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The Effects of Discussion and Self-focusing on Interpersonal Problem Solving Among Dysphoric and Nondysphoric Individuals

by

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Abstract

In a recent study, Lyubomirsky and Nolen-Hoeksema (1995) found that self-focused, dysphoric individuals offer less effective solutions to hypothetical interpersonal problems than do their nondysphoric counterparts. Moreover, these researchers accounted for this finding in primarily cognitive terms. The major objective of this thesis was to investigate whether self-focused dysphoric persons would generate comparatively more effective solutions to these types of problems if they were first given an opportunity to discuss possible solutions with a nondysphoric person. Another objective was to investigate, by means of an additional measure, whether the Lyubomirsky and Nolen-Hoeksema finding might have a motivational component, as well as or instead of the proposed cognitive basis. The current study was a partial replication and extension of the Lyubomirsky and Nolen-Hoeksema experiment with conditions in which a dysphoric person recorded solutions to the problems after discussing them with either another dysphoric subject or a nondysphoric subject. In two other conditions involving discussion, a nondysphoric subject recorded solutions to the problems after discussion with a dysphoric or a nondysphoric subject. In additional control conditions, dysphoric and nondysphoric subjects recorded their solutions to these problems without having had a discussion. The results in the non-discussion control conditions replicated Lyubomirsky and Nolen-Hoeksema's finding concerning problem-solving effectiveness differences. Additional evidence was also obtained for the proposed cognitive explanation for this effect. The major hypothesis of this thesis was also supported: Self-focused dysphoric subjects who engaged in discussion with nondysphoric subjects--but not other dysphoric subjects--generated solutions that were judged to be as effective as those generated by their nondysphoric counterparts. Applied and theoretical implications of these findings were discussed.

Table of Contents

List of Tables

13. Mean Ratings of Percentage of Ideal Steps Included in Solutions to Problems #1 & #2 on the Question Concerning "What One **Could** Do"

14. Mean Ratings of Percentage of Ideal Steps Included in Solutions to Problems #1 & #2 on the Question Concerning "What You **Would** Do"

15. ANOVA on Mean Ratings of Percentage of Ideal Steps Included in Solutions to Problem #3 on the Question Concerning "What One **Could** Do"

16. ANOVA on Mean Ratings of Percentage of Ideal Steps Included in Solutions to Problem #3 on the Question Concerning "What You **Would** Do"

17. Mean Ratings of Percentage of Ideal Steps Included in Solutions to Problem #3 on the Question Concerning "What One **Could** Do"

18. Mean Ratings of Percentage of Ideal Steps Included in Solutions to Problem #3 on the Question Concerning "What You **Would** Do"

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**The Effects of Discussion and Self-focusing on Interpersonal Problem Solving
Among Dysphoric and Nondysphoric Individuals**

Chapter 1: Overview

Depression is often regarded as the "common cold" of psychiatric disorders. This
metaphor relates primarily to the fact that depression occurs so frequently (i.e., estimates of
the lifetime risk for Major Depressive Disorder are somewhere between 10-25 % for
women and 5-12% for men; APA, 1994). Unlike the common cold, however, the effects of
depression can be devastating. Indeed, the most disturbing and potentially lethal particular
symptom of depression is the tendency towards suicidal ideation and behaviour (Beck,
Steer, Beck, & Newman, 1993). Unfortunately, though, people often underestimate the
severity of the effects of this disorder. This is at least in part due to the fact that depressed
affect is often confused with the syndrome of depression. The American Psychiatric
Association's Diagnostic and Statistical Manual of Mental Disorders (4th ed.) describes
depressive disorders as mental disorders with affective, cognitive, motivational, and
somatic symptomatology (APA, 1994). Moreover, although a transitory depressed mood
is a natural response to aversive events (e.g., Metalsky, Halberstadt, & Abramson, 1987;
Rosenhan & Seligman, 1995), the maintenance of depressed mood over time with the
consequent impairments to productive functioning is problematic (Becker, 1986). Once the
syndrome of depression ensues, maladaptive habits may become the norm, characterised
by negative thinking, disabling emotions, and avoidant behaviour (Beck, Rush, Shaw, &
Emery, 1979). Furthermore, depression has at least one other similarity to the common
cold. That is, while remedies are available to alleviate symptoms, at present there are no
reliable methods to prevent recurrence--which happens frequently (Hollon & Beck, 1986).

Thus, because depression can have debilitating symptoms and can become chronic
and/or recurrent, it is important to identify risk factors, and to intervene early with those at risk.
However, although research has accumulated that demonstrates a significant relationship

between stress and illness (Rabkin & Streuning, 1976), and in particular, stress and depression (Billings & Moos, 1982; Folkman & Lazarus, 1986), the observed relationship between stress and future disorder has been modest. Thus, many researchers have conceptualized the occurrence of depression as a diathesis-stress interaction. That is, preexisting vulnerabilities combine with the occurrence of aversive events or chronic stressors to bring about the depression syndrome. Evidence is accumulating for a number of possible vulnerability factors, including: cognitive styles (e.g., Beck et al, 1979; Abramson, Seligman, & Teasdale, 1986), personality variables (e.g., Robins, 1990; Blatt, 1990), coping styles (e.g., Kuhl, 1981; Folkman & Lazarus, 1986; Lyubomirsky & Nolen-Hoeksema, 1995) and childhood adversity (e.g., Kessler, Davis, & Kendler, 1997; see also Lara & Klein, 1999, for a recent review). Another risk factor, albeit more proximate, is the presence of depressive symptoms. Such symptoms are coined "dysphoria" in those people who have displayed several symptoms over a period of time (i.e., typically at least a week or two, depending on the measure) but do not yet meet the diagnostic criteria for clinical depression (Vredenberg, Flett, & Krames, 1993).

One commonly occurring stressor, on the other hand, that has been identified is interpersonal conflict (Coyne & Delongis, 1986). For example, Clark, Beck, and Brown (1992) found that dysphoria was related to a decrease in social resources due to negative interpersonal events. In terms of potential explanations for such findings, depressed individuals often display deficits in social skills (Libet & Lewinsohn, 1973; Rehm, Kaslow, & Rabin, 1987) and interpersonal problem solving (Lyubomirsky & Nolen-Hoeksema, 1995). As such, depressed persons have been shown to engender negative reactions from others (Coyne, 1976a; Wortman & Dunkel-Schetter, 1987). Moreover, Wortman and her colleagues have found evidence for a "negative interpersonal spiral" in which negative reactions increase depressive symptomatology which in turn leads to an increase in the negativity in others' responses, and so on. While it's unclear as to whether negative interpersonal environments predate depressive episodes or are a consequence thereof (i.e., the "scar" hypothesis, Gotlib & Hammen, 1992), it appears that such troubled

environments contribute to recurrence.

Not surprisingly, then, research conducted by Pietromonaco and Rook (1987) demonstrated that depressed individuals tend to perceive social interactions as more risky than do nondepressed persons and as a result the former are less likely to choose to engage in social contact. In fact, depressed persons often tend to isolate themselves in response to stress (Feldman & Gotlib, 1993). This isolation, while perhaps initially comforting, is ineffective as a habitual coping style (Billings & Moos, 1985), typically leading to further impaired functioning in depressed persons. For example, isolation can be a fertile breeding ground for rumination (Nolen-Hoeksema & Davis, 1999) or self-focus, which have been shown in several studies to be associated with more severe and long-lasting periods of depressed mood (for reviews, see Carver & Scheier, 1990; Ingram, 1990: Nolen-Hoeksema, 1991; Pyszczynski & Greenberg, 1987).

One explanation for the deleterious effects of self-focus and rumination that has received some empirical support is that self-focused attention enhances the negative effects of depressed mood on thinking. Selective memories and distorted interpretations of events then lead to suboptimal problem-solving, creating a vicious cycle between depressed mood and thinking (see, e.g., Lyubomirsky, Caldwell, & Nolen-Hoeksema, 1998; Carver & Scheier, 1990; Teasdale, 1983). For example, when focusing on the causes of one's depressed mood, one may remember recent trivial arguments with one's best friend and draw several negative conclusions, such as: the relationship is in trouble, oneself is to blame, and the situation is hopeless. Other subsequent decisions would tend to be negatively affected by these thoughts (Lyubomirsky & Nolen-Hoeksema, 1995).

Several investigators have obtained evidence consistent with the forgoing explanation. For example, Pyszczynski, Hamilton, Herring and Greenberg (1989) found that self-focus inductions lead dysphoric persons to have more pessimistic expectancies for future events. Furthermore, Brockner (1979) found that such inductions interfere with the ability of dysphoric persons to solve anagram problems.

Lyubomirsky and Nolen-Hoeksema (1995, see Study 3), however, argued that a

better test of the vicious cycle explanation would involve determining whether or not self-focused attention interferes with the ability of dysphoric persons to think of good solutions to the types of problems frequently associated with dysphoria, such as complex interpersonal problems. The study these two investigators devised produced a number of important findings which will be the focus of the current dissertation in the form of a partial replication and extension. As such, a detailed examination of the Lyubomirsky and Nolen-Hoeksema study is in order. In their investigation, potential participants of both sexes completed the 13-item short form of the Beck Depression Inventory (BDI-SF; Beck & Beck, 1972) as part of a larger packet of unrelated questionnaires administered at the beginning of a semester. Based on recommendations by Beck and Beamesderfer (1974), these researchers recruited university students with BDI-SF scores above 7 for the moderately dysphoric group and students with BDI-SF scores below 3 for the nondysphoric group. Students participated in this study within 2 weeks of completing the BDI-SF because this instrument has demonstrated high test-retest stability among college students within this time frame.

After completing a packet of mood questionnaires, the dysphoric and nondysphoric participants spent 8 minutes engaging in a task that was designed to influence the content of their thoughts. Participants in the self-focus condition were asked to focus their attention upon and "think about" a series of 45 items (adapted from Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema & Morrow, 1993) that were emotion focused, symptom focused and self focused. For example, they were asked to think about: "the physical sensations in your body;" "your current level of energy;" "what your feelings might mean;" "the kind of person you are;" and, "why you react the way you do." In contrast, students in the distraction condition directed their attention to thoughts that were focused externally and not related to symptoms, emotions, or the self. For example, they were asked to think about such images as: "a boat slowly crossing the Atlantic," "the expression on the face of the *Mona Lisa*," and "a double-decker bus driving down the street."

Participants were then asked to indicate how they would go about solving a series of

hypothetical interpersonal problems that were adapted from Platt and Spivack (1975). More specifically, students were presented with the beginnings and endings of four interpersonal problems and were asked to imagine themselves experiencing these situations. Further instructions were as follows:

> For each story you will be given the beginning of the story and how the story ends. Your task is to make up a story that connects the beginning that is given to you with the ending that is given to you. In other words, you are to provide a middle for each story.

The following is an example of one of the problem situations:

> You notice that one of your friends seems to be avoiding you. You really like and enjoy spending time with this person, and want him or her to like you. The situation ends when he or she likes you again. Begin the story when you notice your friend avoiding you.

The solutions were assessed by 2 independent judges. The solutions offered by the self-focused, dysphoric subjects were judged to be significantly less effective than those reported by the other subjects.

This is a significant discovery for several reasons. To elaborate, because people suffering from dysphoria may be at risk for developing clinical depression, they have an especially strong need to deal with known stressors such as interpersonal conflict (Barnett & Gotlib, 1988; Billings & Moos, 1985; Bolger & Zuckerman, 1995; Folkman & Lazarus, 1986). Further, recall that interpersonal conflict is not only a stressor in and of itself, but that it can also lead to the initiation of maladaptive coping styles such as isolation and rumination. As well, unresolved interpersonal conflict can deprive at-risk individuals of the potential benefits of positive social contact (House, Landis, & Umberson, 1988). Ironically, despite the problems that depressed persons' social networks are sometimes fraught with, positive social contact can act as a potent stress buffer (House, Landis, & Umberson, 1988). Conversely, the absence of a positive, confiding relationship has been shown to be associated with negative health outcomes, such as depression (Brown & Harris, 1978).

Thus, the Lyubomirsky and Nolen-Hoeksema (1995) study highlights the double-edged sword that depressed persons are often faced with: that is, they tend to have difficulty resolving interpersonal conflict, yet isolation only exacerbates such difficulties and the associated depressive reactions. It would seem then that the social realm is a logical point of intervention for counselling and clinical psychologists. Indeed, both Interpersonal Therapy (see Gotlib & Hammen, 1992, for a review) and Cognitive Therapy (Beck, Rush, Shaw, & Emery, 1979) deal with such issues with depressed persons. In addition, recent research indicates that it is the behavioural component of such therapies (i.e., such as social-skills training) that may be largely responsible for treatment effects (Jacobson, Dobson, Truax, Addix, Koener, Gollan, Gortner, & Prince, 1996). Moreover, cognitive and interpersonal interventions have fared comparably to pharmaceutical ones in recent outcome studies (Barnett & Gotlib, 1988). And, while it may be tempting to rely solely on psychopharmacological interventions, there still remains a substantial minority of individuals who do not respond to medication (i.e., approximately 30 percent after the first medication trial; 15 percent after having tried three different medications, Long, 1993). As well, by the time an individual presents for treatment, the depression has often existed long enough to require treatment for the ramifications of depressive behaviour.

Unfortunately, this delay in receiving treatment is due at least in part to the fact that many depressed persons are reluctant to seek professional help (Vredenberg, Flett, & Krames, 1993). As well, there is a growing consensus that if government funding for mental health services continues to decline, then increasing numbers of people will be unable to gain timely access to such traditional forms of psychotherapy (Gottlieb, 1988). Thus, researchers within the areas of counseling and clinical psychology are becoming increasingly interested in studying the influence of peer interactions on various psychological disorders (see, e.g., Sarason & Sarason, 1985).

In fact, in Gottlieb's (1988) review of support interventions, he proposed that professional caregivers should promote the utilisation of natural support systems and the alteration of interpersonal skills that might facilitate access to those systems. He also

emphasised the need for additional research to evaluate the effectiveness of extant natural support interventions, as well as further studies that could lead to the development of more of these types of intervention programs. Despite the logic of such recommendations, however, Gottlieb's review also highlighted the dearth of research examining support interventions which utilise natural support networks.

Moreover, there is a particularly strong need to investigate peer-interaction effects on depressive symptoms because depressive disorders now account for 75% of all psychiatric hospitalizations (Gotlib & Hammen, 1992). Interestingly, depressive symptoms are especially likely to be affected by peer interaction. This is because such symptoms are thought by many to be perpetuated by systematic cognitive errors (Beck, Rush, Shaw, & Emery, 1979), and many judgemental distortions have been shown to be amenable to correction through consultation with non-experts, at least in non-depressed samples (see, e.g., Wright, Christie, Johnson, & Stoffer, 1996).

It follows, then, that dysphoric persons might be assisted in thinking more clearly and making better decisions if they were to consult with peers. And, if they can be assisted in dealing more effectively with interpersonal problems, their condition might improve, or, they might become less vulnerable to developing clinical depression. Extending the work of Lyubomirsky and Nolen-Hoeksema (1995) is one way to investigate this possibility. In this dissertation, then, a condition is added to those investigators' design in which self-focused, dysphoric participants discuss possible solutions to hypothetical interpersonal problems with a nondysphoric peer. An additional objective is to determine whether the possible benefits of such discussion might vary depending upon whether or not the problem-solving partner is himself or herself dysphoric. This reasoning is based upon the possiblity that subjects' moods could be affected by the dysphoric status of the partner and perhaps alter the impact of the message content. As such, in the current study, dysphoric participants also discuss hypothetical interpersonal problems with fellow dysphoric peers. A final goal is to shed further light on why dysphoric individuals are deficient at interpersonal problem solving. This goal is attempted by refining the

Lyubomirsky and Nolen-Hoeksema dependent measures and by adding further mood measures.

Chapter 2: Literature Review

One of the premises on which the Lyubomirsky and Nolen Hoeksema (1995) study was based is that depressive thinking is negatively distorted. That is, self-focus is thought to activate negative thinking, which in turn impairs behaviour such as problem-solving ability. While this premise has been a cornerstone of cognitive theories of depression for many years (e.g., Beck, 1963; Kovacs & Beck, 1978; Metalsky et al., 1987), it has more recently been called into question, and as such needs to be examined. Moreover, an examination of research concerning the processes involved in depressive thinking may shed light on the nature of depressed person's problem-solving deficits and how they might be corrected.

Discussion is one technique that has been employed for the correction of faulty thinking in non-depressed individuals (e.g., Wright & Wells, 1985; Wright, Christie, Johnson, & Stoffer, 1992). It has not, however, been found to be effective in every decision-making domain that it has been applied to (e.g., Wright, MacEachern, Stoffer, & MacDonald, 1996), and, there has been debate regarding the mechanisms of change (e.g., Burnstein & Vinokur, 1973; Zuber, Croft, & Werner, 1992). A review of these issues will clarify why the current study proposes that discussion could be helpful for problem-solving in depression.

It should not be forgotten that there is a rich literature regarding the effects of offering aid to depressed individuals. Research in the area of social support for depression has indicated that such assistance can have positive effects (House, Landis, & Umberson, 1988), but not always (Coyne, Ellard, & Smith, 1990). In fact, as social support research moves from examining the relationship between general perceptions of social support and global measures of well-being, to examining specific reactions to specific helping overtures, the results become increasingly inconsistent (Barrera, 1986). A thorough review of the social support literature is therefore indicated to assess the potential benefits of peers assisting dysphoric individuals with interpersonal problem-solving.

Thus, three research literatures are relevant to the consideration of how discussion might affect the ability of dysphoric individuals to resolve interpersonal problems: research on thinking and decision-making among members of the depressive subpopulation; research concerning discussion effects on decision-making among members of the general population; and, the work on social support for depression. These literatures will be reviewed in the order outlined above.

Thinking and Decision making among members of the depressive sub-population

Almost forty years ago, Beck (1963) proposed that depression is characterized by enduring negative cognitions which are linked to negative affect. Beck delineated three aspects of depressive thinking: disorders of the content of thought, the process of thought, and the structure of thought (Kovacs & Beck, 1978). Content of thought pertains to the negative cognitive triad, whereby depressed individuals view themselves, the world, and the future in an overly pessimistic way. These negative interpretations are thought to be automatic in that they are difficult to control, and are persistent and repetitive. Such automatic negative thinking is proposed to perpetuate the affective, behavioural, and somatic symptoms of depression. Process of thought refers to the processing errors--or cognitive distortions--such as selective abstraction and overgeneralization, that lead to negative biases. Such errors serve to produce and maintain the negative interpretations which comprise the negative cognitive triad. Finally, the structure of thought refers to the depressive schema which is comprised of excessively rigid beliefs, attitudes and assumptions. Such schemata are thought to be stable knowledge structures that guide the processing of incoming information (Engel & DeRubeis, 1993), thus producing the various cognitive distortions. Depressive schemata are thought to develop as a result of early life experiences and remain relatively inactive or latent prior to the onset of depression. The presence of latent depressive schema is also thought to predispose certain individuals to depression. Specifically, Beck's model emphasizes a diathesis-stress approach, in that an interaction of such schemata with negative life events precipitates depression.

To illustrate Beck's model (Kovacs & Beck, 1978), a depressed person might do poorly on an exam (i.e., a negative life event) and subsequently conclude that: a) their academic future is ruined, b) they are an overall failure, and c) the world is an unjust place to impose such high standards. The content of such thoughts illustrates the negative cognitive triad, whereas the cognitive distortion is overgeneralization. As well, this person might have long-term, perfectionistic tendencies which the negative event activated (i.e., the negative schema).

Also of relevance to this discussion is the learned helplessness model of depression (Seligman, 1975). According to this model, when an individual perceives that a negative life event has happened, the kinds of causal attributions one might make for the event, and the importance one attaches to them, determine the type of reaction one has to it. Depressive reactions are hypothesized to be more likely to occur, to be more intense, and to persist longer when one attributes negative life events to stable and global causes and perceives them as important than when one attributes such events to unstable, specific causes and perceives them as unimportant. In addition, when negative life events are attributed to internal as well as stable, global causes, it is predicted that depressive responses will be accompanied by lowered self-esteem.

The model has recently been revised and is now called the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989), reflecting the prominence of hopelessness cognitions in the etiology of depression. According to the revised model, inferences that one makes about a negative life event will determine whether or not one becomes hopeless and develops hopelessness depression. Specifically, the crucial aspects of the inferences involve perceptions concerning the cause, consequences, and implications for the self that are generated in response to the negative event. In the revised version, however, stability and globality figure more prominently in the development of depression than does internality.

The presence of negative thinking in depressed persons relative to nondepressed persons, which would be predicted from both Beck's (1963) model and hopelessness

theory (Abramson et al., 1989), has been widely demonstrated. Depressed subjects report more negative thoughts, a more negative view of the self, and a more negative view of the future than do nondepressed controls (Engel & DeRubeis, 1993). One of the central features of Beck's model is that depressed persons' negative view of self, world and future (i.e., the negative cognitive triad) is maintained by distorted cognition. Both empirical evidence and clinical observation have been largely consistent with this assumption. The importance of the presence of distorted thinking in depressed and dysphoric persons for the current dissertation concerns the potential impact of such distortion on important aspects of functioning such as interpersonal problem solving. For example. Colvin and Block (1994) asserted that "if individuals distort reality and thereby misjudge consequential, law-reflecting relations, we believe that such individuals must necessarily emit suboptimal, if not maladaptive, behavioural patterns over the long run of life" (p. 17). From this perspective, the problem-solving deficits that have been observed in dysphoric persons would be due to misinterpretations of the relevent interpersonal situation. Recall, though, that while Lyubomirsky and Nolen-Hoeksema (1995) proposed a similar cognitive explanation, their data did not rule out a motivational/self-efficacy explanation. That is, dysphoric persons may indeed perceive problematic situations clearly, but may lack the motivation to act accordingly. In fact, the distorted perception position has been challenged by a body of research generated under the banner of depressive realism--the notion that nondepressed persons may have overly positive perceptions whereas depressive perceptions are relatively accurate (Alloy and Abramson,1979). Coyne (1989), for example, has argued that depressed persons' perceptions may reflect truly dysfunctional and distressing interpersonal environments.

The most impressive research in this area involves the illusion of control. To elaborate, Alloy and Abramson (1979) compared dysphoric and nondysphoric students in their ability to discern their degree of control over outcomes on an experimental task. Specifically, subjects were required to estimate the degree of contingency (which was varied) between pressing a button and the appearance of a green light. Results showed

that nondysphoric subjects overestimated the amount of control they had over outcomes when the outcome was associated with success (e.g., winning money) and underestimated their degree of control when the outcome was associated with failure (e.g., losing money). Dysphoric students, on the other hand, responded accurately under all conditions. The results were interpreted as supporting the existence of an illusion of control bias among nondepressed individuals, whereas depression may be associated with more reality-based judgments.

These results contradict both Beck's (1963) formulation and learned helplessness/hopelessness theory (Abramson et al., 1989). Indeed, the latter states that helpless subjects tend to underestimate the actual degree of contingency that exists between their responses and outcomes. According to the theory, this is a result of previously developed expectations of uncontrollability interfering with judging the actual relation (Metalsky et al., 1987). Vazquez (1987) argued, however, that at least some of the findings in contingency research might be due to inadequacies of the paradigm. He reasoned that the outcomes in the judgement of contingency studies may not have accessed the depressed subjects' negative self-schemata; if they did, one might expect to see biased responding from depressed subjects. Vazquez (1987) set out to test this possibility by extending Alloy and Abramson's (1979) work. Instead of presenting a light, a sentence appeared containing either depressed or nondepressed content. Whether or not the statement was self-referent was also varied. Results showed that when outcomes were negative self-referent sentences, depressed subjects overestimated the actual degree of contingency, whereas nondepressed subjects made accurate judgments.

The results of the Vasquez (1987) study are consistent with Dobson and Franche's (1989) conclusions concerning the depressive realism research. They noted that while the evidence within the judgement-of-contingency paradigm consistently supports the depressive realism hypothesis, research within other paradigms is less consistent. The overall pattern that emerged indicated that "...non-depressive realism increases as ecological validity increases" (p. 428), and that in a subset of studies, it appeared that

"...when outcomes are meaningful, there seems to be a higher tendency for depressive distortion to occur" (p. 429). Still, despite these cautionary notes, Dobson and Franche concluded that the evidence supports the existence of the depressive realism phenomenon. However, a recent study by Dobson and Pusch (1995) indicated that the phenomenon may only apply to mildly depressed college students, and not to clinically depressed patients.

Taylor and Brown (1988) also reviewed the depressive realism evidence and concluded that not only do nondepressed persons display positive illusions, but that these biases may promote mental health. More recently, though, Colvin and Block (1994) questioned the empirical evidence for, and logic of, this contention. For example, they noted that much of the research reviewed by Taylor and Brown did not employ objective criteria against which subjective evaluations could be compared. Taylor and Brown (1994) have discounted these arguments noting that Colvin and Block focused mainly on the evidence for depressive realism, and that whether or not depressed persons were accurate is irrelevant. What is more important, according to Taylor and Brown, is whether unrealistic positivity is associated with good mental health outcomes, an association supported by the evidence in their review.

To provide a logical argument for these findings, Taylor and Brown (1994) reasoned that overestimating one's resources, one's chances for success, and the beneficence of the environment may enable people to put more effort into reaching their goals, which perhaps translates into a self-fulfilling prophecy. In terms of the Lyubomirsky and Nolen-Hoeksema (1995) findings, such arguments are consistent with a potential self-efficacy motivational basis for the problem-solving deficits observed in dysphoric persons. More generally, in considering Taylor and Brown's reasoning and the evidence for a connection between biases and mental health, the question arises as to whether one's perceptions accurately reflect reality is really the key issue. It would appear that what is more important is whether or not one's perceptions are adaptive, as positive interpretations seem to be.

Gollwitzer (1990) has proposed a theory that provides a potential reconciliation

between the traditional accuracy-equals-mental-health view espoused by Colvin and Block (1994), and the Taylor and Brown (1988; 1994) positive-illusion formulation. To elaborate, his theory suggests that positive illusions may be functional under certain circumstances and not in others. Moreover, people may have the ability to suspend these illusions when required. Building on the seminal work of Kurt Lewin (1936) and later work by Kuhl (e.g., Kuhl & Helle,1984) on goal setting and goal striving, Gollwitzer proposed a theory of mindsets. In contemplating an important decision, one is said to be in a deliberative mindset. In order to make an intelligent choice, one must weigh both the potential positive and negative outcomes of achieving a chosen goal. Therefore, an open mind is required at this stage. After a decision has been made, one is said to be in an implemental mindset. The task to be solved at this stage involves planning when, where, and how to act. Commitment to act may be bolstered by screening out any thoughts regarding feasibility or desirability of the goal (i.e., deliberating). In other words, deliberative mindsets should be characterized by even-handed, realistic perceptions, whereas implemental mindsets should be characterized by a positive focus.

Gollwitzer and Kinney (1989) put this theory to the test by applying the mindset paradigm to the illusion-of-control phenomenon. Results showed that the illusion of control could be suspended if persons were put into a deliberative mindset, and enhanced if persons were put into an implemental mindset. A subsequent study (Taylor & Gollwitzer, 1995) expanded this work by extending it to other positive illusions. Results showed that subjects in a deliberative frame of mind had significantly poorer mood, lower self-esteem, and lower perceived invulnerability to risk than participants in whom an implemental mindset had been induced. The authors concluded that "the results provide support for the contention that deliberation may be a time when people are relatively realistic about their talents and shortcomings and the resources and limitations of the environment" (p. 217).

Moreover, Gollwitzer (1990) has proposed that the mindset conceptualization provides a new framework from which to view depressive realism. He reasoned that depressed individuals might find it particularly difficult to set goals because of pervasive

negative beliefs about themselves. Such beliefs should generate doubts regarding the attainability of a particular goal and therefore should impede goal commitment. As a result, an implemental mindset and the associated illusionary optimism may not occur. Thus, the mindset paradigm offers evidence for the functional aspects of positive biases under certain conditions, and some speculations regarding the motivational implications for those lacking these biases (i.e., depressed persons).

Gollwitzer's framework is consistent with the earlier work of Bandura (1977), who was also interested in the mechanisms by which self-evaluation might affect various outcomes. He developed a comprehensive theory that focuses on the relationship between self-beliefs, performance, and mental health outcomes. According to self-efficacy theory, elements of self-efficacy are thought to determine behavioural choices, effort expenditure, persistence despite obstacles, and emotional reactions (Maddux, 1991). These elements pertain to three sets of cognitive processes: (a) self-efficacy expectancies--the extent to which one believes in one's ability to carry out a specific course of action, (b) outcome expectancies--beliefs regarding the likelihood that actions will bring about specific outcomes, and (c) outcome value--the subjective appraisal of a projected outcome.

Self-efficacy theory holds that people experience emotional and behavioural problems when they have faulty expectations concerning their own or others' behaviour, when they undervalue or overvalue certain outcomes, when important life events seem out of control, or when goal achievement seems impossible (Bandura, 1997). Such efficacy expectancies have been implicated in both anxiety reactions (e.g., Williams & Watson, 1985; Bandura, Reese, & Adams, 1982) and depression (Bandura, 1982). The relationship between self-efficacy expectations and depression has been observed in several correlational studies (e.g., Kanfer & Zeiss, 1983; Rosenbaum & Hadari, 1985). Moreover, self-efficacy judgements have been shown to affect emotional state both directly (via imagining the consequences of inefficacy) and indirectly through their relationship to future performance deficits (Kavanagh, 1992). Thus, self-efficacy theory provides a framework for understanding how cognition and motivation might both be implicated in

dysphoria and in problem-solving deficits.

More recently, other investigators have also expressed interest in depressed and dysphoric persons' performance deficits. For example, Sedek, Kofta, and Tyska (1993) theorized that such persons might be fixated in the deliberation stage and experience difficulty moving into the implementation stage. Consistent with this hypothesis, Pittman and D'Agostino (1989) found that control-deprived subjects (i.e., subjects in a situation thought to be analogous to aspects of depression) needed significantly more trials than did comparison subjects to make conclusions about their degree of control in a contingency task.

Sedek et al.'s (1993) reasoning is based on their <u>cognitive exhaustion hypothesis</u>, whereby control-deprived subjects tend to show less complex, or <u>effortful</u> cognitive processing on subsequent decision-making tasks. The extrapolation to mindset theory assumes that implementation tasks require more effortful processing than do the data-gathering tasks involved in deliberation. Research directly examining the fixation proposition, however, has yet to be conducted. Recently, however, von Hecker and Sedek (1999) found that while dysphoric students performed comparably to nondysphoric students in detecting diagnostic social information, the former participants showed deficits in constructing social mental models. To clarify, the detection task is less cognitively complex than the modeling task. As such, this study supports Sedek et al.'s earlier reasoning. Furthermore, in a review of effortful processing in depression, Hartlage, Alloy, Vasquez, and Dykman (1993) concluded that "even mild depression seems to interfere with accessible effortful processes that demand a great deal of cognitive capacity" (p. 250). This evidence, then provides some support for the speculations of Sedek et al. (1993) and Gollwitzer (1990) outlined above. Moreover, deficits in effortful processing in depressed persons have been shown to extend to problem-solving (e.g., Price, Tyron, & Raps, 1978), decision making (e.g., Conway & Giannopoulos, 1993) and general learning (e.g., Hart, Kwentus, Taylor, & Harkins, 1987).

A number of explanations have been offered for deficits in effortful processing in depressed persons (see, e.g., Roy-Byrne, Weingartner, Bierer, Thompson, &

Post,1986). Hartlage et al. (1993) suggested that much of the evidence fits a capacity-reduced, negative-focus hypothesis, whereby cognitive capacity is reduced in depressed persons, and the remaining attentional resources are allocated to negative automatic thoughts. Thus, when stress decreases effortful processing, depressed persons may have difficulty countering their negative thoughts via conscious strategies (Barber & DeRubeis, 1989).

The idea that individuals have limits to their cognitive capacity dates back at least to William James (1905/1981). To accommodate these limitations, highly practiced tasks may become automatic--operating without attention or conscious awareness--thus freeing up cognitive resources for tasks requiring more effortful processing (Moretti & Shaw, 1989). With regard to depression per se, while Beck 's theorizing on automatic thoughts predated much of the work in cognitive psychology, many of his ideas nonetheless parallel the definitions that have been since outlined for automaticity (e.g., Shiffrin & Schneider, 1977). For example, Beck proposed that automatic negative thoughts in depression are perseverative and involuntary, occurring even when an individual is determined not to have them, thus interfering with rational responding. It should be noted, however, that Beck's notion of automaticity refers to both the products and process of automaticity (Hartlage et al., 1993). That is, the negative automatic thoughts that Beck refers to are a result of automatic processing. Utilizing this distinction allows for both the unintentionality (i.e., a criterion of automatic processing) and the interference (a consequence of experiencing the product) aspects of automatic thoughts that Beck refers to.

The Stroop task (e.g., Gotlib & McCann, 1984) provides an interesting methodology that has been used to illuminate depressive automatic processing demonstrating the unintentional processing of negative self-referent words. To do so, subjects are required to name the colour of ink that a word is printed in while attempting to ignore the meaning of the word. Interference from word content, as indicated by response delays, is thought to reflect unintentional, automatic, processing. Among depressed persons, although the colour-naming procedure discourages processing the meaning of the

words, these subjects seem unable to ignore depressive content. That is, for example, they are slower to say "green" for the word "sad" than for the word "tree" when both words are printed in green ink.

Similarly, Wenzlaff, Wegner, and Roper (1988) showed that depressed college students have difficulty suppressing and controlling negative thoughts (i.e., two qualities thought to be associated with automaticity) relative to nondepressed subjects. Subjects were told to imagine themselves in either positive or negative situations. When told to stop thinking of the situation in the course of writing a subsequent stream-of-consciousness report, depressed subjects reported a higher number of intrusive thoughts when the situation had been negative than did nondepressed subjects.

Several other investigators have implicated automaticity in the perpetuation of depressive symptomatology. For example, building upon evidence that mood affects subsequent judgments, Moretti and Shaw (1989) argued that "...affect both increases the accessibility of similarly valenced constructs in memory for processing, and reduces attentional resources for monitoring automatic processing and initiating controlled modes of information processing" (p. 389). In other words, negative affect and negative thinking may work in concert to perpetuate each other. This line of reasoning is consistent with Beck's model. Indeed, Moretti and Shaw argue that "...the process of cognitive therapy (i.e., identifying thoughts associated with feelings of dysphoria, finding underlying cognitive errors, plus the belief systems that fuel them) represents a shift from automatic to controlled processing" (p. 409).

Similarly, Higgins (1989) proposed that automatic processing can exacerbate depression, in that negative beliefs become pervasive and the likelihood of critically assessing them decreases. Higgins also implied that automatic processing may contribute to depressive vulnerability. In reviewing the evidence concerning chronically accessible constructs—a concept similar to the schema construct—he noted that these constructs have been shown to be relatively stable over years. However, direct evidence concerning a potential link between automatic processes and vulnerability to depression is scant

(Hartlage et al., 1993; Moretti & Shaw, 1989). One study by Blackburn and her colleagues (Blackburn, Roxborough, Muir, Glabus, & Blackwood, 1990), though, is intriguing in that a physiological measure of cognitive processing was used to demonstrate the existence of a negative cognitive bias in remitted depressives. Results indicated that depression-prone persons possess enduring cognitive structures that lead them to expect to encounter negative stimuli in the environment.

Expanding on the work on negative thinking in depression, investigators such as Lyubomirsky and Nolen-Hoeksema (1995) have suggested that self-focusing or rumination (i.e., a commonplace activity among many depressed persons, Nolen-Hoeksema, 1991) can maintain or even exacerbate dysphoria by increasing the effects of depressed mood on thinking and by interfering with good problem solving (e.g., Carver & Scheier, 1990). To elaborate, semantic network theory holds that a negative mood activates a network of negative memories, enhancing the accessibility and probability of retrieval of these memories, as well as the retrieval of negative beliefs and schemata about the self and the world (Bower, 1981; Forgas & Bower, 1987). Self-focus or rumination should magnify the effects of dysphoria on negative thinking because the person's attention is drawn to his or her negative mood and the automatically activated negative thoughts. These thoughts in turn affect the person's judgements and interpretations of his or her current situation and exacerbate depressed mood, creating the vicious cycle between depressed mood and thinking described by Teasdale (1983). Therefore, even though people may engage in self-focused, ruminative coping to attempt to make sense of life's problems (Lyubomirsky & Nolen-Hoeksema, 1993), adopting this strategy while in a dysphoric mood may actually disrupt problem solving. Moreover, while negative thinking seems to occur automatically in depressed persons, self-focusing or rumination may be necessary to trigger negative thinking in dysphoric persons. That is, attention may have to be drawn to latent negative thoughts. Indeed, Lyubomirsky and Nolen-Hoeksema (1995) only found deficits in dysphoric participants' problem solving ability when they were induced to self-focus, but not otherwise. In other words, it appears that a negative mood is triggered in dysphoric

individuals via self-focus. The mood then appears to produce negative thoughts that interfere with the effortful processing that is required of implemental-type tasks such as interpersonal problem solving.

Futhermore, while negative thinking may occur spontaneously or automatically in depressed persons, self-focused attention may speed up the process. In several laboratory studies, self-focused attention was induced by placing participants in front of a mirror or having them write essays including the words *I*, *me*, *mirror*, and *alone* (e.g., Pyszczynski, Holt, & Greenberg, 1987). In other studies investigating the effects of a ruminative style of coping with depressed mood, rumination has been induced by having participants focus on their current physical and emotional feeling state, their personality and their goals (e.g., Lyubomirsky & Nolen-Hoeksema, 1993; Nolen-Hoeksema & Morrow, 1993). The preponderance of evidence indicates that self-focused attention and rumination increase or maintain depressed mood in both dysphoric *and* clinically depressed participants (e.g. Lyubomirsky & Nolen-Hoeksema, 1995; Nolen-Hoeksema, 1991; Nolen-Hoeksema, Parker, & Larson, 1994; Pyszczynski & Greenberg, 1987). In nondysphoric participants, however, self-focused attention or rumination does not induce depressed mood. The rumination/self-focus literature, then, is consistent with Beck's notion of a latent depressive schema that can be triggered to produce depressed mood and thinking (e.g., Kovacs & Beck, 1978).

To summarize then, research conducted under the rubric of Beck's cognitive therapy for depression (Beck et. al, 1979) and also hopelessness theory (Abramson et al., 1989) provides evidence for negative thinking in depressed persons. This negativity, however, may be only in relation to the exaggerated positivity of non-depressed thinking. The veridicality of thought, though, may be irrelevant: adaptive thinking, that provides both cognitive and motivational advantages, may be the key to well-being.

What constitutes adaptiveness may vary according to task. The complexity entailed in interpersonal problem-solving, for example, may require a positive focus and effortful processing that may be disrupted by negative self-beliefs and negative automatic

thoughts. That is, ruminative tendencies which typically plague depressed persons may highlight such negativity and further impede problem solving. Such individuals may benefit from discussing problems with non-depressed persons to the extent that the latter may be able to help them screen out negative thoughts and focus on the task at hand. A review of the research pertaining to the potentially ameliorating effects of discussion on fellow non-depressed persons' decision-making ability will help evaluate this possibility.

Discussion Effects on Problem Solving with Nondepressed Subjects

The results of several recent investigations demonstrate that discussion can attenuate various cognitive biases in non-depressed college students. In the first of these investigations, Wright and Wells (1985) found that group discussion attenuates the fundamental attribution error. This error is the phenomenon whereby attributers tend to underestimate the causal influence of situational forces on a target person's behaviour in relation to dispositional forces (Jones, 1979). For example, actors who have complied with clear experimental instructions to take particular stances in essays (e.g., Jones & Harris, 1967; Snyder & Jones, 1974) have been judged by observers to have attitudes or dispositions consistent with the expressed written behaviour.

The second of these investigations was concerned with the consensus-underutilization effect (Wright, Luus, & Christie, 1990). This is the phenomenon whereby people give insufficient weight to information concerning how other people acted in a particular situation when making causal attributions for some individual's behaviour in that situation (e.g., Nisbett & Borgida, 1975). For example, if Bob fails to respond to a victim's cry for help, observers of this event will be virtually unaffected by information concerning how other bystanders acted in this situation when making judgments about Bob. Wright et al. found that discussion eliminates this judgemental tendency.

A third related study concerned the theory-perseverance effect (Wright, Christie, Johnson, & Stoffer, 1996). This is the phenomenon whereby people maintain beliefs about the relationship between factors even after the evidential basis of these beliefs has

been discredited (e.g., Anderson, 1982). For example, if Jane forms the belief that capital punishment deters crime, and is later informed that the evidence upon which she based this belief is seriously flawed, she will tend to maintain her belief in this relationship. Wright et al. found that discussion attenuates this tendency.

The evidence presented thus far may give the impression that discussion consistently corrects faulty thinking in non-depressed subjects, and as such, may serve to alter maladaptive thinking in dysphoric persons. However, other research has shown that discussion sometimes has no influence on judgements. For example, the results of a fourth recent investigation by Wright and his colleagues (Wright, MacEachem, Stoffer, & MacDonald, 1996), one pertaining to jury decision making, showed no difference in the willingness to use critical statistical evidence by a group of mock jurors as compared to that of individuals making decisions. Indeed, other research has shown that discussion can sometimes have a negative influence on judgements. For example, research concerning the groupthink phenomenon (Janis, 1972) has shown that in highly cohesive groups, even well educated individuals often fail to raise seemingly obvious criticisms of plans or decisions because of concerns with maintaining unanimity. As well, research concerning social loafing (Petty, Harkins, & Williams, 1980) has shown that individuals often make poorer decisions in a group context than they do on their own because they feel less personal responsibility for the quality of the decision in the former situation.

Furthermore, investigations concerning the impact of group discussion on the base-rate fallacy underline the complexity of the relationship between discussion and decision making. The base-rate fallacy is the tendency of people to overemphasise individuating information (i.e., information specific to a particular event or entity), and to give insufficient weight to relevant base-rate information when making probability judgments (see, e.g., Kahneman & Tversky, 1972). For example, people tend to guess that a target person is likely to be an engineer, rather than a lawyer, because the target is described as liking mathemetical games (a piece of information that fits the stereotype of an engineer more easily than it fits the stereotype of a lawyer). And, importantly, people tend to make this

inference despite being provided with other information which emphasizes that the probablility of the target being an engineer is much lower than the probability that he or she is a lawyer. In an important investigation, Argote, Devadas, and Melone (1990) found that group-discussion effects on the base-rate fallacy depend on the degree of informativeness of the individuating information. Specifically, they found that discussion tends to enhance base-rate use when the individuating information is uninformative and tends to decrease it when this information is informative.

One of the core topics in the area of social psychology has been the group polarization phenomenon. Research in this area also indicates that the effects of discussion on decision-making are not uniformly positive. Specifically, the phenomenon entails the tendency for group members' views on a broad variety of issues and topics to become more extreme after discussion (Lamm & Myers, 1978). The seminal investigation of the group polarization phenomenon was conducted by Stoner (1961). In this experiment, subjects were presented with a "dilemmas-of-choice" task which contained twelve life-situation problems involving a central person with a choice between more or less risky courses of action. For each situation, the subject's task is to choose the lowest likelihood of success that he would accept before recommending the alternative of higher risk. One of the risk questions is as follows:

> Mr. A., an electrical engineer, who is married and has one child, has been working for a large electronics corporation since graduating from college five years ago. He is assured of a lifetime job with a modest, though adequate salary, and liberal pension benefits upon retirement. On the other hand, it is very unlikely that his salary will increase much before he retires. While attending a convention, Mr. A is offered a job with a small, newly founded company which has a highly uncertain future. The new job would pay more to start and would offer the possibility of a share in the ownership if the company survived the competition of the larger firms.
>
> Imagine that you are advising Mr. A. Listed below are several probabilities or odds of the new company proving financially sound. Please check the lowest

probability that you could consider acceptable to make it worthwhile for Mr. A. to take the new job.

The alternatives available to the subject were as follows: The chances are 1, 3, 5, 7, or 9 in 10 that the company will prove financially sound.

The lowest probability of stability and therefore the riskiest decision is, of course, 1 in 10. On this item, and on many others, regardless of sex of subject or group size, the decision made by a group after a period of discussion is more risky than an individual decision made prior to discussion by the group members. It is not necessary that the discussion continue until the group has reached consensus, nor is it necessary that the post-discussion decision be made publicly.

Thus, investigations of the base-rate fallacy and group polarization illustrate that while discussion often attenuates bias in non-depressed subjects' decision-making, there are situations in which this effect does not occur. Nevertheless, investigators have detected an emerging pattern. To elaborate, a considerable amount of group-discussion research has focused upon the relationship between members' pre-discussion views and the final group decision. Recent evidence indicates that there are simple rules, or, more formally, social decision schemes that relate the initial distribution of members' views and preferences to the groups' final decisions (e.g., Stasser, Taylor, & Hanna, 1989). For example, the majority-wins rule suggests that often the group will opt for whatever position is initially supported by the majority of its members. Thus, discussion serves mainly to strengthen the most popular initial position, no matter how strenuously the minority argues for a different view. A second scheme, the truth-wins rule, indicates that the correct solution will eventually be accepted, as its validity is recognized by increasing numbers of members. A third scheme, the first-shift rule, states that groups tend to adopt a decision consistent with the direction of the first shift in opinion made by any group member.

Several theories have been advanced to account for such tendencies and the different accounts emphasize different types of influence processes. To elaborate, there appear to be two primary types of influence involved in opinion shifts. First, normative

influence involves attempts that focus on people's desire to be liked or accepted (Deutsch & Gerard, 1955). Specifically, as group members express their preference or positions, a judgemental norm tends to emerge and become evident to other group members (Sherif, 1936). These members then shift their positions or preferences to conform to the norm in order to gain the approval of others. One example of a normative influence attempt within a discussion context would be statements of pure preference with no logical or factual justification. Informational influence, on the other hand, involves attempts that focus on people's desire to have accurate information about various issues or topics (Deutsch & Gerard, 1955). A group member might be influenced in this way through the presentation by another member of factual or logical information. In sum, members of decision-making groups comprised of non-depressed subjects may be influenced normatively by the people in the group and their stated positions, or informationally by the logical or factual arguments presented.

To illustrate, some investigators have argued that group polarization is primarily the result of normative pressure (e.g., Brown, 1965; Zuber, Crott & Werner, 1992). This view, called social comparison theory, makes three basic assumptions. First, the typical group member is motivated to be as good if not better than the average member on a dimension rated as positive. Thus, liberals, for example, want to be seen as "more liberal" than others; conservatives want to be seen as "more conservative". Second, because of pluralistic ignorance, before the discussion all members assume that they are situated higher on the positive dimension, or at least as high, as the group average. Finally, when members discover that they don't meet or exceed the group standard they change their opinions in the direction of the positive pole.

A different explanation for group polarization, persuasive arguments theory (PAT, hereafter), holds that informational influence is the most important influence mode (Burnstein & Vinokur, 1973). PAT states that an individual's position on an issue or question is a function of the number and the persuasiveness of various arguments favouring that direction to which the individual has been exposed. Two factors determine how persuasive a given

argument will be: its perceived validity and its perceived novelty. The role of novelty is central because if arguments that an individual is already aware of are presented in the discussion, a shift in his or her position will not occur. Typically, discussion induces a shift in the direction of the pre-discussion majority position because most of the arguments raised in the discussion will support that view. However, as Kaplan (1977) has demonstrated, if novel persuasive arguments are presented that are opposite to the direction initially favoured by most group members, their position will shift in the direction of the position advocated by the arguments.

Comparatively recent research findings suggest that the two kinds of influence are not mutually exclusive in group contexts. Rather, their usage may instead depend on conditions associated with the group interaction (e.g., Isenberg, 1986; Kaplan & Miller, 1987). To clarify, Kaplan (1987, 1989) has proposed a model of group influence processes that helps to identify when normative or informational influence may emerge and/or be more effective. He argued that various situational factors such as task characteristics, the interactive goal of the group, and the personal orientations of group members are critical here. These different factors focus members' attention either on others' positions or on a correct solution of the problem. More specifically, the model proposes that normative influence is more likely to emerge and to be more effective when situational factors favour interpersonal over task-oriented interaction and thus focus members' attention on the positions of other group members. Thus, normative influence should be more prevalent and more effective when, for example, the group is discussing an issue that is value laden, and member harmony is an important goal. Informational influence, on the other hand is more likely to emerge and to be more effective when situational factors favour task-oriented over interpersonal interaction. And so members' attention is focused on the problem's solution. Thus, informational influence should be more prevalent when, for example, the group is trying to solve a problem that has a factually correct answer--an intellective task--and the group adopts the goal of reaching a correct decision.

Kelly, Jackson, and Hutson-Comeaux (1997) investigated this latter prediction

along with the hypothesis that normative, rather than informational influence would dominate if a group is in a hurry and must make a decision quickly. In their study, groups consisting of three college students worked on tasks requiring them to rank order various topics. One task involved rank-ordering the topics people dream about most frequently. The second task involved rank-ordering the leading causes of death. Although both task included a "correct" answer, the one concerning death seemed more intellective than the other. Half of the subjects in each of these two conditions worked under time pressure; they were told to take as much time as they needed to complete the task. As predicted, it was found that on the cause-of-death task, with low time pressure informational influence predominated. Consistent with predictions, as well, normative influence predominated with high time pressure on the dream task.

It could be argued then that decisions rendered under normative influence follow a kind of heuristic; that is, a rule of thumb that simplifies decision-making when attention is allocated elsewhere (Kunda, 1999). To clarify, making factual judgements can be viewed as requiring more effortful processing than merely agreeing with the predominant view. The Kelly et al. (1997) results are consistent with this view, in that when speed was introduced (i.e, an experimental manipulation that has been used to deplete cognitive resources required for effortful processing--e.g., Stoffer & Paulhus, 1992), normative influence prevailed. As well, normative influence can been seen as not only a heuristic for decision-making, but also a distraction from effortful processing in and of itself. That is, peer influence could well derail factual judgements.

In terms of the ramifications of such arguments for the current investigation, recall that the interpersonal problem-solving tasks involved achieving specific goals and were thought to require the type of effortful processing that is needed in implementation mode. This type of task orientation would seem to be typically more amenable to informational influence in non-depressed subjects. But, since depressed subjects appear to have deficits in effortful processing, they may succumb to normative influence--that is, they might conform to their non-depressed partner's opinion in a discussion context. Alternatively,

working with higher-functioning non-depressed subjects might help depressed subjects to shift into implementation mode and follow the rules of informational influence. To clarify, PAT would predict that since depressed subjects perform more poorly on interpersonal problem-solving tasks relative to non-depressed subjects, exposure to the information provided via discussion between the two should improve the quality of the depressed subjects' decisions. That is, depressed subjects should be swayed by higher quality arguments which should appear novel and hopefully valid. Whether normative or informational influence prevails, then, depressed functioning should improve.

While the above arguments may have surface validity, the fact remains that the group discussion format has not previously employed depressed or dysphoric subjects. As such, there could be factors other than informational and normative influence that could affect responses. The rich literature on social support should provide information regarding depressed persons' responses to the receipt of help. It will become clear, however, that definitional confusion in this area and the associated disparity in research results necessitates a thorough review of the various social support constructs.

Research Findings on Social Support and Depression

Durkheim (1951) was one of the first scholars to speculate about the link between social relationships and matters pertaining to depression. Specifically, he proposed that social isolation increases the probability of suicide. The study of social support as a distinct concept, however, did not begin until the 1960's and 1970's when social psychiatrists and sociologists became interested in the topic (see, e.g., Sarason, Sarason, & Pierce, 1990, for a review of this work). The initial focus of this work concerned the relationship between health and embeddedness within a social network. For example, social psychiatrist, Gerald Caplan (1964) proposed that mental health interventions should be directed towards the client's entire family. Caplan's views were influenced by Erikson's (1963) developmental theories and emphasized dealing with transitions throughout the lifespan. Caplan argued that significant others have the capacity to either impede or enhance passage through

transitions.

Two other pioneers in the area of social support, John Cassel (1974) and Sidney Cobb (1976), were interested in understanding why some people are able to withstand stressful life events quite well, while others are not--and indeed often develop physical and mental illnesses. Their initial investigations involved systematic and exhaustive reviews of epidemiological investigations. These reviews highlighted several studies which found that both people and animals who experienced high levels of stress, either in the company of "significant others" or, in the case of people, with the knowledge that they had access to supportive social ties, did not develop the adverse health consequences experienced by those who were relatively isolated or unsupported. Both investigators concluded that under conditions of high life change or chronic exposure to stressors, social support may serve to buffer the individual from the potential adverse effects of such factors on mood and functioning. Moreover, it should facilitate coping and adaption, thus reducing the likelihood of illness. Both Cassel and Cobb held that social support's primary function involved this type of interaction with negative events rather than having a direct effect on health.

It is important to emphasize that Cassel and Cobb disagreed on the instrumental elements of social support. Cobb's (1976) formulation emphasized the perception that support would be available if needed, while Cassel (1974) stressed actual social transactions. In other words, Cobb focused on intrapsychic determinants of support, whereas Cassel focused on the recipient's actual social environment. This difference in emphasis is an early indicator of the definitional confusion that has characterized the social support field.

The influence of Cassel's (1974) and Cobb's (1976) work on subsequent research has been considerable, in that most investigations of social support have concentrated on its success in ameliorating distressful reactions to life stressors. For example, in an investigation of vulnerability to depression among those women who had lost their mothers before their 11th birthday, Brown and Harris (1978) found that the worse the family circumstances before the loss, and the less adequate the care after it, the greater the

women's vulnerability to depression. Other representative studies include one by Barrera (1981) who found that adolescent mothers who were embedded in sizable social networks, or who participated in networks that were relatively free of interpersonal conflict, did not evidence depressive reactions to life stressors. In a study of the effects of daily stress on married couples, Delongis, Folkman and Lazarus (1988) found that persons with relatively low levels of perceived support tended to experience mood disturbances on stressful days. Furthermore, Okun, Melichar, and Hill (1990), in a study of community dwelling elders, found that the effect of negative daily events on psychological distress was significantly reduced when positive social ties increased. Furthermore, in a longitudinal study of the relative effects of perceived social support and social conflict on psychological distress among college students, Lepore (1992) found that while roommate conflict predicted increases in psychological distress over time, this effect was attenuated by high levels of perceived support from friends.

A related body of research has focused on the psychological impact of nondisclosure of negative life events. For example, Pennebaker and his colleagues found that not disclosing traumatic experiences such as divorce, death of a loved one, or sexual abuse is related to subsequent psychological distress and physical health problems (e.g., Harber & Pennebaker, 1993; Pennebaker, 1989). Similarly, in a study of mothers who had recently lost their infants, Lepore, Silver, Wortman, and Wayment (1996) found that those mothers who were constrained from discussing this traumatic event were more likely to experience intrusive thoughts and depressive symptoms over time.

It would appear, then, that there is considerable support for what has been labelled the stress-buffering model of social support (Brown & Harris, 1986). In addition, investigators in this area have also been interested in determining whether social support has beneficial effects on functioning irrespective of the presence of stress. There is some evidence supporting this more general perspective. For example, Cohen and Wills (1985) have found that having people with whom one can spend and enjoy time has a consistent positive relationship with well-being among both high and low-stressed persons.

Furthermore, Baumeister and Leary (1995) concluded on the basis of a review of relevant research findings that "...many of the emotional problems for which people seek professional help (anxiety, depression, grief, loneliness, relationship problems, and the like) result from people's failure to meet their belongingness needs" (p. 521).

It is difficult to evaluate the empirical evidence in the area of social support, however, because of problems associated with the operational definitions that have been used in the relevant investigations. To elaborate, some authors have noted that these definitions are so broad that the concept is in danger of losing its distinctiveness (Barnett & Gotlib, 1988; Broadhead, Kaplan, et al., 1983; Cohen & McKay, 1984; Tardy, 1985). Furthermore, a considerable number of different definitions of the concept have been used in this research area. In fact, Gottlieb (1983) observed that "with each new study a new definition of support surfaces" (p. 50). In addition, the many measurement approaches that exist often appear to bear little relationship to one another (Shumaker & Brownell, 1984; Tardy, 1985).

Similarly, Flannery and Wieman (1989) have noted that social support is a more complex construct than investigators typically conceive it to be, and that it needs to be understood within non-distressed samples before results can be extrapolated to distressed populations. As such, any meaningful attempt to assess the impact of social support on depressive functioning requires a careful review of the various definitions that have been used for social support and then a review of the findings of the investigations that have used each of these definitions. To begin this assessment, Larson and Lee (1996) have carried out research on what they term appraisal support, having other people available to help appraise stressful situations. These investigators found that this type of support is associated with better physical and psychological health in stressed persons relative to relevant controls; however, it is not associated with greater well-being in non-stressed individual. Barnett and Gotlib (1988) have investigated functional support, a combination of esteem, informational, companionship, and tangible support. They found that while this type of support significantly predicted future depression severity, it's interaction with stress did not. But belonging support--having people with whom one can

spend and enjoy time--has been found to have general beneficial effects on functioning (e.g., Cohen & Wills, 1985).

Another conceptualization scheme that is emerging involves dividing social support concepts into three broad categories: a) social embeddedness, b) perceived support, and c) received (or enacted) support (Barrera, 1986; Sarason et al., 1990). Social embeddedness refers to the connections individuals have to their social environments (Barrera, 1986). Many social integration measures have been used to gauge social embeddedness, including: marital ties (Thoits, 1982), participation in community organizations (Berkman & Syme, 1979), presence of older siblings (Sandler, 1980), and contact with friends (Silberfield, 1978). In terms of the findings of studies that have used these types of measures, House et al. (1988) noted that they tend to indicate a negative correlation between social integration and mortality rates (i.e., an absence of social ties being associated with higher mortality).

It should be noted, however, that measures of social embeddedness are vulnerable to the criticism that they overlap with stressful events (Coyne & Delongis, 1986). For example, marital status is often used to indicate the presence of support, whereas divorce, separation, and death of a spouse are often used as items on life-event scales.

Social network analyses have also been used to measure social embeddedness. These are instruments which measure characteristics of social networks such as network structure (e.g., density of network, plus categories of relationships), qualities of relationships (e.g., durability, frequency of contact, and intensity) and the functions of individual members (e.g., type of help provided). Research involving network measures,however, is relatively sparse and has yielded inconsistent findings, and therefore, at this time, adds little to what has been discovered by researchers who employed simpler methodologies such as social integration measures (Sarason et al., 1990). Perhaps, though, with methodological improvements, this may be a viable research area in the future--especially in light of the fact that most social support measures tend not to provide the microanalyses that social network analyses do. Such precision may be necessary to determine specific effective

helping overtures for depressed and dysphoric persons.

More typical of social support measures are those that assess the recipients' general perceptions of support. The term perceived support refers to the cognitive appraisal of being reliably connected to others (Barrera, 1986). Measures of this type of support differ from social embeddedness measures in that the former do not quantify the number of supporters or the amount of social contact. Some instruments that have been used to measure perceived support focus on the individual's confidence that adequate support would be available if needed. Others focus on the perceived adequacy or satisfaction with support per se. This concept fits with cognitive models of stress and coping processes (e.g., Folkman, Schaefer, & Lazarus, 1979) that emphasize the appraisal of potentially threatening situations and the resources that can be enlisted in coping efforts.

A considerable amount of research has shown that it is the perception of social support that is most closely related to health outcomes (Antonucci & Israel, 1986; Sandler & Barrera, 1984; Wethington & Kessler, 1986). Moreover, these findings indicate that perceived social support is negatively correlated with distress. However, the causal direction of this association remains unclear. MacFarlane, Norman, Streiner, and Roy (1983) argued that the relationship is a reciprocal one. In a longitudinal study, they found that increases in uncontrollable life events decreased people's perceptions of the helpfulness of future support transactions. Yet perceived helpfulness appeared to prevent increases in stressful events. Furthermore, Dean, Ensel, and Lin (Dean & Ensel, 1982; Lin & Dean, 1984; Lin & Ensel, 1984) found that increases in life stress were related to decreases in perceptions of social support. Moreover, deterioration in perceived support was related to increases in depressive symptoms.

Possible explanations for these effects include: a) states of psychological distress, such as depression, could lead to a negative distortion of the availability or the adequacy of support, b) distressed individuals may be rejected by others (Coyne, 1976a), or c) characteristics of the distressed individual, such as poor social skills or severe psychiatric disorder, could result in decreases in social networks and/or poor quality relationships

(Belsher & Costello, 1991). Some have suggested that the negative relationship between stress and support is evidence that the two concepts overlap (Coyne, Aldwin, & Lazarus, 1981). For example, Brown and Harris (1978) noted that if their subjects experienced a stressful event, such as marital difficulties, they would likely not name their spouses as confidants.

Irwin Sarason and his colleagues (I. Sarason, B. Sarason, & Shearin, 1986) suggested that it might be worthwhile considering social support as a personality variable. They based this suggestion, in part, on their finding that perceived support levels remain stable over three years. Consistent with this view is a finding by B. Sarason, I. Sarason, Hacker, and Basham (1985) that people reporting high perceived social support were rated as more socially skilled than those low in perceived social support (according to both self and other reports).

Another related possibility is that perceived social support is not directly related to health outcomes. Instead, it may be associated personality types that explain the correlation (Brown & Harris, 1986). Given the global, non-specific evaluation of potential support that perceived support measures typically tap, perception of social support is particularly vulnerable to exaggerations and minimizations resulting from perceptual biases. Depression-prone personality types (e.g., neurotic types) are likely to underestimate perceived social support, whereas high self-esteem types may overestimate the degree of support. Indeed, social support correlates negatively with neuroticism (I. Sarason, B. Sarason, & Shearin, 1986). Neuroticism has also been shown to be associated with increased interpersonal conflicts and depression (Barnett & Gotlib, 1988; Bolger & Zuckerman, 1995).

Other personality types that have been associated with depression show a more direct connection with social variables. Specifically, while social support correlates positively with extroversion, both introversion and interpersonal dependency have been linked to depression and low social support (Barnett & Gotlib, 1988; Lewinsohn, Roberts, Seeley, Rhode, Gotlib, & Hops, 1994; Pincus & Gurtman, 1995). Paradoxically, individuals scoring

high in interpersonal dependency display a heightened need for approval and attention, while those scoring high in introversion tend to avoid social interactions (Coyne & Whiffen, 1995). This puzzling result might be explained by a moderate correlation between interpersonal dependency and introversion (Barnett & Gotlib, 1988). To elaborate, interpersonally dependent types tend to rely primarily on the love and attention of others to maintain their self-worth. This dependency may heighten fears of rejection, leading to the avoidance behaviour that is associated with introversion. Moreover, Linville (1987) has proposed that overinvestment of self-esteem in a limited number of roles leaves one vulnerable to depression--the "all-eggs-in-one-basket" phenomenon. That is, failure in an interpersonal relationship for a vulnerable person leaves them without alternative sources of self-esteem--a situation that has been hypothesised to be linked to depression by a number of theorists (e.g., Linville, 1987; Pyszcznski & Greenberg, 1987). Similarly, Greenberg, Pyszczynski, and Solomon (1990) have proposed that investment in one's social milieu contributes to a sense of self-worth which in turn serves as an anxiety buffer. In sum, self-esteem is seen by these theorists as mediating the link between social contacts and mental health--to the extent that absence of social contacts depletes self-esteem, one becomes vulnerable to psychological distress. Supporting this contention, Hobfoll and Stokes (1988) have noted that persons scoring high on measures of self-esteem and mastery tend to receive greater levels of social support and show greater levels of stress resistance.

An additional type of support, received/enacted social support, focuses on what people actually do when they provide support. Enacted support focuses on the actions that others perform when they assist someone, as reported by the helper (Tardy, 1985). Received support focuses on the recipient's accounts of the helping behaviour. While the latter type of support may appear to be similar to perceived support, they differ in that received support focuses on specific accounts of past help received, whereas perceived support focuses on a general perception of future availability of help. Indeed, a study comparing the factor structures of an instrument which measures perceived support (i.e.,

Social Support Questionnaire (SSQ), I. Sarason, Levine, Basham, & B. Sarason, 1983) with an instrument which measures received support (i.e., Inventory of Social Support Behavior (ISSB), Barrera, Sandler & Ramsey, 1981) revealed that the two measures are distinct and separate. Studies comparing these two types of measures have shown a moderate level of agreement (i.e., 50-60%) between them when they are included in the same study (Antonucci & Israel, 1986; Shulman, 1976). When there is a discrepancy between these two measures, usually the givers report that they gave more than the recipients report having received.

Studies measuring received support often reveal a positive relationship between support and stress (Barrera, 1981; Belle, 1982; Sandler & Barrera, 1984). Although this finding may seem counterintuitive, the positive linkage between stress and social support can be interpreted as evidence that exposure to stressful circumstances triggers the mobilization of support behaviours (Barrera, 1981; Gore, 1981; Gottlieb, 1983). This explanation is consistent with Schachter's (1959) finding that people have a greater tendency to affiliate when confronted with adversity.

Exposure to a stressful event may trigger supportive actions from the individual's network for a variety of reasons. For example: (a) network members may be aware of the negative event and offer support, (b) network members may see the person as in need of help, or (c) the stressed person may actively solicit support (Sarason, Sarason, & Pierce, 1990). Possibility "(a)" may have different implications than "(b)" and "(c)". The latter two possibilities suggest a failure in coping, either because of a person's ineffective skills or because of an event's overpowering nature. These reasons may explain the positive correlation between received support and both negative life events (i.e., stress) and symptomatology. The distinction between help seeking and passive help receipt is not captured in some measures of received support (e.g., the ISSB).

Several studies that have used measures of received support have also found a positive relationship between social support and psychiatric disorder (e.g., Barrera, 1981; Sandler & Barrera, 1984). For example, Potthoff, Holohan, and Joiner (1995) found that

reassurance seeking and depressive symptoms were positively correlated. A medical model analogy provides the most obvious explanation for such findings: Those individuals who show the most symptoms should receive and/or seek the most received support.

A possibility that cannot be ruled out, however, is that the provision of support leads to an increase in symptoms. Receiving support may, for example, have a negative effect on self-esteem if the support is interpreted as an indication of inadequacy, or receiving support may produce feelings of obligation or guilt which lead to dysphoric feelings. Another possibility is that receiving help from others may have a negative impact on future coping efforts (Kaplan & Hartwell, 1987; Taylor, Bandura, Ewart, Miller & Debusk, 1985).

Of relevance, here, is a study by Lehman, Ellard, and Wortman (1986) who found that when left to their own devices, significant others often make support attempts that are judged to be unhelpful by the recipient. In their study of cancer victims, Lehman et al. found that even though support providers were aware of unhelpful behaviours (e.g., advice giving, minimization/forced cheerfulness, and encouraging recovery), they were still unable to refrain from engaging in such behaviour.

To summarize then, a cursory examination of the social support literature might lead one to believe that the evidence supports a positive relationship between social support and mental health. That is, it seems that the provision of support buffers the adverse effects of stress, and contributes to a general sense of well-being. On closer inspection, however, one finds that it may be the case that such findings have more to do with personality types than social environments. Moreover, in some circumstances there may be a negative reaction to the receipt of help, and, this possibility tends to increase as specific indices of helping behaviour are employed.

Still, there does appear to be evidence that some kinds of support can be beneficial under certain circumstances. Recall, for example, that the receipt of appraisal and functional support was associated with positive health outcomes (Larson & Lee,1996; Barnett & Gotlib,1988). These results are germane to the current investigation in that the assistance given to depressed persons involves the provision and appraisal of information (i.e., key

aspects of such types of support). Furthermore, even the seemingly negative possibility that social support can be explained through personality variables may have utility. That is, to the extent that personality differences are reflected in varying social skills (e.g., such as the deficits associated with depression-prone personality types), assistance with interpersonal problems should be beneficial.

However, findings such as those of Lehman et al. (1986) raise the possibility that in the current thesis investigation the dysphoric subjects might have a negative emotional response to the suggestions or comments offered by the nondysphoric participants. For example, a dysphoric participant might say that it would never occur to them to take a particular course of action, or that they, themselves, wouldn't be able to carry out some particular plan. The nondysphoric participant might then engage in minimization, an action that might lower the dysphoric participant's mood and impact negatively on the quality of the solutions that the latter then offers for the interpersonal problems. Alternatively, it is possible that dysphoric participants might feel inadequate in comparison to the nondysphoric participants who tend to make superior suggestions in the discussions, and these feelings could adversely affect their mood and their judgements (Collins, 1996). Indeed, one of the problems with the research in this area has been that it has employed very few dependent variables (e.g., depression, distress). Consequently, it is difficult to know precisely how someone coping with a depressive disorder might react to the provision of help in the form of a strategy suggestion. Thus, while the hypotheses offered in the current study are made with some trepidation given the inconsistencies in the social support literature, it is nevertheless important to conduct more research that examines specific responses of dysphoric persons to particular helping overtures.

Chapter 3: Discussion and Problem Solving Among Dysphoric Subjects: The Current Study

A capsule of the current study reminds us that dysphoric and non-dysphoric participants will discuss possible solutions to interpersonal problem scenarios in homogeneous and non-homogeneous (i.e., in terms of dysphoric status) dyads. They will then individually record what they consider to be the best answers. The performance comparisons of primary interest will be those involving dysphoric/dysphoric dyads versus dysphoric/nondysphoric dyads. Also of interest is the comparison between dysphoric participants who do not discuss the problem scenarios (i.e., as in Lyubomirsky and Nolen-Hoeksema, 1995) and those that participate in the discussion format.

While the current study is somewhat exploratory in nature, the theories and research findings from all three of the reviewed literatures offer some guidance concerning the generation of hypotheses. First PAT (i.e., a type of informational influence) suggests that if dysphoric individuals are exposed to arguments and ideas in a discussion that appear novel and persuasive, they will likely alter their tentatively held solutions towards those advocated by the other discussant. Because nondysphoric persons generate better solutions to interpersonal problems than dysphoric persons (Lyubomirsky & Nolen-Hoeksema, 1995), discussion between a nondysphoric and a dysphoric subject should improve the quality of the latter's solutions.

Recall that it was argued that normative influence should also sway depressed subjects towards the relatively more functional decisions of their nondysphoric discussant partners. Stated somewhat differently, the social comparison theory of group decision shifts would make a similar prediction in this case. That is, in mixed dyads (i.e.,in terms of dysphoric status), the dysphoric subjects, who likely view themselves as being comparatively low in status, might bow to the wishes of (i.e., shift to the position advocated by) the higher perceived status nondysphoric partner and go along with the latter's suggestion. Then, later, when the dysphoric subjects are asked to record their decisions on

their own, they would stick to the suggestion advocated by the nondysphoric subject for reasons of consistency (Festinger, 1957; Bem, 1972).

It is important to note, however, that Gigone and Hastie (1993, 1997) and Stasser (1992) recently found that oftentimes only shared information, as opposed to partially shared information, comes up in discussion. That is, arguments aren't mentioned in discussion that aren't known to, or appreciated by, all discussants. However, in the current thesis investigation, members are urged to find effective solutions and to engage in a thorough discussion, conditions under which this partially-shared information, or hidden profiles as they are also called (Gigone & Hastie, 1993), do tend to emerge. Furthermore, group discussants in the current study are being provided with sufficient time to make their judgements, and they are urged to do their best to generate effective (correct) solutions.

It should be noted as well that the critical persuasive information or arguments that dysphoric subjects may be exposed to during discussion may be novel only in the sense that they aren't accessible in the individuals' current depressed state. That is, the dysphoric individuals, if they were not currently suffering from depression or dysphoria, might well "know" and easily remember that certain steps are effective in dealing with particular interpersonal problems. Indeed, Lyubomirsky and Nolen-Hoeksema (1995) found that when distracted from their dysphoric moods, dysphoric participants performed as well as the non-dysphoric participants on interpersonal problem-solving tasks. Eich and his colleagues (e.g., Macaulay, Ryan, & Eich, 1993) have also demonstrated such state-dependent memory among individuals with bipolar depression: that is, such individuals show poorer recall for information obtained in the alternate mood state.

The idea that depressed persons may simply not have access to adaptive information and/or information processing abilities is consistent with the evidence reviewed here on automatic and effortful processing in depression. That is, dysphoric mood states may trigger automatic negative thoughts which in turn impede the effortful processing required of the interpersonal problem-solving tasks. So, as mentioned previously, the PAT-derived prediction concerning discussion effects is also consistent with the

speculations of many that depressives can profit from assistance with tasks requiring effortful processing (e.g., Conway & Giannopoulos, 1993; Hart, Kwentus, Taylor, & Harkins, 1987; Pietromonaco & Rook, 1987; Price, Tyron, & Raps, 1978; Sedek, Kofta, & Tyska,1993). It is also consistent with the finding that clients undergoing cognitive therapy for depression benefit from discussing cognitive distortions (e.g., selective abstraction, overgeneralization) with their (typically) non-depressed therapists (see, e.g., Beck et al. 1979).

Recall also that the PAT prediction is consistent with those findings within the social support area involving the provision of functional (or informational) support and appraisal support (Larson & Lee,1996; Barnett & Gotlib,1988). It is certainly also compatible with evidence that clients benefit from participation in support groups (see, e.g., Sarason & Sarason, 1985). Recall, however, that significant others often make support attempts that are judged to be unhelpful by the recipient. Moreover, even though support providers may be aware of unhelpful behaviours (e.g., advice giving, minimization/forced cheerfulness, and encouraging recovery), they may still be unable to refrain from engaging in such behaviour (Lehman, Ellard, & Wortman,1986).

Given the exploratory nature of this study, such findings raise the possibility that in the proposed investigation, the dysphoric subjects may have a negative emotional response to the aid offered by the nondysphoric subjects; moreover, this reaction may impact negatively on the quality of the solutions that the former then offer for the interpersonal problems. One possibility is that receiving support could cause the dysphoric subjects to feel inadequate in comparison to the nondysphoric subjects, and this may impact negatively on their self-esteem, their mood, and their judgements. To elaborate, Festinger's (1954) social comparison theory proposes that in order to function effectively, people need to accurately assess their capabilities and limitations. This assessment is typically accomplished through comparison with similar others on the relevant dimensions. In fact, recent evidence suggests that such comparisons are so pervasive that they occur spontaneously and unintentionally without effort--that is, automatically (Gilbert, Giesler, & Morris, 1995). Social comparisons can have both positive and negative effects

on mood, depending on the a variety of factors (see Collins, 1996, for a recent review of the social comparison literature). Relevant to the current study, though, if a peer performs well on a dimension that is highly self-relevant, one might compare one's own performance to that standard and feel inferior (e.g., Tesser, Millar, & Moore,1988). Moreover, depressed persons often set particularly high standards for themselves, likely due to unfavourable comparisons with others who are thought to possess positive attributes that the depressed person lacks (Tabachnik, Crocker, & Alloy, 1983).

Also relevant to the issue of dysphoric participants' reactions to nondysphoric participants' suggestions is a recent study by Locke and Horowitz (1990). These investigators asked individual dysphoric and nondysphoric subjects to converse with another subject who was either dysphoric or nondysphoric. Although these researchers did not include a measure of transitory mood state, they found that subjects in homogeneous dyads (i.e., those in which both partners were nondysphoric or both partners were dysphoric) were more satisfied with the interaction than were those in mixed dyads, regardless of dysphoric status. To the extent that level of satisfaction is an index of mood, these results provide some basis for speculating that the mood state of dysphoric subjects within mixed dyads in the proposed study may become more negative as a consequence of the discussion, and, thus, interfere with problem solving. Similarly, dysphoric subjects who engage in discussion with other dysphoric individuals may experience an improvement in their mood, and they may, as a consequence, perform better than they would be expected to do on their own.

It is important to emphasize, however, that it is far from certain that the discussions that the subjects in the proposed study will be asked to have will produce any mood effects at all because they are comparatively brief. Furthermore, the proposed experimental tasks may not be sufficiently compelling to initiate social comparison processes. Consequently, the predictions offered for this thesis are those generated from PAT.

For purposes of control, the design of the current study also included a condition in

which dysphoric individuals were asked to discuss their solutions with another dysphoric, instead of a nondysphoric, individual. PAT would not predict an improvement in the quality of solutions generated by subjects in this condition. Indeed, because the pre-discussion views of both discussants in this case could be expected to reflect maladaptive thinking, these subjects might generate solutions that are even less effective than the solutions generated by individual dysphoric subjects. There is the chance, however, that the possible higher comfort level experienced in dysphoric dyads (i.e., in comparison to mixed dyads) would attenuate such an effect. The final type of discussion dyad in the current study consists of two nondysphoric discussants. According to PAT, whether or not there is an improvement in the quality of the solutions generated by these subjects depends upon whether the discussants are exposed to ideas that they perceive to be novel and persuasive. There could, therefore, be a small increase in the quality of the solutions generated by subjects in this condition, relative to those generated by nondysphoric subjects in the non-discussion control condition.

To repeat, PAT is concerned solely with the effects of exposure to the content of the discussion. However, as mentioned previously, it is conceivable that engaging in a discussion could produce mood alteration effects because, for example, dysphoric subjects feel inadequate relative to their nondysphoric partners, and these mood effects might influence participants' responses. As stated previously, this seems unlikely to occur in the current study; nevertheless, mood measures were taken from all subjects, both before and after the discussion, to aid in the interpretation of the results.

A final objective of this study was to eliminate a confound in the procedure of Lyubomirsky and Nolen-Hoeksema's (1995) experiment. Recall that those investigators argued that the deficit was cognitive in nature: Semantic network theory holds that a negative mood activates a network of negative memories, enhancing accessibility and probability of retreival of these thoughts (see, e.g., Bower, 1981). Self-focus serves to draw attention to the mood, and therefore the interfering thoughts. However, it is not possible to infer with confidence that their results reflect differences in the *ability* of dysphoric and nondysphoric

individuals to generate effective solutions to the interpersonal problems—a cognitive difficulty. Rather, their results may reflect differences in participants' sense of what behaviours they *would be capable of enacting* to resolve these problems—a self-efficacy or perhaps a motivational difficulty. This confusion arises because subjects in their investigation were asked to report only what they *would* do to solve the problems. They were not asked what one *could* do to solve them. Because depressive disorders are characterized by low self-efficacy and motivational difficulties, as well as cognitive processing deficits (see, e.g., Beck et al., 1979), the dysphoric subjects may have opted to not mention some effective solutions that occurred to them, simply because they felt they would have trouble implementing such strategies.

To conduct a more exacting test of Lyubomirsky and Nolen-Hoeksema's (1995) explanation, then, all subjects in the proposed study were asked to indicate not only what they *would* do to resolve the problems, but what one *could* do, as well. It was hypothesized that the predicted data pattern for the dependent measures involving the "what could one do" questions would mirror those involving the "what would you do" dependent measures.

Summary of Hypotheses

1. Dysphoric subjects who generate solutions on their own regarding what they would do to solve the problems will produce less effective solutions than their non-dysphoric counterparts.

2. Dysphoric subjects who generate solutions on their own regarding what one could do to solve the problems will produce less effective solutions than their non-dysphoric counterparts.

3. Dysphoric subjects who generate solutions after discussion with a non-dysphoric subject will produce more effective solutions concerning what they would do to solve the problems than will dysphoric subjects who produce such solutions on their own.

4. Dysphoric subjects who generate solutions after discussion with a non-dysphoric

subject will produce more effective solutions concerning what one could do to solve the problems than will dysphoric subjects who produce such solutions on their own.

5. Hypothesized effect #3 will not be related to mood changes as a consequence of having the discussion.

6. Hypothesized effect #4 will not be related to mood changes as a consequence of having the discussion.

Chapter 4: Method

<u>Participants and design</u>

One hundred and twenty-six undergraduate psychology students from St. Francis Xavier University completed the Beck Depression Inventory II (BDI-II; Beck, Steer, & Brown, 1996--see Appendix A), and other questionnaires unrelated to the current study, within two weeks prior to their participation in this study (the BDI-II has been shown to have high reliability over this time period, Beck et al., 1996). Students with BDI-II scores above 13 were recruited for the dysphoric group; those with BDI-II scores below 6 were recruited for the nondysphoric group. These assignment criteria depart somewhat from those employed by Lyubomirsky and Nolen-Hoeksema (1995) who used an earlier version of the Beck Depression Inventory (BDI-SF; Beck & Beck, 1972), and recruited students with scores of above 7 for the dysphoric group. While their criteria are consistent with past recommendations (Beck & Beamsderfer, 1974), more recently, higher cut-off scores have been advocated to partially address the issue of using college students in studying depressive symptomatology (Vredenburg, Flett and Krames, 1993). As such, more stringent criteria were adopted in the current investigation.

Within each dysphoria condition (i.e., dysphoric versus nondysphoric) participants were requested to make their judgments alone, after discussion with a dysphoric participant, or after discussion with a nondysphoric participant. The design was therefore a 3 (Individual vs. Discuss with Dysphoric vs. Discuss with Nondysphoric) X 2 (Dysphoric vs. Nondysphoric) between-subjects factorial design.

<u>Measures</u>

<u>BDI-II</u>. The BDI has been one of the most widely used instruments for assessing the occurrence and severity of depression (Kazdin, Matson, & Senatore, 1983). It has been revised (i.e., the BDI-II) recently in order to be more consistent with the DSM-IV criteria for Major Depressive Episode (APA, 1994). In addition to slight changes in item

content, the BDI-II asks about the occurrence of depressive symptomatology over the previous two weeks (i.e., consistent with the DSM-IV criteria) as opposed to the BDI, which queries the past week only (for a review of BDI/BDI-II comparisons, see Beck et al., 1996). The BDI-II has high test-retest reliability (i.e., .93, $p < .001$ over one week) and high internal consistency (alpha=.93) (Beck et al., 1996).

ST-DACL. The State Trait-Depression Adjective Check List (ST-DACL, Lubin, 1994) is a brief adjective checklist that provides a measure of current mood state (see Appendix C). The list is composed of positive and negative adjectives that when denied or endorsed, respectively, are meant to indicate the presence or absence of negative affect. There are several forms of the list, each using different adjectives, so that the ST-DACL can be administered several times within the same study.

Procedure

After the appropriate ethics documentation had been read and signed (see Appendix B), all participants were administered the ST-DACL as a baseline mood measure. As in Lyubomirsky and Nolen-Hoeksema (1995), they were then asked to complete a series of imaging, personality, and thinking tasks to help decrease the salience of the mood measures (see Appendixes D, E, & F). All participants were then asked to spend 5 minutes engaging in a task that was designed to induce them to focus their attention on their thoughts and feelings (see Appendix G). The rationale for this request is as follows: Lyubomirsky and Nolen-Hoeksema (1995) found no problem-solving effectiveness differences between dysphoric and nondysphoric participants when they had immediately beforehand been induced to distract themselves from their feelings and thoughts. Because the research participants in the current study could be expected to become distracted due to their engagement in the tasks that they would complete at the outset of the experiment, or as a result of engaging in typical student activities, such as attending class or engaging in social contact, the self-focus task is needed to counteract these distraction effects.

To aid in the interpretation of the results, the same instructions and materials that were used in the Lyubomirsky and Nolen-Hoeksema (1995) investigation were utilized in the current investigation, with some minor modifications. Students were presented with the beginnings and endings of 3 interpersonal problems (order was randomized across students) and they were asked to imagine themselves experiencing these situations (see Appendix H). Lyubomirsky and Nolen-Hoeksema included 4 interpersonal problems in their investigation. However, they found that the impact of their self-focus manipulation weakened over time, and by the time that participants attempted to generate solutions to the fourth problem this manipulation had lost its effectiveness.

The following instructions were given to participants:

For each story, you will be given the beginning of the story and how the story ends. Your task is to make up a story that connects the beginning that is given to you with the ending that is given to you. In other words, you are to provide a middle for each story.

The following is an example of one of the problem situations:

You notice that one of your friends seems to be avoiding you. You really like and enjoy spending time with this person, and want him or her to like you. The situation ends when he or she likes you again. Begin the story when you notice your friend avoiding you.

Participants in the individual-judgement conditions were asked to sit in non-adjacent seats in a laboratory and to complete their task. To repeat, for each problem scenario, they were asked to try to imagine themselves experiencing the particular situation and to describe in writing what they would do to solve these problems. After they had done so, they were asked to indicate the most effective thing that someone could do to bring about the specified ending. As noted earlier, this additional request was included to address one of the objectives of this investigation: to determine whether is it possible that dysphoric individuals know of effective solutions, but fail to report them because they know they wouldn't be able to implement them. Immediately before, and again immediately after the

problem solving task, subjects in these conditions were once again asked to complete the ST-DACL. This provided information regarding potential mood changes due to either the self-focusing manipulation or the problem-solving task.

Participants in the discussion conditions received the same materials as those provided to participants in the individual conditions. However, the former participants were asked to discuss how one could solve each of two problems. Furthermore, they were told that it was important that they have a lively discussion of these problems. Subjects were not permitted to write anything during discussions.

After they had recorded their solutions to these two problems *on their own*, they were asked to read a third problem, again, on their own, and then record their solutions to this problem. The decision to have all participants attempt to solve a third problem on their own was motivated by a desire to determine whether the potential benefits of discussion would lead participants to gain a new perspective on solving interpersonal problems that might generalize to another problem. It is important to repeat, however, that Lyubomirsky and Nolen-Hoeksema (1995) found that the strength of their self-focus manipulation, and hence of their obtained effects, diminished greatly after participants had completed their second interpersonal problem. Consequently, there is some chance that any effects that are obtained with the third problem may simply be a result of the self-focusing manipulation wearing off by the time the dysphoric participants reach that phase.

Finally, participants were asked to complete the ST-DACL two more times: immediately before and immediately after the discussions. All participants were then fully debriefed.

Chapter 5: Results

Two judges who were unaware of the participants' dysphoric status and judgemental context condition rated each participant's responses for the three problems in terms of problem-solving effectiveness. To increase the validity of these ratings, each of the three scenarios were initially presented to eight independent evaluators, as in the Lyubomirsky and Nolen-Hoeksema (1995) study. The evaluators were asked to indicate the steps or solutions involved in what they believed to be a model response to each situation. These model solutions were then provided to the judges.

Each student's response to each of the three situations was given a rating of problem-solving effectiveness on 7-point Likert scales ranging from not at all effective (1) to extremely effective (7). These ratings, for both the plans that participants indicated they would carry out and those that they reported one could carry out, constituted the major dependent measures.

The judges also rated the percentage of model solution steps that each participant included in their solutions. Again, this was done for both the plans that participants indicated they would carry out and those that they reported one could carry out.

Initial agreement between the two judges was good to excellent on both problem-solving measures. They then discussed their differences until they reached agreement. The data were analysed according to the procedures employed by Wright and Wells (1985). To clarify, in the discussion conditions, only the data from one designated target member (i.e., determined randomly via a coin flip) from each dyad was included in the analysis. The logic behind this procedure is that the current goal is to determine how the quality of the solutions generated by target individuals—either dysphoric or nondysphoric—might be affected by discussion with another individual. As a result, the number of participants in the discussion dyads whose scores were utilized was reduced from 96 to 48 (33 females and 15 males; 25 dysphoric (18 females and 7 males) and 23 nondysphoric (15 females and 8 males)). As well, a chi-square analysis indicated that there were no significant differences in

male/female proportions of dysphoric status across the discussion conditions (X 2.95 = 2.5). This result suggests that dysphoria was not confounded with gender in this study. Consistently, Lyubomirsky and Nolen-Hoekema (1995) found no effects for sex in their analyses. Furthermore, von Hecker and Sedek (1999) recently found that severity of depressive symptomatology was more predictive of deficits in complex cognitive functioning (i.e., such as what is required in interpersonal problem solving) than were gender differences.

A 3 X 2 analysis of variance (ANOVA) was conducted on the target scores. To repeat, of principal interest was whether or not discussion had an impact on the effectiveness of interpersonal-problem solutions, and whether or not that effect was qualified by the dysphoric status of the subject, and/or the dysphoric status of the interaction partner.

Mood Measures

The scores from the ST-DACL that was administered at the beginning of the study correlated significantly with participants' BDI-II scores (r (73) = -0.56). Furthermore, according to these ST-DACL responses, students in the dysphoric group had higher levels of dysphoria (i.e., lower raw scores) (M = 0.23) than did the students in the nondysphoric group (M = 4.56), t (77) = 8.44, p < .001. Moreover, only the participants in the dysphoric condition reported experiencing significantly greater dysphoria after the self-focus manipulation (M = -1.28) than before this manipulation (M = 0.23), t (77) = 2.95, p < .01. The mood ratings of participants in the nondysphoric condition did not differ significantly from one another at these two points in time (M = 4.56, initial ratings; M = 4.05, second ratings, t (77) = 1.00, n.s.

These findings are similar to those obtained by Lyubomirsky and Nolen-Hoeksema (1995). Note, though, that in their study the comparison was between the mood ratings of participants who had been distracted and the ratings of those who had been induced to self-focus (i.e., a between-subjects measure, as opposed to the within-subjects measure

used in the current investigation); there was no distraction condition in the current study.

Solution Effectiveness Ratings

Recall that the main dependent measures were judges' ratings ot the effectiveness of subjects' reports regarding: 1) what one *could* do to solve the problems, and 2) what they, themselves, *would* do to solve the problems. For both the "could" and the "would" solutions, 3 (discussion condition) X 2 (dysphoric status) between-subjects, factorial design ANOVA's were conducted (see Tables 1 & 2). The scores used for these procedures were comprised of the average ratings for the first and second problems. These analyses revealed significant main effects for dysphoric status ("could" data: $F(1,72) = 4.96$, $p < .05$; "would" data: $F(1,72) = 5.47$, $p < .05$). As post-hoc analyses confirmed with both of these measures, the pattern of the mean ratings replicated the Lyubomirsky and Nolen-Hoeksema (1995) finding that solitary, self-focused, dysphoric subjects produced poorer solutions than did their nondysphoric counterparts (see Tables 3 & 4). The fact that this finding was obtained when subjects were asked the "could" version of the dependent measure, as well as the "would" version that Lyubomirsky and Nolen-Hoeksema used, suggests that dysphoric individuals have cognitive as well as motivational and/or self-efficacy shortcomings in terms of being able to resolve interpersonal difficulties. In other words, the solutions that the dysphoric subjects would choose to enact were of poorer quality relative those of the nondysphoric subjects (i.e., the potential motivational deficit). Plus, when exhorted to merely think of possible solutions, the former still produced relatively inferior solutions (i.e., the cognitive deficit). As well, the fact that the pattern of results was virtually identical between the could and would data suggests that dysphoric persons believe that the solutions they choose to enact are the best, which in essense provides a self-rating of solution effectiveness. Both the inabilty to generate quality "ideal" problem solutions and lack of awareness of problem-solving inferiority among dysphoric subjects is consistent with earlier work on dysphoric person's problem solving ability conducted by Marx, Williams, and Claridge (1992). Furthermore, these investigators found

such problem-solving deficits in dysphoric subjects with both hypothetical scenarios and real-life problems, thus providing a measure of validity for the hypothetical-scenario format

The ANOVA's also revealed significant Judgemental Context X Dysphoric Status interaction effects ("could" data: $F(2,72) = 3.19$, $p < .05$--see Table 1; "would" data: $F(2,72) = 4.66$, $p < .05$--see Table 2). As such, support was obtained for the major hypothesis of this thesis: that is, dysphoric subjects produced higher scores after having had a discussion with a nondysphoric partner than they did on their own, or, after having had a discussion with a fellow dysphoric partner. On the other hand, nondysphoric subjects showed no performance differences among the three judgemental context conditions (see Tables 3 & 4). The fact that significant results were obtained despite the reduction in subjects eventuated by the data analysis method suggests that the discussion effects were particularly robust.

There was also a significant judgemental context main effect ($F(2,72)= 3.41$, $p < .05$) with the "could" data, but not with the "would" data, for the two target problems. This difference, however, is inconsequential because the presence or absence of judgemental context main effects does not pertain to the major hypotheses of this thesis.

A dysphoric status main effect was found when only the ratings for the third-presented problems were analyzed (i.e., those that were completed individually by all participants, with no prior discussion of the problem), essentially again replicating the Lyubomirsky and Nolen-Hoeksema (1995) findings. In this third-problem analysis, there was no interaction between dysphoric status and judgemental context (see Tables 5 & 6 for ANOVA results; see Tables 7 & 8 for mean ratings). The absence of an interaction effect here suggests that the problem-solving benefits that dysphoric participants derived from discussing interpersonal problems do not carry over to subsequent problems. Apparently, consultation with a nondysphoric peer for each problem is necessary to effect better solutions. Importantly, it appears that the self-focus manipulation was strong enough to continue to contribute to the impairment of

problem-solving in dysphoric subjects for the third problem scenario.[1]

No evidence was found with either the target problems or the third presented problems to indicate that discussions with a fellow dysphoric subject had either a positive or a negative effect on the quality of solutions generated by dysphoric subjects. Nor was there evidence that discussions with either a dysphoric or a nondysphoric subject affected the quality of solutions generated by nondysphoric subjects (see Tables 3 & 4).

Analysis of covariance. As mentioned previously, it is possible that potential mood differences associated with the various discussion contexts could affect problem-solving ability (Vosberg, 1998). If so, then the performance effects could be attributable to mood and not due to persuasive arguments. Therefore, ANCOVA's were conducted on the scores representing the major dependent measures using reported mood changes (as measured by the ST-DACL) from immediately before and immediately after the problem-solving task as a co-variate. These analyses also revealed significant Judgemental Context X Dysphoric Status interaction effects ($F(2,71) = 3.179$, $p < .05$ - "could" data--see Table 9; $F(2,71) = 4.57 = p < .05$ - "would" data--see Table 10) following the same pattern described above. These findings rule out the possibility that the key problem-solving effectiveness differences are associated in some manner with mood changes brought about through having a discussion; as such, there is further support for the hypothesized persuasive-arguments explanation.

Percentage of Ideal Steps

The interaction effects between judgemental context and dysphoric status that were obtained with the solution-effectiveness ratings for the target problems were not obtained with the secondary dependent measures involving judges' ratings of the percentage of

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[1] It should be noted that in both Lyubomirsky and Nolen-Hoeksema's (1995) study and the current investigation, no condition in which subjects neither self-focused nor distracted was included. Therefore it is possible that dysphoric subjects might perform more poorly than nondysphoric subjects even without the self-focus manipulation. Since the former investigators were tauting the benefits of distraction versus the detrimental effects of self-focusing, this investigator feels that it would have been beneficial to have included such a neutral control condition in their study. In the current investigation, however, the self-focus manipulation was added simply as a precaution to eliminate potential, naturally-occurring, distraction effects. At some point in the future, though, whether or not there truly are significant performance differences between self-focusing dysphoric participants and non-distracted dysphoric participants should be determined.

ideal-solution steps that subjects included in their reports (see Tables 11-18). As mentioned previously, this measure is less precise than the measure involving ratings of overall effectiveness; consequently it was deemed to be of lesser importance.

Chapter 6: Discussion

First of all, the results in the individual conditions essentially replicated those of Lyubomirsky and Nolen-Hoeksema (1995): self-focusing, dysphoric participants performed significantly more poorly on the interpersonal problem-solving tasks than did self-focusing, non-dysphoric participants. In addition, no significant differences were found between the would and could measures in either individual or discussion conditions.

The main hypotheses of the study were also supported: dysphoric participants who discussed solutions to the interpersonal problem-solving tasks with non-dysphoric participants performed better than those who discussed the tasks with a fellow dysphoric participant, or with no one at all. Moreover, additional analyses revealed that these problem-solving differences cannot be explained in terms of mood, as the results appeared even with mood covaried out. As well, the ST-DACL detected a mood decrease from Time 1 to Time 2 (i.e., after the self-focus manipulation), but not from Time 2 to Time 3 (i.e., after the discussion) among dysphoric participants, indicating that this measure was sensitive to mood changes. In addition, nondysphoric participants did not show performance differences among the various conditions.

It should be noted, however, that the order of the dependent measures involving the could and would questions was not counterbalanced in the current study; the "could" dependent measure always appeared first. Consequently, it could be argued that participants' responses to the "would" version of the dependent measure may have been influenced by their thoughts concerning the "could" version. However, Lyubomirsky and Nolen-Hoeksema (1995) used only the "would" dependent measure and found results similar to those of the current investigation. It is therefore unlikely that the dependent measure order created a problem in this study.

Thus, due to the replication of the previous findings and the inclusion of an improved dependent measure in the current study (i.e., the addition of the "could" measure), there are stronger grounds for Lyubomirsky and Nolen-Hoeksema's (1995) claim concerning why

self-focus exacerbates depressed mood in dysphoric persons: it enhances the effect of the negative mood on thinking and problem-solving. Indeed, there is an additional reason why the current study more clearly supports a cognitive explanation than does the original study. Specifically, in the current investigation, performance increments in dysphoric participants' responding occurred without the mood lift that accompanied the distraction manipulation that Lyubomirsky and Nolen-Hoeksema employed. In fact, because both negative and positive moods have been shown to alter performance in a variety of ways (e.g., Radenhausen & Anker, 1988; Schwarz & Bohner, 1996; Vosberg, 1998), it could be argued that the self-focus/distraction performance difference obtained by Lyubomirsky and Nolen-Hoeksema is attributable to mood (i.e., without the need for more elaborate semantic network explanations). Similarly, depressed mood has been associated with deficits in basic physiological functioning without necessarily employing explanations involving mediating cognitive factors (APA, 1994). The results of the current study, however, reemphasize the central role of maladaptive thinking in depressive problem solving. That is, discussion improved self-focused dysphoric individuals' performance, and the analyses revealed that this effect was not mediated by any sort of process involving dysphoric participants experiencing an altered mood as a consequence of interacting with a nondysphoric person. Rather, the effect appears to be due to dysphoric participants being exposed to arguments in the discussion that they found persuasive. This result is all the more impressive because the discussion intervention occurred after dysphoric subjects had been induced to self-focus. In contrast, those participants in the Lyubomirsky and Nolen-Hoeksema investigation who generated the most effective solutions--those in the distraction condition--did not have to overcome the deleterious effects of a previous self-focusing manipulation.

It is possible to argue that the dysphoric participants in the current study who discussed the problems with a nondysphoric participant simply worked longer and harder on the problems than did the dysphoric participants in the individual control condition because of the implicit demands associated with being asked to have a discussion. A case

could therefore be made that the design of this study should have included an additional control condition in which some dysphoric participants were asked, not to have a discussion, but rather, to take additional time and to make a considerable effort to solve the problems. However, the fact that dysphoric participants who discussed the problems with another dysphoric participant did not generate particularly effective solutions suggests that such an additional control condition might not be overly important. Furthermore, the work on effortful processing reviewed earlier (e.g., Moretti & Shaw, 1989) indicates that dysphoric individuals may simply lack the ability or the resources to think through difficult issues such as those involved in solving interpersonal problems. Thus, exhortations to "try hard" or to "spend lots of time on this" in the individual conditions may have had little impact.

It should also be noted that in the discussion conditions, group members were explicitly urged by the experimenter to find effective solutions and to have a thorough discussion. Hidden profiles which contain novel, valid, and therefore persuasive information are likely to emerge under such circumstances (Gigone & Hastie, 1993). One could argue, therefore, that the current findings are not generalizable to many other discussion contexts. However, although in the real world there may be no explicit prods "to have a thorough discussion", the problems encountered in the real world would be actual, as well as personal, ones. Thus, they would seem likely to be even more involving than the ones discussed in the current study. Consequently, the prods under such circumstances should typically exist, but they would be implicit in nature. Therefore, this concern may not be a particularly problematic one.

It is interesting to note that the nondysphoric subjects didn't benefit from discussion with other nondysphoric subjects. PAT predicts that there could well have been beneficial effects in this case. The most likely explanation for this result involves a ceiling effect: The interpersonal problems in this study were not particularly difficult to solve, and it seems unlikely that the nondysphoric participants would have learned much that was novel and compelling in the discussion.

It is also interesting that the dysphoric participants in this study did not benefit from

discussing the problems with another dysphoric partcipant. This finding has important implications: Although dysphoric participants may feel more comfortable interacting with those who are dysphoric rather than nondysphoric (i.e., as Locke and Horowitz,1990, found), dysphoric persons perhaps should be advised to solicit the advice of a nondysphoric person when dealing with interpersonal problems. Moreover, it has been found that while persons with low self-esteem (i.e., such as dysphoric persons) may be uncomfortable with negative feedback, they are nevertheless able to accurately assess and accept such information (Swann, Griffin, Predmore, & Gaines,1987).

Of course, the current research did not investigate the effects of discussing interpersonal problems with a dysphoric person who is a close friend or acquaintance. Perhaps through commiserating and empathizing, a dysphoric friend might help to elevate one's mood and therefore facilitate effective problem solving; this possibility, however, remains to be tested.

A possible limitation of this study is that the participants were individuals who were judged to be dysphoric or nondysphoric based on their scores on the BDI. As Lyubomirsky and Nolen-Hoeksema (1993) pointed out, the BDI has been criticized on the grounds that it may be a measure of nonspecific negative affect rather than depression per se (Kendall, Hollon, Beck, Hammen, & Ingram, 1987). It is therefore important to replicate this study with an appropriately assessed clinical population. This does not mean, however, that the value of a using dysphoric college student sample is diminished--a point that will be dealt with more in depth in the forthcoming section concerning at-risk populations.

Chapter 7: Implications for Applications and Research

Generally, the most influential and persuasive helpers for dysphoric persons seeking assistance with their interpersonal problems would appear to be nondysphoric persons. Moreover, such persons should also be perceived as credible (i.e., responsible and/or having relevant expertise). An abundance of research by Hovland and his associates (e.g., Hovland, Janis, & Kelley, 1953) and others indicates that credible sources are more persuasive than others. There is also evidence that effective persuaders tend to be people who are attractive (Chaiken, 1979), likeable (Folkes & Sears, 1977), who use humor (Duncan & Nelson, 1985), speak rapidly (Street & Brady, 1982) and repeat their messages (Pratkanis & Aronson, 1992). The latter finding is particularly relevant to dysphoric target persons because such persons tend to have low self-esteem, and low self-esteem has been found to interfere with message reception (Rhodes & Wood, 1992).

Knowledgeable, credible helpers do exist in the form of trained counsellors. In particular, in the case of social skills training for dysphoric persons, counsellors trained in Interpersonal Therapy (see Gotlib & Hammen, 1992) or Beck's Cognitive Therapy (Beck, Shaw, Rush, & Emery, 1979) would be appropriate. As has been noted, though, depressed persons are often reluctant to seek professional help (Vredenberg, Flett, & Krames, 1993), and, if government funding for mental health services does not increase, then the rising number of people who succumb to depression will be unable to gain timely access to traditional forms of psychotherapy. These are key issues: it is important to intervene early with at risk populations in the case of depressive disorders, because once an episode begins it can become chronic and/or recurrent. In fact, it is estimated that between 50 and 60 % of people who experience a depressive episode can expect to succumb to at least one more episode (APA, 1994).

Some researchers have begun to identify certain at-risk populations. For example, Nolen-Hoeksema (1991) argued that a ruminative coping style can lead the mild dysphoria that most people experience occasionally in response to stressful events to grow into

more serious and prolonged depression. In support of this argument, Nolen-Hoeksema, Parker, and Larsen (1994) found that recently bereaved adults who were only mildly dysphoric after the death of their loved one became increasingly more depressed and had longer periods of depressed mood if they had a ruminative coping style. Similar results were found in studies of people's dysphoric reactions to an earthquake (Nolen-Hoeksema & Morrow, 1991). Moreover, evidence is beginning to accumulate that suggests a stable, trait-like status for ruminative coping. In a sample of 253 adults, scores on the ruminative coping scale of the Response Styles Questionnaire correlated over .80 over a 5-month interval (Nolen-Hoeksema et al., 1994).

Importantly, ruminative coping may help explain why women are at an increased risk for developing a depressive disorder. That is, women often cope with dysphoria by focusing on the mood and the implications thereof, whereas men are more likely to distract themselves (Nolen-Hoeksema, 1991). In fact, Nolen-Hoeksema, Morrow, & Fredrickson (1993) found that ruminative responses are predictive of more severe and longer lasting dysphoria regardless of initial depression severity or gender.

Individuals who are prone to ruminate also tend towards isolation (Lyubomirsky & Nolen-Hoeksema, 1995), thereby denying themselves the potential stress-buffering benefits of positive social contact (House, Landis, & Umberson, 1988), as well as the possible problem-solving benefits that were illustrated in the current study. In fact, it has been recently shown that those ruminators who do manage to stay well integrated into a social network of persons in whom they can confide show fewer depressive symptoms 18 months after a loss event (Nolen-Hoeksema & Davis, 1999). This same study also showed that while ruminators benefit more from social support after a loss than do non-ruminators, the former report receiving less support.

As well, certain other types of individuals are more at risk for developing depression than are others when interpersonal conflict remains unresolved--for example, people with sociotropic personalities (Beck, 1983), and interpersonally dependent individuals, who tend to depend primarily on the love and attention of others to maintain their self-worth

(Linville,1987). Thus, assisting at-risk individuals with interpersonal problem solving may be particularly important.

Gottlieb (1988), among others, has argued that the problem of providing timely assistance to at-risk individuals can be dealt with partially through reliance on natural support systems, and the results of the current investigation suggests a means by which dysphoric persons might gain assistance from such non-professionals. That is, on the basis of the major finding of this study, there would appear to be grounds for recommending that dysphoric persons solicit advice from nondysphoric laypersons when attempting to solve interpersonal problems. The latter individuals tend to generate or recall effective solutions to these types of problems. Of course, training would likely be required to assist nondysphoric peers in providing such as interaction.

Furthermore, while some have criticized the use of dysphoric college students in depression research in lieu of clinical populations (e.g., Coyne, 1994), the former can be considered an at risk population that needs to be studied in its own right . That is, college students have been shown to have a rate of suicide that is 50% higher than that of individuals in the same cohort (Beck & Young, 1978; as cited in Vredenberg et al., 1993). Plus, since they are young, if depression or dysphoria is treated in this group, it may be kept from becoming a recurrent disorder. Moreover, a recent study that surveyed over 2,000 individuals for the presence of major depression and subsyndromal depression (i.e., dysphoria) showed that both depressed and dysphoric persons suffered more financial losses, had poorer health, missed more workdays, showed impaired job functioning and reported more stress at home, in comparison to nondepressed persons. In fact, on most measures, dysphoric and clinically depressed persons were equally impaired (Judd et al., 1996). In sum, research that might lead to interventions for dysphoria is important both from the standpoint of preventing clinical depression, and to help improve the functioning of dysphoric individuals.

Although the results of the current study indicate that peer support is a potential intervention that is worthy of further investigation, some caution is warranted. To elaborate,

researchers such as Antonucci and his colleagues have noted that social relationships entail costs. Further, implicit knowledge of those costs leads to the development of expectations of reciprocity, with differing reciprocity rules applying to different relationships (Antonucci & Jackson, 1990; Ingersoll-Dayton & Antonucci, 1988). Specifically, Wentowski (1981) distinguished between three types of reciprocity: immediate, deferred and generalized. The first two are based on balanced reciprocity. With immediate reciprocity, individuals maintain distance and have minimal obligations (e.g., acquaintances). With deferred reciprocity, time might pass before a gift or service is repaid, thus indicating trust and greater obligations (e.g., friendship). With generalized reciprocity, it is assumed that the respective partners will contribute to the other's well-being and will eventually derive benefits themselves (e.g., marriage). Thus, while people tend to expect relatively equitable exchanges of resources between acquaintances and friendships, the same expectations tend not to apply to spouses.

Depressed persons are constantly concerned about having enough energy resources to do the things they need to do. And if they feel they have to repay someone for their assistance, they may be reluctant to let on that they need help. As such, this analysis suggests that spouses might be better people for depressed persons to approach for help with their problems than any other type of nonprofessional person. Indeed, typically it is family members or spouses whom depressed persons turn to for help with problems (Brown & Harris, 1978).

Moreover, Reis (1984) suggested that ongoing social support derives more from intimacy than any other aspect of social interaction. Intimacy in a relationship, however, does not necessarily imply absence of conflict. Instead, intimacy tends to allow for confrontation without exacerbating problems (B. Sarason, I. Sarason, & Pierce, 1990). Research by Gove (Gove, Hughes, & Style, 1983), however, has found that only high-quality marriages include intimacy, which in turn contributes to social support.

Furthermore, as Dakof and Taylor (1990) have stated, "the ties of kinship, marriage, and friendship create different constraints, obligations, and interactions, and that recognizing

these phenomena is essential to a comprehensive understanding of social support" (p. 81). For example, with regard to specific support transactions in response to cancer, Dakof and Taylor found that while friends, acquaintances and co-workers gradually or abruptly decreased their contact with cancer patients, closest others did not. However, there were difficulties with these significant others, pertaining in particular to efforts to minimize the impact of cancer or otherwise criticize how the patient was handling the situation. With regard to the current issue of how helpful a nondysphoric close other might be with respect to interpersonal difficulties, the provision of compelling arguments concerning solutions to such problems might sometimes not be accepted because the perceived exhortation to improve would be interpreted as criticism, and perhaps a minimization of the depressed spouse's situation.

To complicate matters further, in a study of heart attack victims and their spouses, Coyne, Ellard and Smith (1990) found that the heart attack was as much of a stressor for the spouse as for the patient. Not only did the spouse have to deal with the near loss of the patient, but they had to confront uncertainty about their future and make major changes to their life routine. In fact, spouses were found to be as much at risk for psychological distress as the patients were. It was also clear that tending to the spouse's emotional needs was as important a coping task for the patients as taking care of the patients was for the spouses. These findings challenge the adequacy of the conventional stress and coping paradigm, specifically its view that the role of close relationships in coping is to provide an avenue for one person to gain support. In terms of the current issue of how helpful spouses might be with a depressive's interpersonal problems, then, this finding highlights the fact that the problem may also deplete the spouse's resources, and consequently they may be unable to offer much useful aid.

Coyne et al. (1990) also found that the support provider's investment in being helpful and achieving a positive outcome may ironically lead to behavioural transactions that are detrimental to the recipient's well-being and successful adaption. In effect, spouses can become emotionally overinvolved in being helpful. Demands or intrusiveness on the

spouse's part may leave the recipient feeling guilty, incompetent, resentful, lacking in autonomy, or coerced (Coyne, Wortman, & Lehman, 1988). In the Coyne et al. (1990) study, two basic types of spousal coping patterns were identified. Emotional overinvolvement is defined by intrusiveness and interference, such as doing things for the patient that he or she could do alone. Protective buffering is defined by hiding concerns, denying worries and avoiding disagreement. Apparently, spouses often engage in intrusive behaviours in an effort to relieve their own distress. Unfortunately, spousal and family emotional overinvolvement has been consistently linked to poor prognosis for depression and other physical and psychological difficulties (e.g., myocardial infarction, schizophrenia; Barnett & Gotlib, 1988). While protective buffering served to increase the patient's self-efficacy, it increased the distress and lowered the self-efficacy of the spouse. Spousal distress, in turn, seems to be associated with ineffective helping behaviour. This situation is what Coyne has referred to as one of the dilemmas of helping (Coyne et al., 1990).

While some responses may be simply viewed as misguided helping attempts, a growing body of evidence suggests that depressed persons typically induce negative reactions in others (e.g., Belsher & Costello, 1991; Coyne, 1976a), and in doing so may generate further stressful situations that tend to exacerbate the depression (e.g., Hammen, 1991; Pothoff, Holohan, & Joiner, Jr., 1995). Several researchers (i.e., Coates & Wortman, 1980; Coyne, 1976b) have developed an interactional model of depression that explicates the dynamics involved in such negative transactions. Moreover, since depression can become a chronic, recurrent disorder, these researchers assert that identifying factors in the social environment which serve to maintain the depression can be as important as identifying precipitating causes.

Central to the interactional model is the notion of the depressive spiral. At the beginning of the spiral, the depressed person engenders negative responses in those with whom they interact (Coyne, 1976a;). Concerned others (i.e., usually the spouse) try to control the depressed person's behaviour through discouraging expressions of negativity,

and demanding improvement. These control attempts tend to backfire. Such "support attempts" may be perceived as non-genuine and arising out of guilt or obligation instead of genuine concern. The depressed person typically perceives the discouragement of negativity as meaning that what he or she is feeling is inappropriate, which may increase self-deprecation. In addition, demands to improve may only serve to decrease intrinsic motivation for positive responses. Spouses may become frustrated and aggravated with the depressed person's failure to improve, and these responses tend to in turn have a negative impact on the depressed person. A downward spiral occurs as the interactions of the depressed person and the spouse become increasingly negative (Coates & Wortman, 1980).

Brickman and his colleagues (Brickman, Kaplan, et al., 1982) have also noted that help often carries with it the implicit assumption that people are incapable of solving their own problems. Support from the spouse can therefore undermine the distressed person's self-esteem if it implies that he or she is an "impaired" person (DiMatteo & Hays, 1981). In the case of depression, the patient's self-esteem is likely already vulnerable. In addition, Coyne et al. (1988) have noted that miscarried helping processes are more likely to occur when there is a lack of clarity as to what can be reasonably expected in terms of outcome, as well as the extent to which it can be influenced by the efforts of the support provider or recipient. With the chronicity and interpersonal difficulties associated with depression, one would expect normal supporter-recipient difficulties to be exacerbated.

In sum, then, while in the current study nondysphoric peers were efficient helpers for dysphoric persons' interpersonal problem solving, it remains to be seen as to whether peers would be the best helpers outside the laboratory setting. Reciprocity research suggests that non-family members may not have the forbearance over time to support those with the chronic difficulties that often accompany depressive disorders. Still, if intervention occurs early with at-risk dysphoric persons, perhaps chronicity can be avoided. With clinically depressed persons, however, spouses may typically be the main support providers. As the current analysis shows, though, such relationships can be fraught with

problems that can impede the helping process.

An interesting, but untested, possibility is that nondysphoric persons who have recovered from dysphoria or depression, and thus presently have well functioning cognitive systems, might make the best consultants for dysphoric persons. The former persons may not only be able to offer advice on how to solve interpersonal problems, but also to offer effective tips on how to motivate the dysphoric person to implement the solution. As well, solutions to problems derived with the aid of previously depressed individuals may be more acceptable to depressed individuals in that such assistance is less likely to diminish self-worth through social-comparison processes (Collins, 1996). Moreover, a growing body of evidence indicates that people are more likely to be persuaded by those whom they view as being similar to themselves on some dimension or dimensions (e.g., Mackie, Worth, & Asuncion, 1990; Simons, Berkowitz, & Moyer, 1970).

In terms of the setting, while the popularity of the internet brings to mind the possibility of employing a computer chat line with depressed and formerly depressed persons interacting, this may not be appropriate for those with more severe depression; that is, supervision is needed in case of problematic interactions or the provision of inappropriate advice. Indeed, given the evidence for problematic relationships with depressive persons, it might be best for support to occur within a depression support group with a trained facilitator present.

A structured setting might provide other benefits, such as focusing on the types of problems that are amenable to assistance. For example, Dunkel-Schetter, Folkman, & Lazarus (1987) emphasize that certain types of coping strategies may be more effective than others in garnering support. Specifically, they found that problem-solving types of coping elicited more support than did distancing oneself from the problem. As well, depressed and dysphoric persons need to be warned against setting emotion-focused goals (e.g., managing one's emotional reactions), rather than problem-focused ones (Carver, Scheier, & Weintraub, 1989). Billings and Moos (1984), for example, found that coping responses directed at problem-solving were associated with less depressive

dysfunction than were those directed at emotional discharge. Recall, though, that depressed persons seem to have difficulty shifting from ruminating and deliberating about problems to more productive, implemental modes of problem solving (Gollwitzer, 1990). A structured support group with mixed dyads (i.e., formerly depressed paired with currently depressed participants) could offer the guidance and practice required. That is, the facilitator could offer basic instruction in a group format, such as breaking problems into steps, thereby depersonalizing them and perhaps prompting intellective functioning. The group could then break into mixed dyads in which the formerly depressed partner could then help with practice and further troubleshooting suggestions.

It should be noted, as well, that the reciprocity research that suggests that peers may not have the patience to deal with depressed persons (e.g., Dakof & Taylor, 1990) may not apply to such structured settings. That is, motivated volunteers who have limited exposure to depressed persons (i.e., as opposed to the daily exposure that friends might encounter) are less likely to distance themselves or become fatigued. Furthermore, as the current study has indicated, when interpersonal problems are presented in a structured format, peers can be helpful. It may be the case as well that with enough training, certain peers might be able to intervene with dysphoric students. Residence advisors, for example, typically receive crucial training in areas such as suicide prevention, and also are in a good position to detect and intervene with early depressive symptoms.

Other relevant research findings indicate that it is best not to recommend the adoption of plans that are too discrepant from the target person's current views unless or until they have confidence in the helper. Furthermore, one should not induce fear in the target person unless the level of fear is moderate, it is clear that they are vulnerable in some way, the target person feels that they can perform the proposed action, and it is clear that the recommended action will likely be effective (Rogers, 1975). Thus, while the current study's findings are encouraging, such recommendations highlight the fact that one needs to proceed with caution when intervening with dysphoria and depressive disorders.

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.D. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

Abramson, L.Y., Seligman, M.E.P., & Teasdale, J.D. (1986). Learned helplessness in humans: Critique and reformulation. In J.C. Coyne (Ed.), Essential papers in depression. New York: New York University Press.

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

Alloy, L.B., & Ahrens, A.H. (1987). Depression and pessimism for the future: Biased use of statistically relevant information in predictions of self versus others. Journal of Personality and Social Psychology, 52, 366-378.

American Psychiatric Association. (1994). Diagnostic & Statistical Manual of Mental Disorders (4th ed). Washington, D.C.: Author.

Anderson, C.A. (1982). Inoculation and counterexplanation: Debiasing techniques in the perseverance of social theories. Social Cognition, 1, 126-139.

Antonucci, T.C. & Israel, B.A. (1986). Veridicality of social support: A comparison of principal and network members' responses. Journal of Consulting and Clinical Psychology, 54, 432-437.

Antonucci, T.C., & Jackson, J.S. (1990). The role of reciprocity in social support. In B.R. Sarason, I.G. Sarason, & G.R. Pierce, (Eds.), Social support: An interactional view. New York: Wiley.

Argote, L., Devadas, R., & Melone, N. (1990). The base-rate fallacy: Contrasting processes and outcomes of group and individual judgment. Organisational Behavior and Human Decision Processes, 46, 296-310.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.

Bandura, A. (1997). Self-efficacy: The exercise of control. New York: W.W. Freeman.

Bandura, A., Reese, L. & Adams, N.E. (1982). Microanalysis of action and fear arousal as a function of differential levels of perceived coping self-efficacy. Journal of Personality and Social Psychology, 43, 5-21.

Barber, J.P., & DeRubeis, R.J. (1989). On second thought: Where the action is in cognitive therapy for depression. Cognitive Therapy and Research, 13, 441-457.

Barden, R.C., Garber, J., Leiman, B., Ford, M.E., & Masters, J.C. (1985). Factors governing the effective remediation of negative affect and its cognitive and behavioral consequences. Journal of Personality and Social Psychology, 49, 1040-1053.

Barnett, P.A., & Gotlib, I.H. (1988). Psychosocial functioning anf depression: Distinguishing among antecedents, concomitants, and consequences. Psychological Bulletin, 104, 97-126.

Barrera, M. Jr. (1981). Social support in the adjustment of pregnant adolescents: Assessment issues. In B.H. Gottlieb (Ed.), Social networks and social support (pp. 69-96). Beverly Hills: Sage.

Barrera, M. Jr. (1986). Distinctions between social support concepts, measures, and models. American Journal of Community Psychology, 14, 413-445.

Barrera, M. Jr., Sandler, I.N., & Ramsey, T.B. (1981). Preliminary development of a scale of social support: Studies on college students. American Journal of Community Psychology, 9, 435-447.

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 117, 497-529.

Beck, A.T. (1963). Thinking and depression: I, Idiosyncratic content and cognitive distortions. Archives of General Psychiatry, 9, 324-333.

Beck. A. T. (1983). Cognitive therapy of depression: New Perspectives. In P.J. Clayton & J.E. Barrett (Eds.), Treatment of depression: Old controversies and new approaches. New York: Raven Press.

Beck, A.T., & Beamesderfer, A. (1974). Assessment of depression: The depression inventory. In P. Pichot (Ed.), Psychological measurements in psychopharmocology and modern pharmopsychiatry (pp.151-169). Basel, Switzerland: Karger.

Beck, A.T., & Beck, R.W. (1972). Screening depressed patients in a family practice: A rapid technique. Postgraduate Medicine, 52, 81-85.

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

Beck, A.T., Steer, R.A., Beck, J.S., & Newman, C.F. (1993). Hopelessness, depression, suicidal ideation, and clinical diagnosis of depression. Suicide and Life-Threatening Behavior, 23, 139-145.

Beck, A.T., Steer, R.A., & Brown, G.K. (1996). BDI-II Manual. San Antonio: Harcourt, Brace, and Company.

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

Becker, E.S. (1986). Depression: A comprehensive theory. In J.C. Coyne (Ed.), Essential papers in depression. New York: New York University Press.

Belle, D. (1982). Social ties and social support. In D. Belle (Ed.), Lives in stress: Women and depression (pp. 133-144). Beverly Hills: Sage.

Belsher, G., & Costello, C.G. (1991). Do confidants of depressed women provide less social support than confidants of nondepressed women? Journal of Abnormal Psychology, 100, 516-525.

Bem, D. (1972). Self-perception theory. In L. Berkowitz (Ed.), Advances in

experimental social psychology (Vol. 6). New York: Academic Press.

Berkman, L.F., & Syme, S.L. (1979). Social networks, host resistance, and mortality: A nine year follow-up study of Alameda County residents. American Journal of Epidemiology, 109, 186-204.

Billings, A.G., & Moos, R.H. (1982). Psychosocial theory and research on depression: An integrative framework and review. Clinical Psychology Review, 2, 213-237.

Billings, A.G., & Moos, R.H. (1984). Coping, stress, and social resources among adults with unipolar depression. Journal of Personality and Social Psychology, 46, 877-891.

Billings, A.G., & Moos, R.H. (1985). Psychosocial processes of remission in unipolar depression: Comparing depressed patients with matched community controls. Journal of Consulting and Clinical Psychology, 53, 314-325.

Blackburn, I.M., Roxborough, H.M., Muir, W.J., Glabus, M., & Blackwood, D.H.R. (1990). Perceptual and physiological dysfunction in depression. Psychological Medicine, 20, 95-103.

Blatt, S.J. (1990). Interpersonal relatedness and self-definition: Two personality configurations and their implications for psychopathology and psychotherapy. In J.L. Singer (Ed.), Repression and dissociation:Implications for personality theory, psychopathology, and health. Chicago: The University of Chicago Press.

Bolger, N., & Zuckerman, A. (1995). A framework for studying personality in the stress process. Journal of Personality and Social Psychology, 69, 890-902.

Bower, G.H. (1981). Mood and memory. American Psychologist, 36, 129-148.

Brickman, P., Rabinowitz, V.C., Karuza, J., Jr., Coates, D., Cohn, E., & Kidder, L. (1982). Models of helping and coping. American Psychologist, 37, 368-384.

Broadhead, W.E., Kaplan, B.H., James, S.A., Wagner, E.H., Shoenbach, V.J., Grimson, R., Heydon, S., Tibblin, G., & Gehlbach, S.H. (1983). The epidemiologic evidence for a relationship between social support and health. American Journal of

Epidemiology, 117, 521-537.

Brockner, J. (1979). The effects of self-esteem, success, failure, and self-consciousness on task performance. Journal of Personality and Social Psychology, 14, 564-578.

Brown, G.W., & Harris, T. (1978). Social origins of depression: A study of psychiatric disorder in women. London: Tavistock.

Brown, G.W., & Harris, T. (1986). Establishing causal links: The bedford college studies of depression. In H. Katshing (Ed.), Life events and psychiatric disorders: controversial issues (pp. 107-187). Cambridge: Cambridge University Press.

Brown, R. (1965). Social psychology. New York: Free Press.

Burnstein, E. (1982). Persuasion as argument processing. In H. Brandstatter, J.H. Davis, & G. Stocher-Kreichgauer (Eds.), Contemporary problems in group decision-making (pp. 103-124). Orlando, FL: Academic Press.

Carver, C.S., & Scheier, M.F. (1990). Origins and functions of positive and negative affect: A control-process view. Psychological Review, 97, 19-35.

Carver, C.S., Scheier, M.F., & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. Journal of Personality and Social Psychology, 56, 267-283.

Cassel, J. (1974). Psychosocial processes and stress: Theoretical formulations. International Journal of Health Services, 4, 471-482.

Chaiken, S. (1979). Communicator physical attractiveness and persuasion. Journal of Personality and Social Psychology, 37, 1387-1397.

Clark, D.A., Beck, A.T., & Brown, G.K. (1992). Sociotropy, autonomy, and life event perceptions in dysphoric and nondysphoric individuals. Cognitive Therapy and Research, 16, 635-652.

Caplan, G. (1964). Principles of preventive psychiatry. New York: Basic Books.

Coates, J.C., & Wortman, C.B. (1980). Depression maintenance and interpersonal control. In A. Baum & J. Singer (Eds.), Advances in environmental psychology (Vol. 2, pp.

149-182). New York: Academic Press.

Cobb, S. (1976). Social support as a moderator of life stress. Psychosomatic Medicine, 38, 300-314.

Cohen, S. & McKay, G. (1984). Social support, stress, and the buffering hypothesis: A theoretical analysis. In A. Baum, S.E. Taylor, & J.E. Singer (Eds.), Handbook of psychology and health. Vol. 4: Social psychological aspects of health (pp. 253-267). Hillsdale, NJ: Lawrence Erlbaum.

Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. Psychological Bulletin, 98, 310-357.

Collins, R.L. (1996). For better or worse: The impact of upward social comparisons on self-evaluations. Psychological Bulletin, 119, 51-69.

Colvin, C.R., & Block, J. (1994). Do positive illusions foster mental health? An examination of the Taylor and Brown formulation. Psychological Bulletin, 116, 3-20.

Conway, M., & Giannopoulos, C. (1993). Dysphoria and decision making: Limited information use for evaluations of multiattribute targets. Journal of Personality and Social Psychology, 64, 613-623.

Coyne, J.C. (1976a). Depression and the response of others. Journal of Abnormal Psychology, 83, 186-193.

Coyne, J.C. (1976b). Toward an interactional description of depression. Psychiatry, 39, 28-40.

Coyne, J.C. (Ed.), (1986). Essential papers in depression. New York: New York University Press.

Coyne, J.C. (1989). Thinking postcognitively about depression. In A. Freeman, K.M. Simon, L.E. Beutler, & H. Arkowitz (Eds.), Comprehensive handbook of cognitive therapy. New York: Plenum Press.

Coyne, J.C. (1994). Self-reported distress: Analog or ersatz depression? Psychological Bulletin, 116, 29-45.

Coyne, J.C., Aldwin, C. & Lazarus, R.S. (1981). Depression and coping in

stressful episodes. Journal of Abnormal Psychology, 90, 439-447.

Coyne, J.C., Ellard, J.H. & Smith, D.A.F. (1990). Social support, interdependence, and the dilemmas of helping. In B.R. Sarason, I.G. Sarason, & G.R. Pierce, (Eds.), Social support: An interactional view. New York: Wiley.

Coyne, J.C. & Delongis, A. (1986). Going beyond social support: The role of social relationships in adaption. Journal of Consulting and Clinical Psychology, 54, 454-460.

Coyne, J.C., & Whiffen, V.E. (1995). Issues in personality as diathesis for depression: The case of sociotropy-dependency and autonomy-self-criticism. Psychological Bulletin, 118, 358-378.

Coyne, J.C., Wortman, C.B., & Lehman, D. (1988). The other side of support: Emotional overinvolvement and miscarried helping. In B. Gottlieb (Ed.), Social support: Formats, processes, and effects (pp. 305-330). Beverly Hills, CA: Sage.

Dakof, G.A. & Taylor, S.E. (1990). Victims' perceptions of social support: What is helpful from whom? Journal of Personality and Social Psychology, 58, 80-89.

Dean, A., & Ensel, W.M. (1982). Modelling social support, life events, competence, and depression in the context of age and sex. Journal of Community Psychology, 10, 392-408.

DeLongis, A., Folkman, S., & Lazarus, R.S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. Journal of Personality and Social Psychology, 54, 486-495.

Deutsch, M., & Gerard, H.B. (1955). A study of normative and informational influences upon individual judgment. Journal of Abnormal and Social Psychology, 51, 629-636.

DiMatteo, M.R., & Hays, R. (1981). Social support and serious illness. In B. Gottlieb (Ed.), Social networks and social support (pp. 117-148). Beverly Hills, CA: Sage.

Dobson, K.S., & Franche, R.L. (1989). A conceptual and empirical review of the

depressive realism hypothesis. Canadian Journal of Behavioural Science, 21, 419-433.

Dobson, K.S., & Pusch, D. (1995). A test of the depressive realism hypothesis in clinically depressed subjects. Cognitive Therapy and Research, 19, 179-194.Duncan & Nelson

Duncan, C.P., & Nelson, J.E. (1985). Effects of humour in a radio advertising experiment. Journal of Advertising, 14, 33-40.

Dunkel-Schetter, C., Fokman, S., & Lazarus, R.S. (1987). Correlates of social support receipt. Journal of Personality and Social Psychology, 53, 71-80.

Durkheim, E. (1951). Suicide. New York: Free Press.

Engel, R.A., & DeRubeis, R.J. (1993). The role of cognition in depression. In K.S. Dobson & P.C. Kendall (Eds.), Psychopathology and cognition (pp. 83-119). Toronto: Academic Press.

Erikson, E.H. (1963). Childhood and society. New York: Norton.

Fennell, M.J.V., & Teasdale, J.D. (1984). Effects of distraction on thinking and affect in depressed patients. British Journal of Clinical Psychology, 23, 65-66.

Feldman, L.A., & Gotlib, I.H. (1993). Social Dysfunction. In C. G. Costello (Ed.), Symptoms of depression, (pp. 85-112). New York: John Wiley & Sons.

Festinger, L. (1954). A theory of social comparison processes. Human Relations, 7, 117-140.

Festinger, L. (1957). A theory of cognitive dissonance. Stanford: Stanford University Press.

Flannery, R.B. Jr., & Wieman, D. (1989). Social support, life stress, and psychological distress: An empirical assessment. Journal of Clinical Psychology, 45, 867-872.

Folkes, V.S., & Sears, D.O. (1977). Does anybody like a liar? Journal of Experimental Social Psychology, 13, 505-519.

Folkman, S., & Lazarus, R.S. (1986). Stress processes and depressive symptomatology. Journal of Abnormal Psychology, 95, 107-113.

Folkman, S., Schaefer, C. & Lazarus, R.S. (1979). Cognitive processes as mediators of stress and coping. In V. Hamilton & D.M. Warburton (Eds.), Human stress and cognition: An information-processing approach (pp. 265-298). London: Wiley.

Folkes & Sears

Forgas, J.P., & Bower, G.H. (1987). Mood effects on person-perception judgments. Journal of Personality and Social Psychology, 53, 53-60.

Gigone, D. & Hastie, R. (1993). The common knowledge effect: Information sharing and group judgment. Journal of Personality and Social Psychology, 65, 959-974.

Gigone, D. & Hastie, R. (1997). The impact of information on small group choice. Journal of Personality and Social Psychology, 72, 132-140.

Gilbert, D.T., Giesler, R.B., & Morris, K.A. (1995). When comparisons arise. Journal of Personality and Social Psychology, 69, 227-236.

Gollwitzer, P.M. (1990). Action phases and mind-sets. In E.T. Higgins & R.M. Sorrentino (Eds.), Handbook of motivation and cognition: Foundations of social behavior (Vol. 2, pp. 53-92). New York: Guilford Press

Gollwitzer, P.M., Heckhausen, H., & Steller, B. (1990). Deliberative and implemental mind-sets: Cognitive tuning toward congruous thoughts and information. Journal of Personality and Social Psychology, 59, 1119-1127.

Gollwitzer, P.M., & Kinney, R.F. (1989). Effects of deliberative and implemental mind-sets on illusion of control. Journal of Personality and Social Psychology, 56, 531-542.

Gore, S. (1981). Stress-buffering functions of social supports: An appraisal and clarification of research models. In B.S. Dohrenwend & B.P. Dohrenwend (Eds.), Stressful life events and their contexts (pp. 202-222). New York: Prodist.

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

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., Hammen, C.L. (1992). Psychological aspects of depression: Toward a cognitive-interpersonal integration. Toronto: Wiley.

Gottlieb, B.H. (1983). Social support strategies: Guidelines for mental health practice. Beverly Hills: Sage.

Gottlieb, B.H. (1988). Support interventions: A typology and agenda for research. In S.W. Duck (Ed.), Handbook of personal relationships (pp. 519-540). Chichester: John Wiley & Sons.

Gove, W., Hughes, M., & Style, C.B. (1983). Does marriage have positive effects on the psychological well-being of the individual? Journal of Health and Social Behavior, 24, 122-131.

Greenberg, J., Pyszczynski, T., & Solomon, S. (1990). Anxiety concerning social exclusion: Innate response or one consequence of the need for terror management? Journal of Social and Clinical Psychology, 9, 202-213.

Hammen, C. (1991). Generation of stress in the course of unipolar depression. Journal of Abnormal Psychology, 100, 555-561.

Harber, K.D., & Pennebaker, J.W. (1992). Overcoming traumatic memories. In S.A. Christianson (Ed.). The handbook of emotion and memory (pp.359-387). Hillsdale, NJ: Erlbaum.

Hart, R.P., Kwentus, J.A., Taylor, J.R., & Harkins, S.W. (1987). Rate of forgetting in dementia and depression. Journal of Consulting and Clinical Psychology, 55, 101-105.

Hartlage, S., Alloy, L.B., Vazquez, C., & Dykman, B. (1993). Automatic and effortful processing in depression. Psychological Bulletin, 113, 247-278.

Higgins, E.T. (1989). Knowledge accessability and activation. In J.S. Uleman & Bargh, J.A. (Eds.), Unintended thought (pp. 383-421). New York: Guilford Press.

Hobfoll, S.E., & Stokes, J.P. (1988). The process and mechanics of social support. In   S.W. Duck (Ed.), Handbook of personal relationships (pp. 519-540). Chichester: John Wiley & Sons.

Hollon & Beck (1986). Cognitive and cognitive-behavioral interventions. In S.L.

Garfield & A.E. Bergin (Eds.), Handbook of psychotherapy and behavior change (3rd edition). New York: Wiley.

House, J.S., Landis, K.R., & Umberson, D. (1988). Social relationships and health. Science, 241, 540-545.Janis, I.L. (1972). Victims of groupthink. Boston: Houghton Mifflin Co.

Hovland, C.I., Janis, I.L., & Kelley, H.H. (1953). Communication and persuasion. New Haven CT: Yale University Press.

Ingam, R.E. (1990). Self-focused attention in clinical disorders: Review and a conceptual model. Psychological Bulletin, 109, 156-176.

Ingersoll-Dayton, B. & Antonucci, T.C. (1988). Reciprocal and non-reciprocal social support: Contrasting sides of intimate relationships. Journal of Gerontology, 43, 65-73.

Isenberg, D. (1986). Group polarization: A critical review and meta-analysis. Journal of Personality and Social Psychology, 50, 1141-1151.

Jacobson, N.S., Dobson, K.S., Truax, P.A., Addix, M.E., Koener, K., Gollan, J.K., Gortner, E., & Prince, S.E. (1996). A component analysis of cognitive-behavioral treatment for depression. Journal of Consulting and Clinical Psychology, 64, 295-304.

James, W. (1981). The principles of psychology. In F.H. Brukhardt, F. Bowers, & I.K. Skurpskelis (Eds.), The works of William James (Vol. 1, pp. 380-386). Cambridge, MA: Harvard University Press. (Original work published 1905).

Jones, E.E. (1979). The rocky road from acts to dispositions. American Psychologist, 34, 107-117.

Jones, E.E., & Harris, V.A. (1967). The attribution of attitudes. Journal of Experimental Social Psychology, 3, 1-24.

Kahneman, D., & Tversky, A. (1972). Subjective probability: A judgment of representativeness. Cognitive Psychology, 3, 430-454.

Kanfer, R., & Zeiss, A.M. (1983). Depression, interpersonal standard-setting, and judgements of self-efficacy. Journal of Abnormal Psychology, 92, 319-329.

Kavanagh, D.J. (1992). Self-efficacy and depression. In R. Schwarzer (Ed.), Self-

efficacy: Thought control of action (pp. 177-193). Washington, DC.: Hemisphere.

Kaplan, M.F. (1977). Discussion polarisation effects in a modified jury decision paradigm: Informational influences. Sociometry, 40, 262-271.

Kaplan, M.F. (1989). Task, situational and perceived determinants of influence processes in group decision making. In E. Lawler & B. Markovsky (Eds.), Advances in group processes (Vol. 6, pp. 87-1050). Greenwich, CT: JAI.

Kaplan, M.F. (1987). The influencing process in group decision making. In C. Hendrick (Ed.), Review of personality and social psychology: Group processes (Vol. 8, pp. 189-212). Beverly Hills, CA: Sage.

Kaplan, M.F., & Miller, C.E. (1987). Group decision making and normative versus informational influence: Effects of type of issue and assigned decision rule. Journal of Personality and Social Psychology, 53, 306-313.

Kaplan, R.M., & Hartwell, S.L. (1987). Differential effects of social support and social networks on physiological and social outcomes in men and women with Type II diabetes mellitus. Health Psychology, 6, 387-398.

Kazdin, A.E., Matson, J.L., & Senatore, V. (1983). Assessment of depression in mentally retarded adults. American Journal of Psychiatry, 140, 1040-1043.

Kelly, J.R., Jackson, J.W., & Hutson-Comeaux, S.L. (1997). The effects of time pressure and task differences on influence modes and accuracy in decision-making groups. Personality and Social Psychology Bulletin, 23, 10-22.

Kendall, P.C., Hollon, S.D., Beck, A.T., Hammen, C.L., & Ingram, R. (1987). Issues and recommendations regarding use of the Beck Depression Inventory. Cognitive Therapy and Research, 11, 289-299.

Kessler, R.C., Davis, C.G., & Kendler, K.S. (1997). Childhood adversity and adult psychiatric disorder in the US National Comorbidity Survey. Psychological Medicine, 27, 1101-1119.

Kovacs, M., & Beck, A.T. (1978). Maladaptive cognitive structures in depression. American Journal of Psychiatry, 135, 525-533.Kuhl, J. (1981). Motivational and functional

helplessness: The moderating effect of state versus action orientation. Journal of Personality and Social Psychology, 40, 155-170.

Kuhl, J. & Helle, P. (1986). Motivational and volitional determinants of depression: The degenerated-intention hypothesis. Journal of Abnormal Psychology, 95, 247-251.

Kunda, Z. (1999). Social cognition: Making sense of people. Cambridge, MA: The MIT Press.

Lamm, H., & Myers, D.G. (1978). Group-induced polarization of attitudes and behavior. In L. Berkowitz (Ed.), Advances in experimental social psychology. New York: Academic Press.

Lara, M.E., & Klein, D.N. (1999). Psychosocial processes underlying the maintenance and persistence of depression: Implications for understanding chronic depression. Clinical Psychology Review, 19, 553-570.

Larson, R., & Lee, M. (1996). The capacity to be alone as a stress buffer. Journal of Social Psychology, 136, 5-16.

Lehman, D.R., Ellard, J.H., & Wortman, C.B., (1986). Social support for the bereaved: Recipients' and providers' perspectives on what is helpful. Journal of Consulting and Clinical Psychology, 54, 438-446.

Lepore, S.J. (1992). Social conflict, social support, and psychological distress: Evidence of cross-domain buffering effects. Journal of Personality and Social Psychology, 63, 857-867.

Lepore, S.J., Silver, R.C., Wortman, C.B., & Wayment, H. A. (1996). Social constraints, intrusive thoughts, and depressive symptoms among bereaved mothers. Journal of Personality and Social Psychology, 70, 271-282.

Lewin, K. (1936). Principles of topological psychology. New York: McGraw-Hill.

Lewinsohn, P.M., Roberts, R.E., Seeley, J.R., Rhode, P., Gotlib, I.H., & Hops, H. (1994). Adolescent psychopathology II: Psychological risk factors for depression. Journal of Abnormal Psychology, 103, 302-315.

Libet, J. & Lewinsohn, P.M. (1973). The concept of social skill with special reference

to the behavior of depressed persons. Journal of Consulting and Clinical Psychology, 40, 304-312.

Lin, N., & Dean, A. (1984). Social support and depression: A panel study. Social Psychiatry, 19, 83-91.

Lin, N., & Ensel, W.M. (1984). Depression-mobility and its social etiology: The role of life events and social support. Journal of Health and Social Behavior, 25, 176-188.

Linville, P.W. (1987). Self-complexity as a cognitive buffer against stress-related illness and depression. Journal of Personality and Social Psychology, 52, 663-676.

Locke, K.D., & Horowitz, L.M. (1990). Satisfaction in interpersonal interactions as a function of similarity in level of dysphoria. Journal of Personality and Social Psychology, 58, 823-831.

Long, Phillip (1993). Presentation at the Mood Disorders Association of B.C.

Lubin, B. (1994). State-trait depression adjective check lists: Professional manual. Odessa, Fl.: Psychological Assessment Resources Inc.

Lyubomirsky, S., Caldwell, N.D. & Nolen-Hoeksema, S. (1998). Effects of ruminative and distracting responses to depressed mood on retrieval of autobiographical memories. Journal of Personality and Social Psychology, 75, 166-177.

Lyubomirsky, S., & Nolen-Hoeksema, S. (1993). Self-perpetuating properties of dysphoric rumination. Journal of Personality and Social Psychology, 65, 339-349.

Lyubomirsky, S., & Nolen-Hoeksema, S. (1995). Effects of self-focused rumination on negative thinking and interpersonal problem solving. Journal of Personality and Social Psychology, 69, 176-190.

Macaulay, D., Ryan, L. & Eich, E. (1993). Mood dependence in implicit and explicit memory. In Graf, P. & Masson, M.E.J. (Eds.), Implicit memory: New directions in cognition, development, and neuropsychology (pp. 75-94). Hillsdale, NJ: Lawrence Erlbaum Associates, inc.

MacFarlane, A.H., Norman, G.R., Streiner, D.L., & Roy, R.J. (1983). The process of social stress: Stable, reciprocal, and mediating relationships. Journal of Health and Social

Behavior, 24, 160-173.

Mackie, D.M., Worth, L.T., & Asuncion, A.G. (1990). Processing of persuasive in-group messages. Journal of Personality and Social Psychology, 58, 812-822.

Maddux, J.E. (1991). Self-efficacy. In C.R. Snyder & D.R. Forsyth (Eds.), Handbook of social and clinical psychology: The health perpective. New York: Pergamon Press.

Marx, E.M., Williams, J.M.G., & Claridge, G.C. (1992). Depression and interpersonal problem solving. Journal of Abnormal Psychology, 101, 78-86.

Metalsky, G.I., Halberstadt, L.J., & Abramson, L.Y. (1987). Vulnerability to depressive mood reactions: Toward a more powerful test of the diathesis-stress and causal mediation components of the reformulated theory of depression. Journal of Personality and Social Psychology, 52, 386-393.

Morrow, J. & Nolen-Hoeksema, S. (1990). Effects of responses to depression on the remediation of depressive affect. Journal of Personality and Social Psychology, 58, 519-527.

Moretti, M.M. & Shaw, B.F. (1989). Automatic and dysfunctional processes in depression. In J.S. Uleman & Bargh, J.A. (Eds.), Unintended thought (pp. 383-421). New York: Guilford Press.

Nisbett, R.E., & Borgida, E. (1975). Attribution and the psychology of prediction. Journal of Personality and Social Psychology, 32, 932-943.

Nolen-Hoeksema, S. (1991). Reponses to depression and their effects on the duration of depressive episodes. Journal of Abnormal Psychology, 100, 569-582.

Nolen-Hoeksema, S., & Davis, C.G. (1999). "Thanks for sharing that": Ruminators and their social support networks. Journal of Personality and Social Psychology, 77, 801-814.

Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. Journal of Personality and Social Psychology, 61, 115-121.

Nolen-Hoeksema, S., & Morrow, J. (1993). Effects of rumination and distraction on naturally occurring depressed moods. Cognition and Emotion, 7, 561-570.

Nolen-Hoeksema, S., Morrow, J. & Fredrickson, B.L. (1993). Response styles and the duration of episodes of depressed mood. Journal of Abnormal Psychology, 102, 20-28.

Nolen-Hoeksema, S., Parker, L.E., & Larson, J. (1994). Ruminative coping with depressed mood following loss. Journal of Personality and Social Psychology, 67, 92-104.

Okun, M.A., Melichar, J.F., & Hill, M.D. (1990). Negative daily events, positive and negative social ties, and psychological distress among older adults. Gerontologist, 30, 193-199.

Pennebaker, J.W. (1989). Confession, inhibition, and disease. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 22, pp. 211-244). Orlando FL: Academic Press.

Petty, R.E., Harkins,S.G., & Williams, K.D. (1980). The effects of group diffusion of cognitive effort on attitudes: An information-processing view. Journal of Personality and Social Psychology, 38, 81-92.

Pietromonaco, P.R., & Markus, H. (1985). The nature of negative thoughts in depression. Journal of Personality and Social Psychology, 48, 799-807.

Pietromonaco, P.R., & Rook, K. S. (1987). Decision style in depression: The contribution of perceived risk versus benefits. Journal of Personality and Social Psychology, 52, 399-408.

Pincus, A.L., & Gurtman, M.B. (1995). The three faces of interpersonal dependency: Structural analyses of self-report dependency measures. Journal of Personality and Social Psychology, 69, 744-758.

Pittman, T.S., & D'Agostino, P.R. (1989). Motivation and cognition: Control deprivation and the nature of subsequent information processing. Journal of Experimental Social Psychology, 25, 465-480.

Platt, J.J, & Spivak, G. (1975). Manual for the Means-End Problem-Solving

Procedure (MEPS): A measure of interpersonal problem-solving skill. Philadelphia: Hahnemann Medical College and Hospital.

Potthoff, J.G., Holohan, C.J., & Joiner Jr., T.E. (1995). Reassurance seeking, stress generation, and depressive symptoms: An integrative model. Journal of Personality and Social Psychology, 68, 664-670.

Pratkanis, A.R., & Aronson, E. (1992). Age of propoganda: The everyday use and abuse of persuasion. New York: W.H. Freeman.

Price, K.P., Tyron, W.W., & Raps, C.S. (1978). Learned helplessness and depression in a clinical population: A test of two behavioral hypotheses. Journal of Abnormal Psychology, 87, 113-121.

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

Pyszczynski, T., Hamilton, J.H., Herring, F., & Greenberg, J. (1989). Depression, self-focused attention, and the negative memory bias. Journal of Personality and Social Psychology, 57, 351-357.

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

Rabkin, J.G., & Struening, E.L. (1976). Life events, stress, and illness. Science, 194, 1013-1020.

Radenhausen, R.A., & Anker, J.M. (1988). Effects of depressed mood induction on reasoning performance. Perceptual and Motor Skills, 66, 855-860.

Rehm, L.P., Kaslow, N.H., & Rabin, A.S. (1987). Cognitive and behavioral targets in a self-control therapy program for depression. Journal of Consulting and Clinical Psychology, 55, 60-67.

Reis, H.T. (1984). Social interaction and well-being. In S. Duck (Ed.), Handbook of personal relationships: Theory, relationships and interventions. New York: Wiley.

Rhodes, N. & Wood, N. (1992). Self-esteem and intelligence affect influencibility: The mediating role of message reception. Psychological Bulletin, 111, 156-171.

Robins, C.J. (1990). Congruence of personality and life events in depression. Journal of Abnormal Psychology, 99, 393-397.

Rogers, R.W. (1975). A protection motivation theory of fear appeals and attitude change. Journal of Psychology, 91, 93-114.

Rosenbaum, M., & Hadari, D. (1985). Personal efficacy, external locus of control, and perceived contingency of parental reinforcement among depressed, paranoid, and normal subjects. Journal of Personality and Social Psychology, 49, 539-547.

Rosenhan, D.L., & Seligman, M.E.P. (1995). Abnormal Psychology. Norton & Company: New York.

Roy-Byrne, P.P., Weingartner, H., Bierer, L.M., Thompson, K., & Post, R.M. (1986). Effortful and automatic cognitive processes in depression. Archives of General Psychiatry, 43, 265-267.

Sandler, I.N. (1980). Social support resources, stress and maladjustment of poor children. American Journal of Community Psychology, 8, 41-52.

Sandler, I.N., & Barrera, M., Jr. (1984). Toward a multimethod approach to assessing the effects of social support. American Journal of Community Psychology, 12, 37-52.

Sarason, I.G., Levine, H.M., Basham, R.B., & Sarason, B.R. (1983). Assessing social support: The social support questionnaire. Journal of Personality and Social Psychology, 44, 127-139.

Sarason, I.G., & Sarason, B.R. (Eds.). (1985). Social support: Theory, research, and applications. Dordrecht, The Netherlands: Martinus Nijhoff.

Sarason, I.G., Sarason, B.R., Hacker, T.A., & Basham, R.B. (1985). Concomitants of social support: Social skills, physical attractiveness, and gender. Journal of Personality and Social Psychology, 49, 469-480.

Sarason, B.R., Sarason, I.G., & Pierce, G. R. (1990). Traditional views of social

support and their impact on assessment. In B.R. Sarason, I.G. Sarason, & G.R. Pierce, (Eds.), Social support: An interactional view. New York: Wiley.

Sarason, B.R., Sarason, I.G., & Shearin, E.N. (1986). Social support as an individual difference variable: Its stability, origins, and relational aspects. Journal of Personality and Social Psychology, 50, 845-855.

Schachter, S. (1959). The psychology of affiliation. Stanford: Stanford University Press.

Schwarz, N., & Bohner, G. (1996). Feelings and their motivational implications: Moods and the action sequence. In P.M. Gollwitzer & J.A. Bargh (Eds.), The psychology of action: Linking cognition and motivation to behavior (pp. 119-145). New York: The Guilford Press.

Seligman, M.E.P. (1975). Helplessness. San Francisco: W.H. Freeman and Company.

Sedek, G., Kofta, M., & Tyszka, T. (1993). Effects of uncontrollability on subsequent decision making: Testing the cognitive exhaustion hypotheses. Journal of Personality and Social Psychology, 65, 1270-1281.

Shaw, M.E. (1971). Group dynamics: The psychology of small group behavior. New York: McGraw-Hill.

Sherif, M. (1936). The psychology of social norms. New York: Harper.

Shiffrin, 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.

Shulman, N. (1976). Network analysis: A new addition to an old bag of tricks. Acta Sociologica, 23, 307-323.

Shumaker, S.A., & Brownell, A. (1984). Toward a theory of social support: Closing conceptual gaps. Journal of Social Issues, 40, 11-36.

Silberfeld, M. (1978). Psychological symptoms and social supports. Social Psychiatry, 13, 11-17.

Simons, H.W., Berkowitz, N.N., & Moyer, R.J. (1970). Similarity, credibility, and attitude change: A review and a theory. Psychological Bulletin, 73, 1-16.

Snyder, M., & Jones, E.E. (1974). Attitude attribution when behavior is constrained. Journal of Experimental and Social Psychology, 10, 585-600.

Stasser, G. (1992). Pooling of unshared information during group discussion. In S. Worchel, W. Wood, & J.H. Simpson (Eds.), Group process and productivity (pp. 48-67). Newbury Park, CA: Sage.

Stasser, G., Taylor, L.A., & Hanna, C. (1992). Information sampling in structured and unstructured discussions of three- and six-person groups. Journal of Personality and Social Psychology, 57, 67-78.

Stoffer, E. S., & Paulhus, D. L. (1992). Effects of delay on the automatization of self reports. Paper presented at the Canadian Psychological Association annual convention, Quebec City.

Stoner, J.A.F. (1961). A comparison of individual and group decisions involving risk. Unpublished master's thesis, MIT., Cambridge, MA.

Street, R.L., Jr., & Brady, R.M. (1982). Speech rate acceptance ranges as a functiion of evaluative domain, listener speech rate, and communication context. Communication Monographs, 49, 290-308.

Swann, W.B. Jr., Griffin, J.J., Predmore, S.C., & Gaines, B. (1987). The cognitive-affective crossfire: When self-consistency confronts self-enhancement. Journal of Personality and Social Psychology, 52, 881-889.

Tabachnik, N., Crocker, J. & Alloy, L.B. (1983). Depression, social comparison, and the false consensus effect. Journal of Personality and Social Psychology, 45, 688-699.

Tardy, C.H. (1985). Social support measurement. American Journal of Community Psychology, 13, 187-202.

Taylor, C.B., Bandura, A., Ewart, C.K., Miller, N.H., & Debusk, R.R. (1985). Exercise testing to enhance wives' confidence in their husband's cardiac capability soon after clinically uncomplicated acute myocardial infarction. American Journal of Cardiology, 55,

635-638.

Taylor, S.E., & Brown, J.D. (1988). Illusion and well-being: A social psychological perspective on mental health. Psychological Bulletin, 103, 193-210.

Taylor, S.E., & Brown, J.D. (1994). Positive illusions and well-being revisited: Separating fact from fiction. Psychological Bulletin, 116, 21-27.

Taylor, S.E., & Gollwitzer, P.M. (1995). Effects of mind-set on positive illusions. Journal of Personality and Social Psychology, 69, 213-226.

Teasdale, J.D. (1983). Negative thinking in depression: Cause, effect, or reciprocal relationship? Advances in Behavior Research and Therapy, 5, 3-26.

Teasdale, J.D., & Fogarty, S.J. (1979). Differential effects of induced mood on retrieval of pleasant and unpleasant events from episodic memory. Journal of Abnormal Psychology, 88, 248-257.

Tessar, A., Millar, M., & Moore, J. (1988). Some affective consequences of social comparison and reflection processes: The pain and pleasure of being close. Journal of Personality and Social Psychology, 54, 49-61.

Thoits, P.A. (1982). Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. Journal of Health and Social Behavior, 23, 145-159.

Vazquez, C. (1987). Judgment of contingency: Cognitive biases in depressed and nondepressed subjects. Journal of Personality and Social Psychology, 52, 419-431.

Vinokur, A., & Burnstein, E. (1974). Effects of partially shared persuasive arguments on group-induced shifts: A group problem-solving approach. Journal of Personality and Social Psychology, 62, 739-752.

von Hecker, U., & Sedek, G. (1999). Uncontrollability, depression, and the construction of mental models. Journal of Personality and Social Psychology, 77, 833-850.

Vosberg, S.K. (1998). The effects of positive and negative mood on divergent-thinking performance. Creativity Research Journal, 11, 165-172.

Vredenburg, K., Flett, G.L., & Krames, L. (1993). Analogue versus clinical

depression: A critical reappraisal. Psychological Bulletin, 113, 327-344.

Wentowski, G.J. (1981). Reciprocity and the coping strategies of older people: Cultural dimensions of network building. The Gerontologist, 21, 600-609.

Wenzlaff, R.M., Wegner, D.M., & Roper, D.W. (1988). Depression and mental control: The resurgence of unwanted negative thoughts. Journal of Personality and Social Psychology, 55, 882-892.

Wethington, E. & Kessler, R.C. (1986). Perceived support, received support, and adjustment to stressful life events. Journal of Health and Social Behavior, 27, 78-89.

Williams, L.S. & Watson, N. (1985). Perceived danger and perceived self-efficacy as cognitive determinants of acrophobic behaviors. Behavior Therapy, 16, 136-146.

Wortman, C.B., & Dunkel-Schetter, C. (1987). Conceptual and methodological issues in the study of social support. In A. Baum & J. Singer (Eds.), Handbook of psychology and health (pp. 63-108). Hillsdale, NJ: Erlbaum.

Wright, E.F., & Wells, G.L. (1985). Does group discussion attenuate the dispositional bias? Journal of Applied Social Psychology, 15, 531-546.

Wright, E.F., Luus, C.A.E., & Christie, S.D. (1990). Does group discussion facilitate the use of consensus information in making causal attributions? Journal of Personality and Social Psychology, 59, 261-269.

Wright, E.F., Christie, S.D., Johnson, R.W., & Stoffer, E.S. (1996). The impact of group discussion on the theory-perseverance bias. Journal of Social Psychology, 136, 85-98.

Wright, E.F., MacEachem, L., Stoffer, E.S., & MacDonald, N. (1996). Factors affecting the use of naked statistical evidence of liability. Journal of Social Psychology, 136, 677-688.

Zuber, J.A., Crott, H.W., & Werner, J. (1992). Choice shift and group polarization: An analysis of the status of arguments and social decision schemes. Journal of Personality and Social Psychology, 62, 50-61.

Table 1

Analysis of Variance on Mean Ratings of Effectiveness of Solutions to

Problems #1 & #2 on the Question Concerning 'What One Could Do"

Source	SS	df	MS	F	Sig
Judgemental Context (J)	8.141	2	4.070	3.409*	.038
Dysphoric Status (D)	5.932	1	5.932	4.961*	.029
J X D	7.623	2	3.811	3.192*	.047
Error	85.96	72	1.194		

*p < .05

Table 2

Analysis of Variance on Mean Ratings of Effectiveness of Solutions to

Problems #1 & #2 on the Question Concerning "What You Would Do"

Source	SS	df	MS	F	Sig
Judgemental Context (J)	5.776	2	2.888	2.258	.112
Dysphoric Status (D)	6.993	1	6.993	5.468*	.022
D X J	11.920	2	5.960	4.661*	.012
Error	92.072	72	1.279		

*p < .05

Table 3

Mean Ratings of Effectiveness of Solutions to Problems #1 and #2 on

Question Concerning "What One Could Do"

Dysphoric status	Judgemental Context		
	Individual	Discuss with dysphoric	Discuss with non-dysphoric
Dysphoric			
M	2.61a (n=14)	2.58a (n=12)	3.81b (n=13)
Non-dysphoric			
M	3.91b (n=16)	3.17ab (n=12)	3.59ab (n=11)

Note: *The greater the score the more effective the solutions were judged to be on the 7-point scale*

Means not sharing a common subscript differ from one another at the .05 level of significance using the Newman-Keuls procedure

Table 4

Mean Ratings of Effectiveness of Solutions to Problems #1 and #2 on the

Question Concerning "What You Would Do"

Dysphoric status	Judgemental Context		
	Individual	Discuss with dysphoric	Discuss with non-dysphoric
Dysphoric			
M	2.39a (n=14)	2.71ac (n=12)	3.81bc (n=13)
Non-dysphoric			
M	3.97b (n=16)	3.25abc (n=12)	3.50abc (n=11)

Note: *The greater the score the more effective the solutions were judged to be on the 7-point scale*

Means not sharing a common subscript differ from one another at the .05 level of significance using the Newman-Keuls procedure

Table 5

Analysis of Variance on Mean Ratings of Effectiveness of Solutions to

Problem #3 on the Question Concerning "What One Could Do"

Source	SS	df	MS	F	Sig
Judgemental Context (J)	4.433	2	2.217	1.099	.339
Dysphoric Status (D)	8.397	1	8.397	4.162*	.045
J X D	.433	2	.217	.107	.898
Error	145.247	72	2.017		

*p < .05

Table 6

ANOVA on Mean Ratings of Effectiveness of Solutions to Problem #3

on the Question Concerning "What You Would Do"

Source	SS	df	MS	F	Sig
Judgemental Context (J)	11.189	2	5.594	2.752	.071
Dysphoric Status (D)	15.691	1	15.691	7.719*	.007
J X D	2.425	2	1.212	.596	.554
Error	146.366	72	2.033		

*p < .01

Table 7

Mean Ratings of Effectiveness of Solutions to Problem #3 on Question Concerning "What One Could Do"

Dysphoric status	Judgemental Context		
	Individual	Discuss with dysphoric	Discuss with non-dysphoric
Dysphoric			
M	2.71a (n=14)	3.00a (n=12) (n=13)	3.46a
Non-dysphoric			
M	3.50a (n=16)	3.75a (n=12) (n=11)	3.91a

Note: *The greater the score the more effective the solutions were judged to be on the 7-point scale*

Means not sharing a common subscript differ from one another at the .05 level of significance using the Newman-Keuls procedure

Table 8

Mean Ratings of Effectiveness of Solutions to Problem #3 on the
Question Concerning "What You Would Do"

Dysphoric status	Judgemental Context		
	Individual	Discuss with dysphoric	Discuss with non-dysphoric
Dysphoric			
M	2.50a (n=14)	2.50ab (n=12) (n=13)	3.69ab
Non-dysphoric			
M	3.56ab (n=16)	3.75ab (n=12) (n=11)	4.09b

Note: *The greater the score the more effective the solutions were judged to be on the 7-point scale*

Means not sharing a common subscript differ from one another at the .05 level of significance using the Newman-Keuls procedure

Table 9

Analysis of Covariance on Mean Ratings of Effectiveness of Solutions

to Problems #1 & #2 on the Question Concerning "What One Could Do"

with Change in Mood Ratings from Time #1 to Time #3 as Co-variate

Source	SS	df	MS	F	Sig
Mood Difference (Time 1 - Time 2)	9.534E-02	1	9.534E-02	.079	.780
Judgemental Context (J)	7.843	2	3.921	3.242*	.045
Dysphoric Status (D)	5.936	1	5.936	4.908*	.030
J X D	7.690	2	3.845	3.179*	.048
Error	85.865	71	1.209		

*p < .05

Table 10

Analysis of Variance on Mean Ratings of Effectiveness of Solutions

to Problems #1 & #2 on the Question Concerning "What You Would Do"

with Change in Mood Ratings from Time #1 to Time #2 as Co-variate

Source	SS	df	MS	F	Sig
Mood Difference (Time 3 - Time 2)	2.20E-03	1	2.20E-03	.002	.967
Judgemental Context (J)	5.741	2	2.870	2.213	.117
Dysphoric Status (D)	6.990	1	6.990	5.390*	.023
J X D	11.864	2	5.932	4.574*	.014
Error	92.070	71	1.297		

*p < .05

Table 11

Analysis of Variance on Mean Ratings of Percentage of Ideal Steps Included in

Solutions to Problems #1 & #2 on the Question Concerning "What One Could Do"

Source	SS	df	MS	F	Sig
Judgemental Context (J)	938.443	2	469.222	1.542	.221
Dysphoric Status (D)	1454.408	1	1454.408	4.779*	.032
J X D	952.147	2	476.073	1.564	.216
Error	21911.541	72	304.327		

*p < .05

Table 12

Analysis of Variance on Mean Ratings of Percentage of Ideal Steps Included in

Solutions to Problems #1 & #2 on the Question Concerning "What You Would Do"

Source	SS	df	MS	F	Sig
Judgemental Context (J)	51.415	2	25.707	.069	.933
Dysphoric Status (D)	654.062	1	654.062	1.762	.189
J X D	1756.637	2	878.319	2.366	.101
Error	26728.957	72	371.236		

Table 13

Mean Ratings of Percentage of Ideal Steps Included in Solutions

to Problems #1 & #2 on Question Concerning "What One Could Do"

Dysphoric status	Judgemental Context		
	Individual	Discuss with dysphoric	Discuss with non-dysphoric
Dysphoric			
M	33.07a (n=14)	33.79a (n=13)	39.15a (n=12)
Non-dysphoric			
M	51.03a (n=16)	35.54a (n=11)	45.55a (n=12)

Note: *Means not sharing a common subscript differ from one another at the .05 level of significance using the Newman-Keuls procedure*

Table 14

Mean Ratings of Percentage of Ideal Steps Included in Solutions

to Problems #1 & #2 on Question Concerning "What You Would Do"

Dysphoric status	Judgemental Context		
	Individual	Discuss with dysphoric	Discuss with non-dysphoric
Dysphoric			
M	30.11a (n=14)	40.29a (n=13)	39.81a (n=12)
Non-dysphoric			
M	48.69 a (n=16)	37.25a (n=11)	41.77a (n=12)

Note: *Means not sharing a common subscript differ from one another at the .05 level of significance using the Newman-Keuls procedure*

Table 15

Analysis of Variance on Mean Ratings of Percentage of Ideal Steps Included in

Solutions to Problem #3 on the Question Concerning "What One Could Do"

Source	SS	df	MS	F	Sig
Judgemental Context (J)	193.070	2	96.535	.150	.861
Dysphoric Status (D)	2834.754	1	2834.754	4.406*	.039
J X D	737.471	2	368.735	.573	.566
Error	46328.920	72	643.457		

*p < .05

Table 16

Analysis of Variance on Mean Ratings of Percentage of Ideal Steps Included in

Solutions to Problem #3 on the Question Concerning "What You Would Do"

Source	SS	df	MS	F	Sig
Judgemental Context (J)	2383.670	2	1191.835	1.910	.156
Dysphoric Status (D)	5733.199	1	5733.199	9.187*	.003
J X D	396.233	2	198.117	.317	.729
Error	44933.655	72	624.079		

*p < .05

Table 17

Mean Ratings of Percentage of Ideal Steps Included in Solutions to

Problem #3 on Question Concerning "What One Could Do"

Dysphoric status	Judgemental Context		
	Individual	Discuss with dysphoric	Discuss with non-dysphoric
Dysphoric			
M	32.64a (n=14)	40.67a (n=13)	40.15a (n=12)
Non-dysphoric			
M	52.31a (n=16)	45.50a (n=11)	52.09a (n=12)

Note: *Means not sharing a common subscript differ from one another at the .05 level of significance using the Newman-Keuls procedure*

Table 18

Mean Ratings of Percentage of Ideal Steps Included in Solutions to Problem #3

on Question Concerning "What You Would Do"

Dysphoric status	Judgemental Context		
	Individual	Discuss with dysphoric	Discuss with non-dysphoric
Dysphoric			
M	29.07a (n=14)	29.67a (n=13)	44.62a (n=12)
Non-dysphoric			
M	52.31a (n=16)	45.50a (n=11)	57.36a (n=12)

Note: *Means not sharing a common subscript differ from one another at the .05 level of significance using the Newman-Keuls procedure*

Appendix B.1

Dear Subject:

My name is Elaine Stoffer. I am a graduate student in the Department of Educational Psychology at the University of Calgary, conducting a research project under the supervision of Dr. John Mueller, as part of the requirements towards a Ph.D. degree. I have received permission from my univerity and the Psychology Department of St. Francis Xavier University to conduct my Ph.D. project here. I am writing to provide information regarding my research project, Personality, Imaging and Thinking, so that you can make an informed decision regarding your participation.

The purpose of the experiment is to see how peronality factors, imaging, and problem-solving abilities relate to one another. As part of the study you will be asked to imagine events, complete mood and personality questionnaires, and attempt to generate solutions to some simple, hypothetical social problems. Moreover, you may be asked to engage in a discussion about the latter with another partcipant. This discussion will be audiotaped, with your permission. These procedures will take approximately 45 minutes. You should be aware that even if you give your permission you are free to withdraw at any time for any reason and without penalty .

Participation in this study will involve no greater risks than those ordinarily experienced in daily life.

Data will be gathered in such a way as to ensure anonymity. Your name will in no way be associated with your responses. Moreover, we are only concerned with group scores, not individual ones. And once collected, responses will be kept in strictest confidence. The data will be kept in locked filing cabinets at the University. And only group results will be reported in any published studies.

If you have any questions, please feel free to contact me at 867-2262. Or you can contact Dr. Ted Wright at 867-2262. He is the Chair of both the Psychology Department Ethics Committee and the St. Francis Xavier University Committee on Ethics in Research. My Ph.D. supervisor, Dr. John Mueller can be reached at (403) 220-5561. You can also contact the Office of the Chair, Faculty of Education Joint Ethics Review Committee at (403) 220-3381. Two copies of the consent form are provided. Please return one signed copy to me and retain the other copy for your records.

Thank you for your cooperation.

Sincerely,

Elaine Stoffer

Appendix B.2

Consent for Research Participation

I, the undersigned, hereby give my consent to participate in aresearch project entitled
Personality, Imaging, and Thinking.

I understand that such consent means That I will take part in imagining events and answering
questions.

I understand that participation in this study may be terminated at any time by my request or
at the request of the invetigator.

Participation in this project and/or withdrawal from this project will not adversely affect me in
any way.

I understand that this study will not involve any greater risk than those ordinarily occuring in
daily life.

I understand that the responses will be obtained anonymously and kept in strictest
confidence.

I understand that only group data will be reported in any published reports.

I have been given a copy of this consent form for my records. I understand that if I have any
questions I can contact the researcher at 867-2262, the supervisor at (403) 220-5561, or
the Department of Psychology Ethics Chair at 867-2262.

_____

Date

_____

Signature

_____

Participant's Printed Name

Appendix D

For each question, check either YES or NO in the space provided.

1. Do you have many different hobbies?   YES__ NO__

2. Do you stop to think things through before doing anything?　　　YES__ NO__

3. Have you ever taken the praise for something you knew someone else had really done?

YES__ NO__

4. Are you a talkative person?　　　YES__ NO__

5. Were you ever greedy by helping yourself to more than your share of anything?
YES__ NO__

6. If you say you will do something, do you always keep your promise no matter how inconvenient it may be?　　　YES__ NO__

7. Can you usually let yourelf go and enjoy yourself at a lively party?

YES__ NO__

8. Have you ever blamed someone for doing something that was really your fault?
YES__ NO__

9. Do you enjoy meeting new people?　　　YES__ NO__

10. Have you ever taken anything (even a pin or button) that belonged to someone else?
YES__ NO__

Appendix E

Dream Task

At this point in the study we would like you to take a moment to try to recall an image from some dream that you have had. Focus on that image for about 60 seconds, Then turn to the next page.

Thank you

Appendix F

Imaging Task

At this point in the study we would like you to spend a moment focusing on a particular image. Please spend about 60 seconds imaging, that is, "picturing in your mind's eye", an orange object. Any orange object will do. After you have done this please turn to the next page. Thank you.

Appendix G

For the next FIVE minutes try your best to focus your attention on each of the ideas on this page.
Read each item slowly and silently to yourself. As you read the items, use your imagination and concentration to focus your mind on each of the ideas. Spend a few moments visualizing and concentraing on each item. Try to get through as many of these as you can during the 5 minute period.

- the physical sensations you feel in your body
- your character and who you strive to be
- the degree of clarity in your thinking right now
- why you react the way you do
- the way you feel inside
- the possible consequences of your current mental state
- how similar/different you are relative to other people
- what it would be like if your present feelings lasted
- why things turn out the way they do
- trying to undertand your feelings
- how awake/tired you feel now
- the amount of tension in your muscles
- whether you are fulfilled
- your physical appearance
- whether you feel stressed right now
- the long-term goals you have set
- the amount of certainty you feel
- your present feelings of fatigue/energy
- possible explanations for your physical sensations
- how hopeful/hopeless you feel
- the level of motivation you feel right now
- the degree of helplessnes you feel
- the degree of calmness/restlessness you feel
- the possible consequences of the way you feel
- what your feelings might mean
- how sad/happy you are feeling
- the expectations your family has for you
- why your body feels this way
- why you get this way sometimes
- how passive/active you feel
- what people notice about your personality
- the kind of student you are and wish you were

- how weak/strong your body feels right now
- the degree of relaxation/agitation you feel
- the kind of peron you think you should be
- the degree of control you feel right now
- what would happen if your current physical state lasted
- sitting down and anayzing your personality

- why you turned out this way
- the things that are most important in your life
- how quick/slow your thinking is right now
- the degree of decisiveness you feel
- trying to undertnd who you are
- how you feel about your friendships
- whether you have accomplished a lot so far

Remember to move to the next task after 5 minutes

Appendix H.1

You get a message from your girlfriend/boyfriend that she/he is very angry with you because of something you've done. You do not want the relationship to break up. The situation ends when she/he is very happy with you again. Begin the story when you get the message.

Appendix H.2

You notice that one of your friends seems to be avoiding you. You really like and enjoy spending time with this person, and want him/her to like you. The situation ends when she/he likes you again. Begin the story when you notice your friend avoiding you.

Appendix H.3

You are listening to other people speak at a committee meeting on how to solve an honour code problem at your university. They have made several suggestions, but you feel they have overlooked some critical reasons why these suggestions will not work. You want to tell them these reasons. The story ends when the other committee members realize you are right. Begin the story when you first realize that there is something wrong with the others' suggestions.

This project seems a nice example of using simulation in instruction, at least far as my knowledge of that literature permits me to tell. The format is unusual, and I enjoyed exploring it compared to a ream of paper. It's nice that it will be available as a continuing resource. It's clear that a lot of work and problem-solving went into this, beyond what MEd students usually done in terms of creativity. My main interest is in determining the student's knowledge of the limits of this approach and the alternatives that may exist.

I still do not have a solid feeling for exactly what MEd performance should be now that the requirements have changed between EDPS and GDER, but this document seems more than acceptable for the MEd level in terms of sophistication and originality, and I expect to be able to pass the candidate accordingly pending comparable performance on the oral component.

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