

**The Dissertation Committee for Arshia Ebrahimi
certifies that this is the approved version of the following dissertation:**

**Do Depressed Individuals Make Greater Use of
Contextual Information to "Correct"
Self-relevant Interpretations?**

Committee:

Stephanie S. Rude, Co-Supervisor

Aaron B. Rochlen, Co-Supervisor

Christopher J. McCarthy

Frank W. Wicker

William B. Swann, Jr.

**Do Depressed Individuals Make Greater Use of
Contextual Information to "Correct"
Self-relevant Interpretations?**

by

Arshia Ebrahimi, B.A.

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Co-Supervisors: Stephanie S. Rude and Aaron B. Rochlen

Studies on the major cognitive theories consistently indicate that depressed individuals process information in a selective and negatively biased manner. On the other hand, there is a body of social cognition research that suggests that depressed individuals are more extensive and even-handed compared to nondepressed individuals. The purpose of the two studies presented here was to examine both negative biases and correction processes during the interpretation of self-referent information in depression. The presented studies investigated differences in depressed and non-depressed participants' judgments about the self-implications of negative events, in hypothetical (Study 1) and simulated (Study 2) contexts. It was predicted that depressives' self-judgments would be characteristically negative in the face of mildly negative and ambiguous self-relevant information but that depressed individuals would show greater evidence of correcting these judgments when mitigating information was provided. The results of Study 1 were generally consistent with predictions, whereas Study 2 yielded inconclusive results.

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Chapter I: Introduction

Depression is considered to be the most common psychological disorder in the world (National Institute of Mental Health [NIMH], 2001), and it has received significant empirical and theoretical attention in both clinical and social psychology. After the “cognitive revolution” in these subdisciplines, several theories of depression were developed to explain the cognitive factors that play a role in the onset, maintenance, and treatment of the disorder. Two of the most influential cognitive theories in the clinical literature are Beck’s (1967,1976) cognitive theory of depression and the hopelessness theory (Abramson, Metalsky, & Alloy, 1989). These theorists predict that depressed individuals have a tendency to make overly negative interpretations about the self. These predictions have received wide support from numerous studies that have shown that depressed individuals make more negative evaluations and judgments compared to nondepressed individuals in various contexts related to the self.

Theories and studies in the social-cognition literature on depression have focused on the judgments and interpretations that depressed individuals make about others. There is a group of studies in this literature, mostly by Weary and her colleagues, that has shown that depressed individuals actually make less biased and more hypervigilant judgments compared to nondepressed individuals rather than unwarranted and overly negative judgments. Although these findings have not yet been discussed in the context of self-referent processing, they seem to have important implications for depressives’ self-referent interpretations. The purpose of this review is to examine the two literatures on depressive interpretation and to integrate the findings into a more comprehensive view of depression by using Gilbert and colleagues’ stage model of inferences (Gilbert, Pelham, & Krull, 1988).

Beginning in the 1970s, the cognitive perspective became a predominant force in the study of emotional disorders and gave rise to several major cognitive theories of depression. According to these theories, depression is caused and maintained by the tendency to process self-referent information in a maladaptive and negatively biased manner. Two theories have been widely researched and particularly influential in the

conceptualization of depressive information processing: the hopelessness theory (Abramson, Metalsky, & Alloy, 1989) and Beck's (1967,1976) cognitive theory of depression. The hopelessness theory focuses on the role of maladaptive attributional styles in depression. It is predicted that individuals who have a tendency to make negative inferences about the causes and implications of adverse life events are more vulnerable to developing a sense of hopelessness and, ultimately, depression. Beck's theory contends that depression is triggered and maintained by cognitive structures called depressive schemas. Depressive schemas are constellations of negative attitudes and beliefs about the self in relation to the future and to the world. Once depressive schemas are activated, it is predicted that negatively biased cognitive processes will dominate the processing of information and lead to subsequent feelings of distress and depression.

Numerous studies have provided support for these theories by showing that depressed individuals have negative biases in attention and memory (e.g., Derry & Kuiper, 1981; Gotlib & Cane, 1987; Gotlib & McCann, 1984; Matthews & Antes, 1992; Watkins, Mathews, Williamson, & Fuller, 1992). For example, Derry and Kuiper (1981) found that depressed individuals exhibited significantly enhanced recall for negative self-referent adjectives, which supports the hypothesis that depressive self-schemas contain negative content. Overall, it has been found that depressed individuals are more likely to attend to and remember negative information and ignore positive information.

Another important, but less researched, aspect of depressive information processing is interpretations regarding the self. Interpretations are the judgments, inferences, and meanings that individuals generate when confronted with alternative information and stimuli (Clark, Beck, & Alford, 1999). The major lines of research that have shown that depressed individuals perceive self-referent information more negatively than nondepressed individuals are: perceptions of feedback (e.g., Dykman, Abramson, Alloy, & Hartlage, 1989; Henriques & Leitenberg, 2002; Krantz & Hammen, 1979; Lowenstein & Hokanson, 1986; Nelson & Craighead, 1977), interpretations of hypothetical situations (e.g., Krantz & Gallagher-Thompson, 1990; Krantz & Hammen, 1979; Nunn, Mathews, & Trower, 1997) judgments of own performance (e.g., Forgas,

Bower, & Krantz, 1984; Cane & Gotlib, 1985), attributions for events (Miller & Morretti, 1988), and future-related expectations (e.g., Anderson, Spielman, & Bargh, 1992; Cane & Gotlib, 1985; Gaschke, Braveman, & Evans, 1992). These studies provide strong evidence that depressed individuals impose negative meanings and reject positive meanings of self-referent information. This cognitive pattern has been referred to as “selectivity” by Beck and his colleagues (Clark, Beck, & Alford, 1999).

Recently, some researchers in the social cognition literature have revealed a completely different picture of interpretive processes in depression. There is compelling evidence that depressed individuals process available information in an extensive rather than selective way and make judgments that are relatively unbiased and situation-appropriate rather than biased (Edwards & Weary, 1993; Gleicher & Weary, 1991; Hildebrand-Saints & Weary, 1988; Marsh & Weary, 1989; McCaul, 1983; Weary, Elbin, & Hill, 1987; Weary, Jordan, & Hill, 1985; Yost & Weary, 1996). Most of these findings have resulted from investigations of a control-motivation model of depression (Weary, Marsh, Gleicher, & Edwards, 1993). According to the model, depression is associated with chronic expectations of uncontrollability and resulting feelings of uncertainty. These negative expectations and feelings are believed to create a need for understanding and control over one’s social environment. As a result, depressed individuals compared to nondepressed individuals are more likely to exhibit “a more extensive and intentional search for and processing of social information in an attempt to regain interpretive and predictive control” (Yost & Weary, 1996, p.193).

The two different literatures on depressive interpretation seem to be in stark contrast. On one hand, the studies on the major cognitive theories indicate that depressed individuals make dysfunctional and maladaptive interpretations because of the tendency to process information in a selective and negatively biased manner. On the other hand, there is a body of research that suggests that depressed individuals are more extensive and less biased compared to nondepressed individuals. It may be possible that the disparate findings are related to differences in the way depressed individuals process social versus self-referent information. However, another possibility is that the two

literatures are focusing on different stages of processing rather than processing that is unique to certain types of information (Gilbert, Pelham, & Krull, 1988).

According to Gilbert and his colleagues, social inferences are a product of two qualitatively different types of processes. The *automatic stages* result in biased judgments, and the *effortful stages* result in “corrected” judgments. The model was developed to explain and investigate the correspondence bias in person perception, and the researchers’ unique contribution to the literature has been the notion that social inferences can be either relatively biased or relatively unbiased depending on the level of cognitive resources and motivation that is available for effortful inferential correction. The model also seems to have profound implications for depression theories and studies. Perhaps depressive interpretations about the self are more versatile and complex constructs than currently conceptualized by the major models. Furthermore, the different findings from the major cognitive theories and the control-motivation model may be due to investigations of different stages of processing. More specifically, perhaps researchers of the major cognitive theories are capturing the influences of the biased, automatic stages whereas the researchers of the control-motivation model are investigating the influences of the corrective and unbiased stages.

To date, no studies have examined the influences of corrective processing on the interpretation of depressed individuals about the self. The goal of the presented studies was to examine the separate and combined influences of both negative biases and corrective processes on depressives’ self-referent interpretations.

Chapter II: Review of Literature

Research on Cognitive Processes in Depression

Depression is considered to be the most common psychological disorder in the world today. Approximately 9.5% of Americans age 18 or older suffers from a diagnosable depressive disorder (National Institute of Mental Health [NIMH], 2001). The “epidemic” problem can have devastating effects on all aspects of personal and social life. On an individual level, depression can interfere with school, work, and relationships and result in shame, medical problems, divorce, and suicide. On a broader social level, the disorder has been considered the leading cause of disability (NIMH, 2001). The work force and economy are affected by lower productivity, absenteeism, and health care expenditures. It is estimated that the costs of depression exceed \$30 billion a year in the United States (Rice & Miller, 1995).

Due to the severe and pervasive impact of depression, the disorder has been in the forefront of psychopathological research. Early investigations of depression were influenced by psychoanalytic and behavioral approaches. However, in the 1960s, the cognitive perspective revolutionized the field of psychology and led to cognitive theories and research paradigms in the literature on emotional disorders. From the cognitive perspective, human functioning and adaptation depends on the manner in which information is processed. Therefore, emotional disorders are explained by maladaptive differences in the selection, transformation, encoding, storing, and retrieval of information. These fundamental assumptions have had a strong influence on depression research. The ultimate goal has been to identify the cognitive constructs and mechanisms that contribute to the onset, maintenance, and treatment of the disorder.

The subdisciplines of clinical and social psychology have made different but equally important theoretical and empirical contributions to the understanding of information processing in depression. The prominent theories in clinical psychology have focused on self-referent processing, and the studies on these theories have shown that depression is associated with negative biases in memory, attention, and interpretation. Theories from social psychology have focused on depressives’ cognitions

about others, and research on the control-motivation model in particular has shown that depressed individuals make social judgments that are relatively unbiased and situation-appropriate compared to nondepressed individuals. The purpose of this literature review is to examine these two literatures on depressive interpretation and to integrate these findings into a more comprehensive conceptualization of the interpretive processing in depression.

Major Cognitive Theories of Depression

The major cognitive models of depression include Beck's cognitive theory of depression (1967, 1976), the hopelessness theory (Abramson, Metalsky, & Alloy, 1989), Seligman's (1975) learned helplessness theory, and Rehm's (1977) self-control model. Although differences do exist between these models, the fundamental assumption is that depression is characterized by negative thinking (Alloy, Albright, Abramson, & Dykman, 1990). There are two theories in particular that have significantly influenced the current views of depressive information processing. Accordingly, the following review will focus on the concepts and findings that have stemmed from these theories.

The "hopelessness theory" (Abramson, Metalsky, & Alloy, 1989), which is a revision of the "learned helplessness" model (Abramson, Seligman, & Teasdale, 1978), states that hopelessness depression is a subtype of depression with specific causes, symptoms, and treatments. A significant etiological factor of hopelessness depression is a chronic expectation that desired events are improbable and adverse events are inevitable. It is believed that individuals with these expectations develop a tendency to attribute negative life events to internal, stable, and general factors and positive life events to external, unstable, and specific factors. Therefore, when negative events occur, depressed individuals are more likely to make negative inferences about the self and have overly pessimistic inferences about the consequences of the event. Eventually, the maladaptive attributional style is believed cause feelings of hopelessness and depressive symptoms.

Beck's cognitive theory of depression (1967, 1976) is the most widely accepted and researched theory of the depression. According to Beck, depression is triggered and

maintained by maladaptive and dysfunctional self-schemata. “Schemas are relatively enduring internal structures of stored generic or prototypical features of stimuli, ideas, or experience that are used to organize new information in a meaningful way thereby determining how phenomena are perceived and conceptualized” (Clark, Beck, & Alford, 1999, p. 79). It is believed that the content of depressives’ schemas are extreme and negative because of adverse and traumatic childhood experiences, such as loss, parental criticism, or lack of control. The negative experiences are organized together to form constellations of negative attitudes and beliefs about *the self, the world, and the future*.

Depressive schemas act as a vulnerability factor for pessimistic thinking and negative affect. They can remain dormant, during which information processing is relatively unaffected by the negative expectations and beliefs. However, the schemas can be activated by distressing events or schema-relevant information. Once the depressive schemas are activated, they dominate the processing of incoming information by influencing the way stimuli and events are perceived, attended to, evaluated, and remembered. The ultimate outcome of the biased processing is “an automatic tendency to selectively focus on the negative features of one’s personal experiences and to exclude or overlook the positive elements of the situation” (Clark, Beck, and Alford, 1999, p. 177). This is referred to as the “selective processing hypothesis” of the cognitive theory of depression.

Research on Depressive Negativity Hypothesis

The major cognitive theories of depression have led to considerable research examining the hypothesis that depressive thinking is negatively biased. For example, researchers have investigated the “diathesis-stress” notion that depressed individuals think in a negative style and that their cognitive style makes them emotionally vulnerable to life stressors (Alloy et al., 1999). The studies most relevant to the negativity prediction use designs with stimuli that is emotionally laden and self-referent. These designs allow for the triggering and measuring of the negatively biased mechanisms that are predicted in depression. The supporting research has shown that depressed individuals are negatively biased in the way they attend to, recall, and interpret information.

Attention in depression. One successful method for examining negative biases in attention is to investigate “debilitated task performance” (Clark, Beck, & Alford, 1999). These studies have mood-related distracters that are designed to interfere with performance during an experimental task. The assumption is that concurrent encoding of mood-congruent distracters will lead to debilitations in task performance. For example, two studies (Gotlib & Cane, 1987; Gotlib & McCann, 1984) presented negative, neutral, and positive words in different colors. Participants were instructed to name the color of the words, and the task distracter was the valence of the presented words. Both studies found longer response times to depression related words in the depressed group compared to the non-depressed group.

An alternative method for investigating attentional biases is to assess facilitated cognitive performance. Studies using recognition tasks have found that depressed individuals recognize unpleasant words faster and more accurately than non-depressed individuals (e.g., Matthews & Antes, 1992; Powell & Hemsley, 1984; von Hippel, Hawkins, & Narayan, 1994). Consistent with the “debilitated performance” studies, these studies show that depressive schemas negatively influence the attentional processes of depressed individuals.

Memory in depression. Memory bias has been another major focus of research on depressive information processing. “Many studies, for example, have employed incidental recall strategies that require the individual to first rate stimuli on some dimension and then later recall the stimuli” (Ingram, Partridge, Scott, & Bernet, 1994, p. 198). The assumption is that enhanced recall of information is related to the content and organization of activated schemas. Incoming information is presumed to activate content-related schemas, and subsequent schema functioning is predicted to facilitate and bias the encoding of information.

In a widely cited study, Derry and Kuiper (1981) used emotionally valenced adjectives to investigate the self-referent processes of depressed and non-depressed individuals. They found that depressed individuals recalled self-referent adjectives more frequently and more efficiently than non-depressed individuals, which indicates the

existence of self-schemas in depression. Furthermore, depressed individuals exhibited significantly enhanced recall for negative adjectives, which supports the hypothesis that depressive self-schemas contain negative content. Other studies have also found disproportionately higher recall of negative content compared to positive content in depressed groups (Bradley & Mathews, 1983; Matt, Vazquez, & Campbell, 1992; Watkins, Mathews, Williamson, & Fuller, 1992).

Interpretive processes in depression. There have been numerous investigations on memory and attention in depression, and the findings consistently support the prediction that depressed individuals have negatively biased attention and memory processes. However, judgments and interpretations are another important aspect of information processing, and this cognitive dimension has received relatively less empirical attention in the depression literature (Gotlib, Roberts, & Gilboa, 1996; Nunn, Mathews, & Trower, 1997). *Interpretations* are the judgments, inferences, and meanings that individuals generate when confronted with different types of information and stimuli (Clark, Beck, & Alford, 1999). A major prediction of both the hopelessness theory and Beck's theory is that depressed individuals generate negative interpretations about events and experiences related to the self, and these interpretations result in negative feelings and the perpetuation of depression (Alloy et al., 1999). The hopelessness model predicts that those individuals who have a tendency to make negative inferences, either about the self or about future consequences, after they have experienced a negative life event are highly susceptible to developing hopelessness depression (Dykman & Abramson, 1990). Beck's theory also emphasizes the importance of interpretations. "When a variety of meanings can be accessed, which one becomes dominant or accessible and which ones are suppressed can be taken as an indicator of an encoding bias" (Clark, Beck, & Alford, 1999, p.189). Considering the theoretical significance of interpretations, it is surprising that there has been a dearth of research on depressives' interpretations of self-referent information.

Hammen and Krantz's (1976) study was one of the earliest investigations of cognitive distortions in depression. Participants were given either positive, negative, or

no feedback after a performance task, and it was found that depressed individuals' expectations and evaluations were significantly more influenced by negative feedback compared to the control group. First, the depressed group receiving negative feedback was significantly more pessimistic about future performances compared to the nondepressed group, even though initial predictions about performance in the two groups were similar. Second, the depressed group receiving negative feedback subsequently made significantly more negative ratings about themselves compared to the nondepressed group. These findings show that depressed individuals respond to feedback in a way that perpetuates negative biases in evaluations about the self. In addition to the feedback task, the researchers also included an interpretation task. Participants read six brief stories about hypothetical characters in various problematic situations, and they were instructed to select the response option that most likely represented the character's thoughts and feelings in that situation. It was found that depressed individuals chose significantly more "pessimistic" and "logically unjustified" responses and significantly less "nondepressed-nondistorted" responses compared to the nondepressed group.

Several other studies have shown that depressed individuals react differentially to positive and negative feedback. Swann and his colleagues have shown that, compared to favorable feedback, depressed individuals prefer unfavorable feedback and perceive the unfavorable feedback as more credible (Giesler, Josephs, & Swann, 1996; Swann, Wenzlaff, Krull, & Pelham, 1992; Swann, Wenzlaff, & Tatarodi, 1992). It has also been shown that depressed individuals are more inclined to impose negative interpretations on ambiguous feedback (Dykman, Abramson, Alloy, & Hartlage, 1989), perceive mixed feedback as negative (e.g., Lowenstein & Hokanson, 1986), react less optimistically to positive feedback (e.g., Nelson & Craighead, 1977), and react more pessimistically to negative feedback (e.g., Henriques & Leitenberg, 2002) compared to nondepressed individuals. Similar to perceptions of feedback, depressed individuals' perceptions of their own real-life performances are more pessimistic relative to their judgments of others' behaviors (e.g., Forgas, Bower, & Krantz, 1984) and compared to objective ratings (e.g., Cane & Gotlib, 1985). These findings provide strong evidence that

depressed individuals have a tendency to perceive self-related feedback and performances in a negative manner.

Studies with other forms of valenced stimuli than feedback have revealed depression-related differences in interpretive and judgment processes as well. Nunn, Mathews, and Trower (1997) found that depressed individuals endorsed significantly more negative responses compared to positive responses as likely reactions of hypothetical characters in given situations where as nondepressed individuals endorsed significantly more positive responses compared to negative responses. Depression studies with the Scrambled Sentences Test (SST; Wenzlaff, 1988, 1993) have shown that depressed individuals use negative solutions more than non-depressed individuals to unscramble emotionally-valenced and self-relevant sentences (e.g., Hedlund & Rude, 1995; Rude, Covich, Jarrold, Hedlund, & Zentner, 2001). Similarly, depressed individuals endorse significantly more negative adjectives when asked to describe the self than non-depressed individuals (e.g., Rude, Krantz, & Rosenham, 1988).

Research on causal attributions and future expectations has examined depression-related differences between judgments for negative and positive events. It is typically found that depressed individuals compared to nondepressed individuals are more likely to take responsibility for negative events (see review by Miller & Morretti, 1988) and that depressed individuals expect more negative and fewer positive events and performances in the future (e.g., Anderson, Spielman, & Bargh, 1992; Cane & Gotlib, 1985; Gaschke, Braveman, & Evans, 1992). For example, Krantz and Gallagher-Thompson (1990) found that a depressed group made significantly more negative and distorted interpretations about negative stories than a non-depressed group, but no interpretive differences were found between the groups for the positive stories. These studies reveal an interpretive bias in depression that is characterized by generating more negative responses and less positive responses than nondepressed individuals.

Recently, the investigations on negatively biased information processing have been extended beyond currently depressed individuals to formerly depressed individuals. Hedlund and Rude (1995) conducted the first study that showed negatively biased

information-processing in individuals with past, but not current, depressed mood. Their findings indicated that the formerly depressed group, compared to the never depressed group, made significantly more negative solutions on the SST. They also showed that the recall of the formerly depressed group was significantly more negative than the never depressed group following a Stroop task with valenced words. Another study showed even more compelling evidence for theoretical predictions about cognitive vulnerability to depression by showing that an overly-negative response style on the SST predicts subsequent episodes of depression (Rude, Wenzlaff, Gibbs, Vane, & Whitney, 2002). These studies have provided important evidence for the negatively biased cognitive mechanisms that are predicted in depression.

Overall, these studies show that depressed individuals have a tendency to make overly negative interpretations, attributions, judgments, and evaluations when processing information that is emotionally laden and related to the self. These findings provide strong support for the predictions of the major cognitive theories. Even more specifically, they support Beck's notion of selective bias by indicating that depressed individuals are more likely to impose negative meanings and less likely to impose positive meanings on self-referent information when there is a range of categorical meanings.

Social Cognition in Depression

Whereas the research on the major cognitive models primarily examines depression-related differences in self-referent interpretations, the social-cognitive researchers focus on depression-related differences in social judgments. Although there has not been much integration between the two literatures, both emphasize self-representation as an important cognitive factor. "Theorists long have suggested that an implicit, if not explicit, comparison of self with others is an integral part of self-perception, as well as other-perception" (Weary & Edwards, 1993, p. 302). Therefore, the findings and methodological advances in the social cognition literature have significant relevance for the understanding of interpretive processes regarding the self in depression.

Motivation and Social Cognition

The depression literature on social cognition has historically focused on the influence of motivation to a greater extent than have the major depression theories. The development of this focus on motivation can be traced back to the earlier work on attributions and control motivation (Heider, 1958; Jones & Davis, 1965; Kelley, 1967). One of the assumptions of this work was that “attributions were made in order to render the social world predictable and controllable” (Pittman & Heller, 1987, p. 468). Supporting studies have shown that individuals are more likely to engage in attributional analysis when they are deprived of control (e.g. D’Agostino & Pittman, 1982; Pittman & Pittman, 1980; Swann, Stephenson, & Pittman, 1981), provided with negative or unexpected information (e.g., Clary & Tesser, 1983; Diener & Dweck, 1978; Hastie, 1984; Pyszczynski & Greenberg, 1981; Wong & Weiner, 1981), or feel that the attributional outcome is personally relevant (e.g., Berscheid, Graziano, Monson, & Dermer, 1976; Elliott, 1979; Harvey, Yarkin, Lightner, & Town, 1980; Jones & Davis, 1965; Monson, Keel, Stephens, & Genung, 1982).

One study (McCaul, 1983) examined the effects of depression on the level of attributional activity to provide further support for the predictions about control motivation. It is believed that depression is associated with chronic expectations of uncontrollability (e.g., Abramson et al., 1989; Beck, 1976). Therefore, McCaul predicted that depressed individuals would make greater use of attributional information than non-depressed individuals. Participants read an essay that supported the presence of nuclear power plants in heavily populated areas. Half of the participants were told that the person was paid \$2500 to write the essay (external attributional information), and the other half of the participants were told that the essay was an entry in a personal journal (internal attributional information). It was found that the depressed group was less likely to attribute the writing of the essay to internal traits of the person when they were informed that the person was paid as opposed to writing a journal entry. The nondepressed group, on the other hand, made similar judgments about the causes of the essay regardless of the attributional condition. McCaul concluded that the feelings of

uncontrollability in the depressed group led to a greater use of attributional information, which resulted in less biased judgments. The findings provided further support that attributional activity is driven by the need for control.

Model of social-cognitive consequences of depression. Since McCaul's investigation, many studies have provided further evidence that depressed individuals process social information in a more extensive way than do nondepressed individuals (e.g., Edwards & Weary, 1993; Gleicher & Weary, 1991; Hildebrand-Saints & Weary, 1988; Marsh & Weary, 1989; Weary, Elbin, & Hill, 1987; Weary, Jordan, & Hill, 1985; Yost & Weary, 1996). Weary, Marsh, Gleicher, and Edwards (1993) developed a model of mild and moderate depression to provide a framework for understanding these results. The model also includes the consequences of depressives' uncontrollability expectations on social cognition. The main premise of the model was described by Yost and Weary (1996) as follows:

Mild and moderate perceptions of control loss associated with mild and moderate depression generate feelings of uncertainty about one's ability to understand causal relationships in the social world; these feelings, in turn, are thought to result in a more extensive and intentional search for and processing of social information in an attempt to regain interpretive and predictive control (p. 141).

Several other researchers in addition to McCaul, have found that depressed individuals are more likely to attend to an extensive range of information in their social environment, take the relevant information into account, and make judgments about others that are relatively unbiased or appropriate to the situation. Yost and Weary (1996) used a design similar to McCaul's study but also placed half of the participants under a cognitive load (rehearsing a six digit number while reading a speech). They found that depressed individuals were less biased than nondepressed individuals when there was no cognitive load. However, no differences were found in the load condition. They concluded that depressed individuals' greater use of attributional information to make unbiased judgments is a motivated and deliberate style of processing because it is impaired by cognitive limitations, such as insufficient attention.

Related studies have shown that depressed individuals are more sensitive to attributional information. For example, Weary, Jordan, and Hill (1985) showed a videotape of a student that performed poorly on an aptitude test. After the performance, the student was shown to either accept responsibility for his performance (a behavior that is in accordance with social norms) or not accept responsibility for his performance (a social violation). It was found that the depressed group in the social violation condition made significantly harsher judgments about the student compared to the nondepressed group in the social violation condition and compared to the depressed group in the no violation condition. The nondepressed group's judgments did not vary as a function of the actor's willingness to take responsibility. The researchers concluded that the violation of a typical norm increased feelings of uncertainty in the depressed group, which in turn increased sensitivity to the available information.

Lassiter, Koenig, & Apple (1996) examined depressives' sensitivity to information and processing motivation by asking participants to watch videotapes of actors performing everyday activities (e.g., cleaning) and then to identify units of meaningful actions in the performances they observed (e.g., opened the door). The researchers found that the depressed group had higher rates of unitization than the nondepressed group if the behavioral sequence had subjective importance or if they were explicitly instructed to identify "the smallest actions that seem natural and meaningful to you." However, the depressed groups had lower rates of unitization than the nondepressed group if the behavioral sequence lacked subjective importance *and* explicit task instructions were not available. The study indicates that depressed individuals are more sensitive to information and process information more extensively than nondepressed individuals but only when motivation is sufficient.

Researchers have also found that depressed individuals are more likely to seek information and to generate more judgments compared to nondepressed individuals when making social judgments. Gleicher and Weary (1991) found that depressed individuals listed more impressions about an actor and reported a greater interest in understanding another person's behaviors than nondepressed individuals. The depressed group in Flett,

Pliner, and Blankstein's study (1989) listed more causes for real life positive and negative events and had higher scores on the Attributional Complexity Scale (ACS; Fletcher, Danilovics, Fernandez, Perterson, & Reeder, 1986) than the nondepressed group. Hildebrand-Saints and Weary (1989) informed participants that they would be playing the role of an interviewer and instructed them to choose interview questions from a list of potential questions. The depressed group selected questions that were higher in diagnosticity (i.e., provided more information about the interviewee) than the nondepressed group.

In summary, there is a small but growing body of research in the social-cognition literature that provides compelling evidence that depressed individuals are more likely than non depressed individuals to attend to an extensive range of information in their social environment, take the relevant information into account, and make judgments about others that are relatively unbiased or appropriate to the situation. Although the model and the supporting findings have not yet been discussed in the context of self-referent processing, there seems to be a contradiction between this perspective and the major cognitive theories. The social-cognitive consequences model of depression model suggests that, at least in some situations, depressed individuals are more data-driven than are nondepressed individuals, and the supporting studies have provided compelling evidence that depressed individuals process available information in an extensive rather than selective way and make judgments that are relatively unbiased and situation-appropriate rather than biased.

Integrating the Different Perspectives and Findings

Understanding the true manner in which depressed individuals interpret and judge the world around them is important to the progress of theories, research, and treatments in the field of depression. Most of the knowledge about depressive inferential processes has been influenced and advanced by studies on the major cognitive theories. It is common for these examinations to focus on the judgments that depressed individuals make about the self, as opposed to about others or general knowledge. The theoretical reason is that the core of the maladaptive thoughts and processes in depression is predicted to be "the

self.” For example, Clark, Beck, and Alford (1999) contend that “core schema are usually expressed in terms of absolute statements and generally refer to attributes about the self” (p. 83). Studies with self-referent stimuli have validated these theoretical conceptions of depressive inference by showing that depressed groups are more negative and pessimistic than nondepressed groups.

Social cognition research has also contributed to the current knowledge about inferential processing in depression. The basic difference in these studies is that social judgments, not judgments about the self, are investigated. Researchers have frequently commented that depression studies on social cognition do not consistently reveal negative patterns (e.g., Bargh & Tota, 1988). Furthermore, there is evidence that depressed individuals are capable of and more likely to process social information in relatively accurate or even-handed ways, compared to nondepressed individuals. In particular, the previously described research on social cognition and control-motivation has found that depressed individuals process social information in an extensive and relatively unbiased manner.

Although the social-cognitive literature examines judgments about others, it still seems relevant to understanding the way that depressed individuals make sense of the self. Gara et al. (1993) described the connection as follows:

What is known about depressed person’ cognitions about persons other than themselves? An answer to this question seems basic to the understanding of depressive phenomenology if schemata of self and of other people are assumed to be inextricably and dialectically interrelated—that is, if a person’s self-understanding is assumed to occur within a relationship framework that necessarily involves his or her views of others (p. 93).

The implicit connection between self and other-perception has been noted by several other researchers as well (e.g., Weary & Edwards, 1993). However, there has been a lack of integration between the two bodies of research. An important question for future

research is whether these extensive and deliberate tendencies that influence depressed individuals' social inferences can also influence their self-inferences.

An obvious explanation for the disparate findings is that depressed individuals process social information differently than self-referent information. However, there seem to be other methodological differences between these areas of research that may also provide an explanation for the different findings. It will be postulated that the two literatures are focusing on *different stages* of information processing rather than entirely different tendencies that are exclusive to certain types of information. More specifically, it will be argued that the research on the major cognitive theories focuses on the automatic stages of processing while the research on the control-motivation model focuses on effortful stages of processing.

Stage Model of Social Inferences

The distinction between automatic and effortful processing initially appeared in the cognitive science literature (e.g., Posner, 1978; Shiffrin & Schneider, 1977). According to these researchers, automatic processes are “initiated without awareness and place limited demands on available cognitive capacity” (Ingram, Partridge, Scott, & Bernet, 1994, p. 198). Conversely, effortful processing “requires conscious activity and is presumably under the control of the individual” (Ingram, Partridge, Scott, & Bernet, 1994, pg. 198). These concepts have contributed significantly to research on attributions and social-cognitions in the general population. Earlier studies indicated that individuals make dispositional judgments about others that are automatic and biased. “Recent research suggests that it is useful to think of social inference not as a single process but as a series of processes” (Krull, 1993, p. 340). In other words, social inferences are the outcome of automatic and effortful processes.

Gilbert, Pelham, and Krull (1988) have developed a stage model of social inferences to explain the cognitive mechanisms underlying the correspondence bias. The model predicts that inferences are influenced by two qualitatively different stages. During the initial stages, the perceiver makes an observation and then makes a judgment about the observation related to a specific inferential goal. The inferential goal is either

to make a judgment about a person or about a situation. For example, if someone is yelling, the observer may either make judgments about the person's character (hostile) or the person's situation (stressful). These initial judgments are believed to be automatic, spontaneous, and efficient because they are influenced by prior beliefs and expectations, such as schemas and stereotypes (Krull, 1993).

The researchers contend that the automatic stages of processing will be followed by an effortful stage if the attention of the perceiver is not limited and if the perceiver is sufficiently motivated. In the effortful stage, it is believed that the perceiver will "correct" the initial judgment based on a deliberate and controlled consideration of available information that may override or mitigate the biased judgment. "Correction seems to be a much more willful process that is easily impaired by ongoing cognitive activities" (Krull, 1993, p. 341). Here is an example of the automatic and effortful stages that are involved in the social inferential process:

When perceivers view behavior, they begin by identifying the behavior ('Tom is giving money to the United Way representative'), next they characterize the actor, or infer that the actor possesses a disposition that corresponds to the actor's behavior ('Tom is a generous person'), and finally, they correct this inference by taking into account the circumstances or situations that may have constrained the actor's behavior ('Tom knows that Marlene likes charitable men. Perhaps Tom isn't a particularly generous person after all') p. 340.

To examine these predictions, Gilbert and his colleagues have developed a variation of the correspondence bias paradigm. As in the previously discussed studies, the participants observe or read descriptions of a particular person or situation, and then they are provided with information that is intended to correct biases in judgments. The bias-reducing information has been referred to in several different ways by the researchers in the literature (e.g., "constraining," "situational," "additional," and "available" information). In this review, the general term "corrective information" will be used. The unique aspect of Gilbert and his colleagues' studies is that half of the participants are placed under a cognitive load (e.g., rehearsing a phrase or a six digit

number). The assumption is that the condition with the cognitive load will reveal the efficient and automatic effects of the initial stages of processing, and the condition without the cognitive load will reveal the effortful and corrective effects of the latter stages of processing. The studies provide strong and consistent evidence that relatively automatic judgments are biased due to the internal beliefs and constructs, such as stereotypes and schemas, while relatively effortful judgments are less biased and more accurate due to the conscious and deliberate use of external information (e.g., Gilbert, Pelham, & Krull, 1988; Krull, 1993; Krull & Erickson, 1995).

Applying the Model to Current Depression Research

Research on the major cognitive theories has predominantly been focused on automatic processing. Many of the methodologies in these studies are "...derived from research in experimental cognitive psychology, to assess automatic cognitive processes and schematic functioning in depressed persons" (Gotlib & Krasnoperova, 1998, p. 606). For example, a technique for investigating schema-driven interpretations is to present valenced stimuli (e.g., negative versus positive feedback) and to ask participants to make judgments, evaluations, and interpretations about the stimuli. It is expected that the negative information will activate depressive schemas and maladaptive beliefs, which will in turn lead to overly negative and typically automatic responses. These methods have contributed significantly to understanding the way depressed individuals automatically interpret self-referent information.

These studies are usually not focused on motivational factors or other effortful processes that may influence self-judgment (Dykman, 1998). Most of the studies use tasks that require participants to choose from negative and positive response options. Although the studies do show that depressed individuals consistently choose the negative options, they do not show whether depressed individuals would still rely on schematic biases and dysfunctional attitudes if alternative, corrective information were available. Therefore, the studies lack methodologies that are appropriate for assessing correction of overly negative judgments about the self.

The studies on the social-cognitive theories intend to assess motivated reasoning. To achieve this goal, the experimental tasks are designed to create social situations with more than one reasonable interpretation. Typically, participants are required to make social judgments about either real or hypothetical characters in one of two conditions. In one condition, participants are given specific information about the character that is designed to significantly alter participants' social judgment process. This type of information is commonly referred to as *situational constraints* or *dispositional information*. Researchers believe that, when this type of information is made available, then effortful correction processes can be examined because participants have a means for adjusting their biased social judgments. Researchers contend that, on the other hand, the social judgments made in the other experimental conditions without such information will more directly reveal the influences of cognitive biases. Such designs can be useful to studies on self-referent processing by allowing for the observation and assessment of secondary, corrective processes that may also influence depressives' self-judgments, in addition to negative biases.

Chapter III: Overview of Presented Studies

Existing studies on self-referent inferences in depression are designed to elicit and assess cognitive biases. To date, no studies have examined whether depressed individuals can utilize corrective information to reduce negativity in self-referent judgments. The purpose of the proposed studies was to develop a paradigm that allows for the observation of both negative biases and corrective processes during the interpretation of self-referent information in depression. The term *corrective information* was developed, for the purposes of the presented studies, to refer to information that may significantly alter one's judgment about the self. It was operationally defined as *information that indicates a plausible factor, other than self, that may have played a role in the negative outcome of an event*. For example, students commonly make negative inferences about their intellectual abilities after receiving a poor grade on an exam. However, information about the difficulty of the test may alter these judgments. If a student realizes that the exam was extremely difficult, then s/he can "correct" overly negative inferences about their intellectual abilities by accounting for the impact of test difficulty on their academic performance.

Potential thought processes for depressed individuals in exam scenario

Emotional Event	Initial inferential outcome	Corrective information	Secondary inferential outcome
Student receives a poor grade on an exam	"I never do well at anything. Why should school be any different?"	Student receives information that test was highly difficult \implies	"I'm not a great student, but I could do better if the test wasn't so hard."
		No information is available about difficulty of test \implies	No inferential change or continued poor judgment about the self (e.g., "I'm never going to be good at school.")

Study 1

The primary purpose of the first study was to test if depressed individuals can utilize corrective information to reduce negativity in self-referent judgments. Inferential certainty and memory were also investigated to provide support for the cognitive processes that were predicted to influence the self-referent judgments of the mood groups. The design included depressed and nondepressed college students. The participants were required to imagine themselves in hypothetical scenarios about everyday situations with negative outcomes. Corrective information was included in half of the scenarios. After the scenarios were presented, participants were asked to make evaluative judgments about themselves based on the outcome of the scenario. They were also asked to rate their certainty about their self-evaluation and to recall information from the scenarios.

Hypothesis 1

Depressed individuals will make more negative judgments about themselves, and will recall more negative information from the vignettes compared to the non-depressed individuals. This prediction is based on the theoretical assumption of the major cognitive theories that the interpretation of self-referent information in depression is influenced by maladaptive and pessimistic cognitive biases.

Hypothesis 2

The depressed group will show a greater reduction in self-referent negativity and greater uncertainty in the corrective versus the non corrective condition than will the non depressed group. Depressed participants are also expected to show better recall of corrective information than are non depressed participants. These predictions are based on the past research on the control-motivation model of depression showing that depressed individuals are more sensitive to and more likely to use available attributional information because of expectations of uncontrollability and feelings of uncertainty about their environment.

Study 2

The primary purpose of the second study was to extend the first investigation by examining whether depressed individuals would correct negative self-inferences in simulated real-life contexts, rather than hypothetical situations. Depressed and nondepressed participants were asked to give a speech while ostensibly being observed by a professor. Half of the participants were given information before the speech task that was designed to indicate that the rater's mood was disagreeable. Following the speech tasks, participants were asked to evaluate themselves on several speech-related dimensions. Then they were provided with feedback from the professor on their speech performance, which was relatively negative. The participants were subsequently asked to make predictions about their performance on a second speech.

Hypothesis 1

The depressed group will show a smaller increase in expectations for their performance on the second speech than will the non depressed group.

Hypothesis 2

The depressed compared to the nondepressed group's positive expectations about their second speech performance will be enhanced by the corrective information to a greater degree.

Hypothesis 3

The depressed group's estimation of the validity of the speech feedback will be influenced by the corrective information to a greater degree than will be the case for the non depressed group.

Experiment 1: Correction of Depressed Individuals' Negative Self-judgments in Hypothetical Situations

Method

Design

The study employed a 2 (mood group: non-depressed, depressed) X 2 (information condition: corrective information, irrelevant information) X 2 (order of information condition: corrective or irrelevant vignettes first) mixed ANOVA design, with mood group as the between group variable and information condition as the within-subjects variable.

Participants

Participants were undergraduate students from the Educational Psychology subject pool at the University of Texas at Austin and received course credit for participation. They were instructed by the department to sign up for the “Story Time” study. This title was developed to avoid indication of the actual purposes of the study. One student was excluded from the study due to arriving late for the session.

The final sample consisted of 46 undergraduate student participants. The mean age of participants was 21.35 (SD = 1.98). The ethnicity breakdown of the sample was 56.5% Caucasian (26 participants), 21.7% Asian-American (10 participants), 8.7% Latino/Hispanic (4 participants), 4.3% Indian-American (2 participants), 4.3% Biracial (2 participants), and 4.3% Other (2 participants). The study consisted of 29 (23 females and 6 males) non-depressed participants and 17 (14 females and 3 males) depressed participants. The mean BDI scores were 5.90 (SD = 3.098) for the non-depressed group and 18.75 (SD = 7.707) for the depressed group.

Participants were divided into mood groups by their total score on the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). It was originally proposed that participants who scored 10 or above would be included in the depressed mood group and those who scored 5 or below would be included in the non-depressed mood group. A BDI cut-off score of 12 was chosen instead because it allowed for a compromise between the goal of using the most stringent possible criterion for

defining the depressed group and the goal of retaining sufficient numbers of participants in this group for reasonable statistical power.

Measures

Development of vignettes. Four vignettes were developed as the emotional stimuli in the study. The purpose of these vignettes was to allow for the assessment of participants' negative, self-relevant cognitions and for the influence of corrective processes on these cognitions. The vignettes were approximately 10-14 sentences in length, described typical college situations with negative outcomes, and were written in the second person (e.g. "you take an exam in class today"). The four vignette scenarios were as follows: getting a low grade on a mid-term exam, being excluded from a party invitation, receiving a poor evaluation from an employer, and getting ignored at a social function.

Two versions were created for each vignette, a corrective version and an irrelevant version. The only difference between the two versions of the vignettes was a single phrase. For the corrective version, the phrase was designed to provide information that facilitated the correction of negative self-judgments about the emotional event. In other words, the phrase indicated a plausible explanation for the negative emotional outcome that was not related to the self. The irrelevant vignettes phrases provided information that was not related to the negative outcome of the emotional event. The following is an example of a vignette, with both phrases included:

When you get to your class, you notice that the grades for the mid-term exam have been posted. There is a huddle of people around the bulletin board discussing the exam and trying to find their grades. Quite a few students **were looking through their lecture notes (irrelevant version of phrase) / are talking about how tricky the exam was (corrective version of phrase)**. As you work your way to the front, someone taps you on the shoulder. It's an old friend from high school, and you are both surprised that you had never seen each other in the class until now. Before you get a chance to catch up with each other, the professor walks in and begins the class. You can't wait any longer to see your

grade so you decide to take a quick peek. You are surprised to see that your grade is low.

To measure participants' interpretations of these vignettes, an interpretive statement was developed for each vignette and was followed by a agreement rating scale. These interpretative statements were designed to reflect a negative meaning about the self, based on the vignette scenarios. For example, for the vignette above participants were asked to rate the statement "The low grade means you are a poor student" from a scale of 1 (strongly agree) to 9 (strongly disagree).

Piloting of vignettes. A small pilot study was conducted to provide data about the validity of the vignettes. 29 undergraduate students from an undergraduate educational psychology course read each version of the vignettes and completed ratings scales about the vignettes for course credit. A booklet (Appendix A) containing the vignettes and rating scales was given to the participants. Students were asked to first review the irrelevant version of a vignette and then to review the corrective version of the vignette. After reviewing both versions of a vignette, they were presented with the negative interpretation (e.g., "the low exam grade means you are a poor student") statement for that vignette and were asked to rate their agreement with it on a scale of 1 (strongly agree) to 9 (strongly disagree). These ratings were used to assess participants' interpretations of the emotional event in the vignette. In addition, the student research participants were instructed to explain any differences in how they interpreted the two versions. Lastly, they were instructed to rate the realism of the first and second version of each vignette from a scale of 1 (very realistic) to 9 (very unrealistic).

The pilot data were analyzed to determine if the irrelevant and corrective versions of the four vignettes differed in the expected ways. Paired-samples t-tests supported the effectiveness of the information condition manipulation by indicating that participants' interpretations of all four vignettes were more negative for the irrelevant version compared to the corrective versions. Table 1 contains the means, standard deviations, and t-tests. Participants' narrative data provided further support that the versions differed in the expected ways. The data indicated that participants considered the corrective

information when making inferences about the vignettes and made less negative self-judgments based on this information, as seen by the examples provided in Table 2.

Table 1. *Means, Standard Deviations, and T-tests for Inference Ratings from Vignette Pilot Study*

Vignette	With irrelevant target phrase	With corrective target phrase	Paired-samples t-test
Mid-term exam	5.72 (1.96)	6.69 (1.49)	$t(28) = -3.47, p = .002$
Party invitation	4.48 (2.20)	5.66 (2.26)	$t(28) = -2.84, p = .008$
Boss evaluation	3.55 (1.24)	5.03 (1.68)	$t(28) = 4.58, p = .000$
Club meeting	3.76 (1.50)	4.83 (1.71)	$t(28) = -3.50, p = .002$

Note: Higher ratings are more positive.

Participants' ratings of the realism of the vignettes were examined to determine if the emotional stimuli in the study were reflective of real-life, personal situations. Realistic ratings below 5.0 (neutral) were viewed as indicating that the vignettes were considered realistic. Table 3 reflects the means and standard deviations of participants' realistic rating for each vignette, in both versions. Mean realism ratings for all vignettes, in both versions, were below 5 (considered realistic).

Presentation of the study vignettes. A questionnaire was developed with these vignette narratives and ratings scales (see Appendix B and C). The vignettes were presented with the following titles and ordering: "You see your mid-term grade" story, "you go to a coffee shop" story, "Your boss reviews your project" story, and "You join an organization" story. The instructions asked participants to "read each of these stories, and imagine yourself in the situations that you are reading about."

Table 2. *Examples of Reasons for Rating Irrelevant and Corrective Versions of a Vignette Scenario Differently*

Vignette Scenario	Participant Response
Mid-term exam	<p>“In the first situation no indication is given that the test was difficult. Therefore, the student doing poorly is a result of their ability. However, in the second situation it is indicated that the test was indeed tricky. Therefore, the student doing poorly is more a reflection of the test than ability.”</p> <p>“Knowing that others found the test difficult makes me feel better even if I did receive a low grade.”</p>
Party invitation	<p>“I told the roommate not to talk to me in the second situation, so I wouldn’t feel as bad if the roommate hadn’t included me in the conversation.”</p> <p>“If the roommate had wanted to invite me in the first scenario she would have told both of us about the party at the same time. In the second scenario, it could be that the roommate will tell me when I finish studying.”</p>
Boss evaluation	<p>“The fight with his wife may have influenced his mood negatively, therefore he may have been too quick to judge the project.”</p> <p>“If the boss had a lot of troubles on his mind he is more likely to project those problems onto my report.”</p>
Club meeting	<p>“In the first situation the people seem cold and uninterested in the new member. However, in the second situation, focus is placed upon the strong work ethic of the group. Thus, rather than partying they would probably prefer to go home and study. There is no evidence that they dislike the person.”</p> <p>“The first group [involved in student issues] is more likely to want to go out and so it would seem more of a rejection.</p>

Table 3. *Means and Standard Deviations for Realistic Ratings of Each Vignette (from Vignette Pilot Study)*

Vignette	With irrelevant target phrase	With corrective target phrase
Mid-term exam	3.90 (2.11)	2.79 (1.90)
Party invitation	4.34 (2.07)	3.97 (1.90)
Boss evaluation	3.86 (1.25)	4.14 (1.51)
Club meeting	4.55 (1.92)	4.45 (1.82)

For half of the participants, the mid-term and coffee shop vignette were presented in the irrelevant version and the boss review and organization vignette were presented in the corrective version (see Appendix B). For the other half of the participants, the order of the information condition was reversed (see Appendix C). Therefore, while all of the participants received the vignettes in the same order, half of them received the corrective condition first and the other half received it second. In addition, all vignettes were rotated through both the corrective and irrelevant information conditions.

Uncertainty ratings. Each vignette was followed by the same negative interpretations of the vignette events that were used in the pilot study, and the participants were instructed to rate this on a scale from 1 (strongly agree) to 9 (strongly disagree). These ratings were used to assess participants' interpretations of the emotional event in the vignette. The interpretation rating was followed by a confidence rating. Participants were instructed to rate on a scale of 1 (very certain) to 9 (very uncertain) how certain they were about their interpretation. This score was used as a measure of how uncertain participants were about their self-referent interpretations of the negative vignette events.

Memory scores. The memory questionnaire for this study was developed to measure participants' recall of the manipulated information in the vignette, whether

irrelevant or corrective (Appendix D). Memory was of interest because it was expected to reflect the degree of attention that participants showed to the corrective information. The form instructed participants to “write as much as you can remember and as close to verbatim as possible” from the second and third vignettes that they read.” Only two vignettes were included in the interest of time. The second and third vignettes were chosen because these would include one irrelevant vignette and one corrective vignette, regardless of participants’ experimental conditions, while reducing the influence of the primacy and recency effect on participant memory. The memory questionnaire was scored by the author based on the extent to which participants’ recalled the content of the target phrases. Responses received a score of “1” if the corrective or irrelevant concepts were recalled and “0” if inaccurate or no information was recalled.

A subset of the participants’ memory questionnaires was also scored independently by a rater who was blind. 10 of these questionnaires were randomly selected from the order condition that received the corrective version of the coffee shop vignette and the irrelevant version of the boss review vignette. Another 10 questionnaires were randomly selected from the other order condition, meaning that the vignette versions were reversed. The second rater’s memory scores provided inter-ratings for the following: 5 memory scores for the corrective version of the coffee shop vignette, 5 for the irrelevant version of the coffee shop vignette, 5 for the corrective version of the boss review vignette, and 5 for the irrelevant version of the boss review vignette. Inter-rater reliability of the memory scores ranged from .80 to 1.00.

Beck Depression Inventory. (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). The BDI (see Appendix E) is a 21 item self-report inventory that measures the severity of depression during the past two weeks. The question that assessed suicidality was omitted. Each item represents a depression-related attitude or symptom. These items are rated on a scale of 0 (absence of symptom) to 3 (high level of symptom). Studies have shown that the measure has high internal consistency, concurrent validity, and construct validity. Although the findings will be discussed in terms of depression, it

is acknowledged that the selection criteria that will be implemented in this study are more appropriate for dysphoric mood rather than syndromal depression.

Procedures

Approval from the Internal Review Board of the University of Texas at Austin was obtained for the procedures for the present study. The experimenter was the principal investigator of the study. Sessions typically included 5-15 participants and were conducted in classrooms of similar size and appearance. Each session began by providing participants with written information about the study procedures, purpose, and possible effects (Appendix F). Experimenter did not proceed to the experimental phase until all participants read and signed the consent form and were offered an opportunity to ask questions. No participant declined participation.

After consent forms were collected, the experimenter gave each participant three packets. The packets were sealed and numbered 1 through 3. The three packets contained the vignette booklet, the BDI, and the Memory Questionnaire, respectively. All participants were instructed at the same time to open the first packet. The experimenter read the instructions aloud to the participants. After answering participants' questions, the experimenter instructed participants to complete the contents of each packet, to reseal the content before opening the next packet, and to not change the content once a packet was resealed.

Participants were further instructed to return their packets to the experimenter once completed. They were informed that they would be given a participation receipt and a debriefing form. The experimenter encouraged the participants to read the debriefing form (Appendix G) for further information about the importance of their participation and the purpose of the study. They were also encouraged to talk with the experimenter or to use the contact information provided in the debriefing form for any questions or concerns. Participants were requested to dispose of the debriefing form after reading the information and to withhold from sharing information about the study until the end of the semester.

Results

This study used a 2 (mood group: depressed, non-depressed) x 2 (information condition: irrelevant target phrases and corrective target phrases) x 2 (order of information condition: corrective or irrelevant vignettes first) design. The between-subjects factor was mood group, and the within-subjects factor was information condition. Each participant, whether depressed or non-depressed, was asked to read two vignettes that included an irrelevant target phrase and two vignettes that included a corrective target phrase.

Preliminary Analyses

Dependent variables. Following each of the four vignettes, participants rated their agreement with a negative, self-relevant statement interpretation of the preceding vignette on a scale of 1 (strongly agree) to 9 (strongly disagree) and then to rate their certainty about this interpretation on a scale of 1 (very certain) to 9 (very uncertain).

The two inference ratings that corresponded with the “irrelevant vignettes” (those that included an irrelevant target phrase) were summed together to create a score for the irrelevant information condition (“total irrelevant inference score”). Similarly, the two inference ratings for the vignettes that included a corrective target phrase were summed together to create a Total Inference Score for the corrective information condition. Higher scores indicated more disagreement with the negative vignette interpretation and were interpreted as more correction of a negative cognition about the self.

The data for participants’ certainty about their vignette interpretations was calculated similarly. Participants’ certainty ratings for their interpretation of the two vignettes with the irrelevant target phrases were summed together to create a Total Certainty Score for the irrelevant information condition. This score was used as a measure of inferential certainty in situations without corrective information. Their certainty ratings for their interpretation of the two vignettes with the corrective target phrases were summed together to create a Total Certainty Score for the corrective information condition. This score was used as a measure of inferential certainty in

situations with corrective information available. Higher scores indicated more uncertainty.

The third dependent variable in this study was participants' memory scores. Participants were asked to provide verbatim recall of one of the vignettes that included an irrelevant target phrase and one of the vignettes that included a corrective target phrase. For each vignette recall, participants received a score of 1 if they recalled the irrelevant or corrective phrase and 0 if they did not. Higher Memory Score indicated more accurate recall.

Means and standard deviations for the three dependent variables, as a function of mood group and information condition, are presented in Table 4.

Table 4. *Means and Standard Deviations by Mood Group and Information Condition (IC)*

Dependent Variable	No Depression		Depression	
	Irrelevant IC	Corrective IC	Irrelevant IC	Corrective IC
Total Inference Score	10.00 (2.93) n=29	9.34 (3.00) n=29	6.12 (3.10) n=17	9.00 (2.90) n=16
Total Certainty Score	5.52 (2.28) n=29	6.48 (2.91) n=29	5.94 (3.17) n=16	7.19 (3.83) n=16
Memory score	.72 (.35) n=29	.78 (.26) n=29	.81 (.35) n=16	.80 (.33) n=16

Note: Higher inference scores are more positive. Higher uncertainty scores represent more uncertainty. Higher memory scores represent more recall.

Manipulation check. Another method for evaluating the effectiveness of the vignette manipulation, in addition to the pilot study, was to analyze the certainty scores from the main study. If the corrective target phrase was designed as expected, then vignettes with corrective information would trigger extensive and effortful processing

and would, therefore, be associated with less inferential certainty and higher information recall. A paired-samples t-test indicated that inferential uncertainty differed in the expected ways between the two information conditions. Participants were more uncertain of their vignette interpretations in the corrective condition ($M=6.73$, $SD=3.24$) than they were in the irrelevant condition ($M=5.67$, $SD=2.60$), $t(44) = -2.45$, $p=.018$.

Examination of Hypotheses

Hypotheses about self-relevant inferences. a) Overall depressed individuals in emotional situations will make more negative judgments about the self than non-depressed individuals. b) Depressed individuals will make significantly less negative judgments about themselves in emotional situations with corrective information compared to without corrective information. Non-depressed individuals, on the other hand, will make similar judgments about themselves in emotional situations with and without corrective information.

A mixed between-within subjects analysis of variance (ANOVA) was conducted to test predictions about the impact of depression and corrective information on participants' self-relevant interpretations, as measured by Total Inference Score. The within subjects factor was information condition (corrected, uncorrected), and the between factors were mood group (depressed, non-depressed) and order of information condition (first two vignettes presented with corrective information versus last two vignettes presented with corrective information).

There was a significant main effect for mood group, $F(1, 41)=8.44$, $p=.006$. As expected, non-depressed individuals made more positive interpretations ($M = 9.66$) than depressed individuals ($M = 7.63$), regardless of the vignette version. The main effect for information condition was also significant, $F(1, 41)=4.99$, $p=.03$. As expected, participants' interpretations of the self were more positive when corrective information was made available ($M = 9.19$) compared to the condition without it ($M = 8.10$). The main effect for order was not significant.

The analysis also yielded the predicted interaction, $F(1, 43)=8.25$, $p=.006$, indicating that the corrective information had different impacts for the depressed versus

the non-depressed groups. Pairwise comparisons revealed that depressed individuals made significantly more positive emotional inferences about vignettes with corrective information compared to vignettes with irrelevant information ($p=.001$) whereas non-depressed individuals' inferences did not significantly differ between the two information conditions.

The interaction effect between information condition and order was also significant [$F(1, 41)=21.14, p=.001$]. When making inferences about vignettes with irrelevant information, participants were more positive if the irrelevant inferences were presented first compared to when the corrective vignettes were presented first. When making inferences about corrective vignettes, participants were more positive when the corrective vignettes were presented first compared to when the irrelevant vignettes were presented first.

Hypotheses about inferential uncertainty. a) Overall, depressed individuals will be less certain about their self-relevant interpretations in emotional situations than non-depressed individuals. b) Depressed individuals' uncertainty about their self-relevant interpretations will increase more than non-depressed individuals' uncertainty in emotional situations with corrective information.

The analysis of uncertainty ratings was parallel to that done on self-relevant inference ratings: A mixed between-within subjects analysis of variance (ANOVA) was conducted to test predictions about the impact of depression, corrective information, and order on participants' inferential certainty, as measured by Total Certainty Score. Depressed and non-depressed participants rated their degree of certainty for their two vignette interpretations in the irrelevant condition and their two vignette interpretations in the corrective condition. Inferential uncertainty did depend significantly on participants' information condition, $F(1, 41)=6.19, p=.017$. Participants in the corrective condition were more uncertain about their interpretations than participants in the irrelevant version. The analysis did not yield a significant main effect for mood group and order. It also did not reveal any significant interaction effects.

Hypotheses about memory recall. Depressed individuals will recall greatly more information from the corrective target phrases compared to the irrelevant target phrases. On the other hand, non-depressed individuals will recall similar amounts of information from corrective and irrelevant target phrases.

A mixed between-within subjects analysis of variance (ANOVA) was conducted on the Memory Scores, with information condition as the within variable and mood group and order as the between subjects variables. The main effect for information condition was nearly significant, $F(1, 42)=4.04, p=.051$], reflecting that participants recalled corrective target phrases ($X=.90, SD=.04$) more than irrelevant target phrases ($X=.73, SD=.07$). No other main or interaction effects were significant.

Experiment 2: Correction of Depressed Individuals' Negative Self-Judgments in Real Life Situation

Method

Design

This is a 2 (mood group: depressed, non-depressed) x 2 (information condition: corrective information, no corrective information) between-subjects design.

Participants

A total of 164 undergraduate students participated in the study. There were 129 participants in the non-depressed group ($M=4.74$, $SD=3.15$) and 35 participants in the depressed group ($M=17.97$, $SD=5.06$). Data were collected from 113 of these participants in the spring semester of 2004. These participants were undergraduate students from the Educational Psychology subject pool at the University of Texas at Austin who volunteered for partial fulfillment of course requirements. The remaining 51 participants were recruited from a departmental introductory course in the summer of 2004. The professor offered these students credit on a course assignment for volunteering in the study. Due to time restrictions on the length of the experimental sessions demographic data was not collected on either of the participant groups. The validity measures described below were also not collected on the second group of participants to increase participation incentive by reducing the amount of time required by the study.

Procedure

All participants completed the study in fifteen minute individual sessions. The sessions were conducted in a small room with a one-way mirror, a table, and two chairs. The participants were greeted by the experimenter upon arrival and taken to the study room. Participants were instructed to take a seat with their side to the one-way mirror.

Corrective information manipulation. Corrective information was provided in half of the study cases immediately after participants entered the study room. The experimenter began these sessions with the following statement: "Dr. Mason, who is going to be part of our session, is running a little late. Her car got towed so she has to

walk all the way across campus to get here. But by the time I finish explaining the study to you, she should be here.” Later in the study, participants would receive unfavorable feedback from Dr. Mason. The false information about her tardiness was designed to indicate that Dr. Mason had been involved in an adverse situation prior to the session. It was considered *corrective information* because participants in this condition could potentially attribute the negative feedback from Dr. Mason to an external, situational factor rather than self-related factors.

Introduction and consent. Following the information about Dr. Mason’s tardiness, all participants received the same standard introduction. Once participants were seated, the experimenter gave a standardized introduction:

What we are looking at in this study is speeches-what makes a speech effective versus ineffective. We are going to ask you to give a two minute speech about the techniques & strategies that you found helpful when you were trying to apply to college. While you give the speech, Dr. Mason, who is the faculty sponsor of the study, will be observing you through this one-way mirror. While she is observing you, she will be rating the content and the presentation of your speech. Once you are done with the speech, we are going to ask you to rate yourself and to rate some feedback that we are going to give you. Then you’re going to complete one more questionnaire, and you’ll be done with the study. There are more details on the study in this consent form. Give it a read and then I will be more than happy to answer any questions you might have either about what you read or what I said.”

In reality, the speeches were not observed by anyone. The deception was necessary to create a realistic, emotional situation. At the end of the introduction, participants were given time to ask questions and to review the consent form. Once consent was provided, the experimenter exited the room in order for the participant to complete the speech task.

Self-evaluation of speech performance. After two minutes, the experimenter returned to the room and gave the participants a speech evaluation form (Appendix H). The experimenter explained the form to the participants as follows:

This is a form that is designed for evaluating speeches. It's usually used in a professional context so some of the terms might seem a bit unfamiliar. If you are not sure what they are asking, don't worry about it. Just try your best. Basically we're just asking you to evaluate yourself on the speech you just gave.

The form was developed for the purposes of this study. It consisted of eight dimensions of speech that were invented so as to give the appearance of a published measure. Of these dimensions, four referred to the "content of speech" (e.g., cohesion of distinct points) and four referred to the "presentation of speech" (e.g., congruence of facial expression with content). Participants were required to rate their speech on these dimensions using a scale ranging from (1) poor to (10) excellent.

The form was used to assess the negativity of participants' inferences about their speech abilities. Overall score was calculated by summing the ratings of each speech dimension with lower scores reflecting a strong negative bias about their overall speech abilities. Scale scores were calculated by summing the ratings of each dimension for the respective subscales. Lower scores reflected a strong negative bias about ability to develop speeches and to present speeches respectively.

Evaluation of other's feedback. After evaluating their own speech, participants were given the opportunity to review Dr. Mason's feedback about their speech. The experimenter gave the participants a sealed folder with the ostensible feedback. The format of Dr. Mason's feedback was identical to the participants' self-evaluation speech form. Dr. Mason's name was handwritten on the top of the form as the "rater", and the scores were handwritten for each speech dimension (Appendix I). Dr. Mason's ratings for speech content were below average, and her scores for speech performance were even lower. Each participant received the same feedback sheet. The experimenter waited outside of the study room while the participants reviewed it. Participants were instructed to reseal it and call in the experimenter when they were through.

When the experimenter returned, the participants were instructed to provide their reactions about the feedback:

As part of the speech feedback process, we would like to ask you to give your reactions and thoughts to the feedback you just received. It is very important for the study to be honest on the following questionnaire. We realize that it might be difficult to react to someone else's feedback but this will really help us understand the speech giving process. Rest assured that your answers will be anonymous and that Dr. Mason will not see them.

These assurances were provided in order to allow for a more honest and accurate reactions to the feedback.

A form (Appendix J) was developed for the purposes of this study to assess participants' interpretations of Dr. Mason's feedback. Participants were instructed to rate how accurate they considered the speech feedback they received from Dr. Mason. They were asked to separately rate her overall content ratings and her presentation ratings on a scale of 1 (very inaccurate) to 7 (very accurate). They were also instructed to rate how valid the overall ratings were on a scale of 1 (not very valid) to 7 (very valid) and how credible the overall ratings were on a scale of 1 (not very credible) to 7 (very credible).

Self-evaluation of predicted speech performance. Following the feedback review, participants were instructed to complete another self-evaluation task.

We are thinking about adding a second speech to the study. So hypothetically what would have happened is that you would have given a second speech right after the first, on a new topic and a new rater would have rated you. For us to know if we should add a second speech to the study we would like you to fill out this form based on how you think you would have done if you had given a second speech.

Participants were given a blank speech self-evaluation form. This procedure was designed to obtain a measure of participants' judgments about their speech abilities, after receiving negative feedback.

Cognitive measure. Once the speech evaluation tasks were completed, the participants were asked to complete the Beck Depression Inventory. The experimenter explained the instructions for the inventory and then left the room while the participants

completed the measures. The total BDI scores were used to determine each participant's mood group. The cut-off scores in this study for mood group classification were the same as Study 1.

Debriefing. Participants were debriefed thoroughly by the experimenter at the end of the session, including an explanation of the deception in the study and the reasons why it was necessary. Participants were assured that the feedback they received had no merit and that the experimenter had no knowledge of speech abilities. Participants were requested to refrain from discussing the study with others until the end of the academic year. The participants received a debriefing form which included information about the purpose of deception in psychological studies, referral information, and contact information in case of future concerns. All questions and concerns were addressed at the time of debriefing, and no participants made future contact.

Results

This study had two between-subjects factors, mood group (non-depressed and depressed) and information condition (no corrective information, corrective information), and one within-subjects factor (inferences for first speech and second speech). The dependent variables are described below. The means and standard deviations for these dependent variables are presented in Table 5, participants' average self-ratings are compared to Dr. Mason's ratings in Table 6, and the correlations between these dependent variables are presented in Tables 7 – 9.

Dependent Variables

Participants' self-ratings for speeches. After giving their first speech, participants were asked to rate their speech on four content dimensions and four presentation dimensions. Table 6 provides means and standard deviations for participants' ratings of their own speeches and also shows the feedback that all participants received "from Dr. Mason." The average of these content ratings ("Content Rating at Time 1") and the average of these presentation ratings ("Presentation Rating at Time 1") were summed together ("Total Time 1 Ratings"). Higher scores indicated more

Table 5. Means and Standard Deviations of Self-Ratings and Total Validity Scores

Dependent Variables	Information Condition	Mood Group	Mean	Std. Deviation	N	
Total Self-Rating at Time 1	No Corrective	Non-Dep	8.17	2.62	49	
		Dep	8.63	3.34	10	
		Total	8.25	2.73	59	
	Corrective	Non-Dep	9.20	3.46	41	
		Dep	10.50	1.62	13	
		Total	9.51	3.15	54	
	Total	Total	Non-Dep	8.64	3.06	90
			Dep	9.68	2.63	23
			Total	8.85	3.00	113
Total Self-Rating at Time 2	No Corrective	Non-Dep	11.96	2.77	49	
		Dep	11.70	3.31	10	
		Total	11.92	2.84	59	
	Corrective	Non-Dep	12.07	3.03	41	
		Dep	13.52	2.02	13	
		Total	12.42	2.87	54	
	Total	Total	Non-Dep	12.01	2.87	90
			Dep	12.73	2.75	23
			Total	12.16	2.85	113
Total Validity Score	No Corrective	Non-Dep	22.20	5.07	49	
		Dep	19.70	5.48	10	
		Total	21.78	5.18	59	
	Corrective	Non-Dep	19.66	4.96	41	
		Dep	21.77	3.86	13	
		Total	20.17	4.77	54	
	Total	Total	Non-Dep	21.04	5.15	90
			Dep	20.87	4.63	23
			Total	21.01	5.03	113

Note: Higher scores represent more positive self-ratings and higher perceptions of validity.

Table 6. *Means and Standard Deviations of Self-Ratings and Dr. Mason's Ratings*

	Self-Ratings	Dr. Mason's Ratings
Content		
Content Dimension 1	4.41 (1.83)	5
Content Dimension 2	2.74 (1.77)	5
Content Dimension 3	4.76 (2.07)	3
Content Dimension 4	5.15 (2.14)	4
Time 1 Content Rating	4.27 (1.57)	4.25
Presentation Dimension 1	4.91 (2.15)	6
Presentation Dimension 2	5.23 (2.02)	3
Presentation Dimension 3	3.70 (2.01)	5
Presentation Dimension 4	5.48 (2.02)	5
Time 1 Presentation Rating	4.83 (1.76)	4.75
Total Time 1 Ratings	9.09 (3.15)	9

Note: Higher scores are more positive.

positive ratings by participants of their speech. A similar rating score was created for participants' second, hypothetical speech. The average of their four content ratings for their second speech was summed with their average rating of their four presentation ratings ("Total Time 2 Ratings"). Again, higher scores indicated more positive ratings of their hypothetical speech. The comparison between the measures at time 1 and the measures at time 2 indicated how participants used Dr. Mason's feedback to make inferential corrections about their speech abilities.

Participants' perception of speech feedback. Participants were asked to rate Dr. Mason's feedback on the following dimensions: a) validity of the content feedback, b) the validity of the presentation feedback, c) the overall accuracy of the feedback, and d) the overall credibility of the feedback. The correlations between the validity items ranged from .41 to .84. The reported analyses below indicated that the four rating items assessed validity in a similar way. Therefore, the four items were summed together for each participant ("Total Validity Score"). The variable represents participants' perception of feedback accuracy.

Table 7. Correlations for Content and Dimension Self-Ratings of Predicted Speech (at Time 2)

At Time 2		Cont Dim1	Cont Dim2	Cont Dim3	Cont Dim4	Cont Avg	Pres Dim1	Pres Dim2	Pres Dim3	Pres Dim4	Pres Avg
A	ContDim1	.52	.44	.46	.48	.53	.41	.39	.38	.40	.45
T	ContDim2	.34	.38	.33	.32	.39	.33	.36	.34	.30	.38
	ContDim3	.53	.44	.57	.57	.60	.46	.43	.40	.46	.49
T	ContDim4	.48	.44	.47	.56	.55	.46	.44	.43	.45	.50
I	ContAvg	.59	.53	.58	.61	.65	.52	.51	.49	.51	.57
M	PresDim1	.39	.39	.44	.43	.47	.44	.37	.34	.42	.44
E	PresDim2	.49	.49	.51	.53	.57	.51	.48	.45	.51	.55
	PresDim3	.48	.45	.48	.44	.53	.38	.46	.53	.38	.50
1	PresDim4	.52	.48	.53	.53	.58	.51	.50	.41	.58	.55
	PresAvg	.55	.53	.57	.56	.62	.53	.53	.50	.55	.59
A	ContDim1	1.00									
T	ContDim2	.76	1.00								
	ContDim3	.66	.69	1.00							
T	ContDim4	.68	.66	.81	1.00						
I	ContAvg	.87	.88	.90	.89	1.00					
M	PresDim1	.58	.63	.62	.66	.70	1.00				
E	PresDim2	.56	.61	.65	.63	.69	.83	1.00			
	PresDim3	.54	.61	.70	.63	.70	.66	.77	1.00		
2	PresDim4	.57	.60	.71	.71	.73	.70	.72	.72	1.00	
	PresAvg	.62	.69	.75	.73	.79	.89	.93	.88	.87	1.00

Table 8. Correlations for Content and Dimension Self-Ratings of Predicted Speech (at Time 2)

At Time 2		Cont Dim1	Cont Dim2	Cont Dim3	Cont Dim4	Cont Avg	Pres Dim1	Pres Dim2	Pres Dim3	Pres Dim4	Pres Avg
A	ContDim1	.52	.44	.46	.48	.53	.41	.39	.38	.40	.45
T	ContDim2	.34	.38	.33	.32	.39	.33	.36	.34	.30	.38
	ContDim3	.53	.44	.57	.57	.60	.46	.43	.40	.46	.49
T	ContDim4	.48	.44	.47	.56	.55	.46	.44	.43	.45	.50
I	ContAvg	.59	.53	.58	.61	.65	.52	.51	.49	.51	.57
M	PresDim1	.39	.39	.44	.43	.47	.44	.37	.34	.42	.44
E	PresDim2	.49	.49	.51	.53	.57	.51	.48	.45	.51	.55
	PresDim3	.48	.45	.48	.44	.53	.38	.46	.53	.38	.50
1	PresDim4	.52	.48	.53	.53	.58	.51	.50	.41	.58	.55
	PresAvg	.55	.53	.57	.56	.62	.53	.53	.50	.55	.59
A	ContDim1	1.00									
T	ContDim2	.76	1.00								
	ContDim3	.66	.69	1.00							
T	ContDim4	.68	.66	.81	1.00						
I	ContAvg	.87	.88	.90	.89	1.00					
M	PresDim1	.58	.63	.62	.66	.70	1.00				
E	PresDim2	.56	.61	.65	.63	.69	.83	1.00			
	PresDim3	.54	.61	.70	.63	.70	.66	.77	1.00		
2	PresDim4	.57	.60	.71	.71	.73	.70	.72	.72	1.00	
	PresAvg	.62	.69	.75	.73	.79	.89	.93	.88	.87	1.00

Table 9. Correlations between Validity items, Self-Ratings of Actual Speech (Content and Presentation ratings at Time 1), and Self-Ratings of Predicted Speech (Content and Presentation ratings at Time 2)

		Validity 1	Validity 2	Validity 3	Validity 4
	Validity 1	1.00	.84	.60	.54
	Validity 2		1.00	.51	.41
	Validity 3			1.00	.69
	Validity 4				1.00
A	ContDim1	.10	.05	.03	.06
T	ContDim2	-.06	.00	.01	-.01
	ContDim3	.03	.11	.03	.01
T	ContDim4	.02	.03	-.01	.02
I	ContAvg	.03	.07	.02	.03
M	PresDim1	-.02	.02	-.01	.02
E	PresDim2	.03	.06	-.04	-.12
	PresDim3	-.14	-.07	-.05	-.07
1	PresDim4	.00	.03	.03	.01
	PresAvg	-.04	.01	-.02	-.04
A	ContDim1	.04	.05	.04	-.06
T	ContDim2	.08	.08	-.03	-.05
	ContDim3	.05	.04	-.14	-.10
T	ContDim4	.04	.04	-.06	-.09
I	ContAvg	.06	.06	-.06	-.08
M	PresDim1	-.04	-.08	-.01	-.05
E	PresDim2	-.05	-.10	-.04	-.10
	PresDim3	.06	.00	-.11	-.12
2	PresDim4	.05	.03	-.06	-.09
	PresAvg	.01	-.04	-.06	-.10

Examination of Hypotheses

Hypotheses about speech self-ratings. It was predicted that depressed individuals' predictions about their second speech would be more negative compared to those of the non-depressed group. It was also predicted that this effect would be greater in the no corrective condition, compared to the corrective condition.

An analysis of variance was conducted on participants' ratings of how well they expected they would do on a second speech (Total Time 2 Ratings), with mood group and information condition as the between factors and participants' ratings of their first speech (Total Time 1 Ratings) as a covariate. There was no significant main effect for mood group ($p > .10$) or information condition ($p > .80$). The predicted interaction effect between these two variables was not significant, $F(1, 159) = 2.66$, $p = .105$. However, the pattern of means was in the expected direction: The depressed group was less positive at Time 2 in the condition without corrective information and this mean difference was nearly significant [$F(1, 82) = 3.69$, $p = .058$], whereas the groups did not differ in the corrective information condition [$F(1, 76) < 1$].

To follow up these findings, separate analyses were conducted on participants' content ratings and presentation ratings at Time 2, which were combined in the analysis above. The analysis of variance on Content Rating at Time 2 was conducted with mood group and information as the between factors and Content Rating at Time 1 as a covariate. There was no significant main effect for mood group ($p > .16$) or information condition ($p > .36$). The predicted interaction effect between these two variables was significant, $F(1, 159) = 3.98$, $p = .048$, and revealed the same pattern observed in the analysis of Total scores: The depressed group was less positive at Time 2 in the condition without corrective information [$F(1, 82) =$, $p = .031$], whereas the groups did not differ in the corrective information condition [$F(1, 76) < 1$].

Another analysis of variance parallel to this one was conducted on the average presentation ratings at Time 2, with mood group and information condition as the between factors and Presentation Rating at Time 1 as a covariate. There were no significant main or interaction effects.

The analyses on the content and presentation ratings at Time 1 were conducted again with the exclusion of participants who rated themselves as negatively as or more negatively than Dr. Mason to examine the impact of feedback that was relatively more negative than participants' own evaluations on future speech predictions. The findings were in the same pattern as the above findings, but neither of these analyses revealed significant main or interaction effects. The implications of these findings and the general issue of feedback negativity will be discussed further in the discussion chapter.

Hypotheses about validity measure. It was predicted that both mood groups would consider Dr. Mason's feedback as less valid in the corrective information condition compared to the no corrective information condition. It was also expected that this difference in perception of the feedback between the two information conditions would be greater for the depressed group.

An analysis of variance was conducted on participants' perception of Dr. Mason's feedback (Total Validity Scores), with mood group and information condition as the between factors and participants' ratings of their first speech (Total Time 1 Ratings) as a covariate. The main effects for mood group ($p > .83$) and information condition ($p > .79$) were not significant. The interaction effect between the two independent variables closely approached statistical significance, $F(1,108)=3.81$, $p=.054$. For the depressed group, participants perceived Dr. Mason's feedback as more valid in the corrective condition ($X=21.77$, $SD=1.37$) compared to the no corrective information condition ($X=19.70$, $SD=1.56$). For the non-depressed group, participants perceived Dr. Mason's feedback as more valid in the no corrective information condition ($X=22.20$, $SD=.71$) compared to the corrective information condition ($X=19.66$, $SD=.77$). The depressed group did not show a trend that was congruent with the predication that depression-related uncertainty would increase in corrective contexts whereas the trend of the non-depressed group was more congruent with these predictions. The unexpected findings will be discussed further in the discussion section.

Chapter VI: Discussion

The presented studies investigated differences in depressed and non-depressed participants' judgments about the self-implications of negative events, in hypothetical (Study 1) and simulated (Study 2) contexts. The purpose was to replicate prior findings of more negative interpretations by depressed individuals, while providing evidence that these biases can be mitigated by depressed individuals' greater attention to contextual information. It was predicted that depressives' self-judgments would be characteristically negative in the face of mildly negative and ambiguous self-relevant information but that depressed individuals would show greater evidence of correcting these judgments when mitigating information was provided. The results of Study 1 were generally consistent with predictions, whereas Study 2 yielded inconclusive results. The findings are discussed in the context of related research. Then the possible reasons for the mixed results will be provided. The chapter will conclude with a discussion of the theoretical, research, and clinical implications of the current studies.

Summary of Study 1 and 2 Results

Replication of Past Findings on Negativity in Depression

Negative self-views play an important role in the onset and maintenance of depression according to the contemporary cognitive theories (e.g., Beck, 1967, 1976; Alloy et al., 1999). These theories posit that depressed individuals have a maladaptive style of processing information and that this results in emotional distress. Supporting studies have found that depressed participants make judgments, evaluations, and interpretations about self-referent information that are more negative than non-depressed participants (for review see Beck, Alford, & Clark, 1999). The current Study 1 replicates this finding of negatively biased processing of self-relevant information. Conversely, Study 2 revealed that the main effect for depression was not significant.

There are two tentative explanations regarding the emotional stimuli in the second study that may explain the lack of results. The research on cognitive biases in depression has frequently suggested the use of stimuli that are negative in valence and congruent with depression-related concerns to investigate the pessimistic aspects of depressive

thinking (e.g., Derry & Kuiper, 1981; Gotlib, Roberts, & Gilboa, 1996; Hartlage, Alloy, Vazquez, & Dykman, 1981). The negative speech feedback in Study 2 was intended to elicit concerns about self-worth in the depressed group and to result in negative judgments about future performance demands. In retrospect, the intellectual and skill-specific nature of the speech feedback may not have been effective for tapping into the broader emotional concerns about personal worth, loss, and inadequacy in depression. Also, the feedback may not have been sufficiently negative to trigger core, maladaptive self-biases. This speculation is supported by Table 5, which shows that the speech feedback was generally more positive than the participants' own evaluations.

Findings about Inferential Correction in Depression

In Study 1, the effect of mood group depended on information condition, namely that corrective information influenced the valence of self-judgments in the depressed group more than the non-depressed group. The attenuating effect of corrective information on pessimistic judgment in depression has been shown in studies on depression and social judgments (e.g., McCaul, 1983; Yost & Weary, 1996). However, the current study is the first to show that depressed individuals can also correct self-judgments. The explanation is believed to be similar to that provided by Yost and Weary (1996). Depressed individuals have a greater emotional need for understanding and control due to their perceived deficits. It is expected that this motivated the depressed group to attend to the corrective information and to make effortful adjustments to their initially biased self-judgments about the personal meaning of the negative vignette events. It should be noted, however, that this effect was not found on the Study 1 measures of inferential uncertainty and target phrase recall. This is surprising because past studies with similar measures have shown that extensive and corrective social information processing in depressed groups are associated with more recall of available information and less certainty about social judgments (e.g., Gleicher & Weary, 1991; von Hecker & Meiser, 2005). Future studies are necessary with measures or methods that may better detect the mechanisms for inferential correction in depression.

Unlike the major findings of the first study, the second study did not support predictions about inferential correction in depression. It was predicted that both mood groups would evaluate a second performance more positively than the first speech performance, but this difference was expected to be greater for the depressed group in the corrective condition compared to the depressed group in the no corrective condition. The mixed model ANOVA on actual and future speech evaluations did not reveal the predicted interaction between mood group and information condition. These findings indicate that negative performance feedback had a similar effect on subsequent self-evaluations in depression, regardless of whether corrective information was available or not. This is different from Study 1's finding that negative hypothetical events were judged less negatively by the depressed group when corrective information was available, compared to the condition without it. It is important to explore the reasons for these differences before making conclusions about inferential correction in depression.

Explanation of Mixed Findings about Inferential Correction in Depression

Lack of Differences Between Mood Groups in Study 2

An important possibility is that a greater degree of corrective processing was not revealed in the depressed group of Study 2 because there were no mood group differences to detect. For example, it is likely that the deception task of Study 2 triggered a higher level of motivated reasoning in the depressed group than Study 1. Several studies have indicated that depressed individuals are more sensitive to and aware of subtleties and details in their environments. One study showed that that the depressed group was more accurate in identifying an actor's truths and lies (DePaulo & Lane, 1999). Based on these findings, it is possible that the subtle nuisances of the second study (i.e., one way mirror, ostensible rater, false feedback, etc.) may have motivated the depressed group to engage in a hypervigilant and effortful style of processing, whether in the corrective condition or not. The overly effortful processing in the depressed group from the onset of the study and would explain the overall finding that the depressed group's judgments were not influenced by corrective information, as there may have been no need for inferential adjustment.

As mentioned earlier, another reason that there may not have been mood group differences in corrective processing is that the speech feedback was too mild or unrelated to depressives' concerns to trigger negative biases. If negatively biased processing was not activated in the depressed group of Study 2, then there would be less reason for the overall self-judgments of the depressed group to be influenced differently by the availability of corrective information compared to the nondepressed group.

Methodological Issues with Information Condition in Study 2

The corrective information in both studies was designed to facilitate a positive change in participants' evaluations of their future speech performance by compromising the validity of the rater's negative speech feedback. However, the mixed model ANOVA on participants' inferential change did not reveal this expected effect for information condition in Study 2. The analysis on participants' perception of feedback validity in Study 2 also did not reveal a significant effect for information condition, further indicating that the corrective information did not effectively modify the perceived validity of the negative speech feedback. It may be that the information about the rater's adverse experiences prior to the study (i.e., getting towed) was not compelling enough to alter perceptions about the negative speech feedback. Such a deficiency in the corrective information would explain the second study's failure to find inferential correction in the depressed group.

Limitations in Cognitive Capacity for Effortful Correction

It is believed that cognitive capacity for certain types of effortful processes are limited in depression because of an overall reduction in cognitive resources and an allocation of the available resources to emotional concerns. Inferential correction is particularly susceptible to these cognitive deficits because studies show that it requires a significant amount of cognitive resources (Gilbert, Pelham, & Krull, 1988). It is possible that the real life context of Study 2 exacerbated these cognitive deficits, hence explaining the study's failure to find inferential correction in the depressed group. The information in real life contexts is inherently more complex and extensive than hypothetical stimuli. Therefore, it is feasible that the depressed individuals were under a greater cognitive load

in Study 2. It can be concluded from the mixed results of Study 1 and 2 that depressed individuals can correct self-judgments in hypothetical situations but are too cognitively limited in some types of real-life situations.

Summary of Conclusions

The findings of Study 1 support the hypothesis that depressed individuals are more likely than non depressed individuals to correct negative biases in self-judgments when given mitigating information. However, it must be noted that the measures of uncertainty and recall in Study 1 did not provide evidence for the control motivated explanations of the supported findings, and that the Study 2 results did not support this hypothesis. It is unclear why the second study failed to show similar results. One likely possibility is that the methodological limitations of Study 2 did not allow for the accurate investigation of inferential correction in depression. Future research is necessary to examine the factors that will facilitate and inhibit the correction of negative self-judgments and the style of processing associated with depressed individuals' correction of negative self-judgments.

Importance and Implications of Present Studies

Extending Current Research and Suggestions for Future Directions

Since the cognitive revolution in psychology, it has been widely accepted in the depression literature that self-cognitions play a major role in the development and maintenance of the disorder. Regardless of its theoretical importance, few studies have investigated the effects of depression on self-relevant interpretations, judgments, and inferences. Furthermore, the existing studies on interpretive processes in depression have provided inconclusive results. Some studies have found that depressed participants are more negative than non-depressed participants, others have not found mood group differences, and still others have found that depressed participants' are more realistic than non-depressed participants.

Researchers have suggested the development of more sophisticated methodologies, such as the methods in social research paradigms, to reconcile the disparate findings in the current literature on depressives' judgments (e.g., Dykman,

1998; Dykman & Abramson, 1990). In accordance, the current research applied a stage model of social inferences (Gilbert, Pelham, & Krull, 1988) to the investigation of self-inferences in depression. It was the first study to investigate the effortful correction of self-referent inferences in depression, but the design also allowed for the assessment of negative biases in depressives' self-inferences. The current findings contribute to the understanding of these disparate findings in two important ways. First, the results support the existing conclusions that negative biases can influence depressives' self-cognitions. Second, the findings indicate that these negative biases can be ameliorated in depression by corrective information.

One of the next steps for depression research is to examine whether depressed individuals can also correct judgments in real life situations. One way to address the previously discussed methodological limitations is to experimentally simulate one of the vignette scenarios. For example, the researcher can stage a spontaneous party invitation from one confederate to another in a group of awaiting participants and then ask participants to provide explanations for the event. Another important area for future research is to investigate the role of cognitive capacity and motivation in the correction of depressives' self-inferences. Cognitive loads can be implemented to investigate the effect of limitations in cognitive resources on depressives' corrective processes, and studies with explicit instructions for participants to attend to or remember corrective information can investigate whether depressed individuals can be externally motivated to correct negative self-judgments. These types of investigations will extend current knowledge about the factors that will enhance and inhibit more adaptive styles of processing, such as inferential correction, than overly negative thinking in depression.

Theoretical Implications

There is a predominant view in the current literature is that depression is associated with an overly negative style of thinking. The "negativity hypothesis" has been spurred by the predictions of the contemporary cognitive theories of depression and has been further perpetuated by the research supporting negative biases in depressive cognition. Several authors have advocated for a more complex view of depressive

cognition. Even cognitive theorists, such as Beck, contend that the negative effects of depression on the outcome of cognitive processes is not pervasive and unchanging (Clark, Beck, & Alford, 1999). The current research extends these discussions by examining corrective processes as another way that depressive thinking may vary from the conceptualization of rigid and negative thinking, and the results provide some support for a more complex view of information processing in depression. That is, when required to make emotional sense of the self, depressed individuals are influenced by automatic, negative cognitive processes but and can also be influenced by effortful, correction processes.

Clinical Applications

The concept of inferential correction can be used to improve many facets of cognitive therapy for depression. Existing therapies focus on changing maladaptive thinking, mostly by identifying problematic thoughts and by helping the client reformulate these. The findings about inferential correction in depression provide evidence for a fundamental, strength-based shift in these clinical approaches. Cognitive therapists can adopt a less pathologizing role by conceptualizing and approaching the “depressed client” as an individual with the propensity for negative thinking as well as the impressive ability to identify the corrective aspects of a situation, rather than viewing them simply as pessimistic individuals. Such a shift would greatly benefit the therapeutic relationship in cognitive therapies. Therapists would approach the change process with more positive regard and hope. More importantly, depressed clients would be more likely to develop positive self-views, which is essential for therapeutic success (Adler, 1917; Beck, 1967, 1976; Horney, 1945; Rogers, 1951; Sullivan, 1953).

The concept of inferential correction can also improve clinical assessments and treatment plans. The presented findings indicate that therapists must make two important distinctions to fully and accurately assess a depressed client’s cognitive problems and to develop treatments accordingly. The most obvious clinical determination is whether the client has the cognitive skills for inferential correction. If these skills are lacking, then traditional cognitive therapy techniques are appropriate for developing cognitive skills for

more adaptive thinking. However, the findings of the current studies indicate that some depressed individuals may already be capable of correcting maladaptive cognitions. In these cases, cognitive therapists should assist the client in exploring and working through issues that are negatively impacting their ability to make adaptive corrections to problematic self-views. Cognitive therapists may need to borrow techniques from other therapies or to develop their own innovative interventions. For example, narrative therapies are excellent for exploring client's meanings of "problems" and of identifying potential losses that may be associated with making more positive changes. Journaling about cognitively challenging situations may also aid in the process of exploring and working through clients' lack of readiness or willingness to change.

Appendix A

Measure for Vignette Validation

**NARRATIVE
QUESTIONNAIRE**

INSTRUCTIONS:

In this booklet, you will see two narratives on the left pages and rating scales questions about the narratives on the right pages:

<p>Situation #1: ^^^^^^^^^^^^^^^^^^^^ ^^^^^^^^^^^^^^^^^^^^ ^^^^^^^^^^^^^^^^^^^^ ^^^^^^</p> <p>Situation #2: ^^^^^^^^^^^^^^^^^^^^ ^^^^^^^^^^^^^^^^^^^^ ^^^^^^^^^^^^^^^^^^^^ ^^^^^^</p>	<p>Narrative Questions</p> <p>^^^^^^^^^^^^^^^^^^^^ 1---2---3—4—5—6--7</p> <p>^^^^^^^^^^^^^^^^^^^^ 1---2---3—4—5—6--7</p> <p>^^^^^^^^^^^^^^^^^^^^ 1---2---3—4—5—6--7</p>
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The two narratives on each page will be exactly the same except for one phrase, which will be bolded. Please read the two narratives and then circle your answers to the questions on the right page.

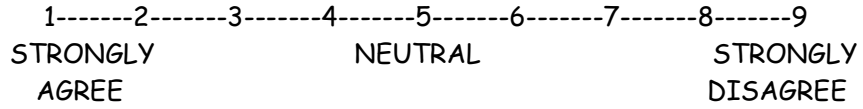
Situation 1:

When you get to your class, you notice that the grades for the mid-term exam have been posted. There is a huddle of people around the bulletin board discussing the exam and trying to find their grades. Quite a few students are **looking through their lecture notes**. As you work your way to the front, someone taps you on the shoulder. It's an old friend from high school, and you are both surprised that you had never seen each other in the class until now. Before you get a chance to catch up with each other, the professor walks in and begins the class. You can't wait any longer to see your grade so you decide to take a quick peek. You are surprised to see that your grade is low.

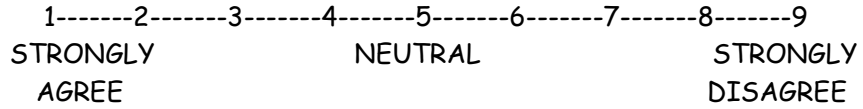
Situation 2:

When you get to your class, you notice that the grades for the mid-term exam have been posted. There is a huddle of people around the bulletin board discussing the exam and trying to find their grades. Quite a few students are **talking about how tricky the exam was**. As you work your way to the front, someone taps you on the shoulder. It's an old friend from high school, and you are both surprised that you had never seen each other in the class until now. Before you get a chance to catch up with each other, the professor walks in and begins the class. You can't wait any longer to see your grade so you decide to take a quick peek. You are surprised to see that your grade is low.

In the first situation, the low grade means that you are a poor student.

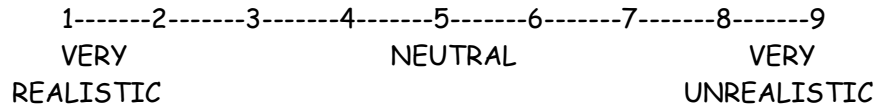


In the second situation, the low grade means that you are a poor student.

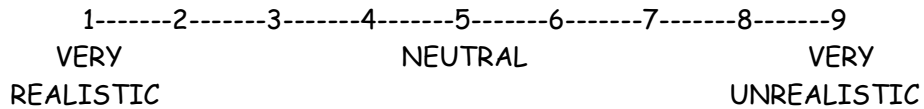


If you answered the two items above differently, please explain why:

How realistic was the first situation?



How realistic was the second situation?



Situation 1:

You and your roommate go to a coffee shop to study. You want to focus on your work so you **choose a table with good lighting**. A few minutes after you get started, your neighbor from your apartment complex walks up to the table and says "I thought I saw the two of you! What are you up to?" Your roommate starts whispering about a big party this weekend and invites your neighbor to go. The two of them discuss the plans, and your roommate mentions that they have to ride together because it is invitation only. The party sounds like a lot of fun to you, but your roommate has not invited you.

Situation 2:

You and your roommate go to a coffee shop to study. You want to focus on your work so you tell your **roommate not to distract you**. A few minutes after you get started, your neighbor from your apartment complex walks up to the table and says "I thought I saw the two of you! What are you up to?" Your roommate starts whispering about a big party this weekend and invites your neighbor to go. The two of them discuss the plans, and your roommate mentions that they have to ride together because it is invitation only. The party sounds like a lot of fun to you, but your roommate has not invited you.

Situation 1:

You have been working on a major project at work for months, and it is finally time to turn it in. As you drop it off in your boss's file, you overhear him talking about **a fight he had with his wife last night**. At lunch time, you sit with some co-workers and catch up on the office stories. The latest news is that one of the team leaders is going to Europe. The company is expanding, and the goal is to enter the international market by the end of the year. You go back to your office after lunch, and your boss walks in shortly after. He says "I got a chance to review your project this morning. It seemed a bit rushed and incomplete."

Situation 2:

You have been working on a major project at work for months, and it is finally time to turn it in. As you drop it off in your boss's file, you overhear him talking about **the coffee in the break room**. At lunch time, you sit with some co-workers and catch up on the office stories. The latest news is that one of the team leaders is going to Europe. The company is expanding, and the goal is to enter the international market by the end of the year. You go back to your office after lunch, and your boss walks in shortly after. He says "I got a chance to review your project this morning. It seemed a bit rushed and incomplete."

Situation 1:

You want to make your resume stronger because you will be looking for a job soon. You decide to join an organization that is **involved in student issues on campus**. During the first meeting, the members discuss all of the plans and goals for the upcoming semester. Once the meeting ends, you realize that you are not ready to go home yet. You have had a rough week, and you would like to go out and unwind. You notice that some people are chatting around the vending machine so you walk over to join them. When there is a silence, you say "You know, I was thinking about going out for a while. Would anyone like to join me?" A few people are silent, and the rest decline your offer.

Situation 2:

You want to make your resume stronger because you will be looking for a job soon. You decide to join an organization that is **known for their intense work ethics**. During the first meeting, the members discuss all of the plans and goals for the upcoming semester. Once the meeting ends, you realize that you are not ready to go home yet. You have had a rough week, and you would like to go out and unwind. You notice that some people are chatting around the vending machine so you walk over to join them. When there is a silence, you say "You know, I was thinking about going out for a while. Would anyone like to join me?" A few people are silent, and the rest decline your offer.

Appendix B

Packet # _____

Please provide the following information:

Age: _____

Gender: _____

Ethnicity: _____

**NARRATIVE
QUESTIONNAIRE**

INSTRUCTIONS:

Every day we encounter numerous situations. For example, we go to classes, we buy products, and we have conversations. In order to function through the day, we have to make sense of each situation by *deciding what it means*. This questionnaire is designed to simulate the process of making sense out of everyday college situations. At the top of each page, there is a story title followed by a short story. Read each of these stories, and imagined yourself in the situations that you are reading about. Once you have read the story, answer the two questions that follow. Then turn to the next page. **ONCE YOU HAVE TURNED THE PAGE, PLEASE DO NOT TURN BACK TO PREVIOUS PAGES.** Please raise your hand if you have any questions. Otherwise, please turn to the next page.

"YOU SEE YOUR MID-TERM GRADE" Story

When you get to your class, you notice that the grades for the mid-term exam have been posted. There is a huddle of people around the bulletin board discussing the exam and trying to find their grades. Quite a few students are looking through their lecture notes. As you work your way to the front, someone taps you on the shoulder. It's an old friend from high school, and you are both surprised that you had never seen each other in the class until now. Before you get a chance to catch up with each other, the professor walks in and begins the class. You can't wait any longer to see your grade so you decide to take a quick peek. You are surprised to see that your grade is low.

In this particular situation, the low grade means that you are a poor student.

1-----2-----3-----4-----5-----6-----7-----8-----9
STRONGLY AGREE NEUTRAL STRONGLY DISAGREE

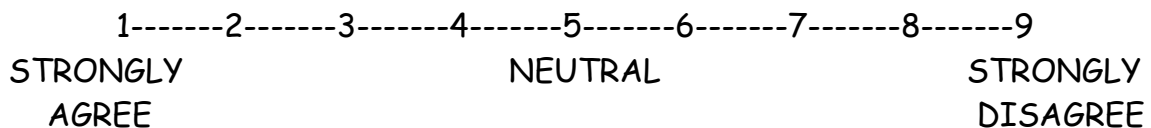
How certain do you feel about your answer above:

1-----2-----3-----4-----5-----6-----7-----8-----9
VERY CERTAIN NEUTRAL VERY UNCERTAIN

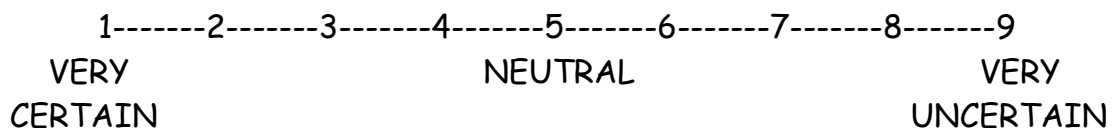
"YOU JOIN AN ORGANIZATION" Story

You want to make your resume stronger because you will be looking for a job soon. You decide to join an organization that is known for their intense work ethics. During the first meeting, the members discuss all of the plans and goals for the upcoming semester. Once the meeting ends, you realize that you are not ready to go home yet. You have had a rough week, and you would like to go out and unwind. You notice that some people are chatting around the vending machine so you walk over to join them. When there is a silence, you say "You know, I was thinking about going out for a while. Would anyone like to join me?" A few people are silent, and the rest decline your offer.

In this situation, the group of people does not want your company.



How certain do you feel about your answer above:



Appendix C

Packet # _____

Please provide the following information:

Age: _____

Gender: _____

Ethnicity: _____

**NARRATIVE
QUESTIONNAIRE**

INSTRUCTIONS:

Every day we encounter numerous situations. For example, we go to classes, we buy products, and we have conversations. In order to function through the day, we have to make sense of each situation by *deciding what it means*. This questionnaire is designed to simulate the process of making sense out of everyday college situations. At the top of each page, there is a story title followed by a short story. Read each of these stories, and imagined yourself in the situations that you are reading about. Once you have read the story, answer the two questions that follow. Then turn to the next page. **ONCE YOU HAVE TURNED THE PAGE, PLEASE DO NOT TURN BACK TO PREVIOUS PAGES.** Please raise your hand if you have any questions. Otherwise, please turn to the next page.

“YOU SEE YOUR MID-TERM GRADE” Story

When you get to your class, you notice that the grades for the mid-term exam have been posted. There is a huddle of people around the bulletin board discussing the exam and trying to find their grades. Quite a few students are talking about how tricky the exam was. As you work your way to the front, someone taps you on the shoulder. It's an old friend from high school, and you are both surprised that you had never seen each other in the class until now. Before you get a chance to catch up with each other, the professor walks in and begins the class. You can't wait any longer to see your grade so you decide to take a quick peek. You are surprised to see that your grade is low.

In this particular situation, the low grade means that you are a poor student.

1-----2-----3-----4-----5-----6-----7-----8-----9
STRONGLY AGREE NEUTRAL STRONGLY DISAGREE

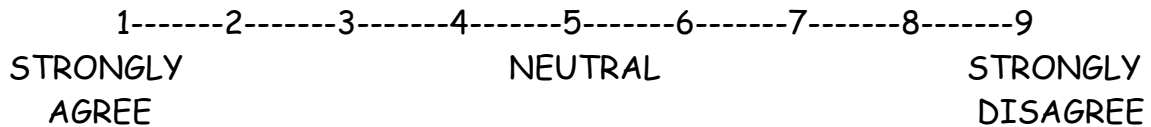
How certain do you feel about your answer above:

1-----2-----3-----4-----5-----6-----7-----8-----9
VERY CERTAIN NEUTRAL VERY UNCERTAIN

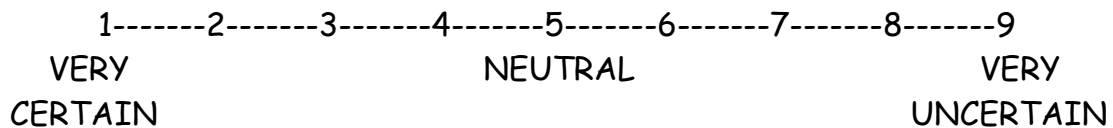
"YOU GO TO A COFFEE SHOP" Story

You and your roommate go to a coffee shop to study. You want to focus on your work so you tell your roommate not to distract you. A few minutes after you get started, your neighbor from your apartment complex walks up to the table and says "I thought I saw the two of you! What are you up to?" Your roommate starts whispering about a big party this weekend and invites your neighbor to go. The two of them discuss the plans, and your roommate mentions that they have to ride together because it is invitation only. The party sounds like a lot of fun to you, but your roommate has not invited you.

In this situation, the roommate does not want to invite you to the party.



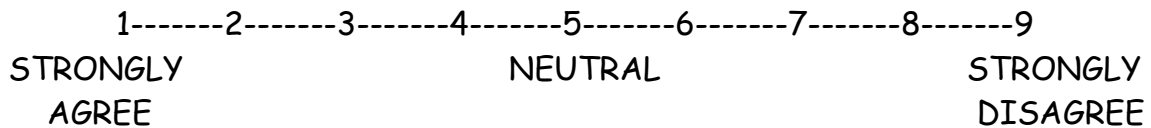
How certain do you feel about your answer above:



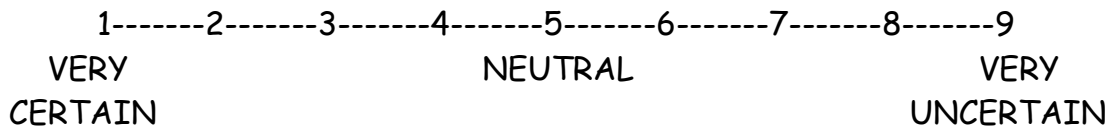
"YOUR BOSS REVIEWS YOUR PROJECT" Story

You have been working on a major project at work for months, and it is finally time to turn it in. As you drop it off in your boss's file, you overhear him talking about the coffee in the break room. At lunch time, you sit with some co-workers and catch up on the office stories. The latest news is that one of the team leaders is going to Europe. The company is expanding, and the goal is to enter the international market by the end of the year. You go back to your office after lunch, and your boss walks in shortly after. He says "I got a chance to review your project this morning. It seemed a bit rushed and incomplete."

In this particular situation, your boss's comment means that your project was not good.



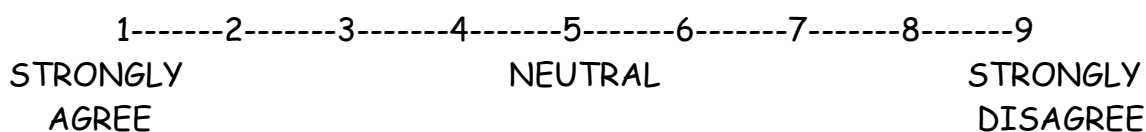
How certain do you feel about your answer above:



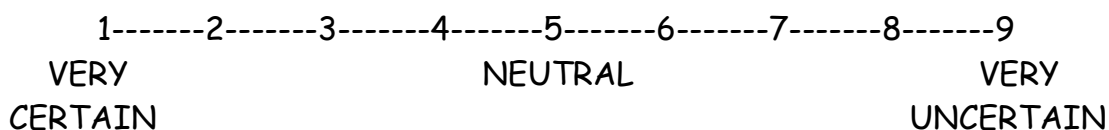
"YOU JOIN AN ORGANIZATION" Story

You want to make your resume stronger because you will be looking for a job soon. You decide to join an organization that is involved in student issues on campus. During the first meeting, the members discuss all of the plans and goals for the upcoming semester. Once the meeting ends, you realize that you are not ready to go home yet. You have had a rough week, and you would like to go out and unwind. You notice that some people are chatting around the vending machine so you walk over to join them. When there is a silence, you say "You know, I was thinking about going out for a while. Would anyone like to join me?" A few people are silent, and the rest decline your offer.

In this situation, the group of people does not want your company.



How certain do you feel about your answer above:



Appendix D

Packet # _____

Memory Questionnaire

This questionnaire is designed to measure how well you remember two of the stories you just read. You may remember almost nothing, almost everything, or some parts really well and other parts not at all. Please write down **AS MUCH AS YOU CAN REMEMBER** and **AS CLOSE TO VERBATIM AS POSSIBLE** (i.e. word for word).

"YOU GO TO A COFFEE SHOP" Story

"YOUR BOSS REVIEWS YOUR PROJECT" Story

Appendix E

BECK INVENTORY

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY! Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

1. 0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.
2. 0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel that the future is hopeless and that things cannot improve.
3. 0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel I am a complete failure as a person.
4. 0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.
5. 0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.
6. 0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.
7. 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.
8. 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.
10. 0 I don't cry anymore than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't even though I want to.

11. 0 I am no more irritated now than I ever am.
 1 I get annoyed or irritated more easily than I used to.
 2 I feel irritated all the time now.
 3 I don't get irritated at all by the things that used to irritate me.
12. 0 I have not lost interest in other people.
 1 I am less interested in other people than I used to be.
 2 I have lost most of my interest in other people.
 3 I have lost all of my interest in other people.
13. 0 I make decisions about as well as I ever could.
 1 I put off making decisions more than I used to.
 2 I have greater difficulty in making decisions than before.
 3 I can't make decisions at all anymore.
14. 0 I don't feel I look any worse than I used to.
 1 I am worried that I am looking old or unattractive.
 2 I feel that there are permanent changes in my appearance that make me look unattractive.
 3 I believe that I look ugly.
15. 0 I can work about as well as usual.
 1 It takes an extra effort to get started at doing something.
 2 I have to push myself very hard to do anything.
 3 I can't do any work at all.
16. 0 I can sleep as well as usual.
 1 I don't sleep as well as I used to.
 2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
 3 I wake up several hours earlier than I used to and cannot get back to sleep.
17. 0 I don't get more tired than usual.
 1 I get tired more easily than I used to.
 2 I get tired from doing almost anything.
 3 I am too tired to do anything.
18. 0 My appetite is no worse than usual.
 1 My appetite is not as good as it used to be.
 2 My appetite is much worse now.
 3 I have no appetite at all anymore.
19. 0 I haven't lost much weight, if any, lately.
 1 I have lost more than 5 pounds. If purposely trying to lose
 2 I have lost more than 10 pounds. weight by eating less,
 3 I have lost more than 15 pounds. check here ____.
20. 0 I am no more worried about my health than usual.
 1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
 2 I am very worried about physical problems and it's hard to think of much else.
 3 I am so worried about my physical problems, that I cannot think about anything else.
21. 0 I have not noticed any recent change in my interest in sex.
 1 I am less interested in sex than I used to be.
 2 I am much less interested in sex now.
 3 I have lost interest in sex completely.

Informed Consent to Participate in Research

The University of Texas at Austin

You are being asked to participate in a research study. This form provides you with information about the study. The Principal Investigator (the person in charge of this research) or his/her representative will also describe this study to you and answer all of your questions. Please read the information below and ask questions about anything you don't understand before deciding whether or not to take part. Your participation is entirely voluntary and you can refuse to participate without penalty or loss of benefits to which you are otherwise entitled.

Title of Research Study: The Storytime Study

Principal Investigator(s) (include faculty sponsor), UT affiliation, and Telephone Number(s):

Principal Investigator: Arshia Ebrahimi, B.A.
Department of Educational Psychology, Counseling
Psychology
Phone #: (512) 297-7252

Faculty Sponsor: Stephanie S. Rude, Ph.D.
Department of Educational Psychology, Counseling
Psychology
Phone: (512) 471-1160

Funding source:
Self-funded

What is the purpose of this study?

The purpose of this study is to gain more knowledge about how people interpret information about everyday situations.

What will be done if you take part in this research study?

First, you will read and answer a few questions about four short stories. The stories will be about everyday college situations, and you will be instructed to imagine yourself in these stories while you read them. Then, you will be asked to complete two questionnaires. The first questionnaire will be about the stories, and the second

questionnaire will ask about your emotional, behavioral, and cognitive experiences during the past two weeks.

What are the possible discomforts and risks?

There are no anticipated risks involved in this study, but there may be risks that are not known at this time. The stories are designed to replicate everyday situations that students may experience during college. Therefore, some of the stories you hear may give you negative thoughts or feelings. Others may remind you of a negative event or interaction that you may have had in the past. If you have any distress during or following the study, you are encouraged to contact now or call the Principal Investigator listed on the front page of this form. The Principal Investigator will provide you information about possible resources that may be helpful. Also, you may call the Austin-Travis County Mental Health Services Counseling Helpline at 472-4357.

What are the possible benefits to you or to others?

The study will contribute to the literature on inferential processing.

If you choose to take part in this study, will it cost you anything?

There are no costs involved in this study.

Will you receive compensation for your participation in this study?

There is no compensation of this study.

What if you are injured because of the study?

The study involves no physical risks.

If you do not want to take part in this study, what other options are available to you?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future relationships with The University of Texas at Austin.

How can you withdraw from this research study and who should I call if I have questions?

If you wish to stop your participation in this research study for any reason, you should contact: Arshia Ebrahimi at (512) 297-7252. You are free to withdraw your consent and stop participation in this research study at any time without penalty or loss of benefits for which you may be entitled. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

In addition, if you have questions about your rights as a research participant, please contact Clarke A. Burnham, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects, 512/232-4383.

How will your privacy and the confidentiality of your research records be protected?

Authorized persons from The University of Texas at Austin and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. If the research project is sponsored then the sponsor also have the legal right to review your research records. Otherwise, your research records will not be released without your consent unless required by law or a court order.

If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

Will the researchers benefit from your participation in this study beyond publishing or presenting the results?

No

Signatures:

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

Signature and printed name of person obtaining consent Date

You have been informed about this study's purpose, procedures, possible benefits and risks, and you may receive a copy of this Form upon request. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights.

 X
Printed Name of Subject Date

 X
Signature of Subject Date

 X
Signature of Principal Investigator Date

Appendix G

Debriefing Form

The purpose of the study in which you participated was to help the researchers better understand some of the assumptions and inferences people make about information they encounter in their daily lives. Previous research has shown that ALL humans routinely make assumptions about information they encounter: We “fill in the blanks” to make sense out of information we receive because that information is often incomplete. A question we investigated in this study is whether making certain kinds of assumptions/inferences—those that are unflattering or cast a negative or pessimistic light on ourselves—is related to certain types of mood symptoms.

As part of this study, you answered questions about negative types of experiences. In the process of doing this, you may have become more aware of painful feelings or stressful life circumstances. Since most college students encounter stress and hardship severe enough to bring about struggles with depression and/or anxiety at one time or another, we are providing all research participants with phone numbers for services that are free of charge to UT students. The UT Counseling & Mental Health Center (471-3515) provides free counseling and information and referral to students by appointment, and the UT Telephone Counseling and Referral Services (471-2255) provides 24 hour telephone crisis support and referral information.

Appendix H

SPEECH EVALUATION FORM

Rater _____

Subject # _____

Please rate the following dimensions based on the following rating scale:

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Poor Average Excellent
Performance Performance

Content of Speech:

- ___ Introduction (*gets attention, effective setting*)
- ___ Closure (*summarizes, effective containment*)
- ___ Organization (*cohesion of distinct points*)
- ___ Reinforcing Points (*examples, persuasive associations*)

- ___ **OVERALL CONTENT RATING**

Presentation of Speech:

- ___ Posture (*maintained poise*)
- ___ Facial Expressions (*congruence with content*)
- ___ Distractors (*no overusage, no non-communicatives ex: umm's*)
- ___ Rate of speech (*engaging, understandable*)

- ___ **OVERALL PRESENTATION RATING**

Appendix I

SPEECH EVALUATION FORM

Rater Dr. Mason

Subject # 231

Please rate the following dimensions based on the following rating scale:

1-----2-----3-----4-----5-----6-----7-----8-----9-----10
Poor Average Excellent
Performance Performance

Content of Speech:

5 Introduction (*gets attention, effective setting*)

5 Closure (*summarizes, effective containment*)

3 Organization (*cohesion of distinct points*)

4 Reinforcing Points (*examples, persuasive associations*)

4.25 OVERALL CONTENT RATING

Presentation of Speech:

6 Posture (*maintained poise*)

3 Facial Expressions (*congruence with content*)

5 Distractors (*no overusage, no non-communicatives ex: umm's*)

5 Rate of speech (*engaging, understandable*)

4.75 OVERALL PRESENTATION RATING

Appendix J

Participant Evaluation of Feedback

Do you think the feedback accurately represents...

the content of your speech: 1-----2-----3-----4-----5-----6-----7
 Very Very
 Inaccurate Accurate

the presentation of your speech: 1-----2-----3-----4-----5-----6-----7
 Very Very
 Inaccurate Accurate

Overall, do you think the feedback you received...

was valid: 1-----2-----3-----4-----5-----6-----7
 Not Very Very
 Valid Valid

was credible: 1-----2-----3-----4-----5-----6-----7
 Not Very Very
 Credible Credible

References

- Abramson, L.Y., Metalsky, G.I., & Alloy, L.B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review*, 96, 358-372.
- Abramson, L.Y., Seligman, M.E.P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology*, 87, 49-74.
- Adler, A. (1917). *The neurotic constitution*. New York: Moffat, Yard.
- Albright, J.S., Alloy, L.B., Barch, D., & Dykman, B.M. (1993) Social comparison by dysphoric and nondysphoric college students: The grass isn't always greener on the other side. *Cognitive Therapy and Research*, 17, 485-509.
- Alloy, L.B., Abramson, L.Y., Whitehouse, W.G., Hogan, M.E., Tashman, N.A., Steinberg, D.L., Rose, D.T., & Donovan, P. (1999). Depressogenic cognitive styles: Predictive validity, information processing and personality characteristics, and developmental origins. *Behaviour Research and Therapy*, 37, 503-531.
- Alloy, L.B., Albright, J.S., Abramson, L.B., & Dykman, B.M. (1990). Depressive realism and nondepressive optimistic illusions: The role of the self. In R.E. Ingram (Ed.), *Contemporary psychological approaches to depression: Theory, research and treatment* (pp. 71-86). New York: plenum Press.
- Andersen, S.M., Spielman, L.A., & Bargh, J.A. (1992). Future-event schemas and certainty about the future: Automaticity in depressives' future-event predictions. *Journal of Personality and Social Psychology*, 63, 711-723.
- Beck, A.T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: Hoeber.
- Beck, A.T. (1976). *Cognitive therapy and the emotional disorders*. New York: International University Press.
- Bersheid, E., Graziano, W., Monson, T. & Dermer M. (1976). Outcome dependency: Attention, attribution, and attraction. *Journal of Personality and Social Psychology*, 34, 978-989.

- Cane, D.B., & Gotlib, I.H. (1985). Depression and the effects of positive and negative feedback on expectations, evaluations and performance. *Cognitive Therapy and Research*, 9, 145-160.
- Clark, D.A., & Beck, A.T., & Alford, B.A. *Scientific foundations of cognitive theory and therapy of depression*, New York: Wiley.
- Clary, E.G. & Tesser, A. (1983). Reactions to unexpected events: The naïve scientist and interpretative activity. *Pers Soc Psychol Bull* 9, 609-620.
- D'Agostino, P.R. & Pittman, T.S. (1982). Effort expenditure following control deprivation. *Bull Psychon Soc*, 19, 282-283.
- Derry, P.A., & Kuiper, N.A. (1981). Schematic processing and self-reference in clinical depression. *Journal of Abnormal Psychology*, 90, 286-297.
- Diener, C.T. & Dweck, C.S. (1978). An analysis of learned helplessness: Continuous changes in performance, strategy, and achievement cognitions following failure *Journal of Personality and Social Psychology*, 36, 451-462.
- Dykman, B.M. (1998). Integrating cognitive and motivational factors in depression: Initial tests of a goal-orientation approach. *Journal of Personality and Social Psychology*, 74, 139-158.
- Dykman, B.M., & Abramson, L.Y. (1990). Contributions of basic research to the cognitive theories of depression. *Personality and Social Psychology Bulletin*, 16, 42-57.
- Dykman, B. M., Abramson, L. Y., Alloy, L. B., & Hartlage, S. (1989). Processing of ambiguous and unambiguous feedback by depressed and nondepressed college students: Schematic biases and their implications for depressive realism. *Journal of Personality and Social Psychology*, 56 (3), 431-445.
- Edwards, J.A., & Weary, G. (1993). Depression and the impression-formation continuum: Piecemeal processing despite the availability of category information. *Journal of Personality and Social Psychology*, 64, 636-645.

- Elliot, G.C. (1979). Some effects of deception and level of self-monitoring on planning and reacting to a self-presentation. *Journal of Personality and Social Psychology*, 37, 1282-1292.
- Fletcher, G.J.D., Danilovics, P., Fernandez, G., Peterson, D., & Reeder, G.D. (1986). Attributional complexity: An individual differences measure. *Journal of Personality and Social Psychology*, 51, 875-884.
- Flett, G.L., Pliner, P., & Blankstein, K.R. (1989). Depression and components of attributional complexity. *Journal of Personality and Social Psychology*, 56, 757-764.
- Forgas, J.P., Bower, B.H., & Krantz, S.E. (1984). The influence of mood on perceptions of social interactions. *Journal of Experimental and Social Psychology*, 20, 497-513.
- Gara, M. A., Woolfolk, R. L., Cohen, B. D., Goldston, R. B., Allen, L. A., & Novalany, J. (1993). Perception of self and other in major depression. *Journal of Abnormal Psychology*, 102 (1), 93-100.
- Giesler, R.B., Josephs, R.A., & Swann, W.B., Jr. (1996). Self-verification in clinical depression: The desire for negative evaluation. *Journal of Abnormal Psychology*, 105, 358-368.
- Gilbert, D.T., Pelham, B.W., & Krull, D.S. (1988). On cognitive busyness: When person perceivers meet the persons perceived. *Journal of Personality and Social Psychology*, 54, 733-744.
- Gleicher, F., & Weary, G. (1991). Effect of depression on quantity and quality of social inferences. *Journal of Personality and Social Psychology*, 61, 105-114.
- Gotlib, I.H., & Cane, D.B. (1987). Construct accessibility and clinical depression: A longitudinal investigation. *Journal of Abnormal Psychology*, 96, 199-204.
- Gotlib, I.H., & Krasnoperova, E. (1998). Biased information processing as a vulnerability factor for depression. *Behavior Therapy*, 29, 301-309.

- Gotlib, I.H., & McCann, C.D. (1984) Construct accessibility and depression: An examination of cognitive and affective factors. *Journal of Personality and Social Psychology*, 47, 427-439.
- Gotlib, I.H., Roberts, J.E., Gilboa, E. (1996). Cognitive interference in depression. In I. G. Sarason, G. R. Pierce, & B. R. Sarason (Eds.), *Cognitive interference: Theories, methods, and findings* (pp. 347-377). New Jersey: Erlbaum.
- Hammen, C. L., & Krantz, S. (1976). Effect of success and failure on depressive cognitions. *Journal of Abnormal Psychology*, 85, 577-586.
- Hartlage, S., Alloy, L., Vasquez, C. & Dykman, B. (1993). Automatic and effortful processing in depression. *Psychological Bulletin*, 113, 247-278.
- Harvey, J.H., Yarkin, K.L., Lightner, J.M. & Town, J.P. (1980). Unsolicited attribution and recall of interpersonal events. *Journal of Personality and Social Psychology*, 38, 551-568.
- Hastie, R. (1984). Causes and effects of casual attribution. *Journal of Personality and Social Psychology*, 46, 44-56.
- Hedlund, S., & Rude, S.S. (1995). Evidence of latent depressive schemas in formerly depressed individuals. *Journal of Abnormal Psychology*, 104, 517-525.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Henriques, G., & Leitenberg, H. (2002). An experimental analysis of the role of cognitive errors in the development of depressed mood following negative social feedback. *Cognitive Therapy and Research*, 26, 245-260.
- Hertel, P.T., & Rude, S.S. (1991). Depressive deficits in memory: Focusing attention improves subsequent recall. *Journal of Experimental Psychology*, 120, 301-309.
- Hildebrand-Saints, L., & Weary, G. (1989). Depression and social information gathering. *Personality and Social Psychology Bulletin*, 15, 150-160.
- Horney, K. (1945). *Our inner conflicts*. New York: Norton.
- Ingram, R.E., Partridge, S., Scott, W., & Bernet, C.Z. (1994). Schema specificity in subclinical syndrome depression: Distinctions between automatically versus

- effortfully encoded state and trait depressive information. *Cognitive Therapy and Research*, 18, 195-209.
- Jones, E.E. & Davis, K.E. (1965). From acts to dispositions: The attribution process in personal deception. *Adv Exp Soc Psychol*, 2, 220-266.
- Kelley, H.H. (1967). Attribution theory in social psychology. In D. Levine (Ed.), *Nebraska Symposium on Motivation* 15, 192-240.
- Krantz, S.E., & Gallagher-Thompson, D. (1990). Depression and information valence influence on depressive cognition. *Cognitive Therapy and Research*, 14, 95-108.
- Krantz, S.E., & Hammen, C. (1979). Assessment of cognitive bias in depression. *Journal of Abnormal Psychology*, 88, 611-619.
- Krull, D.S. (1993). Does the grist change the mill? The effect of the perceiver's inferential goal on the process of social inference. *Personality and Social Psychology Bulletin*, 19, 340-348.
- Krull, D.S., & Erickson, D.J. (1995). Judging situations: On the effortful process of taking dispositional information into account. *Social Cognition*, 13, 417-438.
- Lane, J.D. & DePaulo, B.M. (1999) Completing Coyne's cycle: Dysphorics' ability to detect deception. *Journal of Research in Personality*, 33, 311-329.
- Lassiter, G.D., Koenig, L.J., & Apple, K.J. (1996). Mood and behavior perception: Dysphoria can increase and decrease effortful processing of information. *Personality and Social Psychology Bulletin*, 22, 794-810.
- Loewenstein, D. A., & Hokanson, J.E. (1986). The processing of social information by mildly and moderately dysphoric college students. *Cognitive Therapy and Research*, 10, 447-460.
- Marsh, K.L., & Weary, G. (1989). Depression and attributional complexity. *Personality and Social Psychology Bulletin*, 15, 325-336.
- Matt, G.E., Vazquez, C., & Campbell, W.K. (1992). Mood-congruent recall of affectively toned stimuli: A meta-analytic review. *Clinical Psychology Review*, 12, 227-255.

- Matthews, G.R., & Antes, J.R. (1992). Visual attention and depression: Cognitive biases in the eye fixations of the dysphoric and the nondepressed. *Cognitive Therapy and Research*, 16, 359-371.
- Mayer, J.D., Gaschke, Y.N., Braverman, D.L., & Evans, T.W. (1992). Mood-congruent judgment is a general effect. *Journal of Personality and Social Psychology*, 63, 119-132.
- McCaul, K. D. (1983). Observer attributions of depressed student. *Personality and Social Psychology Bulletin*, 9, 74-82.
- Miller, A.G. & Lawson, T. (1989). The effect of an informational option on the fundamental attribution error. *Personality and Social Psychology Bulletin*, 15, 194-204.
- Miller, D.T., & Morretti, M.M. (1988). The causal attributions of depressives: Self-serving or self-deserving? In L.B. Alloy (Eds.), *Cognitive biases in depression* (pp. 266-289). New York: Guilford.
- Monson, T.C., Keel, R., Stephens, D. & Genung, V. (1982). Trait attributions relative validity, covariation with behavior, and prospect of future interaction. *Journal of Personality and Social Psychology*, 42, 1014-1024.
- Nelson, R.E., & Craighead, W.E. (1977). Selective recall of positive and negative feedback, self-control behavior, and depression. *Journal of Abnormal Psychology*, 86, 379-388.
- Nunn, J. D., Matthews, A. & Trower, P. (1997). Selective processing of concern-related information in depression. *British Journal of Clinical Psychology*, 36, 489-503.
- Pittman, T.S., & D'Agostino, P. (1989). Motivation and cognition: Control deprivation and the nature of subsequent information processing. *Journal of Experimental Social Psychology*, 25, 465-480.
- Pitman, T.S., & Heller, J.F. (1987). Social motivation. *Annual Review of Psychology*, 38, 461-489.
- Pittman, T.S., & Pittman, N. (1980). Deprivation of control and the attribution process. *Journal of Personality and Social Psychology*, 39(3), 377-389.

- Posner, M.I. (1978). *Chronometric explorations of mind*. Hillsdale, New Jersey: Erlbaum.
- Powell, M., & Hemsly, D.R. (1984). Depression: A breakdown in perceptual defense? *British Journal of Psychiatry*, 145, 358-362.
- Pyszczynski, T.A. & Greenberg, J. (1981). Role of disconfirmed expectancies in the instigation of attributional processing. *Journal of Personality and Social Psychology*, 40, 31-38.
- Rehm, L.P. (1977). A self-control model of depression. *Behavior Therapy*, 8, 787-804.
- Reich, D.A. & Weary, G. (1998). Depressives' future-event schemas and the social inference process. *Journal of Personality and Social Psychology*, 74, 1133-1145.
- Rice, D.P. & Miller, L.S. (1995). The economic burden of affective disorders. *British Journal of Psychiatry*, 27, 34-42.
- Riskind, J.H. (1989). *The mediating mechanisms in mood and memory: A cognitive-priming formulation*. *Journal of Social Behavior & Personality*, 4, 173-184.
- Rogers, C.R. (1951). *Client-centered therapy: Its current practices, implications, theory*. Boston: Houghton Mifflin.
- Rude, S.S., Covich, J., Jarrold, W., Hedlund, S., & Zentner, M. (2001). Directing depressive schemata in vulnerable individuals: Questionnaires versus laboratory tasks. *Cognitive Therapy and Research*, 25, 103-116.
- Rude, S.S., Krantz, S.E., & Rosenhan, D.L. (1988). Distinguishing the dimensions of valence and belief consistency in depressive and nondepressive information processing. *Cognitive Therapy and Research*, 12, 391-407.
- Schiffrrin, R.M., & Schneider, W. (1977). Controlled and automatic human information processing: II. Perceptual learning, automatic attending and a general theory. *Psychological Review*, 84, 127-190.
- Siegle, G. J., Ingram, R. E., & Matt, G. E. (2002). Affective interference: An explanation for negative attention biases in dysphoria? *Cognitive Therapy and Research*, 26, 73-87.
- Sullivan, H.S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.

- Swann, W.B., Stephenson, B., & Pittman, T.S. (1981). Curiosity and control: On the determinants of the search for social knowledge. *Journal of Personality and Social Psychology*, 40, 1128-132
- Swann, W.B., Jr., Wenzlaff, R.A., Krull, D.S., & Pelham, B.W. (1992). Allure of negative feedback: Self-verification strivings among depressed persons. *Journal of Abnormal Psychology*, 101, 293-306.
- Swann, W.B., Jr., Wenzlaff, R.A., & Tafari, R.W. (1992). Depression and the search for negative evaluations: More evidence of the role of self-verification strivings. *Journal of Abnormal Psychology*, 101, 314-317.
- Teasdale, J. D., Moore, R. G., Hayhurst, H., Pope, M., Williams, S., & Segal, Z. V. (2002). Metacognitive awareness and prevention of relapse in depression: Empirical evidence. *Journal of Consulting and Clinical Psychology*, 70, 275-287.
- von Hecker, U. Meiser, & Thorsten (2005). Defocused Attention in Depressed Mood: Evidence From Source Monitoring. *Emotion*, 5, 456-463.
- von Hippel, W., Hawkins, C., & Narayan, S. (1994). Personality and perceptual expertise: Individual differences in perceptual identification. *Psychological Science*, 5, 401-406.
- Watkins, P.C., Mathews, A., Williamson, D.A., & Fuller, R.D. (1992). Mood-congruent memory in depression: Emotional priming or elaboration? *Journal of Abnormal Psychology*, 101, 581-586.
- Weary, G., Elbin, S.D., & Hill, M.G. (1987). Attribution and social comparison processes in depression. *Journal of Personality and Social Psychology*, 52, 605-610.
- Weary, G., Jordan, J.S., & Hill, M.G. (1985). The attributional norm of internality and depressive sensitivity to social information. *Journal of Personality and Social Psychology*, 49, 1283-1293.
- Weary, G., Marsh, K.L., Gleicher, F., & Edwards, J.A. (1993). Social-cognitive consequences of depression. In G. Weary, F. Gleicher, & K.L. Marsh (Eds.), *Control motivation and social cognition* (pp. 225-287). New York: Springer-Verlag.

- Weary, G., Marsh, K.L., Gleicher, F., & Edwards, J.A. (1993). Depression, control motivation, and the processing of information about others. In G. Weary, F. Gleicher, & K.L. Marsh (Eds.), *Control motivation and social cognition* (pp. 225-287). New York: Springer-Verlag.
- Wenzlaff, R.M. (1988, May) *Automatic information processing in depression*. Paper presented at the International Conference on Self-Control, Nags Head, NC.
- Wenzlaff, R.M. (1993). The mental control of depression: Psychological obstacles to emotional well-being. In D.M. Webner & J.W. Pennebaker(Eds.), *Handbook of mental control* (pp. 239-257) Englewood Cliffs, NJ: Prentice Hall.
- Wong, P.T. & Weiner, B. (1981). When people ask “why” questions, and the heuristics of attributional search. *Journal of Personality and Social Psychology*. 40, 650-663.
- Yost, J. H., & Weary, G. (1996). Depression and the correspondent inference bias: Evidence for more effortful cognitive processing. *Personality and Social Psychology Bulletin*, 22, 192-201.

VITA

Arshia Ebrahimi was born in Lafayette, Louisiana on February 15, 1978. She completed her high school degree at Plano Senior High School, Plano, Texas, in 1996. She received her Bachelor of Arts, with a major in Psychology, from The University of Texas at Austin in December 1999. In Fall 2000 she entered the Counseling Psychology Doctoral Program at The University of Texas in Austin. She completed her Psychology Internship at Purdue University's Counseling and Psychological Services in July 2005. Following completion of her internship, she accepted a Coordinator of Outreach and Programming Position at Miami University's Student Counseling Service, in Oxford, Ohio.

Permanent Address: 410 Brookview, Oxford, Ohio 45056

This dissertation was typed by Arshia Ebrahimi.