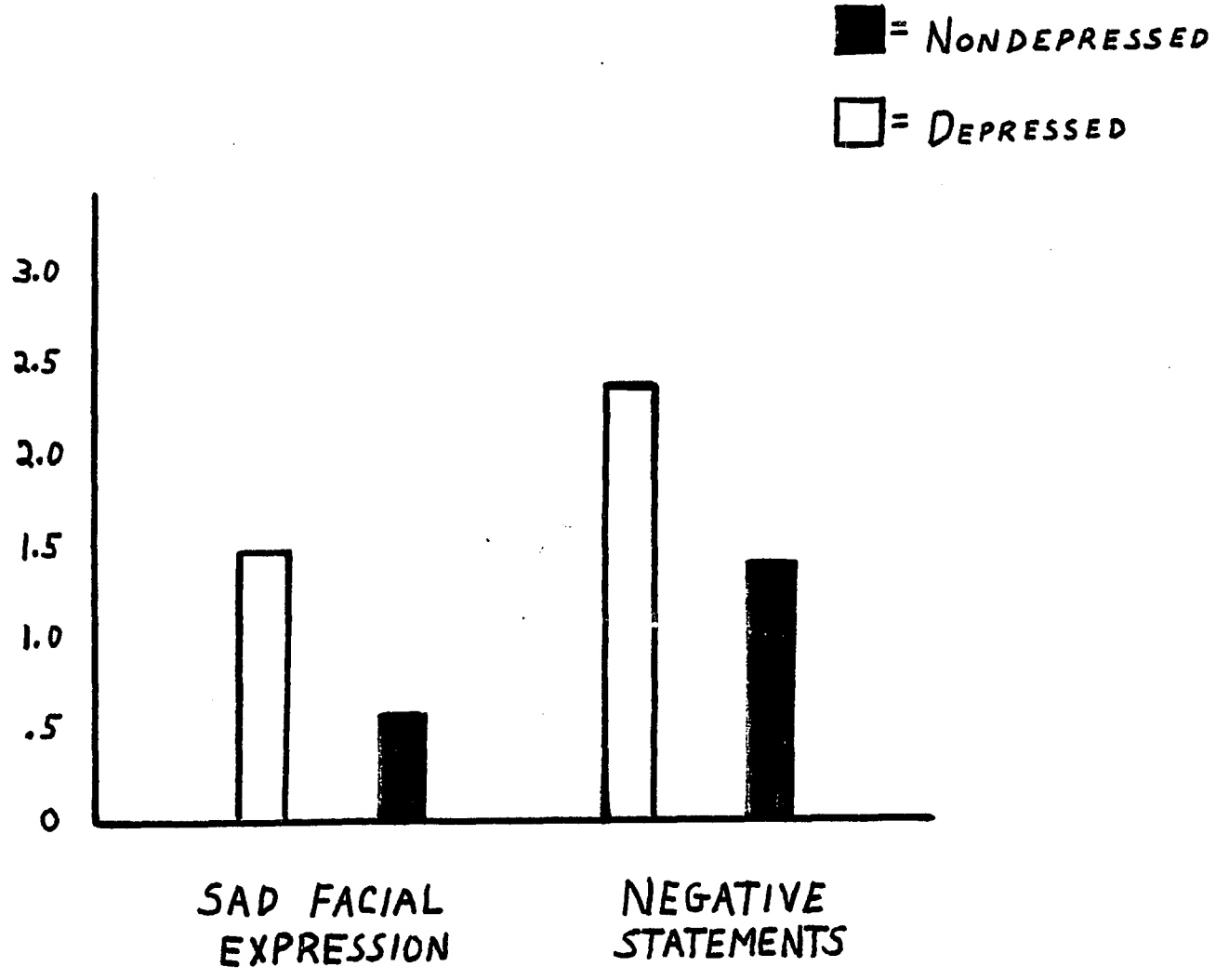
	Depressed	Nondepressed
Self-focus	61.13	55.87
Non self-focus	54.43	57.20

DEQ-R, $F(1,55)=.15$, $p=.70$ and the MAACL, $F(1,55)=2.49$, $p=.12$. A main effect for differential evaluation did occur on the ANCOVA for each post-measure. Those subjects in the failure conditions were significantly more self-critical than subjects in the success conditions on the DEQ-R, $F(1,55)=6.44$, $p<.01$, and significantly more expressive of sad affect than subjects in the success condition on the MAACL, $F(1,55)=32.33$, $p<.001$

Hypothesis four, which involved the testing for a main effect of depression diagnosis, was not supported on the self-report measures (MAACL, DEQ-R), but was supported on the behavioral measures (judgments of independent raters). The depressed group was predicted to be more self-critical and expressive of sad affect than the non-depressed group on post-experimental self-report and behavioral measures. A 2x2x2 ANCOVA performed on the post-MAACL, $F(1,55)=.10$, $p=.75$, and the post-DEQ-R, $F(1,55)=.38$, $p=.54$, did not yield significant findings. However, consistent with hypothesis four, the depressed group was observed as making significantly more negative, self-critical statements than the non-depressed group, $F(1,56)=11.38$, $p<.001$. Also, the depressed group displayed significantly more sad facial expressions than the non-depressed group when observed during the post-manipulation interview, $F(1,56)=6.58$, $p<.01$. (Figure 2). Thus, a difference in findings existed regarding between-group comparisons of the covaried self-report responses, and the non-covaried behavioral responses.

Figure 2

Between-Group Post-Test Comparison of
Sad Facial Expression and Negative Statements



However, when the pre-test scores were analyzed by a *t* test, a main effect for diagnosis of depression was shown on the measures of sad affect (MAACL) and self-criticism (DEQ-R). The depressed group reported significantly more sad affect on the MAACL, $t=7.25$, $p<.001$, and significantly more self-criticism on the DEQ-R, $t=7.31$, $p<.001$, than the non-depressed group. (Figure 3). These results perhaps present a more naturalistic difference between the depressed and non-depressed groups. See Table 4 for group means on pre-test measures.

Hypothesis five predicted that the depressed group would exhibit more convergence between self-report and observed behavior than the non-depressed group. This involved a multi-step analysis.

First, the post-MAACL correlated significantly with the observation of sad facial expression during interview for the entire sample, $r=.35$, $p<.01$, and the post-DEQ-R correlated significantly with the observation of negative statements made during interview for the entire sample, $r=.44$, $p<.001$. The second step of the analysis sought to determine the relationship between self-report responses and observed behavior during interview within each group, depressed and non-depressed. Consistent with the prediction, there was a significant relationship between the manner in which depressives responded on the MAACL and expressed themselves in the video-taped interview (facial expressions of sadness), $r=.37$, $p<.05$, while no such relationship existed for

Figure 3

Between-Group Pre-Test Differences on Dysphoria and Self-Criticism

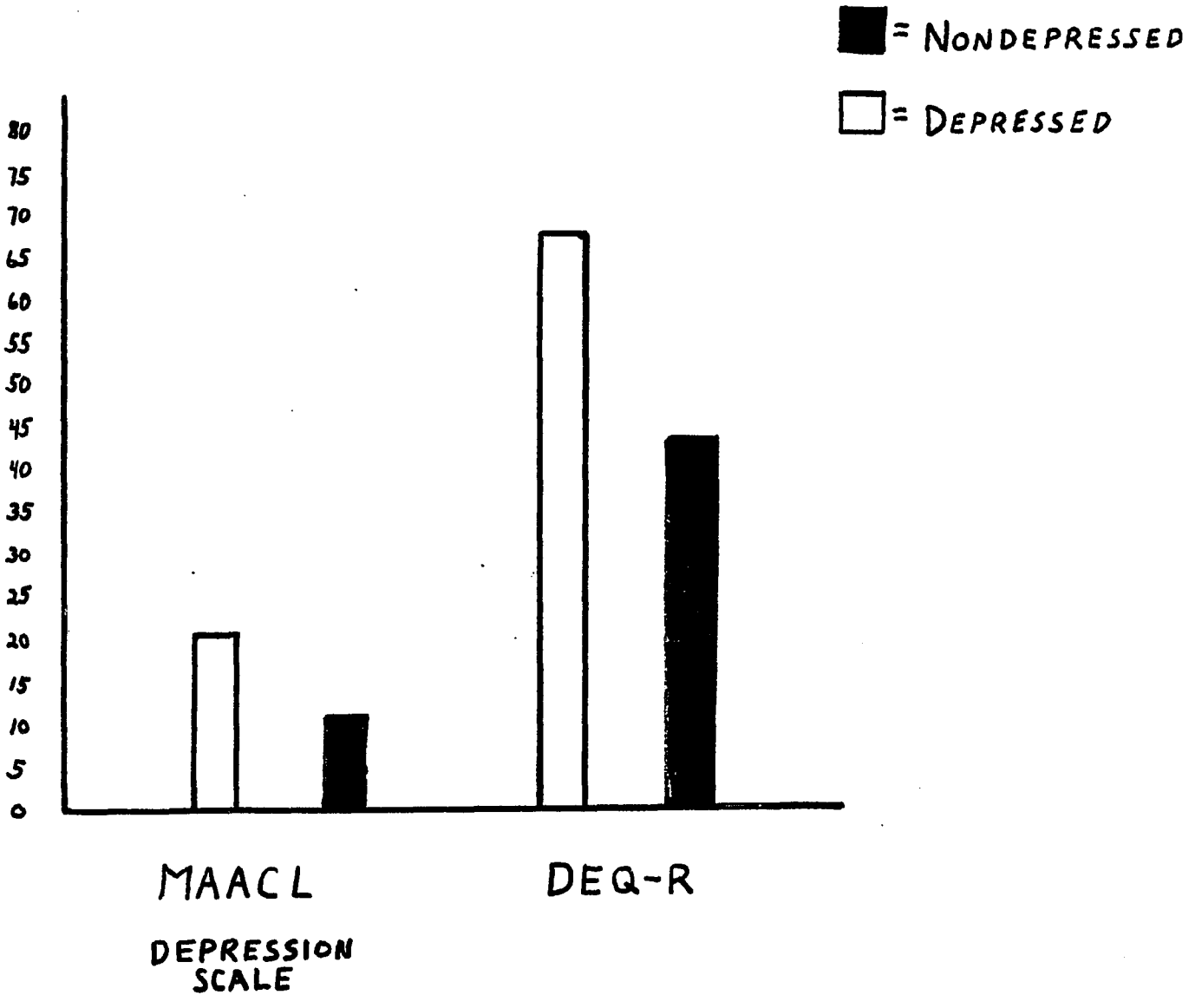


Table 4

Means and Standard Deviations for Pre-Experimental Measures on Group Comparison

	Depressed (n=32)		Non-Depressed (n=32)		
Measure	M	SD	M	SD	t
Pre-BDI	17.63	6.67	2.91	2.19	11.86***
Pre-MAACL	21.25	5.68	12.06	4.37	7.25***
Pre-DEQ-R	68.97	13.04	44.81	13.41	7.31***
SCS	31.44	5.29	26.94	6.20	3.12**

Note: BDI=Beck Depression Inventory; MAACL=Multiple Adjective Check List-Depression Scale; DEQ-R=Depressive Experiences Questionnaire-Revised;
SCS=Self-Consciousness Scale
***p<.001 significance is two-tailed
**p<.01 significance is two-tailed

non-depressives, r=-.10, p=.29. The third step of the analysis involved comparing the two groups. No significance resulted when the depressed and non-depressed groups were compared to each other on the basis of their correlation coefficients (z=2.06). Further, no significant relationship was found between the DEQ-R and the expression of negative, self-critical statements made by the depressed group (r=.29) or the non-depressed group (r=.24) during a video-taped interview.

Summary of Results

Major Findings. The testing of the five hypotheses by means of the 2x2x2 factorial design followed by t test probing of significant results indicated a significant two-way interaction between self-focus and depression, such that those subjects in the depressed/self-focused condition were more self-critical on the DEQ-R. In addition, a main effect of self-focus was indicated. Subjects in the self-focus condition (mirror-present) were significantly more self-focused in their responses than subjects in the non-self-focus condition on the SFSC, and significantly more dysphoric in responses on the MAACL. Further, a main effect for differential evaluation was indicated. Subjects in the failure condition were more self-critical on the DEQ-R and more expressive of sad affect on the MAACL than subjects in the success condition. Finally, a convergence between the self-report and behavioral expression of sad affect for depressives was indicated. Depressives were more consistent than non-depressives in their self-report and facial expression of sad affect.

Chapter lV

Discussion

The concept of self-focused attention has its roots in the "objective self-awareness theory" of Duval and Wicklund (1972). Since this conceptualization, a line of research in the social psychology literature has furthered the study of self-focused attention, culminating in the "self-regulatory perseveration theory" of Pyszczynski and Greenberg (1987). These two authors suggest that the initial response to failure and frustration is an increase in self-focused attention. Self-focusing on negative discrepancies between personal standards of behavior and actual performance produces negative affect. However, if the self-focused attention is directed at positive differences between standard and behavior, the resulting affect is positive. The need for and the probability of successful discrepancy reduction determines whether an individual continues in or withdraws from the "frustrating" situation.

Independent of Pyszczynski and Greenberg (1987), the "integrative theory of depression" (Lewinsohn, Hoberman, Teri, & Hautzinger, 1985), suggests that depression begins with an antecedent event that is stressful. This stressful event produces a negative emotional reaction, to a degree that is directly related to the importance of the event. The inability to reverse the impact of the stressor, through an increase in positive reinforcement or a decrease of aversive experience, hypothetically, increases the state of self-awareness.

The continuing increase in self-focused attention provides the basis for the affective, cognitive and behavioral changes, such as dysphoria, self-blame, and self-criticism, that maintain an episode of depression.

Both the "integrative theory of depression" and the "self-regulatory perseveration theory" underscore the important role self-focused attention and negative events have in the maintenance of depression. However, the theories differ with respect to their view on the self-focusing style of depressives. Lewinsohn et al. suggest that depressives display a general increment in the tendency to self-focus, while Pyszczynski and Greenberg suggest a depressive self-focusing style that is differentially high in self-focus after failure and low after success. In an effort to further evaluate the role of self-focused attention, in the context of Lewinsohn et al.'s hypothesis and the findings of Pyszczynski and Greenberg, the present study was conducted using a similar methodology to Pyszczynski and Greenberg (1985).

Validity of Present Methodology

The analysis of the data collected, in the present study, confirmed the manipulation of the independent variables of self-focus and differential evaluation according to the present methodology. Since all the subjects in the self-focusing condition (mirror-present) showed a significantly greater proclivity to report self-focused responses, it can be concluded that both depressives and nondepressives alike were influenced to become self-focused

when working in the presence of the mirror. This was the case regardless of the success or failure evaluation provided. In fact, all of the subjects in the self-focused condition reported that they were aware of the mirror while working on the tasks of the experiment. These findings were consistent with the contention of Carver and Scheier (1978) and Buss and Scheier (1976) that the mirror is an effective instrument for the induction of a state of self-focused attention.

In addition, all subjects, regardless of being depressed or nondepressed, were significantly influenced by failure evaluation. As a result of their failure experience, subjects reported more sadness (MAACL-D scale) and more self-criticism (DEQ-R) than the subjects who received success evaluation. This finding was consistent with the "interpersonal model of depression" and other reinforcement models of depression (Ferster, 1976; Lewinsohn, 1974), regarding the effects of positive and negative experiences (as in success and failure evaluations) on mood and behavior.

The Role of Self-Focus in Depression

In view of Pyszczynski and Greenberg (1987) and Lewinsohn et al. (1985), a three-way interaction of self-focus, depression and failure evaluation was predicted in the present study. The results did not support the premise that depressives who receive failure evaluation while in a self-focusing condition become increasingly more self-focused than nondepressives who receive failure evaluation in a self-focusing condition. This was an interesting finding in

view of Pyszczynski and Greenberg's premise that depressives, as opposed to nondepressives, prefer self-focusing more after failure than after success, and Lewinsohn et al.'s contention that depressives display a general increment in self-focusing regardless of success or failure experiences. However, since Pyszczynski and Greenberg (1985) did report a three-way interaction between depression, negative feedback and self-focused attention, it is important to compare the methodology of the present study with the Pyszczynski and Greenberg study (1985).

Although the present study employed a similar method to Pyszczynski and Greenberg (1985), there were some differences that deserve discussion in light of the different results. In the Pyszczynski and Greenberg study, subjects were screened for depression using the BDI and asked to work on an anagram puzzle. The subjects received predetermined positive or negative feedback after their performance, as in the present study. However, unlike the present study, following the feedback, subjects were assigned to work on another task in the presence and absence of a mirror. The mirror was used during the second stage of their study in a within groups design. In the present study, there was only one stage, and the mirror was used in a between groups design. In the Pyszczynski and Greenberg study, the subject's preference for the mirror-present or mirror-absent task, during the second stage of their experiment, served as the dependent measure of self-focus. Their findings indicated that depressives

preferred the task in the mirror-present condition after negative feedback, while nondepressives preferred the task in the mirror-present condition after positive feedback.

In the present study, the subjects worked on only one set of tasks in the presence or absence of the mirror. Self-focus was a between-group factor, and the dependent measure of self-focus was the subject's self-report on the SFSC. The question arises regarding whether an indication for preference of a mirror-related puzzle is a direct enough dependent measure of self-focus. In the present study, subjects were asked to complete sentence stems on the SFSC. These self-reports were scored by independent raters for self vs. external content responses. This would seem to be a more direct measure of self-focused attention than asking for preference of one experimental condition as opposed to another. It would have been necessary for Pyszczynski and Greenberg to validate that preference is a measure of self-focus.

In view of the present results (a non-significant interaction between depression, self-focus, and differential evaluation, but a significant interaction between depression and self-focus), and the difference of opinion between the two models regarding the self-focusing style of depressives vis a vis failure experience, it is possible that a three-way interaction between the independent variables of self-focus, depression, and failure evaluation does not exist. The present findings would then be consistent with the Lewinsohn

et al. hypothesis that success and failure experiences may not necessarily increase self-focusing in depressives. Rather, depressives tend to have a general increment in self-focus after a severe stressor, regardless of subsequent success and failure experiences.

An alternate explanation for the lack of a three-way interaction, in the present study, may have to do with the kind of failure evaluation provided. Although very similar to the kind of feedback used by Pyszczynski and Greenberg (1985), there was no two-way interaction of differential evaluation and depression on the measure of self-focusing (SFSC) in the present study. Consistent with Rehm's perspective, it may be that the situational antecedents and consequences of the failure, in this study, did not produce an environment that promoted a significant difference in degree of self-focusing for depressives as opposed to nondepressives. Failing on the anagrams task might not have been a significant enough personal failure experience for the depressed group to increase their self-focusing relative to the nondepressed group. Simply stated, it may not have been a severe enough stressor to promote an increase in self-focusing for the depressed group.

The present results confirmed the prediction that depressives in the self-focused condition were significantly more self-critical than the nondepressives in the self-focused condition, and the depressives who were not self-focused. Smith and Greenberg (1981) suggested that

parallels exist between objective self-awareness (self-focused attention) and depression, particularly with respect to affective response and self-evaluative tendency. The present finding confirms that the interaction of self-focused attention with depression results in the increase of negative self-evaluation (self-criticism). This result is consistent with the findings that depressives are displeased with their performance, regardless of their success or failure on a task (Pyszczynski & Greenberg, 1985). It also supports the finding that self-focusing increases depressives' pessimism about the self (Pyszczynski, Greenberg, & Holt, 1987). Furthermore, the present result is consistent with Beck's model of depression, in that depressives have a negative view of the self. When depressives focus on the self, attention is directed at negative aspects of the self, which results in an exacerbated amount of self-criticism (Beck, 1976). In addition, this finding is consistent with Kanfer's (1970) theory of self-regulation and Rehm's (1977) "self-control theory". For Rehm, self-monitoring is the observation of one's own behavior, while self-evaluation refers to a comparison between an estimate of performance and an internal standard. Depression is characterized by low self-esteem exhibited through negative self-evaluations. The result of the present study supported the concept that self-monitoring (self-focusing) by depressives results in negative self-evaluation (self-criticism). This is consistent with Rehm's theory regarding depressives' proclivity to focus

on negative aspects of events and, therefore, make negative interpretations. When this is considered in conjunction with the concept that depressives are realistic in their perceptions of their skill deficits (Lewinsohn et al., 1980), the effect on the maintenance of depression can be significant.

It did not seem to matter whether depressives were receiving success or failure evaluations. They were more self-critical when self-focusing regardless of their success or failure, consistent with the findings of Pyszczynski and Greenberg (1985). In fact, the self-focused depressives in the success condition were more self-critical than the self-focused depressives in the failure condition. Although not significant, there was also a tendency for depressives to report more sad affect on the depression scale of the MAACL than nondepressives when self-focusing. If this is considered in conjunction with the present finding that self-focused attention increased sad affect for all subjects in this study, and past findings that self-focused attention is capable of exacerbating negative affect (Gibbons, et al., 1985), the present results clearly suggest that self-focusing may play an important role in the maintenance of depression. The present findings are consistent with Lewinsohn et al.'s "integrative theory of depression" and Pyszczynski and Greenberg's "self-regulatory preservation theory". Both perspectives suggest that self-focused attention plays an important role in the

maintenance of depression by increasing negative affect, self-blame and self-criticism.

In the present study, self-focusing increased the self-report of sadness for all subjects who worked on the anagram task in the presence of the mirror. This finding is consistent with "objective self-awareness theory" (Duval and Wicklund, 1972), in that self-focusing generates a negative affect and is, therefore, an aversive state. It also is consistent with the finding that nondepressives experience self-focusing as aversive (Scheier, 1976).

The results of the present study did not confirm the prediction that differential evaluation and depression diagnosis would significantly interact to produce an increase in depressives' self-report of sadness and self-criticism. Depressives who received failure evaluation did not show different results than nondepressives, in this regard. Although not significant, it is interesting to note that the nondepressed group reported a more dysphoric reaction than the depressed group to failure evaluation, when the means were adjusted for pre-experimental differences in ANCOVA. Similar to the findings that depressives were less pleased with their performance regardless of success or failure (Pyszczynski & Greenberg, 1985), the depressed group in this study self-reported roughly the same amount of self-criticism (DEQ-R) after success or failure evaluation. This result was consistent with Lewinsohn's revised position in the "integrative model of depression" which suggests that

pleasant and unpleasant events, by themselves, do not fully account for depression (Lewinsohn et al., 1985).

The present results did not support the prediction that depressives would report more dysphoria (MAACL-D) and self-criticism (DEQ-R) on post-manipulation self-report. Depressives entered the experiment reporting significantly more of each, than nondepressives, on the pre-manipulation self-report. However, such a strong correlation existed between the pre and post-measures given for dysphoria and self-criticism that an analysis of covariance was necessary. Depressives were observed as more dysphoric by independent raters during the post-manipulation interview. They were also observed by the raters as producing a greater frequency of negative, self-critical statements during this interview. When taken in conjunction with the reports on the pre-experimental questionnaires, this observation of behavior, could be seen as more of a naturalistic finding regarding the differences between the depressed and the nondepressed groups. Since the depressed group entered the experiment with such a high degree of dysphoria and self-criticism, it might have required a more enduring and intense stressor to produce significantly elevated scores on their self-report post-measures. According to Pyszczynski and Greenberg's "self-regulatory preservation theory", the disruption of daily activities caused by stressful life events increases self-focused attention, which in turn, increases negative affect and self-criticism. Lewinsohn

et al. suggest that dysphoria and self-criticism are the result of a chain of events that begins with the presence of a powerful stressor. It is possible that the failure experience provided in this study was not powerful enough to evoke the expected response from depressives as opposed to nondepressives.

The prediction that depressives, rather than nondepressives, would exhibit more convergence between their self-report of dysphoria (MAACL-D) and self-criticism (DEQ-R) and their sad facial expression and negative statements (judgments of independent raters) was partially supported. Depressives showed a significant correlation between their self-report of dysphoria (MAACL-D) and their observed sadness in facial expression ($r=.37$), which the nondepressives did not. However, when the correlation coefficients for the depressed and nondepressed groups were compared, the result was not significant. The results of the between-group comparison of the self-report of self-criticism (DEQ-R) and the negative statements made during interview was not significant. Although, once again the depressives showed a higher correlation between measures than the nondepressives ($r=.29$). The entire sample showed consistency between self-report of dysphoria (MAACL-D) and facial expression, $p<.01$, as well as between self-report of self-criticism (DEQ-R) and negative statements, $p<.001$. It may have been necessary to have a more clinical sample of depressives, rather than subclinical, in order to achieve the predicted

results. However, the direction of the results was certainly such, that the depressed group did have higher correlations on each of the comparisons made, although not significant on comparison to the nondepressed group. Perhaps if the depressed sample was more of a clinical sample, then the comparison might have, indeed, been significant. Based on the direction of these results, and in view of the findings of Lewinsohn et al. (1980) and Jacobson and Anderson (1982), it would seem reasonable to further explore the differences between depressives and nondepressives self-report styles as compared to their exhibited behavior.

Furthermore, the present results supported the measures used in this study. It is important to note that the MAACL-D and the DEQ-R correlated significantly with the observations of sad facial expression and negative statements for the entire sample. See Table 5 for comparison of measures based on correlations. The BDI correlated significantly with the MAACL-D and the DEQ-R, as well as with sad facial expression and negative statements made during interview. Also, the pre-MAACL-D correlated significantly with the pre-DEQ-R, while the post-MAACL-D correlated significantly with the post-DEQ-R. The SCS also correlated significantly with the pre scores of the DEQ-R and the MAACL-D for the entire sample.

Implications for Future Research

In view of the present results, a question arises regarding the concept of self-focused attention. Many of the cognitive/behavioral theories cited in this study seem to

Table 5

Correlations Between Self-Report and Behavioral Measures

	Behavioral Measures			
	Depressed (n=32)		Nondepressed (n=32)	
	RSAD	RNEG	RSAD	RNEG
Self-Report Measures	r	r	r	r
BDI	.26	.32	.22	.02
pre-MAACL	.47**	.03	-.04	.23
post-MAACL	.37*	.01	-.10	.28
pre-DEQ-R	.18	.31	.13	.14
post-DEQ-R	.19	.29	.18	.24
SFSC	-.20	.08	.04	-.07
SCS	-.09	.32	.07	.30

Note: RSAD= Sad facial expression; RNEG= Negative statements; BDI= Beck Depression Inventory; pre-MAACL= Pre-test Multiple Affect Adjective Checklist-Depression Scale; post-MAACL= post-test Multiple Affect Adjective Checklist-Depression Scale; pre-DEQ-R= pre-test Depressive Experiences Questionnaire-Revised; post-DEQ-R= post-test Depressive Experiences Questionnaire-Revised; SFSC= Self-Focus Sentence Completion; SCS= Self-Consciousness Scale.
**p<.01 significance is two-tailed
*p<.05 significance is two-tailed

converge on the issue of self-awareness (self-focused attention) increasing negative emotion by exacerbating self-criticism. The present findings agree. This is consistent with Beck's notion that depressives have a negative view of the self which increases self-criticism. It is also consistent with Rehm's view that depressives self-monitor negative aspects of behavior which results in negative self-evaluations. Abramson et al. describe depressives as attributing failure to "internal" aspects of the self, thus exacerbating self-criticism. The question that arises concerns whether self-focused attention is indeed a new concept, in the context of Lewinsohn et al., and Pyszczynski and Greenberg, or a concept that is already central to many of the theories on depression.

Given the convergence of these theoretical viewpoints, and the present finding that self-focusing increases self-criticism in depressives, an implication exists regarding the clinical approach most therapuetic for depressives. In view of the present findings, would not an approach that mediates self-focusing, rather than encouraging introspection, be more therapuetic, at least in the early stages of treatment. Perhaps after attention is focused on the improvement of performance skills, thus improving the individual's sense of competence, an alternative approach that shifts the focus to an introspection of self-evaluative statements related to personal standards for performance might be considered

(Smith, Ingram, & Roth, 1985; Vasta & Brockner, 1979).

The limitations of the present study generate considerations for future studies regarding self-focused attention, differential evaluation, and depression. In the present study, success/failure evaluation was given to subjects upon the completion of the 15 minute anagram task. Perhaps the evaluation, or the task itself, was not stressful enough or personally important enough to depressives, such that it provoked a differential response between depressives and nondepressives. Consideration might be given to the use of another kind of stressor, perhaps of more personal meaning to subjects, in future studies. Secondly, perhaps the results might have been different if a more clinical sample had been used. With a more clinical sample, the manipulation of self-focus and differential evaluation might have had a greater impact on the depressed group.

In conclusion, "the integrative model of depression" (Lewinsohn, et al., 1985) converges with other major cognitive/behavioral theories of depression on the concept of self-focused attention. Although a three-way interaction between self-focus, depression, and failure evalution was not found, the results of the present study did support a two-way interaction between self-focus and depression. In vie of this finding, and the fact that "the integrative theory of depression" is of recent origin, a further evaluation of the role of self-focus in depression within the theoretical framework of this model needs to be addressed.

References

Abramson, L.Y., Metalsky, G., & Alloy, L. (1988). The cognitive diathesis-stress theories of depression: Toward an adequate evaluation of the theories' validities. In L. Alloy (ed), Cognitive processes in depression (pp 1-26). New York: The Guilford Press.

Abramson, L.Y.,& Sackeim,H.A. (1977). A paradox in depression: Uncontrollability and self-blame. Psychological Bulletin, 84, 838-851.

Abramson, L.Y., Seligman, M.E.P.,& Teasdale, M.P. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Alloy, L. (1988). Cognitive Processes in Depression. The New York: Guilford Press.

Alloy, L., & Abramson, L.Y. (1979). Judgement of contingency in depressed and nondepressed students: Sadder but wiser? Journal of Experimental Psychology: General, 108, 441-485.

Beck, A.T. (1967). Depression: Clinical, experimental, and theoretical aspects. New York: Hoeber.

Beck, A.T. (1976). Cognitive therapy and emotional disorders. New York: International Universities Press.

Beck, A.T. (1978). Beck Depression Inventory. Philadelphia, Pa.: Center for Cognitive Therapy.

Beck, A.T. (1972). Depression: Causes and treatment. Philadelphia: University of Pennsylvania Press.

Beck, A.T., Rush, J.A., Shaw, B.F. & Emery, G. (1979). Cognitive therapy of depression. New York: The Guilford Press.

Beck, A.T., Ward, C.H., Mendelsohn, M., Mock, J., & Erbaugh, J (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 53-63.

Blaney, P.H. (1977). Contemporary theories of depression: Critique and comparison. Journal of Abnormal Psychology, 86, 203-223.

Blatt, S., D'Afflitti, J., & Quinlin, D. (1976). Experiences of depression in normal young adults. Journal of Abnormal Psychology, 85, 383-389.

Blatt, S., Quinlan, D., Chevron, E., McDonald, C., & Zuroff, D (1982). Dependency and self-criticism: Psychological dimensions of depression. Journal of Consulting and Clinical Psychology, 50, 113-124.

Bloom, P.M., & Brady, J.P. (1968). An ipsative validation of the Multiple Affect Adjective Checklist. Journal of Clinical Psychology, 24, 45-46.

Brehm, J.W. & Wortman, C.B. (1975). Responses to uncontrollable outcomes: An integration of reactance theory and the learned helplessness model. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 8,pp. 277-336). New York: Academic Press.

Brewin, C. R. (1985). Depression and causal attributions: What is their relationship? Psychological Bulletin, 98, 297-309.

Brockner, J. (1979a). The effects of self-esteem, success-failure, and self-consciousness on task performance. Journal of Personality and Social Psychology, 37, 1732-1741.

Brockner, J. (1979b). Self-esteem, self-consciousness, and task performance: Replications, extensions, and possible explanations. Journal of Personality and Social Psychology, 37, 447-461.

Brown, G.W., & Harris, T. (1978). Social origins of depression New York: Free Press.

Bumberry, W., Oliver, J.M. & McClure, J.N. (1978). Validation of the Beck Depression Inventory in a university population using psychiatric estimate as the criterion. Journal of Consulting and Clinical Psychology, 46, 150-155.

Burns, D. (1980). Feeling Good. New York: Signet.

Buss, A. & Scheier, M. (1976). Self-consciousness, self-awareness, and self-attribution. Journal of Research in Personality, 10, 463-468.

Carver, C.S. (1979). A cybernetic model of self-attention processes. Journal of Personality and Social Psychology, 37 1251-1281.

Carver, C.S. & Scheier, M. (1978). Self-focusing effects of dispositional self-consciousness, mirror presence, and audience presence. Journal of Personality and Social Psychology, 36, 324-332.

Carver, C.S. & Scheier, M.F. (1981). Attention and self-regulation: A control theory approach to human behavior. New York: Springer.

Carver, C.S., Blaney, P.H.,& Scheier, M.F. (1979). Reassertion and giving up: The interactive role of self-directed attention and outcome expectancy. Journal of Personality and Social Psychology, 37, 1859-1870.

Christensen, D. (1982). The relationship between self-consciousness and interpersonal effectiveness and a new scale to measure individual differences in self-consciousness. Personality and Individual Differences, 3, 177-188.

Clark, D.M. & Teasdale, J.D. (1982). Diurnal variation in clinical depression and accessibility of memories of positive and negative experiences. Journal of Abnormal Psychology, 91, 87-95.

Coyne,J.C. (1976). Depression and the response of others. Journal of Abnormal Psychology, 85, 186-193.

Coyne, J.C., & Gotlib, I.H. (1983). The role of cognition in depression: A critical appraisal. Psychological Bulletin, 94 472-505.

Craighead, W.E. (1980). Away from a unitary model of depression. Behavior Therapy 11, 122-128.

Davis, D., & Brock, T.C. (1975). Use of first person pronouns as a function of increased objective self-awareness and performance feedback. Journal of Experimental Social Psychology, 11, 381-388.

Derry, P.A. & Kuiper, N.A. (1981). Schematic processing and self-reference in clinical depression. Journal of Abnormal Psychology, 90, 286.

Dunbar, G.C. & Lishman, W.A. (1984). Depression, recognition-memory, and hedonic tone: A signal detection analysis. British Journal of Psychiatry, 144, 376.

Duval, S. & Wicklund, R. (1972). A theory of objective self-awareness. New York: Academic Press.

Duval, S. & Wicklund, R. (1973). Effects of objective self-awareness on attributions of causality. Journal of Experimental Social Psychology, 9, 17-31.

Duval, S., Wicklund, R.A., & Fine, R.I. (1972). Avoidance of objective self-awareness under conditions of high and low intra-self discrepancy. In S. Duval & R.A. Wicklund, A theory of objective self-awareness. New York: Academic Press.

Ekman, P. & Friesen, W. (1975). Unmasking the face. Englewood Cliffs, N.J: Prentice-Hall.

Exner, J.E. (1969). Rorschach responses as an index of narcissism. Journal of Projective Techniques and Personality Assessment, 33, 324-330.

Exner, J.E. (1973). The self-focus sentence completion: A study of egocentricity. Journal of Personality Assessment, 37, 437-455.

Eysenck, H.J. & Martin, I. (1987). Theoretical foundations of behavior therapy. New York: Plenum Press.

Fenigstein, A., Scheier, M. & Buss, A. (1975). Public and private self-consciousness: Assessment and theory. Journal of Consulting and Clinical Psychology, 43, 522-527.

Fenigstein, A. (1979). Self-control, self-attention and social interaction. Journal of Personality and Social Psychology, 37, 75-86.

Fenigstein, A., & Levine, M.P. (1984). Self-attention, concept activation and the causal self. Journal of Experimental Social Psychology, 20, 231-245.

Ferster, C.B. (1973). A functional analysis of depression. American Psychologist, 28, 857-870.

Ferster, C.B. (1974). Behavioral approaches to depression. In R.J. Friedman & M.M. Katz (Eds.) The psychology of depression: Contemporary theory and research. N.Y.: Wiley.

Fleming, B.M., & Thornton, D.W. (1980). Coping skills training as component in the short-term treatment of depression. Journal of Consulting and Clinical Psychology, 48, 652-655.

Froming, W.J., Walker, G.R.,& Lopyan, K.J. (1982). Public and private self-awareness: When personal attitudes conflict with societal expectations. Journal of Experimental Social Psychology, 18, 476-487.

Fuchs, C.Z. & Rehm, L. (1977). A self-control behavior therapy program for depression. Journal of Consulting and Clinical Psychology, 45, 206-215.

Ganellen, R. & Blaney, P.H. (1981). A cognitive model of depressive onset. Paper presented at the annual meeting of the American Psychological Association, Los Angeles.

Gibbons, F.X., & Wicklund, R. (1976). Selective exposure to self. Journal of Research in Personality, 10, 98-106.

Gibbons, F.X., Smith, T., Brehm, S., & Schroeder, D. (1980). Self-awareness and self-confrontation: The role of focus of attention in the process of psychotherapy. Unpublished manuscript, University of Kansas, Lawrence.

Gibbons, F.X., Smith, T., Ingram, R.E., Pearce, K., Brehm, S. & Schroeder, D. (1985). Self-awareness and self-confrontation: Effects of self-focused attention on members of a clinical population. Journal of Personality and Social Psychology, 48, 662-675.

Gotlib, I.H. (1981). Self-reinforcement and recall: Differential deficits in depressed and non-depressed psychiatric patients. Journal of Abnormal Psychology, 90, 521-530.

Gotlib, I.H. (1982). Self-reinforcement and depression in interpersonal interaction: The role of performance level. Journal of Abnormal Psychology, 91, 3-13.

Gotlib, I.H. (1983). Perception and recall of interpersonal feedback: Negative bias in depression. Cognitive Therapy and Research, 7, 399-412.

Gotlib, I.H. & Asarnow, R.F. (1979). Interpersonal and impersonal problem-solving skills in mildly and clinically depressed university college students. Journal of Consulting and Clinical Psychology, 47, 86-95.

Greenberg, J. & Pyszczynski, T. (1986). Persistent high self-focus after failure and low self-focus after success: The depressive self-focusing style. Journal of Personality and Social Psychology, 50, 1039-1044.

Grosscup, S.J. & Lewinsohn, P.M. (1980). Unpleasant and pleasant events, and mood. Journal of Clinical Psychology 36, 252-259.

Hamilton, M. (1967). Development of a rating scale for primary depressive illness. British Journal of Social and Clinical Psychology, 6, 278.

Hammen, C.L. (1980). Depression in college students: beyond the Beck Inventory. Journal of Consulting and Clinical Psychology, 48, 126-128.

Hammen, C.L. & Peters, S.D. (1977). Differential responses to male and female depressive reactions. Journal of Consulting and Clinical Psychology, 45, 994-1001.

Hammen, C.L. & Peters, S.D. (1978). Interpersonal consequences of depression: Responses to men and women enacting a depressed role. Journal of Abnormal Psychology, 87, 322-332.

Hammen, C., Marks, T., deMayo, R., & Mayol, A. (1985). Self-schemas and risks for depression: A prospective study. Journal of Personality and Social Psychology, 49, 1147-1159.

Hull, J.G., Van Treuren, R., Ashford, S., Propsom, P. & Andrus, B. (1988). Self-consciousness and the processing of self-relevant information. Journal of Personality and Social Psychology, 54 (3), 452-465.

Ickes, J. & Wicklund, A. (1971). Self-awareness and self-esteem. In Duval & A. Wicklund (Eds.) A theory of objective self-awareness, p.24. New York: Academic Press.

Ickes, J., Wicklund, A. & Ferris, C. (1973). Objective self-awareness and self-esteem. Journal of Experimental Social Psychology, 9, 202-219.

Ingram, R.E. & Smith, T.S. (1984). Depression and internal versus external focus of attention. Cognitive Therapy and Research, 8, 139-152.

Ingram, R.E., Lumry, A.E., Cruet, D., & Sieber, W. (1987). Attentional processes in depressive disorders. Cognitive Therapy and Research, 11, 351-360.

Izard, C. (1971). The face of emotion. New York: Meredith and Appleton-Century Crofts.

Izard, C. (1980). Maximally discriminative facial movement coding (MAX). Delaware: University of Delaware Press.

Izard, C., Dougherty, L.M., & Hembree, E.A. (1980) A system for identifying affect expressions by holistic judgments (AFFEX). Delaware: University of Delaware Press.

Jacobson, N.S. & Anderson, E.A. (1982). Interpersonal skill and depression in college students: An analysis of the timing of self-disclosures. Behavior Therapy, 13, 271-282.

Johnson-Laird, P.N. (1983). Mental models: Towards a cognitive science of language, inference and consciousness Cambridge: Cambridge University Press.Kanfer, F.H. (1970).

Kanfer, F.H. (1970). Self-regulation: Research, issues and speculations. In C. Neuringer & J.L. Michael (Eds.), Behavior modification in clinical psychology. New York: Appleton-Century-Crofts.

Kanfer, F.H. & Hagerman, S. (1981). The role of self-regulation. In L. Rehm (Ed.), Behavior therapy for depression: Present status and future directions. (Chap.4), N.Y.: Academic Press.

Kanfer, F.H., & Karoly, P. (1972). Self-control: A behavioristic excursion into the lion's den. Behavior Therapy, 2, 398-416.

Karoly, P. & Kanfer, F.H. (1982). Self-management and behavior change, from theory to practice. New York: Pergamon Press.

Kovacs, M., Rush, A.J., Beck, A.T., & Hollon, S.D. (1981) Depressed outpatients treated with cognitive therapy or pharmacotherapy: A one year follow-up. Archives of General Psychiatry, 38, 33-39.

Kuiper, N. (1978). Depression and causal attributions for success and failure. Journal of Personality and Social Psychology, 36, 236-246.

Kuiper, N., Derry, P.A., & MacDonald, M.R. (1982). Self-reference and person perception in depression: A social cognition perspective. In G. Weary & H. Mirels (Eds.). Integrations of social and clinical psychology (pp.79-103). New York: Oxford University Press.

Lewinsohn, P.M. (1974). A behavioral approach to depression. In R.J. Friedman & M. Katz (Eds.), The psychology of depression: Contemporary theory and research (pp.157-186). Washington, CC: Winston-Wiley.

Lewinsohn, P.M. (1975). The behavioral study and treatment of depression. In M. Hersen , R. Eisler, & P. Miller (Eds.), Progress in behavior modification (Vol.1). New York: Academic Press.

Lewinsohn, P. & Graf, M. (1973). Pleasant activities and depression. Journal of Clinical Psychology, 41, 261-268.

Lewinsohn, P.M. & Hoberman, H.M. (1982). Depression. In A.S. Bellak, M. Hersen, & A.E. Kazdin (Eds.), International handbook of behavior modification and therapy. New York: Plenum.

Lewinsohn, P.M., Hoberman, H., Teri, L.& Hautzinger, M. (1985) An integrative theory of depression. In S. Reiss & R. Bootzin (Eds.), Theoretical issues in behavior therapy (pp.331-359), New York: Academic Press.

Lewinsohn, P.M., Larson, D.,& Munoz, R.F. (1982). Measurement of expectancies and other cognitions in depressed individuals. Cognitive Therapy and Research, 6, 437-446.

Lewinsohn, P. & Libet, J. (1972). Pleasant events, activity schedules, and depression. Journal of Abnormal Psychology, 79, 291-295.

Lewinsohn, P.M., Mischel, W., Chaplin, W.,& Barton, R. (1980). Social competence and depression: The role of illusory self-perceptions. Journal of Abnormal Psychology, 89, 203.

Lewinsohn, P.M., Steinmetz, J.L., Larson, D.W., & Franklin, J. (1981). Depression related cognitions: Antecedent or consequence? Journal of Abnormal Psychology, 90, 213-219.

Lewinsohn, P.M., Youngren, M.A., & Grosscup, S.J. (1979). Reinforcement and depression. In R.A. DePue (Ed.), The psychobiology of depressive disorders: Implications for the effects of stress. New York: Academic Press.

Liebling, B.A., & Shaver, P. (1973). Evaluation, self-awareness, and task performance. Journal of Experimental Social Psychology, 9, 297-306.

Lubin, B., Zuckerman, M., & Woodward. (1985). Bibliography for the Multiple Affect Adjective Checklist, August, 1983. San Diego, Ca: Educational and Industrial Testing Service.

MacPhillamy, D.J., & Lewinsohn, P.M. (1974). Depression as a function of levels of desired and obtained pleasure. Journal of Abnormal Psychology, 83, 651-657.

Meites, K., Lovallo, W., & Piskin, V. (1980). A comparison of four scales for anxiety, depression, and neuroticism. Journal of Clinical Psychology, 36, 427-432.

Miller, W.R. (1975). Psychological deficit in depression. Psychological Bulletin, 82, 238-260.

Minkoff, K., Bergman, E., Beck, A.T., & Beck, R. (1973). Hopelessness, depression, and attempted suicide. American Journal of Psychiatry, 130, 455-459.

Musson, R.F. (1981). Self-consciousness and depression. Unpublished manuscript, Northwestern University, Illinois.

National Institute of Mental Health. (1973). Special Report: The depressive disorders. (Prepared by S.K. Secunda, M.M. Katz, R.J. Friedman, & D. Schuyler. U.S. Department of Health Education and Welfare; Health Services and Mental Health Administration, Publ. No., HE 20:2402:D44/4/973). Washington, D.C,: U.S. Government Printing Office

Nelson, R.E. & Craighead, W.E. (1977). Selective recall of psoitive and negative feedback, self-control behaviors and depression. Journal of Abnormal Psychology, 86, 379-388.

Oakes, W.F. & Curtis, N. (1982). Learned helplessness: Not dependent upon cognitions, attributions, or other such phenomenal experiences. Journal of Personality, 50, 387-407.

Overmier,J.B. & Seligman, M.E.P. (1967). Effects of inescapable shock upon subsequent escape and avoidance learning. Journal of Comparative and Physiological Psychology, 63, 23-33.

Peterson, C., Bettes, B.A., & Seligman, M.E.P. (1982). Spontaneous attributions and depressive symptoms: Unpublished manuscript. Virginia Polytechnic Institute and State University.

Peterson, C., Schwartz, S.M., & Seligman, M.E.P. (1981). Self-blame and depressive symptoms. Journal of Personality and Social Psychology, 41, 253-259.

Peterson, C. & Seligman, M.E.P. (1984). Causal attributions as a risk factor for depression: Theroy and evidence. Psychological Review, 91, 347-374.

Power, M.J. (1987). The perception of life events in depressed inpatients and hospitalized controls. Journal of Clinical Psychology, 43, 206-211.

Power, M.J., & Champion, I.A. (1986). Cognitive approaches to depression: A theoretical critique. British Journal of Clinical Psychology, 25, 201-212.

Pyszczynski, T. & Greenberg, J. (1985). Depression and preference for self-focusing stimuli after success and failure. Journal of Personality and Social Psychology, 49, 1066-1075.

Pyszczynski, T., & Greenberg, J. (1986). Evidence for a depressive self-focusing style. Journal of Research in Personality, 20, 95-106.

Pyszczynski, T. & Greenberg, J. (1987). Self-regulatory perseveration and the depressive self-focusing style: A self-awareness theory of reactive depression. Psychological Bulletin, 102, 122-138.

Pyszczynski, T., Holt, K.,& Greenberg, J. (1987). Depression self-focused attention and expectancies for future positive and negative events for self and others. Journal of Personality and Social Psychology, 52, 994-1001.

Raps, C.S., Peterson, C., Reinhard, K.E., Abramson, L.Y., & Seligman, M.E.P.(1982). Attributional style among depressives. Journal of Abnormal Psychology, 91, 102-108.

Rehm, L.P. (1977). A self-control model of depression. Behavior Therapy, 8, 787-804.

Rehm, L.P. (1988). Self-management and cognitive processes in depression. In L. Alloy (Ed.) Cognitive processes in depression (pp. 143-176). New York: Guilford Press.

Reiss, S., & Bootzin, R. (1985). Theoretical issues in behavior therapy. New York: Academic Press.

Rizley, R. (1978). Depression and distortion in the attribution of causality. Journal of Abnormal Psychology 87, 32-48.

Rush, A.J., Beck, A.T., Kovacs, M., & Hollon, S.D. (1977). Comparative efficacy of cognitive therapy versus pharmacotherapy in outpatient depressives. Cognitive Therapy and Research, 1, 17-37.

Sacco, W.P., & Hokanson, J.E. (1978). Expectations of success and anagram performance of depressives in a public and private setting. Journal of Abnormal Psychology, 87, 122-130.

Schare, M., & Lisman, S. (1985). The processing of self-relevant stimuli during alcohol intoxication: A test of the self-awareness model of drinking. Unpublished manuscript, State University of New York-Binghamton, N.Y.

Scheier, M.F. (1976). Self-awareness, self-consciousness, and angry aggression. Journal of Personality, 12, 133-140.

Scheier, M.F., & Carver, C.S. (1977). Self-focused attention and the experience of emotion: Attraction, repulsion, elation, and depression. Journal of Personality and Social Psychology, 35, 625-636.

Secunda, S.K., Katz, M., Friedman, R., & Schuyler, D. (1973). Special Report: The depressive disorders (National Institute of Mental Health) Washington, DC: U.S. Government Printing

Seligman, M.E.P. (1988). 'Me' decades generate depression. American Psychological Association Monitor, October.

Seligman, M.P. (1975) Helplessness. San Francisco: W. Freeman.

Seligman, M., Abramson, L., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. Journal of Abnormal Psychology, 88, 242-247.

Shaw, B.F. (1977). Comparison of cognitive therapy and behavior therapy in the treatment of depression. Journal of Consulting and Clinical Psychology, 45, 543-551.

Shaw, B.F., Vallis, T.M., & McCabe, S.B. The assessment of the severity and symptom patterns in depression. In E. E. Beckham & W.R. Leber (Eds.) Handbook of depression: treatment, assessment and research (pp.372-407). Chicago: Dorsey Press.

Shrauger, J.S., & Terbovic, M.L. (1976). Self-evaluations and assessments of performance by self and others. Journal of Consulting and Clinical Psychology, 44, 564-572.

Skinner, B.F., & Epstein, R. (1982). Cognition, creativity, and behavior: The columban simulations. Illinois: Research Press.

Smith, T.W., & Greenberg, J. (1981). Depression and self-focused attention. Motivation and Emotion, 5, 323-331.

Smith, T.W., Ingram, R.E., & Roth, D.L. (1985). Self-focused attention and depression: Self-evaluation, affect, and life stress. Motivation and Emotion, 9, 381-389.

Steenberger, B.N., & Aderman, D. (1979). Objective self-awareness as a nonaversive state: Effect of anticipating discrepancy reduction. Journal of Personality, 47, 330-334.

Strack, S., Blaney, P.H., Ganellen, R.J.,& Coyne, J.C. (1985). Pessimistic self-preoccupation, performance deficits, and depression. Journal of Personality and Social Psychology, 49, 1076-1085.

Taylor, S.E., & Fiske, S.T. (1978). Salience, attention, and attribution: Top of the head phenomena. In L. Berkowitz (Ed.) Advances in experimental social psychology (Vol. 10, pp. 250-288). New York: Academic Press.

Taylor, F.G., & Marshall, W.L. (1977). Experimantal analysis of cognitive-behavioral therapy for depression. Cognitive Therapy and Research, 1, 59-72.

Vasta, R., & Brockner, J. (1979). Self-esteem and self-evaluative covert statements. Journal of Consulting and Clinical Psychology, 47, 776-777.

Welkowitz, J., Lish, J. & Bond, R. (1985). The Depressive Experiences Questionnaire: revision and validation. Journal of Personality Assessment, 49, 89-94.

Zuckerman, M. & Lubin, B. (1965). Manual for the Multiple Affect Adjective Checklist. San Diego: Edits Publishers.

Zuroff, D., Moskowitz, D., Wielgus, M., & Powers, T. (1983). Construct validation of the dependency and self-criticism scales of the Depressive Experiences Questionnaire. Journal of Research in Personality, 17, 226-241.

APPENDIX A

CONSENT FORM

I agree to participate in a research project being conducted at Hofstra University. The project is coordinated by Michael Stango, M.A., and is supervised by Junko Tanaka-Matsumi, Ph.D..

I understand the procedure will involve completing a series of questionnaires and a problem-solving (anagrams) task, followed by a five minute video-taped interview with the experimenter. This participation should involve approximately one and a half hours of my time.

I understand that I have the right to withdraw from the study at any time, and that my responses to questions will be held in confidence.

I also understand that the research results will be made available to me when the study is completed, if I so wish.

_____

signature

_____

date