INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI

A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor MI 48106-1346 USA
313/761-4700 800/521-0600

THE IMPACT OF REPEATED EXPOSURE AND DEPRESSIVE SYMPTOM IMPROVEMENT ON OTHERS.

by

Irene Granda-Gage

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
of Doctor of Philosophy

Greensboro
1995

Approved by

Rosemery Nelson-Gray

Rosemery Nelson-Gray, Ph.D.

UMI Number: 9618158

UMI Microform 9618158
Copyright 1996, by UMI Company. All rights reserved.

This microform edition is protected against unauthorized
copying under Title 17, United States Code.

UMI
300 North Zeeb Road
Ann Arbor, MI 48103

GRANDA-GAGE, IRENE, PH.D. The Impact of Repeated Exposure and Depressed Symptom Improvement on Others. (1995) Directed by Dr. Rosemery Nelson-Gray. 125 pp.

Research literature suggests that depressed individuals interact with others in such a way that is unpleasant or aversive to others. The present study examined the impact of two contextual variable, repeated exposure to a depressed person and depressive symptom improvement, upon the elicitation of negative arousal and rejection. In addition, the study examined whether certain personality attributes (i.e., empathy, inward or outward focus, and depression) of persons interacting with a depressed individual influence the elicitation of negative arousal and rejection.

A 3 (condition) x 3 (tape) mixed experimental design was employed. In Condition 1, subjects saw a video tape of a depressed role enactment three times with no symptom change. In Condition 2, subjects saw a video tape of a depressed role enactment three times with symptom improvement. And in Condition 3, subjects saw a video tape of a normal role enactment three times. Seventy-five subjects were randomly assigned to one of the three conditions, with 25 subjects in each condition.

It was predicted that subjects who were low in empathy, inwardly focused, and/or depressed would demonstrate more negative arousal and rejection than those that are high in empathy, outwardly focused, and not depressed. The results

affect, rejection for further interaction, and little favorable regard.

As predicted, the results indicate that rejection and negative arousal were elicited by depressed persons. Also as predicted, at Tape 3, depressed persons who evidenced symptom improvement elicited less negative arousal and rejection 3 than depressed persons who evidenced no symptom improvement.

In conclusion, it is important that future research pursue other contextual variables and personality variables of the latter to explain variability elicited by depressed individuals in negative arousal and rejection.

Approval Page

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Dissertation Adviser _____

Committee Members _____

_____

_____

_____

11 - 16 - 95

Date of Acceptance by Committee

11 - 13 - 95

Date of Final Oral Examination

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

CHAPTER I

Introduction

Coyne (1976a) proposed an interactional model of depression which suggests that depression is maintained by the social environment. According to this model, the depressive behaviors exhibited by the individual serve as cues for support and comfort which initially are given by others. However, as the series of interactions continue, the depressed individual is said to interact with others in such a way that he or she induces negative mood arousal and elicits rejection. Hence, support is lost. The depressed individual then makes greater attempts to regain support through further display of depressive behaviors which lead to further rejection and further depression (Coyne, 1976a, 1976b).

Coyne's model has been the subject of many empirical tests. Several studies have found support for Coyne's model, suggesting that depressed individuals induce negative mood and rejection in others (Coyne, 1976b; Gotlib & Robinson, 1982; Hammen & Peters, 1978; Howes & Hokanson, 1979; Robbins, Strack, & Coyne, 1983; Strack & Coyne, 1983; Winer, Bonner, Blaney, & Murray, 1981; Yarkin, Harvey, & Bloxom, 1981). There also have been a few studies that have been

unable to replicate these findings (King & Heller, 1984; McNeil, Arkowitz, & Pritchard, 1987).

In order for the interaction between depressed individuals and others to be more fully understood, more research is needed in several critical areas. Two important areas are the impact of contextual variables (i.e., symptom improvement, knowledge of a depression precipitant) and personality variables (of others interacting with depressed individuals), upon the elicitation of negative arousal and rejection. They are important because they may help us to more fully understand the circumstances under which negative arousal and rejection effects occur or do not occur.

The present study investigated the impact of certain personality variables (of individuals interacting with depressed others) upon the elicitation of negative arousal and rejection in conjunction with two contextual variables. The personality variables employed were inward and outward focus, empathy, and depression. The two contextual variables were repeated exposure to the depressed person, and the presence or absence of depressive symptom improvement (both depicted in a depressed role enactment).

Before discussing the present study, this introduction provides an overview of the existing body of literature. This overview begins with a description of studies that have found support for Coyne's model, followed by those studies that have found mixed results or no support

for Coyne's model.

Coyne's model is supported by several studies which suggest that depressed individuals interact with others in such a way that is unpleasant or aversive to others (Biglan, Hops, & Sherman, 1988), be they strangers or significant others. Biglan et al (1988) suggest that this negative effect that depressed persons have on strangers and familiar others may manifest itself in a variety of reactions. Strangers and familiar others may reject the depressed person (Howes & Hokanson, 1979; Strack & Coyne, 1983), may demonstrate negative responses to the depressed individual (Gotlib & Robinson, 1982), or may experience a negative mood arousal themselves (Hammen & Peters, 1978).

The specific behaviors that discriminate between depressed individuals and normals have not been clearly delineated (e.g., Youngren & Lewinsohn, 1980). However, inappropriate timing of self-disclosure (Jacobson & Anderson, 1982), negative self-evaluation statements (Gotlib & Robinson, 1982; Hokanson, Sacco, Blumberg, & Landrum, 1980; Jacobson & Anderson, 1982), nonverbal behavior (e.g., eye contact, head and mouth angle) (Gotlib & Robinson, 1982; Waxer, 1974), and other aspects of verbal behavior other than content (e.g., voice quality) (Gotlib & Robinson, 1982) have been suggested.

In Jacobson and Anderson's (1982) study, 10 minutes of waiting room conversation between depressed and non-

depressed college students and a confederate were audio-taped and then analyzed. The results indicate that depressed and non-depressed individuals differed in the timing of their self disclosures. That is, the depressed individuals were more apt than non-depressed persons to self-disclose after a comment made by the confederate, regardless of whether that comment was a self-disclosing statement or a remark about the environment. Additionally, Jacobson and Anderson (1982) found that depressed individuals employed significantly more negative self-statements than non-depressed persons.

Similarly, Gotlib and Robinson (1982) in their study using mildly depressed college women found that these women tended to make more negative self-evaluation statements than non-depressed individuals. Moreover, these mildly depressed women produced fewer statements of direct support in their interactions than non-depressed persons. It is noteworthy that these behavioral differences were demonstrated within the first three minutes of an interaction.

In another study, Hokanson, Sacco, Blumberg, and Landrum (1980) used a modified version of the prisoner's dilemma game where the power of each player in an interaction was manipulated. They compared three groups of college students, depressed, non-depressed but psychologically disturbed, and normals. The results indicate that when a depressed person is in a high power position

they tend to communicate high levels of self-devaluation, sadness, and helplessness. Consequently, the interactions between depressed persons and normal individuals resulted in the normal person becoming noncooperative, extrapunitive, and expressing a sense of helplessness. When the depressed individual was in a low power role, they also evidenced negative self-devaluation, sadness, and more helplessness. However, in addition to this, they also blamed their partner for their low power position. The normal individual responded to this by being less punitive and displaying ingratiating game behaviors which may serve to reinforce the depressed person's interactive style.

Although most studies examining the differential behaviors of depressed and non-depressed persons have by and large examined the content of the conversational interactions, others have investigated other aspects of verbal and nonverbal behavior. Waxer (1974) had subjects view a silent video-tape of depressed and non-depressed psychiatric patients and asked them to identify which patients appeared to be depressed based on their nonverbal behavior. The results indicate that subjects were able to correctly differentiate between depressed and non-depressed patients by noting that depressed patients were less able to maintain eye contact, tended to keep their heads down more, and were more apt to have their "mouths turned down".

Differences between depressed and non-depressed individuals regarding aspects of their verbal behavior other than content have also been demonstrated (Biglan et al., 1988). Gotlib and Robinson (1982) noted that the speech quality of mildly depressed college women tended to be more monotonous than that of non-depressed individuals. Several other studies have been done examining the voice quality of depressed vs. non-depressed individuals (Hargreaves, Starkweather, & Blacker, 1965; Newman & Maher, 1938; Scherer, 1987).

Newman and Maher (1938) examined the speech of depressed patients whom they grouped into four distinct categories, "classical depressions", "dissatisfactions/gloom states", "mixed", and "manic states". The "classical depressions" group consisted of patients who evidenced sadness, retardation, constipation, anorexia nervosa, and insomnia. These patients' voice quality when examined was described as "dead" and "listless" with narrow pitch range, slow tempo, frequent pauses, and lacked emphatic accents. The "dissatisfactions/gloom" group were patients who demonstrated chronic states of sadness but were more responsive to treatment than individuals in the "classical depressions" group. The voice quality of these patients was found to be "brittle", and "lively" with long gliding intonation, glottal rasping, and frequent pauses. The "mixed" group was composed of patients who exhibited flight

of ideas, distress, and apprehension. These patients' voice quality was described as gloomy, with stereotyped repetitions of pitch patterns. The "manic" group consisted of patients who evidenced accelerations, irritability, and euphoria. The voice quality of these patients was found to be lively and theatrical, with sudden changes in volume and pitch.

In another study, Hargreaves, Starkweather, and Blacker (1965) interviewed 32 depressed patients every day for approximately five weeks. The interviews were audio recorded and a spectrum analysis of the voice quality of the depressed patients conducted. Hargreaves et al. found that the majority of depressed patients demonstrated the classical listless quality of voice with decreased loudness and inflection as reported by Newman and Maher (1938); however, some of the depressed patients exhibited a loud voice quality as well as a high pitch.

Scherer (1987) examined 24 studies in a recent review of the literature on affective disorders and vocalizations. Scherer concluded: (a) that depressives speak with low intensity, with intensity increasing after therapy; (b) that the voice has many parameters, few of which have been studied in depressives. In his review of the literature, he found that cross comparisons of studies within this area are plagued by various problems. The selection of depressed subjects in terms of diagnostic tools, and numbers of

depressed subjects participating in studies were inconsistent. That is, a large number of studies did not state on what grounds a depressed label or diagnosis is given, some employed few patients as subjects, and others employed only one patient. "Though there are a few studies that are notable exceptions to this, most of the studies report aggregate data for groups of patients or across several assessment points in time. Given that affectively disturbed persons rarely remain in the same state over different periods of time (e.g., bipolar syndromes tend to produce rather marked changes)" (Scherer,1987), comparison of data within and across studies is again difficult. Additionally, the methodology employed in studying and measuring the voice quality of depressed individuals has also been inconsistent, making comparisons across studies even more difficult. That is, the goal of the research in these studies differ as to whether they wanted to: "(a) describe the vocal characteristics of the depressive patients; (b) make differential diagnosis either in comparison with other psychiatric groups or in comparison with normal subjects; (c) state changes in terms of different phases of the mood disturbance; (d) note changes during therapy; or (e) try to establish the effectiveness of a therapeutic intervention on the basis of vocal indicators. Given the diversity of these research aims, it is not surprising that both type of methodology used to obtain

stimulus materials and the nature of the data analysis are different" (Scherer, 1987). Some studies have had subjects read material while others have used interviews. Lastly, the type of analysis done is also inconsistent across studies. A physiological level of analysis, a phonatory-articulatory level, or a subjective level have all been used. "Although there is a lawful relationship among these three, the relationship is far from perfect" (Scherer, 1987). Hence, there may not be a one-to-one correspondence among these levels of analysis, making comparisons across various results difficult. There is little doubt, however, that the voice quality is a sensitive measure of affective states. Furthermore, because the voice is the most common means of communication among people, "the nature of the social relationships of the speaker is also likely to affect voice and speech processes" (Scherer, 1987).

Thus, a strong body of literature supports Coyne's model that depressives interact with others in such a way that was unpleasant or aversive to others. However, some studies have been unable to find support for Coyne's model. These studies are now presented in order to portray the controversies that have arisen regarding Coyne's model.

King and Heller (1984) were unable to find negative mood induction and social rejection effects in subjects who interacted with a homogeneous group of clinically depressed individuals. They consequently suggested that the Coyne

findings may not be as robust as once thought. Moreover, they note that only one study of this genre included a psychiatric control, and the results revealed that both the depressed and psychiatric control groups elicited negative arousal and rejection effects (Boswell & Murray, 1981). Hence, King and Heller (1984) suggest that mood induction and social rejection effects may be effects that even when they occur are not specific to depression. That is, it may be that not all depressed individuals elicit these effects; and, moreover, some individuals with high levels of psychological disturbance in general may also elicit these effects.

Gurtman (1986b), in his review of the literature regarding Coyne's interactional model, criticizes King and Heller's (1984) conclusion that negative mood induction and social rejection effects are not robust findings. He points out that these investigators failed to cite specific support for their claim that such findings are "equivocal", "mixed", and sensitive to "methodological variation". Furthermore, Gurtman, in his review of 10 articles, arrives at a different conclusion from that of King and Heller (1984). Although, in general, he agrees with King and Heller that the results supporting the mood induction effect are mixed, he concludes that the social rejection effect is a robust finding because it appears consistently across various methodologies. Furthermore, although agreeing that the

results for the mood induction effect were mixed, Gurtman notes that five out the seven studies examined found a negative mood induction effect subsequent to the interaction. A possible explanation for these variations may have been due to the use of heterogeneous groups of depressed subjects. That is, criteria for the determination of a depressive disorder varied across studies, and subjects were not assessed for the presence of other disorders. Hence, some subjects more than others may have elicited negative arousal, possibly because of other co-occurring forms of psychopathology.

In response to Gurtman's (1986b) article, King and Heller (1986) state that their disagreement with Gurtman (1986b) "concerns whether or not there is a unique social response to depression" (p. 410), which Gurtman fails to address in his review. Additionally, King and Heller (1986) note that the majority of the studies cited by Gurtman supporting Coyne's interactional model employed depressed and normal control groups but failed to include a psychopathology control group (e.g., Gotlib & Robinson, 1982; Hammen & Peters, 1978; Robbins et al., 1979; Strack & Coyne, 1983; Winer et al., 1981). This is an important point since it may be that individuals evidencing any form of psychopathology tend to elicit a negative social response from others compared with individuals with no psychopathology. Furthermore, King and Heller (1986) suggest

that, when controls for psychopathology are employed, the evidence for a unique social response to depression is small, suggesting that this uniqueness notion is not empirically supported. Though many of the studies conducted to test Coyne's interactional model did not employ psychiatric control groups, Coyne's first study did involve the use of a psychiatric control group. The results revealed the existence of mood induction and rejection effects unique to depression, contrary to King and Heller's suggestions.

Sanislow, Perkins, and Balogh (1989) suggest that this uniqueness issue is an important one, given that few studies ruled out co-occurring disorders in their depressed subjects. Most groups labeled as "depressed" were selected via measures that do assess depressive states; however, these measures (e.g., the Profile of Mood States, Multiple Affect Adjective Checklist, Zung Self Rating Depression Scale, or the Beck Depression Inventory) do not differentiate depression from other possible co-existing psychopathology. Hence, it may be that those subjects classified as "depressed" were actually a heterogeneous group of individuals, which include not only depressed individuals but depressed persons who have other psychological disturbances as well. Sanislow et al. (1989) also suggest that different types of depressed individuals may elicit a variety of responses; they note that studies

(Boswell & Murray, 1981; King & Heller, 1984) which identified depressed individuals via diagnostic criteria and not unidimensional measures of depression did not support Coyne's interactional model. That is, studies which used only one dimension to assess depression and not diagnostic criteria which often rules out or illuminates other forms of psychopathology, yielded support for Coyne's model. However, since only one dimension was used to assess depression, these studies may have been comprised of subjects who were experiencing depressive symptoms that were secondary to other psychiatric disorders. Thus, negative arousal and rejection effects may not be specific to depression. In fact, Boswell and Murray (1981) found that subjects who listened to audio-taped interviews with schizophrenic individuals evidenced the negative mood induction effect. These results suggest that the negative mood induction effect is not specific to depression.

Marcus and Nardone (1992) provided additional explanations as to why studies in this area have produced such varied results. Their review of the literature identified an abundant number of studies which attempted to determine whether depressed individuals elicit negative arousal and/or rejection effects more than nondepressed persons. They note some of these studies have shown that depressed more than non-depressed individuals elicit negative arousal and/or rejection effects, while others have

not. Overall, these researchers conclude that the strongest support for Coyne's model is found in studies where researchers investigate the relationship between significant others, or when confederates or role enactments are employed. They assert that results appear to be more mixed when short term interactions between strangers are utilized. Marcus and Nardone, after a systematic review of the literature, propose four possible explanations for the variation in results: a) methodological and measurement issues; b) the psychology of inevitability; c) self-presentation and situational factors; and d) the heterogeneity of depression. Each of these explanations is more fully described below.

Inconsistency in the identification of depressives across studies presents methodological and measurement issues. Marcus and Nardone note that researchers have used the same measures but different cut-off scores, different measures altogether, or measures that did or did not reveal other co-existing psychopathological disorders. Hence, it becomes difficult to ascertain if individuals who are solely depressed elicit negative arousal and/or rejection more so than those who are nondepressed. They also identify the use of heterogeneous samples of depressed individuals as a significant factor in the variability of findings between studies (as has been suggested by various other researchers previously discussed).

The notion of the psychology of inevitability was derived from a study where subjects were asked to report their feelings about another person. After reading a description of two normal women and being told they would be interacting with one of them, subjects reported more feelings of like for the person they were going to interact with than for the other woman (Darley & Berscheid, 1967). Darley and Berscheid concluded that subjects tend to justify their preference for someone because they knew they were going to be paired off with them and the interaction was inevitable or because it may be easier to reject another person because the subject knows there is no chance of being judged by them (Lynn & Bates, 1985). Borrowing from this, Marcus and Nardone suggest that it may be easier to be critical of and reject a depressed person when others believe there is not a chance of having an interaction with them, and/or therefore cannot be judged by them. They note that this is often the case in studies of short term interactions with strangers, where subjects are not led to believe that they will be interacting with the person they read about, heard, or saw on tape. Though this may explain why findings of support for Coyne's model are weak when using short term interactions with strangers, it does not explain the lack of supportive findings in other studies using the same experimental methodology. Moreover, the present author notes that this account does not explain why

negative arousal and rejection effects are evidenced in studies of long-term, face-to-face interactions with significant others where subjects know that further interactions are more than likely.

Self-presentational factors and the situational nature of depression are also viable explanations for equivocal results found in studies that employ clinical patients. Evidence for this notion comes from observations that all but the most severely depressed individuals are sometimes capable of behaving in a nondepressed manner during a short interaction. Hence, their "aversive" (depressive) behaviors may not be exhibited at this particular point in time. That is, persons diagnosed as depressed may or may not demonstrate depressive symptoms in short exchanges. Those that do demonstrate depressive symptoms may produce negative arousal and/ or rejection. Those that do not demonstrate depressive symptoms in short exchanges would not elicit negative arousal and/or rejection effects regardless of the depression label given by measures.

The heterogeneity of depression explanation suggests that the inconsistent findings in the literature may be the result of there being different types of depressed individuals who exhibit different symptoms which may impact upon others differently. That is, individuals may all have the same diagnosis, but how that psychopathology is exhibited may be idiosyncratic. Hence, one depressed person

may elicit negative arousal and rejection effects, and another may not, as a result of variations in their emission of pathological behaviors.

After reviewing the literature, Marcus and Nardone note the following. Support for negative arousal and rejection effects are more robust when confederates or depressed simulations are employed. This may be because the use of confederates or other simulations ensure that depressive symptoms are exhibited rather than absent in a short interaction. However, studies that employ confederates or depressed simulations rather than depressed individuals may have little to say about others' reactions to depressives.

Given the controversies presented regarding Coyne's model, future studies should attempt to clarify these issues. For example, more studies on the use of family and friends of depressed individuals rather than strangers are needed. This is important since Coyne's model suggests that the interactional process by which depression is maintained is one that involves significant others (Coyne, 1976a, 1976b; Doerfler & Chaplin, 1985). In addition, investigations that focus more on the consequences of rejection (and other responses) for subsequent depressive behaviors are essential, given that Coyne's model assumes that these responses serve to maintain depression. Research of this premise is lacking. More studies which control for psychopathology are also needed in order to ensure that

effects found are unique to depression. Lastly, investigations of personality variables and contextual variables such as the present dissertation, are important in order to better understand the circumstances under which negative arousal and rejection effects occur. The personality variables (of others interacting with depressed others) investigated here are whether one is inwardly or outwardly focused, empathic or depressed. The contextual variables investigated here are repeated interactions vs. a one time interaction with depressed individuals, and knowledge or no knowledge of symptom improvement. Other contextual variables that could be investigated in other studies are contrived vs. noncontrived exchanges; face to face vs. other forms of exchanges; stranger vs. familiar other; and knowledge or no knowledge of a depression precipitant.

Statement of Purpose

Given the results of the various investigations presented and suggestions made for future research, the present study focused on the effects of three personality variables and two contextual variables. The investigation of personality variables was prompted by the variability found across subjects in various studies (Marcus & Nardone, 1992), which suggests the possibility of idiosyncratic reactions to depressed individuals. The three personality variables selected for examination in the present study were empathy,

depression, and inward or outward focus. These variables were chosen because of their association in the literature with the elicitation of support or no support, by persons witnessing another in distress (Davis, 1983).

It was predicted that subjects who were low in empathy, inwardly focused, and/or depressed would demonstrate more negative arousal and/or rejection than those who were high in empathy, outwardly focused and not depressed. Therefore, there should be a high positive correlation between inward focus and depression, and negative arousal and rejection. Conversely, there should be a high negative correlation between outward focus and negative arousal and rejection. To evaluate these predictions, correlational analyses and analyses of variances were conducted.

The two contextual variables investigated in this study were repeated exposure to a depressed individual, and knowledge or no knowledge of depressive symptom improvement. Only one previous study has employed repeated exposure. Winer et al. (1981) found that two exposures led to more negative arousal and rejection than one exposure. However, these results were evidenced by subjects who read descriptions of depressed individuals rather than directly observing depressed behavior in face to face interactions. Similarly, only one study investigated whether knowledge of little or no symptom improvement had an impact upon others. Winer et al. (1981) discovered that knowledge of no symptom

improvement led to greater negative arousal and rejection of a depressed person. However, once again these effects were found by subjects who read descriptions of depressed persons.

In order to test the effects of the Personality variables and contextual variables selected, the present study employed an actress to play the role of both a depressed individual and a normal individual. The actress's performance was videotaped and shown to subjects. An actress, rather than a patient, was employed in order to ensure that depressed symptomology was exhibited, and a videotape rather than live interactions was used in order to maintain standardization across conditions. Subjects came to the laboratory three times to watch one of three sets of ten minute video tapes of an actress playing a depressed or normal individual. Those subjects who saw the actress enacting a depressive role heard her report and exhibit that depressive symptoms were not improving (Condition 1) or improving (Condition 2). In the third set of tapes, subjects saw and heard the actress portray a normal individual talking (Condition 3). After seeing each video tape, subjects filled out a measure of negative mood states (e.g., the Multiple Affect Adjective Checklist) (Appendix A) which measured negative mood arousal. Subjects then answered a short questionnaire which indicated their degree of willingness to engage in further interactions with the

actress (Coyne's Further Interaction Measure) (Appendix B). Following this subjects filled out another short questionnaire which reflected favorable regard they may have for the actress (Rubin's Liking Scale) (Appendix C). Prior to seeing the video tapes, subjects filled out measures of personality attributes and mood states, such as the IRI (Interpersonal Reactivity Index; Davis, 1980, 1983) (Appendix D) which measured empathy, the SCS (Self-Consciousness Scale; Fenigstein, Buss, and Scheier, 1975) (Appendix E) which indicated whether an individual was inwardly or outwardly focused, and the BDI (Beck Depression Inventory; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) (Appendix F) which measured depression. The purpose of these latter instruments was to determine whether subjects with different personality attributes or mood states were more or less likely to show negative mood arousal and/or rejection after seeing a video tape of an actress enacting a depressed person.

It was predicted that subjects would evidence less negative arousal, more willingness to have further interaction, and more positive regard for the non-depressed person seen in Condition 3 across all three tapes than for the same person portraying a depressed role in Conditions 1 and 2. In addition, subjects should demonstrate less negative arousal, more willingness to have further interaction, and more positive regard towards the depressed

role enactment by Tape 3 in Condition 2 when the depressed person showed symptom improvement than after the depressed role enactment on Tape 3 in Condition 1 when the depressed person did not show symptom improvement. To evaluate these predictions analyses of variance and planned comparisons were conducted.

CHAPTER II

Method

Subjects

Seventy-five, white, female Introductory Psychology students, ages 17-25, participated in the study as a means of fulfilling course requirements. The restriction in race, gender, and age were implemented in an attempt to reduce variability among subjects.

Actress

The actress was a white, 20 year-old female student from the University of North Carolina at Greensboro's Department of Communication and Theater. She was trained to mimic depressed and normal individuals' affect and behaviors by watching tapes of identified depressed and nondepressed individuals according to DSM-IV criteria (Appendix G). These tapes (The DSM-III-R Training Program Video Taped Clinical Trials; and The World of Abnormal Psychology, Program 8, Mood Disorders) were obtained from the University of North Carolina at Greensboro's Learning Resource Library. After the actress practiced and was able to perform the appropriate depressed and normal roles, her performance of each role was videotaped. Verification of actress's behavior resembling depressed and nondepressed individuals was

obtained from 18 clinicians (two clinicians per tape, nine tapes), blind to experimental goals, who watched the video tapes. They were asked to state what diagnosis, if any, according to DSM-IV they would assign to the person seen on video tape. Inter-diagnostic reliabilities between the clinicians were calculated. Clinicians correctly diagnosed a Major Depressive Episode 100% of the time, when they viewed a depressed role enactment (i.e., for Conditions 1 and 2). They also correctly deferred diagnosis 100% of the time, when they viewed a nondepressed role enactment (i.e., in Condition 3).

Experimental Design

The current study used a 3 (condition) x 3 (tape) mixed experimental design with the former being a between subjects factor and the latter being a within subjects factor. In the first condition, subjects saw a video tape of a depressed role enactment three times with no symptom change. In the second condition, subjects saw a video tape of a depressed role enactment three times with symptom improvement. In the third condition, subjects saw a video tape of a normal role enactment three times. Seventy-five subjects were randomly assigned to one of the three conditions, with 25 subjects in each condition.

There were a total of nine different tapes, three per condition. Each of the three tapes in Condition 1 consisted

of the actress displaying nine of the nine possible symptoms of Major Depressive Disorder according to DSM IV. Condition 2 consisted of the actress displaying seven symptoms in Tape 1, six symptoms in Tape 2, and five symptoms in Tape 3 (To qualify for a diagnosis of Major Depressive Disorder in DSM-IV, a person must display five of the nine depressive symptoms). The three tapes in Condition 3 consisted of the actress displaying no symptoms. All three tapes within each condition were similar to one another in duration (10 minutes) and content. The order in which information was given varied slightly, and the actress wore different clothes. (See Appendix H for scripts).

Dependent Measures.

MAACL. The following dependent measures were utilized in this study. First is the Depression Scale from the Today Form of the Multiple Affect Adjective Checklist (MAACL) (Zuckerman & Lubin, 1965) (Appendix A). The MAACL measures subjective mood state and was used to measure negative mood arousal in subjects after viewing each video tape. A high score on this scale indicates the presence of depressed mood (negative arousal). Internal (alpha) reliability coefficient for the MAACL Depression Scale is .82 (Zuckerman & Lubin, 1965). Validity for the MAACL Depression Scale was derived from its strong correlation with the MMPI Depression Scale (r= 41), as well as a strong correlation between subjects responses and their peer ratings (r=.51) (Zuckerman & Lubin,

1965).

Coyne's Further Interaction Questionnaire. The second measure was a short questionnaire developed by Coyne (1976a) (Appendix B) which measures the degree of willingness of an individual to engage in further interactions with another person. A high score on this measure reflects a willingness for further interaction. This questionnaire was administered to subjects following the viewing of each video tape and was used to evaluate rejection of the actress by subjects. As yet there is no reliability or validity information for this measure.

Rubin's Liking Scale. The third measure was another short questionnaire, Rubin's Liking Scale (Rubin, 1974) (Appendix C). This questionnaire measured the degree of favorable regard the subject had for the actress and was also administered to subjects following the viewing of each video tape. A high score on this measure indicates the presence of favorable regard. Internal (alpha) reliability coefficient for the Liking Scale is .81 (Rubin, 1970). Validity for the Liking Scale was derived from its low correlation (r=.39) with a Love Scale, which measures a conceptually distinct construct (Rubin,1970).

Fourth, three measures of personality attributes and mood were given to subjects prior to any viewing of video tapes. They were the Interpersonal Reactivity Index, specifically, the Empathy scale (IRI; Davis, 1980, 1983)

(Appendix D); the Self-Consciousness Scale, specifically, the Private and Public Self-Consciousness scales (SCS; Fenigstein, Buss, & Scheier, 1975 (Appendix E); and the Beck Depression Inventory (BDI; Beck et al., 1961) (Appendix F).

IRI. The IRI Empathy Scale measures other-oriented feelings such as sympathy and concern. A high score on this scale indicates the presence of empathy. Test retest reliability for this scale is .70 (Davis, 1983). Validity for the Empathy Scale is derived its strong correlation (r=.63) with other measures of empathy such as The Questionnaire Measure of Emotional Empathy (Davis, 1983).

SCS. The Private and Public Self-Consciousness Scales indicate how self-focused or other-focused an individual is. A high score on the Private Self-Consciousness Scale is evidence of a subject being inwardly focused. Test retest reliability for this scale is .79 (Fenigstein, Buss, & Scheier, 1975). A high score on the Public Self-Consciousness Scales indicates a subject is outwardly focused. Test retest reliability for this scale is .84 (Fenigstein, Buss, & Scheier, 1975). Validity for both the Private and Public Self-Consciousness scales were derived from the high factor loading (.40 or above) of items in each scale using a principal components analysis with a varimax rotation (Fenigstein, Buss, & Scheier, 1975).

BDI. The BDI reflects the presence of depression. Higher scores indicate more depression. Test retest

reliability for this measure ranges from .69 to .90 (Bumberry, Oliver, & McClure, 1978). Validity for the BDI is derived from its strong correlation (r=.77) with clinicians'ratings regarding depth of depression in a college population (Bumberry, Oliver, & McClure, 1978).

Procedure

Each subject came to the laboratory a total of three times (with at least one day between each visit) and completed a consent form (Appendix I) each time. Upon their first visit and prior to seeing any video tape, they were asked to fill out three measures, the BDI which reflects the presence of depression, the IRI which measures empathy, and the SCS which measures whether an individual is inwardly or outwardly focused. They were told that this was a study of the acquaintance process (Coyne, 1976a) and were asked to view a 10 minute video tape of someone they did not know. They were not told that the person they were asked to view was an actress. Each time they came, they were also told that the next scheduled viewing may be of the same person as before, or someone new. Subjects were told this in order to control for expectation bias. However, in reality all subjects saw the same person three times. To encourage subjects to attend all three sessions, they were allowed to enter their name in a raffle on their last visit to the lab; the raffle prize for first place was $50.00, second place

was $30.00, and third place was $20.00. At the end of the experiment, subjects were fully debriefed and given a list of referrals. Appendix J).

There were a total of nine tapes, three tapes per condition. In Condition 1, 25 subjects watched three video tapes of an actress playing a depressive role with no symptom improvement. For example, she said "no matter what I do, I don't sleep well". In Condition 2, 25 other subjects saw three video tapes of an actress playing a depressive role, and where she stated that her symptoms were improving. For example, she said "I think I'm doing better, I'm not crying as much as I used to". In Condition 3, 25 other subjects saw three video tapes of an actress playing a normal role making neutral comments. For example, she said "I go to class and study".

Upon every visit and after viewing a video tape, each subjects filled out the MAACL (which measures negative mood arousal), a short questionnaire developed by Coyne (1976a) where they indicated their degree of willingness to engage in further interactions with the actress (evaluates rejection), and Rubin's Liking scale (which measures favorable regard).

CHAPTER III

Results

Overview

The findings from the present study are presented in five segments. In the first segment, data are presented from the personality and depression measures, the BDI, SCS, and the IRI (means and standard deviations located in Table 1, Appendix K). The BDI is a depressive mood measure. The Private and Public Self-Consciousness Scales from the SCS reflect whether one is inwardly or outwardly directed. The IRI is an empathy measure. These variables were intended to be used as covariates in this study. The second segment consists of results from the MAACL's Depression Scale. This scale denotes negative affect experienced after seeing the video tapes. In the third segment, findings from Coyne's Further Interaction Questionnaire are reported. This measure indicates the likelihood for rejection of the person seen on video-tape. The fourth segment contains the findings from Rubin's Liking Scale. This scale reflects whether subjects had a favorable regard for the person seen on video-tape. Lastly, the fifth segment contains results from both Coyne's and Rubin's measures combined, employed as an overall measure of rejection. (Means and pooled variance errors for the MAACL, Coyne, and Rubin measures are located in Table 2,

Appendix K).

Three outliers were removed before any analyses were conducted resulting in N=23 for Condition 1, N=25 for Condition 2, and N=24 for Condition 3. A series of one-way ANOVAs, using condition as a source of variance, was conducted on the data from the BDI, the Private and Public Self-Consciousness scales from the SCS, and the IRI. Alpha was set at .05. In addition, correlational analyses were also conducted on personality variables and dependent measures. A series of ANOVAs, using condition, tapes, and the interaction between condition and tapes as sources of variance, were conducted on the data from the MAACL's Depression Scale, Coyne's Further Interaction Questionnaire, and Rubin's Liking Scale. Planned comparison analyses were then done conservatively by using Tukey. A MANOVA using data from Coyne's and Rubin's measures as an overall measure of rejection was conducted. Alpha was set at .05 for these last three types of analyses.

It should be noted from inception that there were problems with the MAACL. Initially, the MAACL-R was to be employed. A score on the MAACL-R's Depression Scale is obtained by adding up the total number of depressive adjectives checked. However, Zuckerman, Lubin, and Rinck (1983) have noted that the modal subject's score on the depression scale is zero and is therefore not amenable to analysis. Therefore, the Depression Scale from the original

MAACL was used in this study. The Depression Scale of the original MAACL is scored by adding up the number of depressive adjectives checked (which are the same ones that appear in the MAACL-R), and the number of positive adjectives not checked. Any variability found in the data arose from the number of positive adjectives that subjects did not check; a measure that relies on its ability to detect differences in the population based on the omission of responses is problematic. As such, the MAACL was omitted from the MANOVA that included Coyne's Further Interaction Measure and Rubin's Liking Scale.

Personality Variables

Two correlational analyses were conducted to determine the relationship between pre-existing personality variables and subjects' responses to the tapes. The first correlational analysis was conducted, between the four personality variables and the three dependent measures for the first tape of each condition, per condition. The second correlational analysis was conducted between the four personality variables and the three dependent measures for the first tape of each condition with all three conditions combined. The four personality variables were assessed by the BDI, which measured depressive mood; the Private and Public Self-Consciousness Scales from the SCS, which measured whether one is inwardly or outwardly directed; and the IRI which measured empathy. The three dependent

variables were the Depression Scale from the MAACL, which indicated negative affect experienced; Coyne's Further Interaction Measure, which reflected the desire for further interaction with another; and Rubin's Liking Scale, which measured favorable regard for another. Given the small sample size (i.e., 23-25) and number of correlations conducted (i.e., 12 per condition), only correlations greater than .40 were considered statistically significant according to the table significance levels of the correlation coefficient with 20-25 pairs with $p > .05$ (Snedecor & Cochran, 1989). Given this cutoff, results from these correlational analyses were not statistically significant (Table 3, Table 4, Table 5, and Table 6; all tables are in Appendix K) with one exception. In Condition 1, there was a .47 correlation between the Private Self-Consciousness and Rubin's Liking Scale (Table 3). This finding does not support the prediction that inwardly focused individuals should evidence less positive regard towards a depressed role enactment. However, this is a weak finding and its statistical significance may have been due to sampling variation. Otherwise, it could be taken to indicate that inwardly directed subjects were more likely to demonstrate favorable regard for the person seen on Tape 1 in Condition 1.

No differences were expected on these personality variables across conditions because subjects were randomly

assigned to the three conditions. A series of one-way analyses of variance comparing differences in subjects' responses across conditions on the BDI, the Private and Public Self-Consciousness Scales from the SCS, and the IRI were conducted to determine if the analyses of covariance were necessary. The results were not statistically significant. Specifically, for the BDI, F (2,69) = 1.43, p = .2452 (Table 7); for the Private Self-Consciousness Scale, F (2,69) = .71, p = .4956 (Table 8); for the Public Self-Consciousness Scale, F (2,69) = .48, p = .6202 (Table 9); and for the IRI, F (2,69) = 2.14, p = .1256 (Table 10). Since the findings from the analyses of variance on the personality variables were not statistically significant, the personality variables were not employed as covariates in subsequent analyses.

MAACL Data

The Depression Scale from the MAACL indicates negative affect experienced. Results from an analysis of variance comparing differences in negative affect experienced after seeing the person on video tape were not statistically significant for condition, F (2,69) = 2.09, p = .1320, or for the interaction between condition and tape, F (4,138) = .70, p = .5913 (Table 11). The result for tape, F (4,138) = 3.82, p = .0244 (Table 11) was statistically significant.

However, a planned comparison analysis on tape using

Tukey almost reached statistical significance for a difference between Tapes 2 and 3. (Table 12). Moreover, inspection of the means indicate less depressed affect after Tape 3 than after Tapes 1 or 2 (Table 12). In other words, more exposure to the normal or depressed role enactments produced less negative affect.

The interaction between condition and tape was not statistically significant and a planned comparison analysis on tape at condition using Tukey revealed no differences between Tapes 1, 2, and 3 in Conditions 1, 2, or 3. (Table 13). However, a planned comparison analysis on condition at tape using Tukey revealed differences between Conditions 1 and 3, and 2 and 3, for Tapes 1, 2, and 3 (Table 14). Thus, subjects reported less negative arousal after seeing the normal role enactment in Tapes 1, 2, and 3 in Condition 3 than after seeing the depressed role enactments in Tapes 1, 2, and 3 in Conditions 1 and 2.

Subjects were predicted to evidence less negative arousal across the three tapes after they saw the non-depressed person in Condition 3 than Conditions 1 and 2. This prediction was supported by the planned comparison analysis on condition at tape using Tukey and is reflected in the plot (Figure 1, Appendix L). The plot showed that subjects reported less depressed affect after seeing the person in Condition 3 (across all three tapes) than after seeing the same person in Conditions 1 and 2.

Despite the lack of statistical support for the prediction (that subjects would demonstrate less depressed affect after having seen the person in all three tapes in Condition 2 when compared to Condition 1), the plot depicted slight support at Tape 3. Thus, although not statistically different, subjects reported less depressed affect in Condition 2 than Condition 1 at Tape 3 (Figure 1, Appendix L) .

MANOVA Data

Data from both Coyne's and Rubin's measures but not the MAACL were used as an overall measure of rejection (partial correlation coefficients are located in Table 15), and a MANOVA was conducted. Results from the MANOVA comparing differences in overall rejection of the person seen on video-tape was statistically significant for condition, F (4,136) = 29.48, p = .0001, for tape, F (4,274) = 2.72, p = .0297, but not for the interaction between tape and condition, F (8,274) = 1.91, p = .0578 (Table 16). An examination of the means from the two individual dependent measures suggest that subjects were less likely to reject the non-depressed person seen in Condition 3 than subjects who saw the same person enacting a depressed role in Conditions 1 or 2.

Subjects also exhibited variation in their responses to tapes when both measures were combined and analyzed with a MANOVA. Looking at the means for Tapes 1, 2, and 3 for the

individual dependent measures in Tables 17 and 22, subjects expressed most liking for the person on videotape at the first exposure at Tape 1 than at subsequent exposures. This may have been due to subjects experiencing boredom with the task after Tape 1.

Further Interactions Questionnaire Data

The subjects' desire for further interaction with the person seen on video-tape was measured on a one to six scale per questionnaire item, with one indicating little interest in further contact and six indicating strong interest in further contact. Results from an analysis of variance comparing differences in desire for further contact with the person seen on video-tape was statistically significant for condition, F (2,69) = 37.30, p = .0001; for tape, F (2, 138) = 5.37, p = .0057; and for the interaction between condition and tape, F (4, 138) = 2.58, p = .0399 (Table 17).

A planned comparison analysis on condition using Tukey revealed that, as predicted, subjects were more willing to have further interaction with the non-depressed person seen in Condition 3 than subjects who saw the same person enacting a depressed role in Conditions 1 or 2, with these latter two conditions not differing from each other (Table 18). A planned comparison analysis on tape using Tukey revealed that subjects were more willing to interact with the taped person after Tape 1 than after Tapes 2 or 3 (Table

19). A planned comparison analysis on tape at condition using Tukey revealed no differences between Tapes 1, 2, and 3 in Conditions 1, 2, or 3 (Table 20). However, a planned comparison analysis on condition at tape using Tukey revealed differences between Conditions 1 and 3, and between Conditions 2 and 3, at Tapes 1, 2, and 3, and between Conditions 1 and 2 at Tape 3 (Table 21). These differences can also be seen when the means are plotted (Figure 2, Appendix L). Thus, as expected, subjects reported a greater willingness to have further interaction with the non-depressed person seen in Condition 3 across all three tapes than with the same person portraying a depressed role in Conditions 1 and 2. In addition, as predicted, subjects demonstrated more willingness to interact with the taped person after Tape 3 in Condition 2 when the depressed person showed improvement in symptoms than after Tape 3 in Condition 1 when the depressed person showed no improvement in symptoms.

Rubin's Liking Scale

Subjects' favorable regard for the person seen on video-tape was measured on a zero to nine scale per scale item, with zero indicating strong disagreement for favorable regard and nine indicating strong agreement for favorable regard. Results from an analysis of variance comparing differences in favorable regard for the person seen on video-tape was statistically significant for condition, F

(2,69) = 84.15, p = .0001, but not for tape F (2,138) = .18, p = .8314, or for the interaction between tape and condition, F (4,138) = 1.70, p = .1544 (Table 22). A planned comparison analysis on condition using Tukey indicated that subjects reported more favorable regard for the non-depressed person seen in Condition 3 than subjects who saw the same person enacting a depressed role in Conditions 1 or 2 with the latter two means not differing from each other (Table 23).

The interaction between condition and tape was not statistically significant and a planned comparison analysis on tape at condition using Tukey revealed no differences between Tapes 1, 2, and 3 in Conditions 1, 2, or 3. (Table 25). However, a planned comparison analysis on condition at tape using Tukey revealed differences between Conditions 1 and 3, and between Conditions 2 and 3, at Tapes 1, 2, and 3, and between Conditions 1 and 2 at Tape 3 (Table 26). These differences can also be seen when the means are plotted (Figure 3, Appendix K).

Thus as expected, subjects demonstrated more positive regard for the non-depressed person seen in Condition 3 across all three tapes than for the same person portraying a depressed role in Conditions 1 and 2. In addition, as predicted, subjects evidenced more positive regard towards the depressed role enactment on Tape 3 in Condition 2 when the depressed person showed symptom improvement than after

the depressed role enactment on Tape 3 in Condition 1 when the depressed person did not show symptom improvement.

CHAPTER IV

Discussion

Coyne's (1976a) interactional model of depression suggests that depressed individuals elicit negative mood arousal (e.g., anxiety, depression, hostility) and rejection in others. This model has received much empirical support (Coyne, 1976b; Gotlib & Robinson, 1982; Hammen & Peters, 1978; Howes & Hokanson, 1979; Robbins et al., 1979; Strack & Coyne, 1983; Winer et al., 1981; Yarkin et al., 1981). The contextual features (e.g., contrived vs. noncontrived exchanges, knowledge or no knowledge of a depression precipitant), however, that may influence whether negative arousal and rejection occur in persons who have had some contact with a depressed person have not been delineated. Instead, some behaviors of depressed individuals that have produced negative reactions in others have been suggested: inappropriate timing of self-disclosure (Jacobson & Anderson, 1982), negative self-evaluation statements (Gotlib & Robinson, 1982; Hokanson, Sacco, Blumberg, & Landrum, 1980), nonverbal behavior (e.g., eye contact, head and mouth angle) (Gotlib & Robinson, 1982; Waxer, 1974), and other aspects of verbal behavior other than content (e.g., voice quality) (Gotlib & Robinson, 1982).

The current study examined the impact of two contextual factors, repeated exposure to a depressed individual (via video-tape) and depressive symptom improvement, upon the elicitation of negative arousal and rejection effects. More specifically: Would repeated exposure to a depressed role enactment with no symptom improvement (via video tape) elicit negative arousal and/or rejection? Would repeated exposure to a depressed role enactment with symptom improvement elicit less negative arousal and/or rejection? And, would repeated exposure to a normal role enactment fail to elicit negative arousal and/or rejection? In addition, do certain personality variables (i.e., empathy, inward or outward focus, and depression) of the person watching the video-tapes impact upon the elicitation of negative arousal and rejection?

Subjects' Personality Variables

It was hypothesized that subjects who are low in empathy, inwardly focused, and/or depressed would demonstrate more adverse arousal and/or rejection effects than those who were high in empathy, outwardly focused, and not depressed. In other words, there should be a high positive correlation between inward focus and depression, and adverse arousal and rejection. Conversely, there should be a high negative correlation between outward focus and empathy, and negative arousal and rejection. The results did not support these hypotheses. Instead, the one finding that

was statistically significant suggests the opposite of the first hypothesis. In Condition 1, subjects who were more inwardly focused tended to evidence more favorable regard towards the person in Tape 1. However, given the small sample size and number of correlational analyses conducted, this effect may have been due to sampling variation. The remaining results suggest that overall subjects' reactions to the person seen on video-tape were not associated with depression, empathy, inward or outward focus. Further evidence of this lack of association was provided by the non-statistically significant effects found in the correlational analysis with all three conditions combined.

Reaction to a Depressed Role Enactment vs. Reaction to a Normal Role Enactment

It was predicted that subjects who were repeatedly exposed to either of the depressed role enactments would evidence more negative arousal and/or rejection than subjects who were repeatedly exposed to a normal role enactment. The results show that as predicted, subjects evidenced more rejection and negative arousal to both depressed role enactments when compared to the normal role enactment. (These results are the significant planned comparison analysis of the interaction on the MAACL and the significant main effects for condition on the Rubin and Coyne measures).

Reaction to a Depressed Role Enactment With and Without Symptom Improvement

It was predicted that subjects who were repeatedly exposed to a depressed role enactment, with no symptom change, would evidence more negative arousal and/or rejection of the taped individual, than subjects who were repeatedly exposed to a depressed role enactment evidencing symptom improvement. At Tape 3, differences were found between subjects on the two liking measures who saw a depressed role enactment with no symptom improvement (liked less), and subjects who saw a depressed role enactment with symptom improvement (liked more). Subjects who saw the depressed role enactment with no symptom improvement demonstrated less liking in Tape 3 than Tapes 1 and 2 in Condition 1. Conversely, subjects who saw the depressed role enactment with symptom improvement demonstrated more liking in Tape 3 than Tapes 1 and 2 in Condition 2. The results of the mood measure (which were almost statistically significant) and the inspection of the means were in the predicted direction. At Tape 3, subjects reported less negative affect toward the depressed role enactment evidencing symptom improvement than toward the depressed role enactment evidencing no symptom improvement.

Conclusion

The findings from the present study suggest that certain personality attributes (e.g., empathy, inward or

outward focus) are not associated with the elicitation of negative arousal and rejection with one unpredicted exception. Individuals who were more inwardly focused tended to show more favorable regard for the depressed person. However, given the previously discussed limitations (e.g., sample size, number of correlational analyses conducted),this effect was probably due to sampling variation.

As predicted, the findings of the present study are consistent with the literature and demonstrate that rejection and negative arousal are elicited by depressed role enactments when compared to normal role enactments. The results of the present study also revealed, as predicted that repeated exposure to a depressed role enactment with no symptom improvement elicited more rejection and negative arousal than to a depressed role enactment with symptom improvement. At Tape 3, there were differences between subjects responses to the depressed role enactments that showed symptom improvement, and those that portrayed no symptom improvement. These findings have practical implications for clinicians treating depressed persons. It suggests the importance of giving support when the person is depressed and positive feedback for small increments of improvement.

Strengths and Limitations

The present study had various strengths and limitations. Its primary strength was that it expanded the scope of the existing body of literature which attempts to explain the inconsistent findings in reactions to depressed persons. It did so by identifying and testing the impact of two contextual variables (i.e., repeated exposure and symptom improvement) upon the elicitation of negative arousal and rejection. It made an effort to more fully address Coyne's model by examining the impact of repeated interactions across time. It is the first study to investigate certain personality attributes of those interacting with the depressed individual (via video-tape) and their mediational impact upon the elicitation of negative arousal and rejection. Through the use of role enactments, the present study was able to control for psychopathology other than depression, and thus was able to assert that results found were indicative of depression and not some other form of psychopathology. However, this does not support the notion that rejection and negative arousal effects are unique to depression, (e.g., persons with other forms of psychopathology may also elicit rejection and negative arousal.

The present study also had a few limitations. Firstly, the use of role enactments as substitutes for patients reduces the generalizability of the study, as does the

employment of contrived short interactions. Additionally, the use of the MAACL as a measure of negative mood arousal with its sensitivity problems (as previously discussed) may have weakened any effects for negative arousal.

Directions for Future Research

It has been suggested that various contextual features may influence whether negative arousal and rejection occur in persons who have had some contact with a depressed person. Consequently, these effects may only be manifested under certain conditions. Therefore, studies that examine when the presence or absence of particular contextual factors (e.g., familiar others or strangers; contrived or noncontrived exchanges; face to face interactions or some other form of interaction; symptom improvement or no improvement; and knowledge or no knowledge of a depression precipitant) play a role in the elicitation of negative arousal and rejection of depressed individuals are essential to the understanding of how and when these effects arise. It would be possible to perform these studies by varying the contextual variable and noting the outcome. For example, one could vary the type of exchange employed (contrived vs. noncontrived, face to face vs. some other form) and note the outcome. For another example, studies that look at the impact of a depression precipitant on the elicitation of negative arousal and rejection may also be done. To be more

specific, one could have depressed individuals state or not state why they became depressed, and compare the reactions of others to them, depending on whether a precipitant was stated and/or the nature of that precipitant. Moreover, studies that examine the impact of symptom improvement may find stronger effects if the changes in symptom improvement were more dramatic. For example, one could use a role enactment where nine symptoms are displayed, then five, then 0, and note its impact upon others.

The majority of studies conducted examine the effects of a one time interaction. This is a problem since the theory describes the effects of negative arousal and rejection as occurring over time and across interactions. Only a few, such as the present study, examined the impact of repeated interactions. More studies that examine repeated interactions across time are needed. For example, one could identify individuals who are at risk for depression and measure others' reactions to them before they got depressed, while they were depressed, and after the depressive episode remitted.

All studies of Coyne's model examine the impact of depressed individuals on others. No studies that investigate the impact of negative arousal and rejection effects on the depressed person have been conducted. The probable reason for this is the ethical dilemma that researchers face. Though one could study the effects of giving or withholding

support to an individual who is already depressed, the question becomes whether it is ethical to study the effects of withholding support, when you suspect that such withholding serves to maintain the depression. One way to do this might be by studying the impact of no support on depressed individuals from some of the persons in their life as opposed to all persons in their lives. Alternatively, reseachers could record natural interactions where no support has been noted in the exchange and measure the impact it has upon depressed persons. However, until such studies are allowed to be conducted, the researcher can only hope to gain insight to this phenomenon by identifying and focusing in increasing detail on the various factors that could be significant in such interactions.

The present dissertation has demonstrated the importance of contextual variables (i.e. repeated exposure and depressive symptom improvement) upon the elicitation of negative arousal and rejection effects by depressed persons. Future research should include similar studies which address the role of contextual variables. This would provide a means of clarifying the present inconsistent findings in the literature about Coyne's model and the effects of depressed persons on others.

BIBLIOGRAPHY

Archer, R.L., Diaz-Loving, R., Gollwitzer, P.M., Davis., M.H., & Foushee, H.C. (1981). The role of dispositional empathy and social evaluation in the empathic mediation of helping. Journal of Personality and Social Psychology, 40, 786-796.

Beck, A.T., Ward, C.H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Biglan, A., Hops, H., & Sherman, L. (1988). Coercive family processes and maternal depression. In R. DeV. Peters & J. McMahon (Eds.), Marriage and families: Behavioral-systems approaches. New York: Brunner-Mazel.

Boswell, P.C., & Murray, E.J. (1981). Depression, schizophrenia, and social attraction. Journal of Consulting and Clinical Psychology, 91, 231-240.

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

Coke, J.S., Batson, C.D., & McDavis, C. (1978). Empathic mediation of helping: A two-stage model. Journal of Personality and Social Psychology, 36, 752-766.

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

Coyne, J.C. (1976b). Toward an interactional description of depression. Psychiatry, 39, 142-147.

Davis, M.H. (1983). Measuring individual differences in empathy. JSAS Catalog of Selected Documents in Psychology, 10, 85.

Davis, M.H. (1983). Measuring individual differences in empathy: Evidence for multidimensional approach. Journal of Personality and Social Psychology, 44, 113-126.

Doerfler, L.A., & Chaplin, W.F. (1985). Type III error in research on interpersonal models of depression. Journal of Abnormal Psychology, 94, 227-230.

DSM IV (1994). American Psychiatric Association.

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

Gibbons. F.X., Wicklund, R.A. (1982). Self-focused attention and helping behavior. Journal of Personality and Social Psychology, 43, 462-474.

Gotlib, I.H., & Robinson, A.R. (1982). Responses to depressed individuals: Discrepancies between self-report and observer-rated behavior. Journal of Abnormal Psychology, 91, 231-240.

Gurtman, M.B. (1986b). Depression and the response of others: Reevaluating the reevaluation. Journal of Abnormal Psychology, 95, 99-101.

Hammen, C.L. & Peters, S.D. (1978). Differential responses to male and female depressive reactions. Journal of Abnormal Psychology, 45, 994-1001.

Hargreaves, W.A., Starkweather, J.A., & Blacker, K.H. (1965). Voice quality in depression. Journal of Abnormal Psychology, 70, 218-220.

Hokanson, J.E., Sacco, W.P., Blumberg, S.R., & Landrum, G.C. (1980). Interpersonal behavior of depressive individuals in a mixed-motive game. Journal of Abnormal Psychology, 89, 320-332.

Howes, M.J., & Hokanson, J.E. (1979). Conversation and social responses to depressive interpersonal behavior. Journal of Abnormal Psychology, 88, 625-634.

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.

King, D.A., & Heller, K. (1984). Depression and the response of others: A re-evaluation. Journal of Abnormal Psychology, 93, 477-480.

King, D.A., & Heller, K. (1986). Depression and the response of others: Is the effect specific? Journal of Abnormal Psychology, 95, 410-411.

Marcus, D.K., & Nardone, M.E. (1992). Depression and interpersonal rejection. Clinical Psychology Review, 12, 433-449.

McNeil, D.E., Arkowitz, H.S., & Pritchard, B.E. (1987). The response of others to face-to-face interactions with depressed patients. Journal of Abnormal Psychology, 96, 341-344.

Nelson, R.O., Lin, K., & Torquato, R. (1989, November). Confidential and shared reactions of strangers and familiar others to depressives. Paper presented at the AABT meeting, Washington D.C..

Newman, S.S., & Maher, V.G. (1938). Analysis of spoken language of patients with affective disorders. American Journal of Psychiatry, 94, 913-942.

Robbins, B.P., Strack, S., & Coyne, J.C. (1979). Willingness to provide feedback to depressed persons. Social Behavior and Personality, 17, 199-203.

Rubin, Z. (1974). From liking to loving. Foundations of interpersonal attraction. Huston, TL.

Sanislow, C.A., Perkins, D.V., & Balogh, D.W.(1989). Mood induction, interpersonal perceptions, and rejection in the roommates of depressed, nondepressed-disturbed, and normal college students. Journal of Social and Clinical Psychology, 8, 345-358.

Scherer, K.R. (1982). Methods of research on vocal communication: Paradigms and parameters. In K.R. Scherer, P. Ekman (Eds.), Handbook of methods in nonverbal behavior research (pp. 136-198). Cambridge: Cambridge University Press.

Scherer, K.R. (1987). Vocal assessment of the affective disorders. In J.D. Maser (Ed.), Depression and expressive behavior (pp.57-82). Hillsdale, N.J: Lawrence Erlbaum Associates.

Snedecor, W., George, & Cochran, G., William. (1989). Statistical methods. (8th ed.). Iowa State Univerity Press.

Strack, S., & Coyne, J.C. (1983). Social Confirmation of dysphoria: Shared and private reactions to depression. Journal of Personality and Social Psychology, 44, 798-806.

Waxer, P. (1974). Nonverbal cues for depression. Journal of Abnormal Psychology, 83, 318-322.

Whitman, E.N., & Flicker, D.J. (1966). A potential new measurement of emotional state: A preliminary report. Newark Beth-Israel Hospital, 17, 167-172.

Winer, D.L., Bonner, T.O., Blaney, P.H., & Murray, E.J. (1981). Depression and social attraction. Motivation and Emotion, 5, 153-166.

Yarkin, K.L., Harvey, J.H., & Bloxom, B.M. (1981). Cognitive sets, attribution, and social interaction. Journal of Personality and Social Psychology, 41, 243-252.

Youngren, M.A., & Lewinsohn, P.M. (1980). The functional relation between depressed and problematic interpersonal behavior. Journal of Abnormal Psychology, 89, 333-341.

Zuckerman, M., & Lubin, B., Rinck, C.M. (1983). Construction of new scales for the Multiple Affect Adjective Checklist. Journal of Behavioral Assessment, 5, 119-129.

Zuckerman, M., & Lubin, B. (1965). Manual for the multiple affect adjective checklist. San Diego, CA: EdITS.

Appendix A

Today Form of the Multiple Affect Adjective Checklist

Appendix A

Today Form of Multiple Affect Adjective Checklist

On this sheet you will find words which describe different words which describe how you generally feel. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly.

1 ___ active
2 ___ adventurous
3 ___ affectionate
4 ___ afraid
5 ___ agitated
6 ___ agreeable
7 ___ aggressive
8 ___ alive
9 ___ alone
10___ amiable
11___ amused
12___ angry
13___ annoyed
14___ awful
15___ bashful
16___ bitter
17___ blue
18___ bored
19___ calm
20___ cautious
21___ cheerful
22___ clean
23___ complaining
24___ contented
25___ contrary
26___ cool
27___ cooperative
28___ critical
29___ cross
30___ cruel
31___ daring
32___ desperate
34___ destroyed
35___ disagreeable
36___ discontented
37___ discouraged
38___ disgusted
39___ displeased
40___ energetic
41___ enraged
42___ enthusiastic
43___ fearful

44___ fine
45 ___ fit
46___ forlorn
47___ frank
48___ free
49___ friendly
50___ frightened
51___ furious
52___ lively
53___ gentle
54___ glad
55___ gloomy
56___ good
57___ good-natured
58___ grim
59___ happy
60___ healthy
61___ hopeless
62___ hostile
63___ impatient
64___ incensed
65___ indignant
66___ inspired
67___ interested
68___ irritated
69___ jealous
70___ joyful
71___ kindly
72___ lonely
73___ lost
74___ loving
75___ low
76___ lucky
77___ mad
78___ mean
79___ meek
80___ merry
81___ mild
82___ miserable
83___ nervous
84___ obliging
85___ offended
86___ outraged
87___ panicky
88___ patient
89___ peaceful
90___ pleased
91___ pleasant
92___ polite
93___ powerful
94___ quiet
95___ reckless

96___ rejected
97___ rough
98___ sad
99___ safe
100__ satisfied
101__ secure
102__ shaky
103__ shy
104__ soothed
105__ steady
106__ stubborn
107__ stormy
108__ strong
109__ suffering
110__ sullen
111__ sunk
112__ sympathetic
113__ tame
114__ tender
115__ tense
116__ terrible
117__ terrified
118__ thoughtful
119__ timid
120__ tormented
121__ understanding
122__ unhappy
123__ unsociable
124__ upset
125__ vexed
126__ warm
127__ whole
128__ wild
129__ willful
130__ wilted
131__ worrying
132__ young

Appendix B

Further Interactions Questionnaire

Appendix B

Further Interactions Questionnaire

Please indicate on a scale from 1 (totally disagree) to 6 (totally agree) how much you agree with each item.

____ 1. Would you like to meet this person?

____ 2. Would you like to sit next to this person on a 3-hour bus trip?

____ 3. Would you be willing to work on a job with this person?

____ 4. Would you be willing to have this person eat lunch with you often?

____ 5. Would you invite this person to your home?

____ 6. Would you be willing to share an apartment with someone like this?

____ 7. How likely would it be that this person could become a close friend of yours?

____ 8. Would you be willing to have a person like this supervise your work?

____ 9. Would you ask this person for advice?

____ 10. How physically attractive do you think this person is?

____ 11. How socially poised do you think this person is?

____ 12. How likely would it be that you would go out with

a person with this kind of personality?

_____ 13. How likely would it be that you would marry someone with a personality like this?

Appendix C

Rubin's Liking Scale

Appendix C

Rubin's Liking Scale

Please indicate on a scale from 0 (totally disagree) to 9 (totally agree) how much you agree with each item.

____ 1. When I am with the ____, we always are in the same mood.

____ 2. I think that ____ is unusually well-adjusted.

____ 3. I would highly recommend ____ for a responsible job.

____ 4. In my opinion, ____ is an exceptionally mature person.

____ 5. I have great confidence in ____ 's good judgment.

____ 6. Most people would react favorably to ____ after a brief acquaintance.

____ 7. I think that ____ and I are quite similar to one another.

____ 8. I would vote for ____ in a class or group election.

____ 9. I think that ____ is one of those people who quickly wins respect.

____ 10. I feel that ____ is an extremely intelligent person.

____ 11. ____ is one of the most likable people I know.

____ 12. ____ is the sort of person whom I myself would like to be.

_____ 13. It seems to me that it is very easy for ____ to gain admiration.

Appendix D

Interpersonal Reactivity Scale

Appendix D

IRI

Please respond to each item on a 5-point scale (0 1 2 3 4), with 0 indicating it does not describe me well, to 4 it describes me very well.

____ 1. I daydream and fantasize, with some regularity about things that might happen to me.

____ 2. I often have tender, concerned feelings for people less fortunate than me.

____ 3. I sometimes find it difficult to see things from the "other guy's" point of view.

____ 4. Sometimes I don't feel very sorry for other people when they are having problems.

____ 5. I really get involved with the feelings of the characters in a novel.

____ 6. In emergency situations, I feel apprehensive and ill-at-ease.

____ 7. I am usually objective when I watch a movie or play and I don't often get completely caught up in it.

____ 8. I try to look at everybody's side of a disagreement before I make a decision.

____ 9. When I see someone being taken advantage of, I feel kind of protective toward them.

____ 10. I sometimes feel helpless when I am in the middle of a very emotional situation.

____ 11. I sometimes try to understand my friends better by imagining how things look from their perspective.

____ 12. Becoming extremely involved in a good book or movie is somewhat rare for me.

____ 13. When I see someone get hurt, I tend to remain calm.

____ 14. Other people's misfortunes do not usually disturb me a great deal.

____ 15. If I'm sure I'm right about something , I don;t waste much time listening to other people's arguments.

____ 16. After seeing a play or movie, I have felt as though I were one of the characters.

____ 17. Being in a tense emotional situation scares me.

____ 18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

____ 19. I am usually pretty effective in dealing with emergencies.

____ 20. I am often quite touched by things I see happen.

____ 21. I believe that there are two sides to every question and try to look at both of them.

____ 22. I would describe myself as a pretty soft-hearted person.

____ 23. When I watch a good movie, I can very easily put myself in the place of a leading character.

____ 24. I tend to lose control during emergencies.

____ 25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

____ 26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

____ 27. When I see someone who badly needs help in an emergency, I go to pieces.

____ 28. Before criticizing someone, I try to imagine how I would feel if I were in their place.

Appendix E

Self-Consciousness Scale

Appendix E

SCS

Please indicate on a scale of 0 (extremely uncharacteristic) to 4 (extremely characteristic) how characteristic each item is of you.

___ 1. I'm always trying to figure myself out.

___ 2. I'm concerned about my style of doing things.

___ 3. Generally I'm not very aware of myself.

___ 4. It takes me time to overcome my shyness in new situations.

___ 5. I reflect about myself a lot.

___ 6. I'm concerned about the way I present myself.

___ 7. I'm often the subject of my own fantasies.

___ 8. I have trouble working when someone is watching me.

___ 9. I never scrutinize myself.

___ 10. I get embarrassed very easily.

___ 11. I m self conscious about the way I look.

___ 12. I don't find it hard to talk to strangers.

___ 13. I'm generally attentive to my inner feelings.

___ 14. I usually worry about making a good impression.

___ 15. I'm constantly examining my motives.

___ 16. I feel anxious when I speak in front of a group.

___ 17. One of the last things I do before I leave my house is to look in the mirror.

___ 18. I sometimes have the feeling that I'm off somewhere watching myself.

___ 19. I'm concerned about what other people think of me.

___ 20. I'm alert to changes in my mood.

___ 21. I'm usually aware of my appearance.

___ 22. I'm aware of the way my mind works when I work through a problem.

___ 23. Large groups make me nervous.

Appendix F

Beck Depression Inventory

Appendix F

Beck Depression Inventory

Please indicate the one statement in that group which best describes the way you've been feeling in the PAST WEEK including TODAY.

A.
0. I do not feel sad.
1. I feel blue or sad.
2a. I am blue or sad all the time and I can't snap out of it.
2b. I am so sad or unhappy that it is very painful.
3. I am so sad or unhappy that I can't stand it.

B.
0. I am not particularly pessimistic or discouraged about the future.
1. I feel discouraged about the future.
2a. I feel I have nothing to look forward to.
2b. I feel that I won't ever get over my troubles.
3. I feel that the future is hopeless and that things cannot improve.

C.
0. I do not feel like a failure.
1. I feel like I have failed more than the average person.
2a. I feel that I have accomplished very little that is worthwhile or that means anything.
2b. As I look back in my life all I can see is a lot of failures.
3. I feel I am a complete failure as a person (parent, husband, wife).

D.
1. I am not particularly dissatisfied.
1a. I feel bored most of the time.
1b. I don't enjoy things the way I use to.
2. I don't get satisfaction out of anything anymore.
3. I am dissatisfied with everything.

E.
0. I don't feel particularly guilty.
1. I feel bad or unworthy a good part of the time.
2a. I feel quite guilty.
2b. I feel bad or unworthy practically all the time now.
3. I feel as though I am very bad or worthless.

F. 0. I don't feel I am being punished.
1. I have a feeling that something bad may happen to me.
2. I feel I am being punished or will be punished.
3a. I feel I deserve to be punished.
3b. I want to be punished.

G. 0. I don't feel disappointed in myself.
1a. I am disappointed in myself.
1b. I don't like myself.
2. I am disgusted with myself.
3. I hate myself.

H. 0. I don't feel I am any worse than anybody else.
1. I am critical of myself for my weakness or mistakes.
2. I blame myself for my faults.
3. I blame myself for everything bad that happens.

I. 0. I don't have any thoughts of harming myself.
1. I have thoughts of harming myself but I would not carry them out.
2a. I feel I would be better off dead.
2b. I feel my family would be better off it I were dead.
3a. I have definite plans about committing suicide.
3b. I would kill myself if I could.

J. 0. I don't cry any more than usual.
1. I cry more now than I use to.
2. I cry all the time now. I can't stop it.
3. I use to be able to cry but now I can't even cry at all even though I want to.

K. 0. I am no more irritated now than I ever am.
1. I get annoyed or irritated more easily than I use to.
2. I feel irritated all the time.
3. I don't get irritated at all at the things that use to irritate me.

L. 0. I have not lost interest in other people.
1. I am less interested in other people now than I use to be.
2. I have lost most of my interest in other people and have little feeling for them.
3. I have lost all my interest in other people and don't care about them at all.

M. 0. I make decisions about as well as ever.
1. I try to put off making decisions.
2. I have great difficulty in making decisions.
3. I can't make any decisions at all any more.

N. 0. I don't feel I look any worse than I use to.
1. I am worried that I am looking old or unattractive.
2. I feel that there are permanent changes in my appearance and they make me look unattractive.
3. I feel that I am ugly or repulsive looking.

O. 0. I can work about as well as before.
1a. It takes extra effort for me to get started at doing something.
1b. I don't work as well as I use to.
2. I have to push myself very hard to do anything.
3. I can't do any work at all.

P. 0. I can sleep as well as usual.
1. I wake up more tired in the morning than I use to.
2. I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3. I wake up early every day and can't get more than 5 hours sleep.

Q. 0. I don't get any more tired than I use to.
1. I get more easily tired than I use to.
2. I get tired from doing anything.
3. I get too tired to do anything.

R. 0. My appetite is no worse than usual.
1. My appetite is not as good as it use to be.
2. My appetite is much worse now.
3. I have no appetite at all any more.

S. 0. I haven't lost much weight, if any lately.
1. I have lost more than 5 pounds.
2. I have lost more than 10 pounds.
3. I have lost more than 15 pounds.

T. 0. I am no more concerned about my health than usual.
1. I am concerned about aches and pains or upset stomach or constipation.
2. I am so concerned with how I feel or what I feel that its hard for me to think of much else.
3. I am completely absorbed in what I feel.

U. 0. I have not noticed any recent changes in my interest for sex.
1. I am less interested in sex than I use to be.
2. I am much less interested in sex now.
3. I have lost interest in sex completely.

Appendix G

DSM IV Major Depressive Episode Criteria

Appendix G

DSM IV Major Depressive Episode Criteria

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

Note: Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.

(1) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). **Note:** In children and adolescents, can be irritable mood.

(2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others).

(3) significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or a decrease or increase in appetite nearly every day. **Note:** In children, consider failure to make expected weight gains.

(4) insomnia or hypersomnia nearly every day

(5) psychomotor agitation to retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)

(6) fatigue or loss of energy nearly every day

(7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)

(8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective report or as observed by others).

(9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without specific plan, or a suicide attempt or a specific plan for committing suicide

B. The symptoms do not meet criteria for a Mixed Episode.

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).

E. The symptoms are not better accounted for by Bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

Appendix H

Scripts

Appendix H

Scripts

No evidence of symptom change:

TAPE I

[Wearing sweat pants and sweat shirt, no makeup, hair in pony tail, speaking with a flat affect, and showing some psychomotor retardation].

I haven't felt much like talking lately, but I need my experimental credits for my psych. class that's why I'm doing this. They told me this is a study of the acquaintance process and I'm suppose to talk about myself. I don't know what to say, **[short pause, look at the floor]**. I'm sorry there really isn't much to tell **[long pause, still look at the floor]**. My name is Lisa **[pause]**. I'm a junior in college **[pause]**. I moved away from home three years ago and things were going well. I had friends, went to parties, was doing okay in school. Then about a month ago I started to feel down. Now everything seems to be a big effort. I spend a lot of time by myself in my room, and cry a lot **[eyes water up]**. I don't sleep well. It doesn't seem to matter what time I go to bed, I wake up around 5 o'clock in the morning, and then I can't get back to sleep. I just lay there, I don't want to get out of bed. I have to force myself to get up, get dressed, and go to class. Some days I can't even do that and I lay in bed all day **[long pause]**. On the days I can force myself to get up, it takes me forever to decide what to wear and I usually end up wearing these **[indicate the sweat pants and sweat shirt that you're wearing]**. I feel tired all the time and don't feel like dressing up. I just don't feel like doing anything. My friends use to ask me to go out, but they hardly call me these days. I guess they don't like me anymore. I can't blame them. Doesn't matter I rather be left alone anyway. All they do is nag me about the how much weight I've lost. They don't understand. Food doesn't taste good anymore. I eat because I know I have to but I don't feel like it **[long pause]**. I am worried about my grades. They're starting to slip. I can't concentrate like I use to. I'm afraid I might flunk out. I just can't study. I can't even concentrate long enough to read a paragraph. I feel really bad, sort of worthless **[start to cry softly]**. Sometimes I wish I had cancer or something so that I could die.

TAPE II

[Wearing sweat pants and sweat shirt, no makeup, hair in pony tail, speaking with a flat affect and showing some psychomotor retardation].

I've been asked to talk about myself as part of this research project I have to do for my psych. credits, but I haven't felt like doing anything lately let alone talking. I don't know where to begin **[pause, head down]**. I guess I can tell you that my name is Lisa and I'm a junior in college. Ah, what else **[pause]**. Ah, I use to like school. I also use to have a lot of fun with my friends but that's not true anymore. I'm not sure why. It seems like things have been going badly for over a month now. **[sound tired]** I feel so tired all the time. Everything seems to require more effort than I can give. I don't feel motivated to do anything. I use to like going to the movies, but I don't even feel like doing that. Even talking makes me tired **[long pause]**. I haven't been sleeping well. I wake up really early in the morning, no matter when I go to bed. I can't concentrate on my schoolwork. I'm missing a lot of classes because I can't force myself to get out of bed. Some days I never even get of out bed. I'm afraid I'm going to flunk out. **[Irritated]** My friends have tried to help me, but what I wish they would leave me alone. What I really want is to be left alone. I don't want to see anybody. I don't want to be asked a bunch of questions about why I cry so much, or why I've lost weight **[pause, stop being irritated]**. Nobody understands **[head down]**. Sometimes I think about taking something that will make me go to sleep and I'll never have to wake up. I feel like I'm a burden to everyone and it would be so much easier for me and everyone else if I was no longer here. I'm tired of feeling so badly. All I think about everything I've done wrong in my life, wishing I could change so many things. I feel so helpless and so tired.

TAPE III

[Wearing sweat pants and sweat shirt, no makeup, hair in pony tail, speaking with a flat affect and showing some psychomotor retardation].

I can't believe that out of all the experiments for psych. credits I end up having do one which says I have to talk about myself. I really don't feel like doing this. I feel so stupid doing this **[long pause]**. Here goes, my name is Lisa and I'm a junior in college. I use to like being at school, going to class and hanging out with my friends. I even use to like talking to people, getting to know them, and them getting to know me. But now **[Irritated]**, I just want to be left alone. I wish everyone would just leave me alone? I don't feel like doing anything **[head down, pause]**. I know they mean well but it doesn't help. I feel tired all the time. Everything seems to require such effort. Some days I can't even get out of bed or do I bother changing my clothes **[indicate rumpled clothing]**. Getting cleaned up seems like such an ordeal **[sounding exhausted, pause]**. I don't sleep well. It takes me forever to get to sleep. I just lay there in bed staring at the ceiling. When I finally do get to sleep, I wake up really early. I have a hard time getting out of bed to go to class. On the days I somehow manage force myself to go to class I might as well not gone because I can't even concentrate enough to take notes. My mind just wanders or I start to cry for no reason **[long pause]**. I don't feel like doing anything. Food doesn't even taste good anymore. I have to force myself to eat. I just feel so tired. My friends think I'm crazy. I don't think anybody likes me anymore. I can't blame them. I'm no good to anybody **[head down, pause]**. This has been going on for over a month now. I just want some peace. I'm tired of crying and feeling bad all the time. I feel so sad and empty inside. It feels like its never going to change **[starts to cry]**. I know should be stronger, other people seem to do okay. There must be something wrong with me. I just want some peace. Sometimes I wish I were dead.

Evidence of symptom change:

TAPE I

[Wearing sweat pants and sweat shirt, no makeup, hair in pony tail, speaking with a flat affect, and showing some psychomotor retardation].

I haven't felt much like talking lately, but I need my experimental credits for my psych. class that's why I'm doing this. They told me this is a study of the acquaintance process and I'm suppose to talk about myself. I don't know what to say, **[short pause, look at the floor]**. I'm sorry there really isn't much to tell **[long pause, still look at the floor]**. My name is Lisa **[pause]**. I'm a junior in college **[pause]**. I moved away from home three years ago and things were going well. I had friends, went to parties, was doing okay in school. Then about a month ago I started to feel down. Now everything seems to be a big effort. I spend a lot of time by myself in my room, and cry a lot **[eyes water up]**. I don't sleep well. It doesn't seem to matter what time I go to bed, I wake up around 5 o'clock in the morning, and then I can't get back to sleep. I just lay there, I don't want to get out of bed. I have to force myself to get up, get dressed, and go to class. Some days I can't even do that and I lay in bed all day **[long pause]**. On the days I can force myself to get up, it takes me forever to decide what to wear and I usually end up wearing these **[indicate the sweat pants and sweat shirt that you're wearing]**. I feel tired all the time and don't feel like dressing up. I just don't feel like doing anything. My friends use to ask me to go out, but they hardly call me these days. I guess they don't think they like me anymore. I can't blame them. Doesn't matter I rather be left alone anyway. All they do is nag me about the how much weight I've lost. They don't understand. Food doesn't taste good anymore. I eat because I know I have to but I don't feel like it **[long pause]**. I am worried about my grades. They're starting to slip. I can't concentrate like I use to. I'm afraid I might flunk out. I just can't study. I can't even concentrate long enough to read a paragraph.

TAPE II

[Wearing sweat pants and sweat shirt, no makeup, hair fixed a little, speaking with a flat affect, and slight psychomotor retardation].

I've been asked to talk about myself as part of this research project I have to do for my psych. credits, but I haven't felt like doing much of anything lately, but I'll try. I don't know where to begin **[pause, head down]**. I guess I can start by telling you my name is Lisa and I'm a junior in college. Hmm, what else **[pause]**. Hmm, I use to like school. I also use to have a lot of fun with my friends but that doesn't happen very often anymore. I'm not sure why. I started to fell down and tired all the time about a month ago. I use to cry all the time too but at least now I don't cry as much as I use to. Now I mostly feel tired. Everything seems to require such an effort. I don't feel motivated to do very much. I use to like going to the movies, but I don't even feel like doing that. Even talking makes me tired **[long pause]**. I haven't been sleeping well. I wake up really early in the morning, no matter when I go to bed. I can't concentrate on my schoolwork. I'm afraid I'm going to flunk out. I am trying though. I'm not missing as may classes as I was a two weeks ago. My friends have tried to help me, by trying to get me to do things and I appreciate their concern but it doesn't change how I feel. I don't want to see anybody. I don't want to be asked a bunch of questions like, why I've lost weight **[pause]**. They just don't understand **[head down]**. If they knew I use to think about dying all time they would probably freak out. At least I don't think about it as much as I use to. I've just got to try harder I guess.

TAPE III

[Wearing sweat pants and sweat shirt, no makeup, hair fixed up a little, earrings, and speaking with a flat affect].

I can't believe that out of all the experiments for psych. credits I end up having do one which says I have to talk about myself. I really don't feel like doing this. I feel so stupid doing this but I'll try[**long pause**]. Here goes, my name is Lisa and I'm a junior in college. I use to like being at school, going to class and hanging out with my friends. I even use to like talking to people, getting to know them, and them getting to know me. But now, I just don't feel motivated. Nothing that use to be fun feels like fun and everything seems to take so much energy. I don't feel like doing anything [**head down, pause**]. This has been going on for over a month now. My friends try and get me to do things and I know they're just trying to help. It's just that I feel tired all the time. Everything seems to require such effort. Some days are worse than others I guess. I am doing a little better I think. I use to not get out of bed or bother changing my clothes but I don't do that as much. I still don't sleep well though. It takes me forever to get to sleep. I just lay there in bed staring at the ceiling. When I finally do get to sleep, I wake up really early. Concentration is also still a big problem. I just can't concentrate enough to take notes. My mind just wanders. At least I don't cry as much as I use to, so maybe things are getting a little bit better [**pause**]. I don't have much of an appetite theses days. Food doesn't taste good like it use to. I eat because I know I have to. I just feel so tired. But I don't feel like hurting myself like I use to. I want to get better.

Normal Control

TAPE I

[Wearing casual clothes and earrings, looking clean, tidy, wearing makeup, hair fixed, using a pleasant tone, smiling periodically].

They told me that this is a study about the acquaintance process and I'm suppose to talk about myself. Lets see, hmm, my name is Lisa, and I'm a junior in college. My first year at school I was lost, it being new and all, but now I know my way around pretty well. I guess everybody goes through that. Now I laugh at some of things I use to worry about, like getting lost, making good grades, fitting in. I've gotten to know some really great people since I've been at school, made some good friends, and we do a lot of fun things together. Last week we all went out dancing and had a blast. My friends tell me that I have a good sense of humor probably because I like to make people laugh. I date but there's no one I'm serious about **[pause]**. I'm taking twelve credit hours this semester, which isn't so bad. Being a junior means that almost all the classes I'm taking are in my major so they're more interesting, and I'm making decent grades. Overall my professors are okay, some are tougher than others. I usually go to class everyday, come home, study some and then hang out with my friends. Lets see what else can I tell you about myself **[short pause]**? I like going to the movies, I like listening to music, I like going to the football games, all kinds of things I guess. My first two years at school I lived in the dorm and then when I got a car I moved to an apartment with two friends. So far its been working out okay but I had to learn how to cook. I'm looking forward to my senior year and graduating.

Tape II

[Wearing casual clothes and earrings, looking clean, tidy, wearing makeup, hair fixed, using a pleasant tone, smiling periodically].

I'm doing this in order to get my experimental credits for my psych class. I'm suppose to talk about myself. I'm not sure where to begin. Hmm, my name is Lisa and I'm a junior in college. College has been all right. Moving away from home was hard at first because I didn't know anybody at school, but I soon made friends and began to have fun. The hard thing at first was finding my way to class without getting lost. Now I can laugh at that. I've made some close friends, besides my friends from high school and we have a lot of fun together. We all go to the movies, parties, dancing, or just hang out and talk. Lets see, what else can I say about myself [**pause**]? My friends tell me that I have a good sense of humor, probably because I'm always doing something funny and that I'm pretty easy going. Hmm..., I like to do all kinds of things. I like listening to music, going to the movies, football games, reading, and meeting people. Overall school is okay. I like my professors, some are tougher than others. Since I'm a junior almost all my classes this semester have to do with my major, and they're interesting. My grades are all right. I study when I'm suppose to, go to my classes, but I also have fun. Right now I'm not dating anyone special, I mostly go out with my friends. I live in an apartment with two other girls and we get along okay. Moving out of the dorm and on my own has taught me a lot. I'm learning how to cook for one. I'm looking forward to my senior year and graduation.

TAPE III

[Wearing casual clothes and earrings, looking clean, tidy, wearing makeup, hair fixed, using a pleasant tone, smiling periodically].

Hello, my name is Lisa and I've been asked to talk about myself for this experiment. I'm trying to get my psych. experiment credits so bear with me **[said humorously]**. I'm a junior in college. My first two years at school I lived in the dorm but now I live in an apartment with two of my girlfriends. So far so good. It's been quite a learning experience though. Learning how to cook and all. I've come a long way since I was a freshman. I use to get lost going to class. Now I know my way around pretty well and freshman ask me for directions. Hmm, what else can I say, this is hard **[pause]**. Things seem to be going smoothly so far. My classes are interesting since almost all of them now have to do with my major. Or practically all of them do. My professors are okay, some are harder than others. I'm making decent grades. I study, go to my classes but still have some fun. I have a close group of friends and we do a lot of things together. We go to the movies, parties, or just hang out and talk. That doesn't mean that I don't like to meet new people because I do. I also like to read, listen to music, and go to the college games. Right now there isn't anyone special that I'm seeing, but like I said before I go out with my friends. I can't think of what else to say, **[pause]**. My friends tell me that I'm an easy going person and that I have a good sense of humor. I like to laugh I guess. I'm looking forward to my senior year and graduation.

Appendix I

Consent Form

Appendix I

Consent Form

The experiment in which you are about to engage is being conducted under the supervision of Dr. Rosemery Nelson-Gray of the Department of Psychology.

This is a study of the acquaintance process where you will be asked to see a video-tape of someone you do not know. For this experiment you will be asked to come to the lab three times. On your first visit, (before seeing a video-tape), you will be asked to fill out three questionnaires. These ask about empathy attributes, self-consciousness attributes, and your mood state. On your second and third visit, you will be asked to only view a video-tape and fill out three short questionnaires. These ask you to indicate your current mood state, whether you liked the person whose video-tape you saw, and whether you would like to have some further interaction with them. The video-tapes you see on each of the three visits may, or may not, be of same person. After the three visits, you will then be eligible to participate in our raffle, where the first prize is $50.00, the second prize is $30.00, and the third prize is $20.00. After all data have been collected, the winner of the raffle will be contacted by the experimenter by telephone or letter.

Your participation in this experiment is completely voluntary, and you are free to stop the experiment any time you wish. If you agree to participate in this experiment, please indicate such with your signature.

_____ _____

Signature of Experimenter Signature of Participant

Date _____

Appendix J

Debriefing and Referral List

Appendix J

Debriefing

This has actually been a study of Coyne's model of depression. The model suggest that depressed individuals interact with others in such a way that is unpleasant or aversive to others. In an effort to further investigate this phenomenon, the present study examined the impact of two contextual variable, repeated exposure to a depressed person and depressive symptom improvement, upon the elicitation of negative arousal and rejection. In addition, the study examined whether certain personality attributes (i.e., empathy, inward or outward focus, and depression) of persons interacting with a depressed individual influence the elicitation of negative arousal and rejection.

Subjects were randomly assigned to one of three conditions. Condition 1 subjects saw a depressed role enactment across all three tapes with no symptom improvement. Condition 2 subjects saw a depressed role enactment with symptom improvement across the three tapes. Condition 3 subjects saw a normal role enactment across the three tapes. Before seeing any tapes subjects filled out measures of the personality attributes stated above.

It was predicted that subjects who are low in empathy, inwardly focused, and/or depressed would demonstrate more negative arousal and rejection than those that are high in empathy, outwardly focused, and not depressed.

It was also hypothesized that repeated exposure to a depressed role enactment with no symptom change should lead to negative affect, rejection for further interaction, and little favorable regard; conversely, repeated exposure to a depressed role enactment with symptom improvement should lead to less negative affect, less rejection for further interaction, and more favorable regard. Lastly, repeated exposure to a normal role enactment should not lead to negative affect, rejection for further interaction, and little favorable regard.

All data collected was coded numerically thus we will not be able to tell you how you or other individual subjects responded at the end of the study. We will only know how groups of people responded. If you are interested in knowing the outcome of the experiment or have any questions at a later date please feel free to contact me, Irene Granda-Gage at 334-5013, ext. 208. The drawing the prize will be held at the end of the study. If you are a winner you will be contacted by the telephone or address you gave. In addition, in compliance with the ethic committee's requirements for the use of subjects, all subjects are given the following referral list. Thank you for your participation.

Referral List

UNCG Psychology Clinic
Eberhart Building
UNCG
Greensboro, NC 28412
(910) 334-5662

UNCG's Student Counseling Center
Gove Student Health Center
Greensboro, NC 28412-5001
(910) 334-5340

Greensboro's Center for Mental Health
201 N. Eugene
Greensboro, NC 27409
(910) 373-3630

Appendix K

Tables

Table 1

BDI, SCS, and IRI

Means and Standard Deviations

Condition	BDI	SCS		IRI
		Private	Public	Empathy
1	4.13	22.26	20.00	21.26
	(4.14)	(5.74)	(7.62)	(2.91)
2	2.76	24.12	21.92	19.44
	(2.83)	(6.23)	(7.34)	(3.13)
3	2.70	28.83	21.45	20.08
	(2.66)	(5.27)	(6.01)	(3.17)

Table 2

MAACL Depression Scale, Coyne's Further Interaction Questionnaire and Rubin's Liking Scale.

Means and Pooled Variance Errors

Condition	Tape	MAACL	Coyne	Rubin
1	1	9.86 (2.20)	24.91 (2.96)	11.47 (4.35)
	2	10.60 (2.20)	20.43 (2.96)	11.30 (4.35)
	3	9.47 (2.20)	19.78 (2.96)	9.30 (4.35)
2	1	10.32 (2.20)	24.28 (2.96)	12.12 (4.35)
	2	10.56 (2.20)	22.04 (2.96)	11.36 (4.35)
	3	8.88 (2.20)	24.32 (2.96)	15.00 (4.35)
3	1	8.00 (2.20)	43.66 (2.96)	58.62 (4.35)
	2	7.20 (2.20)	43.25 (2.96)	57.62 (4.35)
	3	6.70 (2.20)	42.66 (2.96)	56.66 (4.35)

Table 3

Condition 1

Intercorrelations Between Dependent Variables

and Personality Variables.

	BDI	SCS (Private)	SCS (Public)	Empathy
		(n = 23)		
Depression	.23	.38	-.03	.33
Coyne	.16	.31	.20	.16
Rubin	.34	.47*	.08	.20

* r > .40

Table 4

Condition 2

Intercorrelations Between Dependent Variables

and Personality Variables.

	BDI	SCS (Private)	SCS (Public)	Empathy
		(n = 25)		
Depression	.13	.02	-.01	-.00
Coyne	.18	.33	.13	.09
Rubin	.01	-.01	- .12	-.04

* r > .40

Table 5

Condition 3

Intercorrelations Between Dependent Variables and Personality Variables.

	BDI	SCS (Private)	SCS (Public)	Empathy
		(n = 24)		
Depression	.21	.10	-.15	.22
Coyne	.05	.03	.05	.24
Rubin	-.03	-.06	.08	.08

* r > .40

Table 6

Conditions 1,2, and 3 Combined

Intercorrelations Between Dependent Variables

and Personality Variables.

	BDI	SCS (Private)	SCS (Public)	Empathy
		(n = 72)		
Depression	.19	.15	-.05	.15
Coyne	.03	.18	.11	.11
Rubin	-.02	.10	.04	.10

* r > .40

Table 7

Analysis of Variance

on the BDI.

Source	Sum of Squares	d.f.	F	p
Condition	30.52	2	1.43	.2452
Error	734.12	69		

* p < .05

Table 8

Analysis of Variance

on the Private Self-Consciousness Scale.

Source	Sum of Squares	d.f.	F	p
Condition	47.24	2	.71	.4956
Error	2298.40	69		

* p < .05

Table 9

Analysis of Variance

on the Public Self-Consciousness Scale.

Source	Sum of Squares	d.f.	F	p
Condition	47.52	2	.48	.6202
Error	3407.79	69		

* $p < .05$

Table 10

Analysis of Variance

on the IRI.

Source	Sum of Squares	d.f.	F	p
Condition	40.55	2	2.14	.1256
Error	654.42	69		

* p < .05

Table 11

Analysis of Variance

on the MAACL Depression Scale.

Source	Sum of Squares	d.f.	F	p
Condition	336.17	2	2.09	.1320
Subject (condition)	5561.78	69		
Tape	55.26	2	3.82*	.0244
Tape * Condition	20.35	4	.70	.5913
Residual	999.19	138		

* $p < .05$

Table 12

Planned Comparison Analysis on

the MAACL Depression Scale for Tape using Tukey.

(Means, Pooled Variance Error, and Marginal Means.)

Condition	Tape	Mean	Marginal Means
1	1	9.86 (.77)	9.39 a
2	1	10.32 (.77)	
3	1	8.00 (.77)	
1	2	10.60 (.77)	9.45 a
2	2	10.56 (.77)	
3	2	7.20 (.77)	
1	3	9.47 (.77)	8.35 a
2	3	8.88 (.77)	
3	3	6.70 (.77)	

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 13

Planned Comparison Analysis on the MAACL Depression Scale for Tape at Condition using Tukey.

Condition	Tape	Mean
1	1	9.86 $_{a}$
1	2	10.60 $_{a}$
1	3	9.47 $_{a}$
2	1	10.32 $_{a}$
2	2	10.56 $_{a}$
2	3	8.88 $_{a}$
3	1	8.00 $_{a}$
3	2	7.20 $_{a}$
3	3	6.70 $_{a}$

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 14

Planned Comparison Analysis the MAACL Depression Scale for Condition at Tape using Tukey.

Condition	Tape	Mean
1	1	9.86 $_{a}$
2	1	10.32 $_{a}$
3	1	8.00 $_{b}$
1	2	10.60 $_{a}$
2	2	10.56 $_{a}$
3	2	7.20 $_{b}$
1	3	9.47 $_{a}$
2	3	8.88 $_{a}$
3	3	6.70 $_{b}$

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 15

Partial Correlation Coefficients
for the MAACL's Depression Scale,
Rubin's Liking Scale, and
Coyne's Further Interaction Questionnaire.

	Depression	Coyne	Rubin
Depression		.07	.15
Coyne			.69

Table 16

Multivariate Analysis for the Overall Effects of Coyne's Further Interaction Questionnaire and Rubin's Liking Scale.

Condition
Wilks' Lambda = .2867
F approximation with 4 and 136 *df* = 29.48*
Probability of a greater *F* = .0001
Tape
Wilks' Lambda = .9249
F approximation with 4 and 274 *df* = 2.72*
Probability of a greater *F* = .0297
Condition * Tape
Wilks' Lambda = .8969
F approximation with 8 and 274 *df* = 1.91
Probability of a greater *F* = .0578

Table 17

Analysis of Variance

on Coyne's Further Interaction Questionnaire.

Source	Sum of Squares	d.f.	F	p
Condition	20347.91	2	37.30*	.0001
Subject (condition)	18819.40	69		
Tape	237.30	2	5.37*	.0057
Tape * Condition	228.17	4	2.58*	.0399
Residual	3048.59	138		

* $p < .05$

Table 18

Planned Comparison Analysis on

Coyne's Further Interaction Questionnaire

for Condition using Tukey.

(Means, Pooled Variance Error, and Marginal Means.)

Condition	Tape	Mean	Marginal Means
1	1	24.91 (2.96)	21.70 a
1	2	20.43 (2.96)	
1	3	19.78 (2.96)	
2	1	24.28 (2.96)	23.54 a
2	2	22.04 (2.96)	
2	3	24.32 (2.96)	
3	1	43.66 (2.96)	43.19 b
3	2	43.25 (2.96)	
3	3	42.66 (2.96)	

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 19

Planned Comparison Analysis on

on Coyne's Further Interaction Questionnaire

for Tape using Tukey.

(Means, Pooled Variance Error, and Marginal Means.)

Condition	Tape	Mean	Marginal Means
1	1	24.91 (1.35)	30.95 a
2	1	24.28 (1.35)	
3	1	43.66 (1.35)	
1	2	20.43 (1.35)	28.57 b
2	2	22.04 (1.35)	
3	2	43.25 (1.35)	
1	3	19.78 (1.35)	28.92 b
2	3	24.32 (1.35)	
3	3	42.66 (1.35)	

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 20

Planned Comparison Analysis on

Coyne's Further Interaction Questionnaire

for Tape at Condition using Tukey.

Condition	Tape	Mean
1	1	24.91 $_a$
1	2	20.43 $_a$
1	3	19.78 $_a$
2	1	24.28 $_a$
2	2	22.04 $_a$
2	3	24.32 $_a$
3	1	43.66 $_a$
3	2	43.25 $_a$
3	3	42.66 $_a$

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 21

Planned Comparison Analysis on

Coyne's Further Interaction Questionnaire

for Condition at Tape using Tukey.

Condition	Tape	Mean
1	1	24.91 a
2	1	24.28 a
3	1	43.66 b
1	2	20.43 a
2	2	22.04 a
3	2	43.25 b
1	3	19.78 a
2	3	24.32 b
3	3	42.66 c

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 22

Analysis of Variance

on Rubin's Liking Scale.

Source	Sum of Squares	d.f.	F	p
Condition	100996.53	2	84.15*	.0001
Subject (condition)	41406.63	69		
Tape	15.37	2	.18	.8314
Tape * Condition	282.17	4	1.70	.1544
Residual	5739.82	138		

* $p < .05$

Table 23

Planned Comparison Analysis on

Rubin's Liking Scale for Condition using Tukey.

(Means, Pooled Variance Error, and Marginal Means.)

Condition	Tape	Mean	Marginal Means
1	1	11.47 (4.35)	10.69 a
1	2	11.30 (4.35)	
1	3	9.30 (4.35)	
2	1	12.12 (4.35)	12.82 a
2	2	11.36 (4.35)	
2	3	15.00 (4.35)	
3	1	58.62 (4.35)	57.63 b
3	2	57.62 (4.35)	
3	3	56.66 (4.35)	

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 24

Means and Marginal Means for

Rubin's Liking Scale

Condition	Tape	Mean	Marginal Means
1	1	11.47	27.40
2	1	12.12	
3	1	58.62	
1	2	11.30	26.76
2	2	11.36	
3	2	57.62	
1	3	9.30	26.98
2	3	15.00	
3	3	56.66	

Table 25

Planned Comparison Analysis on

Rubin's Liking Scale for Tape at Condition using Tukey.

Condition	Tape	Mean
1	1	11.47 $_a$
1	2	11.30 $_a$
1	3	9.30 $_a$
2	1	12.12 $_a$
2	2	11.36 $_a$
2	3	15.00 $_a$
3	1	58.62 $_a$
3	2	57.62 $_a$
3	3	56.66 $_a$

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Table 26

Planned Comparison Analysis on

Rubin's Liking Scale for Condition at Tape using Tukey.

Condition	Tape	Mean
1	1	11.47 $_{a}$
2	1	12.12 $_{a}$
3	1	58.62 $_{b}$
1	2	11.30 $_{a}$
2	2	11.36 $_{a}$
3	2	57.62 $_{b}$
1	3	9.30 $_{a}$
2	3	15.00 $_{b}$
3	3	56.66 $_{c}$

Note. Marginal means with no different subscripts are not significantly different from each other at $p < .05$.

Appendix L

Figures

Figure 1

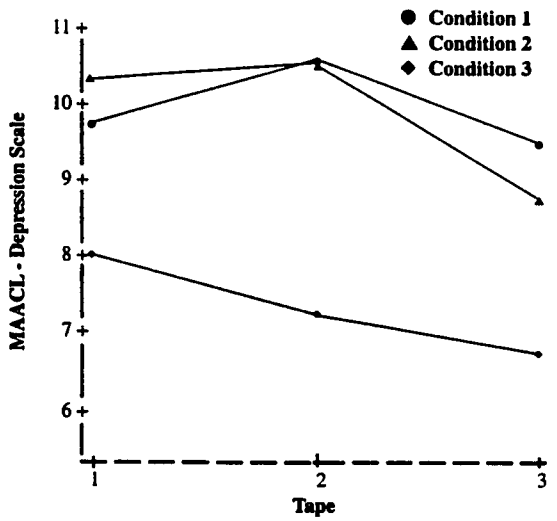

Condition 1
Condition 2
Condition 3
MAACL - Depression Scale
11
10
9
8
7
6
1
2
3
Tape

Figure 2

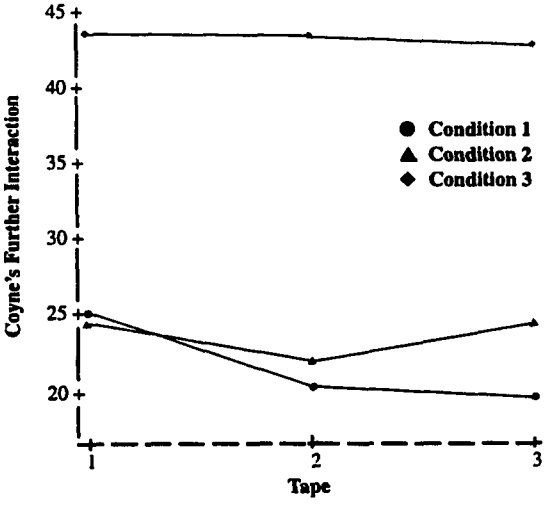
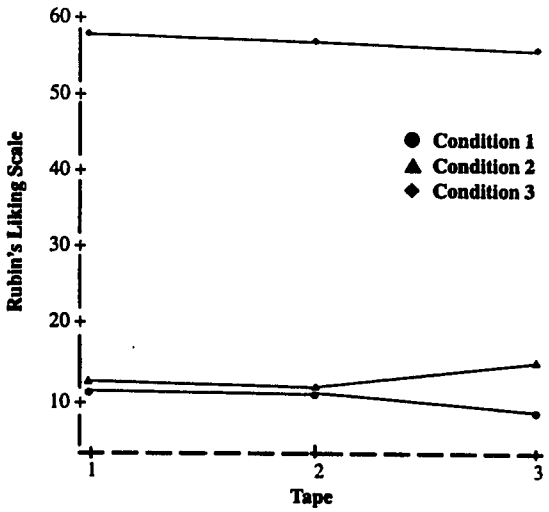

45
40
35
30
25
20
Coyne's Further Interaction
Condition 1
Condition 2
Condition 3
1
2
3
Tape

Figure 3


60
50
40
30
20
10
Rubin's Liking Scale
Condition 1
Condition 2
Condition 3
1
2
3
Tape