

THE IMPACT OF MOTIVATION ON PEOPLE'S RECOLLECTIONS OF
THEIR PARENTS

by

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Abstract

Previous studies of motivated memory have demonstrated that individuals experiencing negative affective states will retrieve positive memories as a means of improving their mood (i.e., a mood incongruency effect in recall). Two experiments were conducted to investigate the hypothesis that mood repair motivations, prompted by lowered feelings of self-esteem induced by a failure experience, would result in mood incongruent recall of individuals' experiences of parental behavior occurring during their childhood. It was further hypothesized that individual difference variables reflecting the tendency to engage in mood repair strategies (i.e., meta-mood cognitions and causal attributions for negative events) would predict the occurrence of mood incongruent recall. The results of Experiment 1 support the notion of motivated recall of childhood experiences: participants retrieved a greater proportion of positive memories under conditions of failure than under conditions of success. In contrast, limited and inconsistent evidence of the moderating effect of the assessed individual differences on recall positivity was revealed. Additionally, Experiment 2 explored the impact of varying levels of motivational concern, other relevant individual differences (i.e., depressive affect, self-esteem), and task demands on mood incongruent recall. The overall pattern of results suggest that recollections of parents are a particularly effective source of material for restoring positive moods, independent of the potential moderating effect of individual differences associated with mood repair tendencies. Findings are discussed in terms of the multiple situational and motivational determinants of mood incongruent recall, and directions for future research are suggested.

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For Inna.

*me despido y camino
hacia otro lado
y saben
que me esperas
-Pablo Neruda*

TABLE OF CONTENTS

	Page
Approval Page	ii
Abstract	iii
Acknowledgments	iv
Table of Contents	v
Chapter 1: Introduction and Overview.....	1
Chapter 2: Review.....	4
Cognitive Factors in Memory	4
Motivational Factors in Memory	7
Chapter 3: Goals and Main Features of the Present Research.....	18
Personality Traits and Motivated Memory	20
Recall of Childhood Experiences of Parental Behavior	24
The Present Studies	28
Chapter 4: Experiment 1	31
Method	32
Participants.....	32
Design.....	32
Procedures	33
Measures	35
Dependent Measures: Recollections of Parenting	40
Results	43

Analyses of the Selective Recall Measure	43
Analyses of the Global Recall Measure	46
Discussion	52
Chapter 5: Experiment 2	55
Method	58
Participants	58
Design.....	59
Procedure	59
Measures	60
Results and Discussion.....	63
The Effect of Mood Induction, Traits, Information and Order of Recall Measures on Recall Positivity	64
Depression and Negative Affectivity.....	72
Self-Esteem	74
Chapter 6: General Discussion	75
Determinants of the Effects of Mood on Memory	76
Meta-Mood Cognitions and Recall Positivity	77
Attributional Style	71
The Influence of Motivational Context on Mood Repair Efforts	83
Task Demands	85
Biased Memories vs. Biased Ratings	88
Level of Depression and Memory for Childhood Experiences	90
Self-Esteem as a Moderator of Mood Incongruent Recall	92

Summary and Conclusions.....	94
Appendix A: Questionnaires and other Research Materials.....	96
A1 Introduction to Experiment 1.....	97
A2 Meta Mood Experience Scale (MES) for Experiment 1.....	98
A3 Expanded Attributional Style Questionnaire - Short Form (EASQ-S).....	104
A4 Beck Depression Inventory - Short Form (BDI-S).....	113
A5 Positive and Negative Affect Schedule (PANAS).....	115
A6 Selective Recall Measure (Part A of Recall Measure Test).....	118
A7 Global Recall Measure (Part B of Recall Measure Test).....	122
A8 Social Perceptiveness Test Cover Sheet for Experiment 1.....	126
A9 Social Perceptiveness Test.....	127
A10 Social Perceptiveness Feedback Materials.....	131
A11 Meta-Mood Experience Scale (MES) for Experiment 2.....	134
A12 Self-Esteem Scale.....	143
A13 Introduction to Experiment 2.....	145
A14 Social Perceptiveness Test Cover Sheet for Experiment 2.....	146
Appendix B: Tables of Results.....	147
B1 Experiment 1: Mean Ratings on the Recall Measures as a Function of Feedback Condition	148
B2 Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood and Mood Induction	149
B3 Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Control) and Mood Induction	150

B4	Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Clarity) and Mood Induction	151
B5	Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Changeability) and Mood Induction	152
B6	Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Acceptance) and Mood Induction	153
B7	Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Value) and Mood Induction	154
B8	Experiment 1: Mean Ratings on the Recall Measures as a Function of Attributional Style (Internal-External) and Mood Induction	155
B9	Experiment 1: Mean Ratings on the Recall Measures as a Function of Attributional Style (Stable-Unstable) and Mood Induction	156
B10	Experiment 1: Mean Ratings on the Recall Measures as a Function of Attributional Style (Global-Specific) and Mood Induction	157
B11	Experiment 1: Mean Ratings on the Recall Measures as a Function of Attributional Style (Personal Goal Items) and Mood Induction	158
B12	Experiment 1: Mean Ratings on the Recall Measures as a Function of Level of Depression	159
B13	Experiment 1: Mean Ratings on the Recall Measures as a Function of Level of Depression and Mood Induction	160
B14	Experiment 1: Mean Ratings on the Recall Measures as a Function of Negative Affectivity.....	161
B15	Experiment 1: Mean Ratings on the Recall Measures as a Function of Positive Affectivity.....	162
B16	Experiment 2: Mean Ratings on the Recall Measures as a Function of Mood Inductio	163
B17	Experiment 2: Mean Ratings on the Recall Measures as a Function of Meta-Mood and Mood Induction	164
B18	Experiment 2: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Emotional Attention) and Mood Induction.....	165
B19	Experiment 2: Mean Ratings on the Recall Measures as a Function of Attributional Style (Personal Goal Items) and Mood Induction	166
B20	Experiment 2: Mean Ratings on the Recall Measures as a Function of Level of	

Depression	167
B21 Experiment 2: Mean Ratings on the Recall Measures as a Function of Negative Affectivity	168
B22 Experiment 2: Mean Ratings on the Recall Measures as a Function of Positive Affectivity	169
B23 Experiment 2: Adjusted Mean Ratings on the Recall Measures as a Function of Level of Depression with Self-Esteem Covaried	170
B24 Experiment 2: Adjusted Mean Ratings on the Recall Measures as a Function of Self-Esteem with Depression Covaried.....	171
References	172
Footnotes	185

CHAPTER 1: INTRODUCTION AND OVERVIEW

Considerable debate exists regarding the accuracy of individuals' memories of their childhood. Although some theorists have concluded that there is little consistent evidence that childhood recollections are subject to distortion (Brewin, Andrews & Gotlib, 1993), others have suggested that they are reconstructed and hence may be influenced by an individual's beliefs, motivations and moods (Bartlett, 1932; Fiske & Taylor, 1991; Greenwald, 1980; Loftus & Loftus, 1980; Stangor & McMillan, 1992). Research supportive of the latter viewpoint has demonstrated the effect of cognitive processes such as inferential reasoning, the importation of previous knowledge and the reinterpretation of prior experience on the content of recalled experiences (Bransford & Johnson, 1972; Loftus, Miller & Burns, 1978; Spiro, 1975, 1977). Studies of memories for other persons in particular suggest that they are influenced by an individual's prior knowledge and expectancies (Anderson and Pichert, 1978; Hastie, 1981; Hirt & Sherman, 1985; Snyder & Uranowitz, 1978; Taylor & Crocker, 1981).

Recent investigations of reconstructive processes have focused on understanding how motivational factors (e.g., an individual's goals, needs and desires) influence social memory. Experimental findings suggest that there is a relationship between motivational states and recall. In particular, the desire to arrive at conclusions that bolster self-esteem and self-image influences which memories become relatively more accessible to the individual (Fiske, 1993; Kunda, 1990; Sorrentino & Higgins, 1986), and which memories are likely to be "forgotten" (Davis, 1990). Mood states activated at the time of retrieval have also been shown to influence memory. In contrast to those findings suggesting distortions in the content of recollections, investigations of mood effects have demonstrated distortions in the affective

valence of recollections. The majority of effects in the mood-memory literature have been viewed as a product of cognitive processes (Bower, 1981; Clark & Isen, 1982). However, motivational accounts of mood induced memory distortions have been proposed. A limited number of studies have demonstrated that individuals will recall positive memories following a negative experience. Some theorists have suggested that under certain conditions individuals engage in “mood repair,” wherein positive memories are recruited in an attempt to alleviate the distress caused by a negative experience (Parrott & Sabini, 1990).

Recent research has identified some of the conditions under which individuals will retrieve positive memories in order to improve their mood (Erber & Erber, 1994; Parrott & Sabini, 1990). For example, negative experiences that involve threats to self-esteem seem particularly able to prompt mood repair efforts (McFarland & Buehler, 1996). The present research further explored the relationship between mood repair motivations and recall, specifically the effect of self-esteem threat on the positivity of individuals recollections of their parents. It was hypothesized that individuals would recall more positive autobiographical memories of their parents after a failure experience than after a success experience. It was expected that individuals confronted with failure would experience a lowering of self-esteem and accompanying negative affective states. Presumably, the subsequent recruitment of positive memories should alleviate distress and bolster self-esteem by affording individuals the opportunity to focus on previous experiences of care, attention and praise from parents.

It was further hypothesized that personality traits may influence the degree to which people engage in motivated recall. McFarland and Buehler (1996) demonstrated that individuals who are willing to acknowledge their negative moods are more likely to recruit

positive memories following a failure experience than following a success experience. It appears that individual differences in mood awareness may moderate the extent to which persons engage in mood repair efforts in response to failure. It seems reasonable to expect that other individual differences, particularly those that relate to coping with negative events (e.g., attributional style, self-esteem), may also moderate the effect of feedback on the positivity of individuals' recollections.

Recent controversies regarding the recovery of childhood memories of trauma in adulthood have placed renewed focus on the impact of current motivational factors on recall. In addition, research on adult attachment style involves the retrospective recall of the quality and affective tone of parent-child relationships (Ainsworth; 1989; Bartholomew & Horowitz, 1991). It may be that the positivity or negativity of mental representations of interpersonal relationships change as a function of present concerns. However, few attachment researchers have explored the impact of current motivations on the affective tone of autobiographical memories of parents. Given the implications such findings may have for research relying on recollections of childhood, and on the more general debate regarding the accuracy of both the content and positivity of childhood memories (Brewin et al., 1993; Loftus, 1993), such an investigation seemed warranted.

CHAPTER 2: REVIEW

Various literatures pertinent to the present research will be reviewed in this chapter.

First, a brief summary of the experimental evidence for reconstructive processes in memory will be presented. Following this, previous research demonstrating the influence of motivational states on memory, particularly those that involve the preservation of self-esteem, will be reviewed. Next, research examining the impact of mood states on memory will be discussed. Most previous studies have shown that moods activate similarly valenced memories (i.e., a mood congruency effect in recall). This established finding will be contrasted with recent evidence demonstrating mood incongruent recall. Mood incongruency findings are important because they support the hypothesis that biases in recall can occur under conditions of self-esteem threat. Evidence suggesting that individual differences in both meta-mood cognitions and causal attributions for negative events (attributional style) may moderate mood repair efforts will then be presented. The literature review section will conclude with a brief survey of research findings regarding the effect of moods on autobiographical memories of childhood experiences.

Cognitive Factors in Memory

Permanent vs. Reconstructed Memory. An examination of the voluminous literature on memory reveals two overarching perspectives. One postulates that experience, once encoded in long-term memory, is permanently stored. Forgetting, or the incomplete recall of information, is therefore due to retrieval failure (Tulving, 1974). Under appropriate conditions, it is conceivable that previously forgotten memories could be retrieved. However, the majority of evidence documenting the recovery of previously forgotten

memories comes from clinical case studies and was not obtained under controlled experimental conditions (Snyder & Uranowitz, 1978; Loftus & Loftus, 1980).

In contrast to permanence theory, the cognitive reconstructive perspective postulates that forgetting is due to the actual loss of information over time, rather than a failure to retrieve previously encoded material. Reconstructive theories then suggest that various cognitive processes work to fill-in the gaps in incomplete memories. Laboratory experimental findings have documented the influence of a variety of cognitive processes on recall, including: a) importation (in which previously unrelated information is added to a recollection); b) inferential reasoning (in which some of the contents of a memory are inferred on the basis of contextual cues); c) and reinterpretation (in which memories are altered to conform to new information) (Bartlett, 1932; Bransford & Johnson, 1972; Loftus, Miller & Burns, 1978; Loftus & Loftus, 1980, Spiro, 1975, 1977; Snyder & Uranowitz, 1978). For the majority of studies concerning reconstructive processes, distortion is measured in terms of changes in the content (i.e., the material and events described) of retrieved experiences. These changes are reflected in differences between the actual stimuli presented for encoding and subsequent recollection, or in differences in content as a function of various post-encoding contexts.

The effects of prior knowledge on memory. According to the reconstructivist perspective, a key aspect of how memories are reconstituted involves the influence of prior knowledge, or schemas. A schema is defined as a cognitive structure that represents knowledge about a concept or type of stimulus, including its attributes and the relations among those attributes (Fiske & Taylor, 1994). Schemas are believed to be cumulative, holistic and assimilative blends of information (Spiro, 1977). Schemas also reduce the need

for a large storage capacity, such as that which might be required in permanent storage models of memory (Fiske & Taylor, 1994).

There is considerable evidence for the influence of prior knowledge on the retrieval of information (Bem & McConnel, 1970; Frederiksen, 1975; Loftus, 1979; Spiro, 1975, 1977). Anderson and Pichert (1978) demonstrated that if, prior to retrieval, individuals were instructed to adopt the perspective of different characters in a story, concomitant changes in the recall of relevant information occurred. The authors suggest that adopting a different perspective lead participants to rely on existing knowledge structures to provide implicit cues for the recall of different categories of stored information. Similarly, Bransford and Johnson (1972) demonstrated increased quantity and accuracy of recall when individuals were provided with an appropriate organizing theme or context (schema), as compared to when they were not.

Social schemas and memory. Studies have revealed that person schemas, and expectancies and attitudes based on our knowledge of others, strongly influence memories for interpersonal experiences (Fiske & Taylor, 1994; Greenwald, 1980). Social or person schemas include prototypic conceptions (like extrovert and introvert), representations of specific individuals, and representations of the self (self-schemata) (Taylor & Crocker, 1981). Person schemas shape social memory in a variety of ways, and usually in a schema-relevant direction (Hastie, 1981; Hirt & Sherman, 1985). For instance, the content of autobiographical memories tends to be consistent with our self-schemas (Ross, 1989; Cantor & Mischel, 1977). Moreover, social schema-relevant information that is consistent with one's expectations is recalled more readily than information that is inconsistent with one's expectations (Cohen, 1981; Stangor & McMillan, 1992).

Motivational Factors in Memory

As suggested above, much of the previous research on social memory has investigated ways in which cognitive structures such as schemas and expectancies influence reconstructive processes in memory. More recently there has been research interest in motivational factors (goals, needs, desires) and how they influence social memory and thought (Crocker, 1993; Fiske, 1993; Klein & Kunda, 1993; Kunda, 1990; Pyszczynski & Greenberg, 1987; Sanitioso, Kunda & Fong, 1990; Sorrentino & Higgins, 1986; Taylor, 1992). Most studies investigating the impact of motivation on memory can be categorized into three main types: a) investigations of how an individual's desire to reach favorable conclusions about the self influences recall; b) studies of motivated forgetting or repression; and c) research on the impact of mood on memory.

Desire to reach favorable conclusions. Studies that involve manipulating an individual's desire to reach favorable conclusions about the self have provided evidence of a directional bias in the accessing of previous experiences. Sanitioso, Kunda and Fong (1990) led participants to believe that a particular personality trait (either extroversion or introversion) was desirable to possess, and then asked them to recall past behaviors that were relevant to that trait domain (extroversion-introversion). The results indicated that a higher proportion of participants recalled extroverted behaviors (and a lower proportion recalled introverted behaviors) when extroversion was portrayed as desirable than when introversion was portrayed as desirable. The authors theorized that the experimental manipulation enhanced the accessibility of memories reflecting the desired trait. Studies have also found increased reaction times for generating and endorsing those memories and beliefs that could be used to justify desired conclusions (Markus & Kunda, 1986).

Similarly, Klien & Kunda (1993) found that individuals will engage in a biased reconstruction of their past behaviors in order to maintain the belief that they are superior to others. Those participants presented with estimates of the frequency of health-threatening behaviors among their peers reported engaging in fewer of these activities than those participants who were not presented with these estimates. Additional evidence for biased reconstruction of autobiographical memories is provided by studies indicating that participants report performing behaviors more frequently in the past when these behaviors are consistent with their current attitudes and beliefs (Ross et al., 1981). These findings may be accounted for by postulating that people attempt to maintain a positive view of themselves (Taylor & Brown, 1988) in which they appear both exceptional and consistent in their abilities and behaviors (Kunda, 1990). Motivated reconstructions of the past help maintain a sense of personal uniqueness and a feeling of superiority.

Motivated Forgetting. Historically, motivated forgetting or repression has been the main focus of motivated memory studies. Repression is most commonly defined as the selective and involuntary forgetting of material that causes individuals anxiety and pain (Freud, [1915], 1957). From the point of view of repression, this material is not lost, but rather stored in the unconscious and can be returned to awareness if the anxiety associated with the memory is removed. Much of the research on repression has attempted to confirm the presence of motivated forgetting and outline the mechanisms by which it operates (Erdelyi, 1990; Holmes, 1990). Similar to goal directed or biased cognitive processing, repression is conceptualized as a means of protecting self-esteem and coping with negative, anxiety provoking experiences. However, it has been noted that the majority of studies in the area of

repression have serious methodological and interpretive flaws (Caron & Wallach, 1957; D’Zurilla, 1965; Holmes, 1973,1990; Loftus, 1993; Loftus & Loftus, 1980; Truax, 1957).

Mood and memory. A considerable amount of research has been conducted on the influence of mood states on cognitive processes in general and memory in particular. In contrast to emotions, that instigate a relatively limited set of responses, moods are affective states capable of altering our affective, cognitive and behavioral responses to a wide array of objects and events. Moods facilitate self-regulation, inform an individual of their general state and needs, and instigate a search to appraise the meaning and significance of events that led to mood itself (Morris, 1989). In addition, they can influence cognition through automatic (i.e., without awareness and without interfering with other ongoing cognition) or controlled (i.e., conscious, intentional and effortful) processes (Clark & Isen, 1982). Unlike the previously noted findings regarding reconstructive processes, mood-memory studies focus not on changes in the specific contents of stored information but on changes in the affective valence of recollections. Depending on the type research paradigm employed, mood-memory effects may reflect distortions in the relative number of positive or negative memories retrieved or distortions in the affective valence assigned to recollections. It should be noted that, as with previous mood-memory studies, it is potential distortions in the affective valence of recollections that concern the present research. No assumptions are made regarding the motivating effects of negative moods induced by self-esteem threat on the accuracy or veracity of the contents of autobiographical memory.

Cognitive theories of mood and memory. The majority of the previous research on the relationship between moods, memory and cognition has employed a cognitive theoretical framework. Bower (1981; Bower & Cohen, 1982; Gilligan & Bower, 1984) has proposed an

associative network model, in which moods cue similarly valenced material stored in memory. Long-term memory is defined as an associative network of nodes representing items such as concepts, schemata, and events. Bower (1981) hypothesizes that affective states are represented by such nodes and that associative links form between them and other related cognitive units. Because this network is activated by contextual and associative cues, material learned while in a given mood becomes associated in memory (Clark & Isen, 1982). If one later experiences the same mood, the previously associated memory becomes more accessible (Bower, 1981).¹

Mood congruency research. The main findings in support of an associative network model of memory have revealed “mood congruency” effects (Blaney, 1986), wherein memory for an emotional event is facilitated as a result of a match between its valence and that of the person’s mood state. Therefore, a mood congruency effect is present when a higher proportion of positive events are recalled by persons experiencing positive mood states than by those experiencing negative mood states. The facilitating effects of an affective match can occur either while learning the material (encoding) or while trying to remember it (retrieval) (Morris, 1989).

Both Blaney (1986) and Morris (1989) divide mood congruency research into those investigations that rely on individual or trait differences between people as the source of an affective state, and experimental studies that use a mood manipulation to induce an affective state. The majority of trait studies have compared the performance of depressed and nondepressed participants on recall tasks. Mood congruency effects have been reported in studies measuring the recall of task success or failure (DeMonbruen & Craighead, 1977; Dobson & Shaw, 1981; Johnson, Petzel, Hartney & Morgan, 1983) and the recall of

affectively valenced semantic material (Bradley & Mathews, 1983; Breslow, Kocsis & Belkin, 1981; Dunbar & Lishman, 1984, McDowall, 1984). In general, depressives underestimate the frequency of their successes on tasks, and demonstrate both poorer recall for positive material, and superior memory for negative material as compared to nondepressives. However, there are difficulties in interpreting these mood congruency findings. First, a potential pitfall of the correlational research that dominates trait studies is that the results may be the product of some characteristic of people with enduring depressive affect other than mood (e.g., negative self-concept). Second, in studies with individual differences as the independent variable, it is difficult to tell whether the mood congruency effect is due to mood during encoding or mood during retrieval or both, as the participants would typically be in the same mood at both times (Morris, 1989).

Experimental studies of mood congruency effects can be differentiated according to the type of procedure used to manipulate a subject's affective state prior to a recall task. There are those procedures that present the mood induction during the encoding phase of the experiment and there are those procedures that present the mood induction just prior to the retrieval phase. Studies that manipulate mood during exposure are difficult to interpret as mood may effect attention to the material and the way it is encoded (Blaney, 1986).

Therefore, the present review will confine itself to studies of mood at the time of retrieval.

Morris's (1989) review of the literature reveals that the majority of studies manipulating mood at the time of retrieval demonstrate mood congruency effects (Clark & Teasdale, 1985; Coleman, 1975; Forgas et al., 1984; Laird et al., 1982; Madigan & Bollenbach, 1982; Mathews & Bradley, 1983; Riskind, 1983; Riskind et al., 1982; Siegel et al., 1979; Snyder & White, 1982; Teasdale & Russell, 1983; Teasdale & Spencer, 1984; Teasdale & Taylor,

1981). However, there now exists an emerging body of evidence suggesting that, under certain conditions, the opposite recall pattern from mood congruency will occur. As discussed below, those studies that demonstrate mood incongruent recall are of direct pertinence to the present proposal.

Mood incongruency and motivated recall. Mood incongruency effects (i.e., a higher proportion of positive events recalled by individuals experiencing negative mood states than by those experiencing more positive mood states) suggest that people are sometimes motivated to recall experiences in a way that will suit their current needs. Motivated memory theorists have attempted to account for mood incongruency effects by proposing that negative moods prompt individuals to recruit positive memories in order to improve or “repair” their affective state (Isen, 1984, 1987; Clark & Isen, 1982; Parrott & Sabini, 1990). However, mood incongruency is a relatively rare finding, and a review of the commonalities across studies provides clues as to the conditions that must be present for this type of motivated recall to occur.

Parrott and Sabini (1990) provide two reasons why stronger evidence of mood incongruent recall has not yet been documented. First, cooperative participants who are aware that moods are the focus of study may inhibit mood repair efforts, perhaps in the belief that such attempts might interfere with the experiment. Second, many experimental settings manipulate mood by exposing participants to stimuli that semantically prime mood congruent concepts and memories, thus augmenting any tendencies toward congruent recall produced by mood alone. The authors suggest that naturally occurring mood inductions could be presented more unobtrusively than those conducted within a laboratory setting (i.e.,

without informing participants of the experimental focus and without the need to prime moods using language-based stimuli).

In what is perhaps the most well known paper addressing mood incongruent recall, Parrott and Sabini (1990) described several experiments exploring the nature of this phenomenon. Two of these experiments were conducted in naturalistic settings. In the first, exam grades were used as a means of inducing positive or negative moods in college students. At the beginning of a class lecture, grades were given to each of the participants. Subsequently, a memory task (writing down the first three autobiographical memories recalled from their high school years) was included as part of a class demonstration. The results revealed a mood incongruency effect for the first memory recalled; those participants whose grades were worse than expected recalled a significantly greater number of positive memories than negative memories, as compared to participants whose grades were better than or as expected. No differences were obtained for the second and third memories recalled. A second experiment used weather as a natural mood induction. Overall, participants rated their mood as more positive on sunny as compared to cloudy days. Participants recalled a significantly greater number of negative memories on sunny days than on cloudy days, demonstrating a mood incongruency effect.

Parrott and Sabini (1990) conducted a third and fourth experiment within a laboratory setting using a musical mood induction procedure. In the third experiment, participants were asked to try to actively maintain the mood suggested by the music (either positive or negative) while performing a series of cognitive tasks. The results revealed a strong mood congruency effect for all three memories recalled, but most prominently for the first memory. In contrast to the third experiment, participants in the fourth experiment were not made aware

that mood was the focus of the study. The results demonstrated mood incongruent recall for both the positive and negative affect conditions, but (as in Experiment 1) the effect was stronger for the first memory recalled. The authors concluded that the overall pattern of findings provided strong evidence for reliable mood repair effects. The Parrott and Sabini (1990) findings also suggest that mechanisms promoting mood incongruent recall predominate over those promoting mood congruent recall under natural conditions.

Erber and Erber (1994) investigated the conditions under which people will spontaneously regulate their negative moods by retrieving positive memories. The authors focused on the distracting qualities of happy or sad moods. They hypothesized that participants would be more likely to engage in mood repair efforts prior to a cognitively demanding task, in order to subsequently maintain their ability to perform successfully. In this study, positive or negative moods were induced in undergraduate participants either at the beginning or at the end of a class. Mood incongruency was expected to occur when the experiment was conducted before class, as participants would attempt to improve their mood in the face of impending work. In contrast, mood congruency was expected to occur when the experiment was conducted at the end of class, when participants would not perceive their mood as possibly interfering with class work. Each participant was asked to recall and focus on either a happy or a sad memory. Participants were then asked to list autobiographical memories. The findings were supportive of the principal hypotheses: Participants exposed to the sad mood induction at the beginning of the class recalled a greater proportion of happy memories than participants exposed to the sad mood induction at the end of class. The results were also in the predicted direction for initially happy participants, although the decrease was not significant. The authors cite these results as evidence that people are active

mood regulators who are sensitive to situational demands. People will attempt to neutralize negative moods that might interfere with the task at hand (Erber & Erber, 1994).

Recent evidence also suggests that certain types of people are more likely than others to demonstrate mood incongruent recall. McFarland and Buehler (1996) investigated the the role of individual differences in moderating people's memories in response to negative affective states. The authors reasoned that motivated recall, such as that evident in mood incongruent responses, should occur primarily in those individuals who are predisposed to openly acknowledge and experience negative emotions. McFarland and Buehler (1996) propose that in order to engage in mood repair by recruiting positive recollections, people must first acknowledge that they are distressed. The authors target the repression-sensitization variable (Byrne, 1964; Weinberger, 1990) as one individual difference that reflects the degree to which people acknowledge negative affect. Sensitizers adopt an "approach" orientation towards a threatening stimulus by focusing their attention on it or on their affective reactions to it. In contrast, repressors engage in an avoidance orientation by denying the threat or their affective reactions to it (Byrne, 1964; Weinberger, 1990).

McFarland and Buehler's (1996) first experiment examined the moderating role of repression-sensitization (R-S) in determining the effects of negative affective states on the positivity of recall. After completing a personality measure of R-S, participants completed a bogus "social perceptiveness" task and were provided with feedback on their performance. The three levels of performance feedback (i.e., below average, average and above average) that were provided to participants in order to manipulate their current mood created three different levels of affect (i.e., negative, neutral and positive). The negative and neutral affect conditions were the most pertinent for testing predictions concerning the relationship

between negative emotions and recall, and therefore were the primary focus of the research. After the feedback presentation, participants were given a list of categories of typical life events and were asked to select five experiences from their own past. They were asked to describe and rate the positivity of these events. Two independent raters later evaluated each event in terms of positivity. The results of the first experiment revealed that sensitizers reported more positive recollections after receiving negative feedback (negative affect condition) than after receiving neutral feedback (neutral affect condition). In contrast, repressors reported more negative recollections after receiving negative feedback than after neutral feedback. Sensitizers also reported more positive recollections after negative feedback as compared to repressors. A second experiment confirmed that the mood incongruency effect observed in sensitizers (in Experiment 1) derived from their greater willingness to acknowledge negative affect after a failure experience. Sensitizers reported more negative moods in the negative feedback condition than in the neutral condition, whereas repressors reported similar responses to both conditions. Sensitizers also responded more negatively to negative feedback than repressors.

In a third experiment, McFarland and Buehler (1996) further explored the influence of individual differences in the acknowledgment of affect on recall. In this case, meta-mood cognitions, or the degree to which persons consciously acknowledge, monitor, evaluate and sometimes work to change moods (Mayer & Gaschke, 1988), were targeted as a potential moderator of mood repair efforts. The authors hypothesized that measures of meta-mood would more directly assess acknowledgment of moods than measures of repression-sensitization. McFarland and Buehler (1996) observed that people who are higher on meta-mood scales (those who find moods acceptable, clear, controllable and changeable) were

more likely than their counterparts to react to a threatening situation (an upcoming stressful event) by recruiting positive memories of previous situations (i.e., a mood incongruity or motivated memory result).

In summary, the McFarland and Buehler (1996) results are consistent with Parrott and Sabini's (1990) contention that mood incongruity effects are more readily apparent when participants are unaware of the experimental focus on moods and when the recall task involves self-referential material (i.e., common life experiences). McFarland and Buehler (1996) also provide evidence that certain individuals, specifically those who are willing to acknowledge negative moods, are more likely to demonstrate mood incongruent recall. Finally, it should be noted that both Parrott and Sabini (Experiment 1, 1990) and McFarland and Buehler (1996) used a failure experience to induce negative mood in participants. As discussed below, failure on a self-relevant task may activate motivational concerns that enhance the likelihood of memory-based mood repair efforts. In the following chapter, literature most directly relevant to the primary goals of the present research will be reviewed.

CHAPTER 3: GOALS AND MAIN FEATURES OF THE PRESENT RESEARCH

The primary goal of the current research was to explore whether motivational factors influence peoples' recollections of their parents. Specifically, this research examined whether mood incongruity effects occur when individuals are asked to recall childhood experiences with their parents. As noted above, mood incongruity is a relatively rare finding, and an examination of the relevant literature reveals several factors critical to eliciting this effect. First, Parrott and Sabini (1990) determined that mood incongruent recall occurred only in those participants who remained unaware of the experimental focus on mood states. It may be that the presence of demand characteristics inhibits research participants from engaging in mood repair efforts. Second, all three of the mood incongruity studies reviewed in the previous section included a memory task that is self-relevant (i.e., the recall of autobiographical experiences). A third factor that may be critical to the elicitation of mood incongruity effects is the use of a self-esteem threatening experience. Although few studies examining the effects of mood on retrieval have used failure, when it has been used (McFarland & Buehler, 1996; Parrott & Sabini, 1990, Experiment 1), mood incongruent recall can occur. Research therefore supports the use of failure on a self-relevant task in order to activate motivational states associated with self-enhancement, and strongly suggests that biased recall may be prompted as a result. Finally, McFarland and Buehler (1996) demonstrated the impact of individual differences in the tendency to acknowledge negative affect on mood incongruent recall.

The present research incorporated all of the above features and moved to extend previous findings with respect to motivational influences on memory. First, the experimental focus on mood states was disguised from participants by presenting them with two apparently

unrelated tasks. The first involved the collection of the trait measures and the presentation of a mood manipulation (failure feedback), and the second involved the collection of the dependent (recall) measures. Second, the recall measures assessed autobiographical memories (i.e., peoples' recollections of their parents). An individual's recollections of their parents is an aspect of autobiographical memory that is associated with self-concerns such as esteem, confidence and the ability to form positive relationships with others. The recollection of positive childhood experiences should therefore be a potentially useful means of improving a negative mood. By recalling warm and supportive parents, individuals can bolster their self-esteem and comfort themselves in the wake of a recent negative experience. Third, the negative mood induction involved a threat to self-esteem. Moods were induced by presenting either positive or negative feedback on an important test. Negative affect induced by failure on a self-relevant task was expected to be an effective means of activating mood repair efforts.

Finally, the present research also examined the moderating role of various individual difference variables. McFarland and Buehler (1996) categorized participants along a personality dimension assessing the degree to which persons consciously acknowledge their mood states. The present investigations further explored how individual differences in meta-mood cognitions moderate the positivity of recall, extending previous findings on meta-mood cognitions by exploring their influence in a new recall domain-- individuals' memories of their parents. The present investigations also extend the findings of McFarland and Buehler (1996) by measuring another potentially relevant individual difference. Attributional style, or the characteristic way a person accounts for the causes of bad events, has been found to be related to the use of cognitive strategies that raise self-esteem and improve negative moods

(Morris, 1989). Accordingly, individual differences in attributional style should predict the occurrence of mood incongruent recall.

The following sections discuss the above issues in more detail, and additional literature will be reviewed. As will be seen, the present research constitutes the first investigation to explore both the impact of motivational factors (i.e., negative moods) and individual differences on the positivity of individuals' recollections of their parents.

Personality Traits and Motivated Memory

Attributional style as a moderator. McFarland and Buehler (1996) demonstrated that individuals who possess personality traits indicative of openness to emotional experience (sensitizers) are more likely to engage in mood repair efforts subsequent to failure. As well, individual differences in meta-mood cognitions, or the degree to which persons consciously acknowledge, monitor, evaluate and expect to change their moods, were also related to mood repair tendencies. The McFarland and Buehler (1996) findings are intriguing because they open up the possibility that other personality traits, particularly those related to the characteristic ways in which people cope with threat or negative events, may also moderate the degree to which people engage in motivated recall. In the present investigations, attributional style is hypothesized to be one such individual difference that may influence the relationship between negative emotions and recall positivity.

Seligman and his colleagues (Abramson, Seligman & Teasdale, 1978) state that individuals possess distinct attributional tendencies that influence how they account for negative experiences. Explanatory or attributional style is defined as the habitual way in which people explain bad events in their lives (Peterson, Seligman & Vaillant, 1988).

Research on attributional style has revealed links to mood states, in particular the intensity,

onset and chronicity of depression (Abramson, Metalsky & Alloy, 1989; Abramson, Seligman & Teasdale, 1978; Metalsky, Halberstadt & Abramson, 1987; see Sweeney, Anderson & Bailey, 1986, for a meta-analytic review). Research findings on the relationship between attributional style and both depression and motivational states will now be reviewed. Following this, hypotheses related to the possible moderating effects of attributional style on motivated recall will be presented.

Abramson (Abramson et al., 1978) outlines three principal attributional dimensions. Uncontrollable aversive events can be attributed to either a) internal (due to something about the person), or external (due to something about the situation) causes; b) stable (nontransient), or unstable (transient) causes; and c) global (present in a variety of situations) or specific (more circumscribed) causes. Individuals who habitually give internal, stable and global explanations for negative events (termed “pessimists”) are said to have an explanatory style that puts them at risk for depression when bad events occur (Seligman, Abramson, Semmel & von Bayer, 1979; Peterson & Seligman, 1984). Individuals with more external, unstable and specific attributional styles (termed “optimists”) are less vulnerable to depression (Peterson et al., 1988; Metalsky, Halberstadt & Abramson, 1987). However, research suggests that explanatory style is not predictive of all types of depression.

Abramson et al. (1989) cite a number of previous studies demonstrating that the stable/unstable and global/specific factors are more predictive of hopelessness depression (a broad subtype of depression believed to be precipitated by maladaptive cognitions) than overall indices of attributional style (that combine the internal, stable and global dimensions).

Attributional biases as a coping mechanism. There now exists a considerable body of evidence documenting the coping advantages of an optimistic attributional style (Zuckerman,

1979; Morris, 1989). For instance, by attributing success to internal factors and externalizing responsibility for failure, individuals can bolster and protect their ego or self-esteem.

Support for a “self-enhancing” attributional bias is provided by Miller (1976), who demonstrated that under conditions of high self-esteem involvement individuals assumed more personal responsibility for success and less responsibility for failure than under conditions of low self-esteem involvement. The fact that self-enhancing attributions are more evident when individuals believe their self-esteem is at stake indicates that there is a motivational component to attributions for success or failure.

As a coping strategy, attributional biases therefore include the tendency to minimize the causes of negative events as a means of improving one’s mood state and obviating threats to self-esteem. The present studies explore the impact of attributional style as a moderator of threats to self-esteem (and accompanying negative affect) produced by failure experiences. When threatened with a failure, people with an optimistic attributional style may cope with the event by engaging in self-enhancement strategies. One way to engage in self-enhancement is to retrieve positive memories. By idealizing one’s recollections, individuals can use past personal experiences of success and support from others to improve mood and self-esteem. Given that an optimistic attributional style is associated with self-enhancement, it was hypothesized that those individuals predisposed to minimizing failure will engage in recall distortion.

Only one previous study could be located exploring the influence of attributional style on the positivity of autobiographical memories. Whisman and Kwong (1992) examined the relationship between childhood recollections of parents, depressive symptoms and the cognitive variables hypothesized as vulnerability factors for depression (i.e., dysfunctional

attitudes and attributional style). Their findings revealed that negative recollections of parents were associated with greater severity of depressive symptoms and with stronger endorsement of a depressive attributional style in both nondepressed and mildly depressed college students. Moreover, controlling for the influence of attributional style eliminated the previously significant relation between recollections of parents and depressive symptoms, providing evidence that depressive attitudes and cognitive style mediate the relation between depressive affect and recall. The Whisman and Kwong (1992) findings suggest that individuals with a pessimistic attributional style tend to recall negative childhood experiences, whereas optimists tend to recall positive childhood experiences. These results support the present hypothesis that individual differences reflecting an externalizing or optimistic attributional style will be associated with the retrieval of positive memories.

However, the Whisman and Kwong (1992) study did not examine the relationship between attributional style and recall under conditions of self-esteem threat. No previous studies could be located that specifically investigate the moderating role of attributional style on the positivity of autobiographical memories subsequent to a negative, self-esteem threatening experience. Such an investigation seemed appropriate, given that attributional biases may predispose some persons to minimize the causes of negative events as a means of improving their mood state and self-esteem. The present investigations hypothesized that optimists will demonstrate mood incongruent recall, rating their parents more positively after failure than after success. Previous findings concerning self-enhancement strategies and attributional styles suggest that pessimists will be less likely to engage in mood repair efforts. It was therefore hypothesized that those individuals with an pessimistic attributional style will rate their parents as positively after failure as after success.

Recall of Childhood Experiences of Parental Behavior

The present studies are concerned with how persons might be motivated to retrieve particular memories of their parents. It is hypothesized that under conditions of self-esteem threat, individuals will be prompted to recall positive experiences with their parents in order to bolster their self-esteem and improve their mood. As noted earlier, an individual's recollections of his/her parents may be particularly effective in assisting mood repair efforts. This is because parental figures are associated with both self-concerns and emotional functioning (Bartholomew & Horowitz, 1991).

Previous investigations of memory for childhood experiences of parents have focused primarily on two areas: the relationship between adult and childhood interpersonal attachment patterns, and the effect of current mood states on the positivity of childhood recollections. Current approaches to adult attachment representations do attempt to account for the reconstructive nature of autobiographical memories, and in particular the tendency to idealize negative childhood experiences (Bartholomew, 1990; George, Kaplan & Main, 1985; van Ijzendoorn, 1995; Main, Cassidy & Kaplan, 1985). A central hypothesis within attachment theory suggests that adult mental representations of childhood attachment experiences with caregivers provide a "working model" of beliefs, expectations and affective reactions that influences behavior in current intimate relationships with partners and offspring. Attachment theory is less concerned with the content of autobiographical memories than with the form in which an autobiographical narrative is presented. The relative coherence of an individual's autobiographical narrative and its effect on current functioning provides the basis for understanding adult mental representations of childhood attachment experiences. Furthermore, autobiographical memory is viewed as an ongoing

reconstruction of one's own past (of which idealization may be a part) in light of new experiences (George, Kaplan & Main, 1985; van Ijzendoorn, 1995). Attachment theory therefore supports the conceptualization of the reconstructed nature of childhood recollections of parents employed in the present study. However, the precise manner in which current motives and moods affect those recollections has not been systematically investigated by attachment theorists. The investigation of such factors may therefore have implications for findings in the adult attachment literature, and in particular as they relate to the process of idealization (essentially the motivated positive distortion of recollections) of childhood relationships with parents.

As the present experiments are concerned with how negative mood states might impact on the positivity of individuals' recollections of parental behavior, those few studies examining the impact of mood on memories for childhood experiences will now be reviewed. The types of measures of individuals' memories of their parents used in these studies are also of interest to the present investigation, and will be presented in the methods section.

Mood and memory for childhood experiences. The majority of empirical studies examining the influence of mood states on the recall of childhood experiences have been conducted on people with histories of anxiety and depression (Gerlsma, Emmelkamp & Arrindell, 1990; Brewin et al., 1993). Given the empirical evidence regarding the influence of negative moods on recall (Blaney, 1986; Bower, 1981; Gotlib, 1983; Isen, 1984), it is likely that people who are distressed recall more unpleasant childhood events than do other individuals, regardless of the actual quality of their early family experiences. If recall is found to covary with mood, then the positivity or negativity of childhood recollections may

be largely a reflection of an individual's current level of functioning. If recall does not covary with mood, then bias in recall is of less concern.

Those studies that have examined the impact of anxiety states on recall of parental behavior have found that phobic disorders are associated with low levels of recalled parental affection and high levels of recalled parental control behaviors (see Gerlsma et al., 1990 for a meta-analysis of the relevant studies). However, studies examining the impact of depression on recall of parenting behavior have provided less consistent results (Brewin et al., 1993; Gerlsma et al., 1990). To date, six studies (Abrahams & Whitlock; 1969; Gerlsma et al., 1992; Gotlib, Mount, Cordy & Whiffen; 1988; Gotlib, Whiffen, Wallace & Mount, 1991; Parker, 1981; Plantes, Prusoff, Brennan & Parker; 1988) have reported no evidence of depressive distortion of memories of parental behavior. The majority of these studies have employed a within-subjects design, comparing the positivity of ratings of parents when individuals were depressed and nondepressed. Findings suggest that patients' ratings of early parental behaviors are not influenced by changes in depressive affect.

A minority of studies examining the influence of mood states on the recall of childhood experiences have been conducted with participants from nonclinical populations. Lewinsohn and Rosenbaum (1987) assessed symptoms of depression and recall of parental behavior in a large, community sample. Consistent with previous research, currently depressed individuals recalled their parents as being more rejecting and unloving than did nondepressed individuals. However, individuals who had experienced a prior episode of depression (but not at the time of the interview) did not differ from never-depressed individuals in their recall of parental behavior. The authors concluded that the retrieval of negative memories is a temporary consequence of the individual's mood and not a stable trait of persons who

experience depression. Amato (1991) assessed the relationship between recollections of parent-child relationships and psychological distress among university students at two points: once at the beginning and again at the end of a semester. Over this period, increases in psychological distress (including depression) were associated with recalling more parent-child conflict, marital conflict and economic hardship during childhood. Finally, one previous study was located that used a mood induction procedure prior to measuring recollections of parental behaviors. Gerlsma et al. (1992) demonstrated that those individuals who had been exposed to a depressive mood induction (involving a combination of music and presentation of self-referential statements) showed significant decreases in their ratings of parental care, whereas those individuals exposed to an elated mood induction showed increases in their ratings of parental overprotection.

Despite the findings for nonclinical populations, researchers have come to conflicting conclusions about the reliability of retrospective recall of childhood experiences. After reviewing the available evidence, Brewin et al. (1993) conclude that claims concerning the general unreliability of retrospective reports are exaggerated. In contrast, a meta-analysis by Gerlsma et al. (1990) concluded that there is statistical evidence of biased recall of autobiographical memories in clinically anxious and depressed individuals. As well, studies involving nonclinical populations demonstrate mood congruency effects; that is, depressed individuals recall their parents more negatively than do nondepressed individuals.

In summary, although there is considerable debate over the degree of bias in childhood recollections, the effects that do occur are in the mood congruent direction. Naturally occurring differences in depression as well as induced depressive states are associated with negative recollections. In light of this work, the prediction for the current research may seem

surprising. The primary prediction is for a mood incongruency effect: People in negative moods are expected to recall more positive childhood experiences of their parents than people in more positive moods.

The Present Studies

There are key differences between the present investigation and previous studies that justify the current prediction of mood incongruency. In the only study that directly manipulated depressive affect (Gerlsma et al., 1992), self-esteem threat was not a part of the mood induction. As noted earlier, the use of a self-esteem threatening failure experience may be critical to the elicitation of memory-based coping efforts to reduce negative affect. Furthermore, the methods used in much of the prior work are not ideal for assessing the effects of moods, and therefore the results may be questioned. Studies that showed a correlation between depression and recall are open to alternative interpretations (Blaney, 1986). Depressives differ from nondepressives on a number of dimensions, including levels of self-esteem, physical symptoms and self-conceptions. As well, the past experiences of depressives may differ from those of nondepressives. Therefore, it cannot be determined if the previous mood congruency findings concerning depressives' recollections of parents are due to negative moods per se or to other factors. It seems that more research is needed to determine if autobiographical memories are subject to a mood bias.

Because of the problems with using a correlational approach for studying the impact of negative moods on memory (i.e., measuring the co-occurrence of depression levels and memories), the present research will use an experimental approach to studying the effects of negative moods on memory. As noted, the one prior study that used this approach did not use a self-esteem threatening experience to induce negative affect. Thus, it seems that the

possibility of mood incongruency in the recall of childhood experiences has not yet been given an adequate test. Although the primary focus of the current research was to assess the effects of the mood manipulation, measures of individual differences in depression and negative affectivity were included because much of the past research has explored these variables. It should be noted that no previous studies have incorporated both a mood manipulation and individual differences in depression. The present experiments therefore constituted the first investigation of the potential moderating effect of individual differences in the disposition towards depressive affect in determining the effects of negative affect on recollections of parents.

The type of recollections examined in the present investigation consisted primarily of individuals' descriptions of common parent/child interactions. Participants were asked to select several interactions with their parents from a list of descriptors, to then briefly articulate their own recollections of experiences they had selected, and rate the positivity of each. An additional measure of the positivity of childhood recollections was provided by having participants similarly rate the positivity of a second list of descriptors. The key purpose of these tasks was to measure changes in affective valence associated with childhood experiences subsequent to failure feedback. Differences in the selection, description and rating of positive or negative experiences were presumed to reflect differences in their relative accessibility under varying (neutral or negative) levels of self-esteem threat. As noted earlier, the present investigation makes no assumptions regarding the effect of mood states on the accuracy or veracity of autobiographical memory. Rather, the present studies are designed to assess changes in the positivity of recollections under conditions of self-esteem threat. Both distortions in content and distortions in recall positivity therefore

represent different aspects of the more general tendency for individuals to reconstruct past events in response to current motives and moods.

In sum, the main purpose of the present investigation was to examine motivational influences on individuals' recollections of parental behavior. Two experiments were conducted, designed to show the impact of motivational factors and individual differences on recall. The first experiment hypothesized that mood repair efforts, prompted by lowered feelings of self-esteem induced by a failure experience, would result in mood incongruent recall of parental behavior. That is, participants would recollect a greater proportion of positive memories under conditions of failure than under conditions of success. It was further hypothesized that individual differences in meta-mood cognitions would moderate efforts at mood repair, and therefore the tendency to acknowledge and accept mood states would be associated with increased mood incongruent recollections. It was also hypothesized that those individuals with an optimistic attributional style would be more likely to engage in mood repair efforts.

Experiment 2 compared two possible strategies for engaging in mood repair. It also investigated the possibility that task demands may have influenced mood incongruent recall. An additional purpose of Experiment 2 was to explore the moderating effect of individual differences in self-esteem on recall positivity.

CHAPTER 4: Experiment 1

The findings reviewed in the previous chapters suggest that an individual's desires and motives may affect which memories are relatively more accessible to them. Studies of motivated memory have demonstrated that individuals will retrieve positive memories as a means of improving their mood. Research also suggests that individual differences in meta-mood cognitions, or the degree to which persons consciously acknowledge, monitor, evaluate and expect to change their moods are related to mood repair tendencies. Additionally, there may be individual differences in causal attributions for negative events that make certain persons more likely to engage in mood repair efforts. Previous research suggests that individuals with an optimistic attributional style engage in coping strategies that minimize the impact of failure on self-esteem. One such coping strategy may involve idealizing one's recollections of the past by selectively retrieving positive memories, and thereby improving one's mood.

The present research was concerned with the influence of negative mood states on memories of *childhood experiences*. In Experiment 1, the main hypothesis was that the recall of positive childhood experiences would occur in individuals exposed to failure on a self-relevant task because threats to self-esteem are likely to provoke a strong affective reaction, and hence motivate efforts to improve mood and self-esteem levels. In other words, it was hypothesized that participants exposed to failure will report greater positivity of recall of parental behavior than those exposed to success. Experiment 1 also investigated the moderating effect of individual differences in meta-mood cognitions on mood repair efforts in the recollection of childhood experiences. Specific hypotheses regarding the moderating role of individual differences on mood repair efforts were as follows: It was hypothesized

that those individuals high in the acknowledgment and acceptance of their moods would be more motivated to engage in mood repair efforts, and would therefore recall their childhood experiences more positively after a failure experience than after success experience. It was further hypothesized that individuals that are low in the acknowledgment and acceptance of their moods would be less aware of their negative mood state following a failure experience. It may be that for these individuals, negative moods influence recall positivity through more automatic memory processes (e.g., the priming of memories of a similar affective valence) (Bower, 1981). Therefore, a mood congruency effect was predicted for those participants low in meta-mood cognitions. Second, it was hypothesized that those individuals predisposed to minimizing failure would engage in recall distortion: Optimists would rate their recollections of their parents more positively after failure than after success. In contrast, individuals predisposed to accepting responsibility for failure would not engage in recall distortion: Pessimists would rate their parents as positively after failure as after success.

Method

Participants

Seventy-nine participants, consisting of 57 female ($M = 18.8$ years) and 22 male ($M = 20.9$ years) undergraduate students at Simon Fraser University were recruited using an introductory psychology subject pool. They completed the experiment individually and received course credit for their participation.

Design

The design of this experiment is best conceptualized as a series of 2 x 2 factorials. The first factor was type of feedback: Negative vs. positive. The second factor was one of a series of trait indices. Each index could be high or low.

Procedures

The experimental design and procedures employed in the present experiments were similar to those used by previous researchers (Sanitioso, Kunda & Fong, 1990; McFarland & Buehler, 1996). Upon arrival at the laboratory, participants were told that they would be involved in two distinct studies and were given a brief description of the purposes of these studies. They were told that the goal of the first study was to determine the relationship between social perceptiveness ability and personality traits. Social perceptiveness (see Appendix A8) was described as an important attribute associated with a variety of positive social outcomes (such as the attainment of occupational goals and the cultivation of successful relationships with others). Socially perceptive people were described as coming from supportive family environments and having positive experiences with parents in childhood. Consistent with this cover story, the experimenter indicated to the participants that if they agreed to take part in the studies they would first complete a personality questionnaire, and then complete and receive feedback on a social perceptiveness test (see Appendices A9 and A10). They were then told that the goal of the second study was to explore sex differences in autobiographical memory. The participants were told that their responses would be totally anonymous, and two drop-boxes, marked “Study 1” and “Study 2” were pointed out to them. This procedure was designed to encourage honest responses and in general to disguise the relatedness of the two studies, and hence disguise the main focus of the experiment. After they were informed of the basic procedures, participants completed a consent form which informed them in writing of the procedures they were agreeing to, and assured them that they were free to withdraw from the studies at any time.

After signing the consent form, each participant was then asked to complete a questionnaire containing measures of attributional style, depression, negative affectivity and meta-mood cognitions. These measures are described in greater detail in the “Individual Differences Measures” section below. The experimenter returned when the participant had completed the trait measures. He then provided him or her with a short description of the social perceptiveness task. The description was designed to increase the participant’s desire to perform well in this area. Participants were told that socially perceptive individuals report higher levels of satisfaction and positive adjustment in work and social domains, and that high levels of social perceptiveness are associated with positive childhood experiences of parental care and home structure. The experimenter then left them alone to read the description of the social perceptiveness task. After a few minutes, the experimenter returned to the room, presented them with the social perceptiveness test booklet, and then left them alone to complete the bogus test. When the participant had finished, the experimenter returned and removed the test booklet for (presumed) scoring.

Performance feedback manipulation. The experimenter returned after 5 minutes and presented the participant with a feedback sheet consisting of six 9-point rating scales. Each scale pertained to a different aspect of social perceptiveness ability (e.g., the ability to judge the target person’s relationships, the ability to judge the target person’s personality, etc. [(1) very poor - (5) average - (9) very good]). The participant was told that their performance level on this test had been circled in red ink. Half of the participants received negative feedback (i.e., that they occupied a low position in the comparison group [circled ratings ranging from 1 to 3 points lower than average]). The remaining participants received slightly positive feedback (i.e., that they occupied an above average position in the comparison group

[circled ratings ranging from 1 to 3 points higher than average]). The purpose of the feedback manipulation was to induce either a negative or a neutral affective state. As most persons believe they are above average in positive personality traits, slightly positive feedback tends to induce a neutral affective response. Participants were randomly assigned to either feedback condition, and the experimenter remained blind to this assignment.

Each participant was given 3 to 4 minutes alone to look at the feedback sheet to allow the mood induction to take effect. Upon returning, the experimenter asked the participants to place all of their materials in an envelope, seal it and put it in a pile of similar envelopes in a box marked "Study 1."

The experimenter then indicated that the second study was about to begin. Participants were asked to read a description of the research and complete the attached questionnaire. The experimenter left the room while they completed the dependent (recall) measures assessing the positivity of their recollections of their parents. These measures will be described in greater detail below.

Immediately thereafter, each participant was extensively debriefed concerning the false feedback and the actual purposes of the present research. They were then thanked for their participation and given a participant feedback form, providing them with the opportunity to air any concerns to the university ethics committee.

Measures

Several individual difference variables that were expected to moderate the relation between negative affect and recall were assessed in the personality questionnaire of Experiment 1.

Meta-mood experience. In the present study, individual differences in meta-mood cognitions were hypothesized to influence the positivity of recalled childhood experiences. Meta-mood is hypothesized to reflect cognitive regulatory processes that acknowledge, monitor, evaluate and sometimes work to change moods. Mayer and Gaschke (1988) developed a meta-mood experience scale to assess individuals' ongoing thoughts and feelings about their mood states. McFarland and Buehler (1996) subsequently adapted the Mayer and Gaschke (1988) measure to reflect individual differences in the general tendency to acknowledge and regulate one's moods. The adapted Meta-Mood Experience Scale (MES), designed to assess the more enduring qualities of the reflective experience of mood, was used in the current study.

The MES consists of statements measuring 5 aspects of meta-mood experience. They reflect the degree to which people find their moods 1) controllable, (e.g., "Often my feelings are out of control") (4 items), 2) clear (e.g., "I am often unable to describe exactly how I am feeling") (4 items), 3) acceptable (e.g., "Most of the time I believe there is nothing wrong with feeling the way I do") (4 items), 4) typical (e.g., "I often feel that when I'm in a certain mood, my mood will go on forever") (3 items) and, 5) changeable (e.g., "I often try to think good thoughts to cheer myself up") (5 items). Participants responded to each statement on a 5-point response scale ranging from strongly disagree (1) to strongly agree (5). Scores were coded to insure that higher scores represent greater perceived control over one's moods, greater clarity of mood states, greater acceptance of moods, greater perception that one's moods are typical for the individual, and greater effort directed at changing one's moods. Internal consistency scores (Cronbach's alpha) for each of the scales were computed for the current sample, and revealed moderate levels of reliability (.56 - .69). The exception was the

typicality scale, which demonstrated unacceptably low reliability (.13), and was dropped from subsequent analyses. In addition to the 20 items from the MES, 10 items designed to measure the degree to which individuals value and appreciate the experience of moods (value scale) were created (e.g. “I learn more about myself by exploring my feelings”). Response format for these items was identical to that of the MES. Cronbach’s alpha score (.84) revealed good reliability for the Value scale. An overall index of meta-mood cognitions for each participant was formed by averaging the z-scores of participants’ control, clarity, changeability, acceptance and value scale scores. Cronbach’s alpha for items included in the index revealed moderate levels of reliability (.64). Median scores for the MES Index and for the separate Control, Clarity, Acceptance and Changeability subscales were computed, and participants were divided into two groups consisting of those high and low on each of the 5 dimensions. The remaining 18 items presented with the MES and shown in Appendix A2 were included for exploratory purposes, and were not used in subsequent analyses.

Attributional style. As with meta-mood cognitions, individual differences in attributional style were also hypothesized to influence the positivity of recalled childhood experiences. As a measure of the degree to which individuals are inclined to attribute negative experiences to external or internal causes, all participants completed a modified version of the Expanded Attributional Style Questionnaire (Seligman et al., 1979; Peterson et al., 1982, Peterson & Villanova, 1988). Twelve items, querying individuals’ causal attributions for negative life events, were presented from the Short Form of Expanded Attributional Style Questionnaire (EASQ-S) (Whitley, 1991). Participants read a one line descriptor of a bad event and were asked to vividly imagine themselves in that situation. Three attributional dimension ratings associated with each event description are scored in the directions of increasing internality,

stability, and globality on a 7-point Likert scale. Composite scores within each dimension are created by summing the associated item ratings across all events. The EASQ-S is highly correlated ($r = .94$) with the full version of the test and Cronbach's alpha scores for the scales ranged from .65 to .87 (Whitely, 1991). Median split scores on the EASQ-S were computed for all scales. Each participant was then categorized as either internal or external, stable or unstable, and global or specific in their attributions for negative events. Two exploratory items, reflecting the degree of importance attributed to each negative event, and attributions of personal control over the cause of each negative event were included with the attributional style questionnaire (as shown in Appendix A3) but were not used in subsequent analyses.

Depression and negative affectivity. Although the results of previous research are equivocal, there is some evidence that depression levels influence the affective valence of autobiographical memories. It may be that the revealed tendency for depressives to recall negative memories of their parents will still occur when they are led to experience a strong, self-relevant, negative affective state. In order to explore the potential influence of depression on the positivity of memory, participants completed the abridged version of the Beck Depression Inventory (BDI-S) (Beck & Beck, 1972). The Beck Inventory is a 13 item self-report scale assessing the affective, cognitive, physiological and motivational features of depression. The 21 item version of the Beck has been shown to be stable, with test-retest correlations ranging from .60 to .86. The concurrent validity of the BDI is moderate to good, as measured by correlations with clinicians ratings and with other valid measures of depression ($r_s = .62$ to $.77$) (Bechman, 1985). The BDI-S is highly correlated with the full version of the test ($r = .96$) (Beck & Beck, 1972).

Each item on the inventory consists of four self-evaluative statements scored from 0 to 3, with increasing scores indicating greater severity of depression (e.g., “I do not feel sad” [0], “I am so sad or unhappy that I can’t stand it” [3]). Total scores on the BDI-S vary from 0 to 39. Participants are asked to rate each statement as it applies to their mood during the last week. Median scores on the BDI-S were computed and the participants were divided into low and high depression groups. The mean score on the BDI-S for the present sample is 5.1 (SD= 3.75), below the cutoff for clinical depression on this measure (Beck & Beck, 1972). The distribution of BDI-S scores was positively skewed, consistent with scales designed to detect the presence of abnormal and/or infrequent but clinically significant symptoms in the general population.

In order to provide a broader test of the influence of individuals’ predisposition to experience negative affective states on recall, the Positive and Negative Affect Schedule (PANAS) (Watson, Clark & Tellegen, 1988) was completed by all participants. The PANAS consists of 20 mood descriptors (10 positive and 10 negative) that form separate positive and negative affectivity scales. Examples of the positive mood descriptors include “enthusiastic”, “proud” and “inspired.” Examples of the negative mood descriptors include “scared”, “upset” and “nervous.” Participants were asked to rate on a 5-point scale the extent to which they had experienced each mood in the past five years, ranging from not at all to very much. Test-retest reliabilities were .68 for the PA scale and .71 for the NA scale; high enough to support the use of the PANAS as a trait measure of emotionality (Watson et al., 1988). Internal consistency reliabilities (alpha coefficients) for the present sample were high (.85 for the Positive Affect (PA) scale, .86 for the Negative Affect (NA) scale). Median split

scores on the PANAS scales were computed, and each participant was categorized as either high or low in negative mood disposition, and high or low in positive mood disposition.

Dependent Measures: Recollections of Parenting

Autobiographical memories. Recall of childhood experiences of parental behavior was measured using two questionnaires: Selective recall and Global ratings. The format of the Selective recall task in the present study was similar to that used by McFarland and Buehler (1996) and Sanitioso, Kunda and Fong (1990). A pool of items from questionnaire measures of parental behavior and parent-child experiences was assembled. The Parental Bonding Instrument (PBI) (Parker, Tupling & Brown, 1979) assesses two dimensions of parental behavior. The first, labeled “Care”, contrasts emotional responsiveness and expression of warmth with a cold and unresponsive parenting style. The second, labeled “Overprotection” contrasts intrusive parental control and resistance to the child’s attempts to gain autonomy with encouragement of independence and separate identity (Parker et al., 1979; Parker, 1984). The Children's Report of Parental Behavior Inventory (CRPBI) (Schaefer, 1965; Lewinsohn & Rosenbaum, 1987) contains three scales measuring recall of parental positive involvement, negative control and lax discipline. The PBI and CRPBI are two of the most widely used instruments assessing recalled parental behavior (Gerlsma, Arrindel & Emmelkamp, 1991). Additional items were created in order to assess recall of parental lax discipline and parental consistency in child care. A pretest was assembled, consisting of a total of 57 descriptors of parental child care behaviors, and administered to 90 undergraduate students. Pretest participants were asked to rate the positivity of the behaviors on a 9-point Likert scale ranging from extremely negative parental behavior (1), to neutral (5), to extremely positive parental behavior (9). Mean positivity ratings were computed for each

item and only those pretest items rated very positive (mean > 7.0) or very negative (mean < 3.0) were included in the recall measures.

Selective recall measure. Recall positivity was measured by having participants select descriptions of childhood experiences with parents. Participants were presented with 20 categories of positive and negative parental behaviors from the pretest item pool (see Appendix A6). Descriptors from each of the three main dimensions of common parent/child experiences were included (Positive Involvement/Care (7 items), Overprotection/Negative Control (9 items), Lax Discipline/Consistency (4 items)). They were asked to select 4 categories of experiences of their mother and/or their father, from when they were between the ages of 6 and 16. They were then asked to briefly describe a memory associated with each category and then rate each of the 4 memories on a 9-point scale ranging from (1) reflecting very negatively on their mother/father's parenting ability, to (5) neutral, to (9) reflecting very positively on their mother/father's parenting ability. Three subscales and one combined scale of recall positivity were computed for each participant on the Selective recall measure. First, mean scores for the 4 ratings were computed for each participant, yielding an average positivity of recall score (Participant subscale). Second, the pretest positivity scores for the 4 items selected by each participant were combined to yield an overall mean pretest positivity score (Pretest subscale). Third, an independent rater coded the positivity of each of the participant's descriptions of the events (using the same 9-point scale), and a mean observer rating for the 4 events was computed (Observer subscale). Fourth, a combined scale of recall positivity for each participant was formed by averaging the z-scores of participants' own mean positivity ratings, the mean pretest positivity scores and the mean observer ratings

of positivity (Combined scale). Interrater reliability for the observer ratings was computed on 15 of the Selective recall protocols, yielding an $r = .90$.

Global recall measure. Participants were also asked to rate both their mother and their father in terms of the degree to which each of 10 different interactions occurred in their own childhood (again, between the ages of 6 and 16). To avoid overlap with those descriptors chosen for the Selective recall measure, items for the Global recall measure were chosen from those remaining in the pretest pool (see Appendix A7). Participants were presented with descriptors reflecting negative and positive parental behaviors in the areas of Overprotection/Negative Control (e.g., “criticized you when you failed at something”) (3 items), Positive Involvement/Care (e.g., “expressed positive emotions when with you”) (4 items), and Lax Discipline/Consistency (e.g., “wouldn’t give in to your demands, and would stick by their rules”) (3 items). Each descriptor was rated on a 5-point scale ranging from never occurring (1), to sometimes (3), to very often occurring (5). Coding on the negative items was reversed in order to insure that higher scores reflected positive ratings in all instances. Separate Mother and Father subscales, consisting of the mean positivity of Global recall ratings, were computed across the 10 items. The mother and father ratings were then summed and averaged to yield a mean positivity of recall of parental behaviors score (Combined Mother/Father scale).

Results

The principal analyses for Experiment 1 consisted of 2 x 2 ANOVAs (Feedback: negative vs. positive; Trait Index: high vs. low) performed separately on combined scales measuring the positivity ratings of participants' own recollections of childhood experiences (Selective recall) and of descriptions of parental behaviors (Global recall). In all analyses a significance level of .05 was employed, except for marginal cases. Selective recall measures are in the top portion and Global recall measures in the bottom portion of all tables in Appendix B.

Analyses of the Selective Recall Measure

Analyses using meta-mood cognition as the trait variable. The primary prediction of the current research was that participants exposed to a negative mood induction (i.e., failure) would retrieve a greater proportion of positive memories of their parents than those exposed to a neutral mood induction (i.e., slightly positive feedback). A two-way ANOVA (Feedback: negative vs. neutral x MES Index: high vs. low) was performed on the Selective Combined scale, revealing a significant main effect for mood induction, $F(1, 75) = 4.23, p < .04$. Consistent with predictions, participants rated their parents more positively in the negative mood condition ($M = .21$), than in the neutral mood condition ($M = -.24$) (Table B1, Appendix B).

It was also hypothesized that individual differences in meta-mood cognitions would be associated with mood incongruent recall. Specifically, it was predicted that individuals with higher levels of meta-mood cognitions would recall a greater proportion of positive childhood experiences of their parents after failure than after success; in contrast, individuals lower in meta-mood cognitions would be less likely to recall more positive memories after failure than after success. The present analysis did not support this prediction: there was no

significant *Feedback x MES Index* interaction on the Selective Combined scale, $F(1, 75) = .013, p < .03$ (Table B2).

Examination of the mean positivity scores on the separate Selective subscales provides additional support for the overall pattern of findings on the Combined measure. On each of the Participant, Pretest and Observer measures, participants exposed to failure rated their parents' parenting behaviors more positively than those exposed to success (Table B1). As with the findings for the Combined scale however, results for the separate subscales do not suggest that individual differences in meta-mood cognitions moderate mood incongruency effects. Both participants higher in meta-mood cognitions and participants lower in meta-mood cognitions rated their recollections of their parents more positively following negative mood induction than following neutral mood induction, on all three subscales (Table B2). A similar pattern of findings with respect to trait moderated mood incongruency was observed for the individual meta-mood Control, Clarity, Changeability, Acceptance and Value scales (Tables B3 to B7).

Overall, the results support the main hypothesis of Experiment 1, demonstrating mood incongruent recall of childhood experiences of parental behavior following a failure experience. However, predictions regarding the moderating effect of meta-mood cognitions on mood incongruency effects were not supported by analyses on the Selective recall measures.

Analyses using attributional style as the trait variable. It was predicted that individual differences in attributional style would be associated with mood incongruent recall: Optimists would rate their childhood recollections of their parents more positively after

failure than after success. In contrast, it was expected that pessimists would be less likely to engage in mood incongruent recall. 2 x 2 ANOVAs (Feedback: negative vs. positive; EASQ-S trait: high vs. low) were performed on the Selective Combined scale. The results for separate analyses using the EASQ-S scales (Internal/External, Stable/Unstable and Global/Specific) as predictors revealed no significant interactions with feedback on the Selective Combined scale (p 's > .05).

Similar to the pattern of recall positivity obtained on the Combined scale, results for the Selective recall subscales did not support the hypothesis that individual differences in attributional style moderates mood incongruent recall. As is evident from the mean recall positivity scores, both optimists and pessimists rated their parents more positively following negative mood induction than following neutral mood induction on the Participant, Pretest and Observer measures (Tables B8 to B10).

It is possible that the broad range of negative events described in the EASQ-S do not accurately reflect specific attributions for experiences of a more self-relevant nature, such as those associated with the type of failure feedback used here. In an effort to derive a more precise measure of attributional style, scores on the EASQ-S scales were recomputed using the 5 items that concern the achievement of important personal or career goals (e.g. "you have trouble with one of your instructors"). Items of a more general nature (e.g. "there are few recreational activities on which you are interested") were omitted from the scales. Median split scores for EASQ-S Personal Goals (PG) Internal/External, Stable/Unstable and Global/Specific scales were computed and each participant was categorized according to their attributional style (as above). The results of separate analyses for the PG scales (see Table B11) revealed no significant interactions with feedback on the Selective Combined

scale (p 's $> .05$). Thus, for the Selective memory measure, those individuals with an optimistic attributional style towards self-relevant negative events did not recall a greater number of positive childhood experiences of their parents after failure than after success.

Depression and negative affectivity. There is some evidence that depression levels may influence the positivity of autobiographical memories (Gerlsma et al., 1990). 2 x 2 ANOVAs (Feedback: negative vs. positive; BDI-S: high vs. low) were performed on each of the Selective recall measures. The results (Table B12) revealed a significant main effect for depression levels. Scores on the BDI predicted outcome on the Combined scale: depressive participants ($M = -.30$) recalled their parents significantly more negatively than did nondepressives ($M = .28$), $F(1, 75) = 8.00, p < .006$. No significant interaction effects were present ($p > .05$). As is evident from the mean positivity scores for the Participant, Pretest and Observer subscales, a similar pattern of more negative recall of parents for depressives as compared to nondepressives was present on all Selective measures (Table B13).

The results using the Negative Affect (NA) scale (Table B14) were consistent with those for the Beck, with a main effect present on the Combined scale, $F(1, 75) = 7.51, p < .01$. As well, no significant interaction effects were present. No significant main effects or interactions were present for the Positive Affect (PA) scale of the PANAS on the Selective Combined scale ($p > .05$) (Table B15).

Analyses of the Global Recall Measure

Analyses using meta-mood cognition as the trait variable. It was predicted that participants exposed to failure would report greater positivity of recall of parental behavior than those exposed to success. 2 x 2 ANOVAs (Feedback: negative vs. positive; MES Index:

high vs. low) revealed no significant difference across the two feedback conditions for the Global Mother/Father scale, $F(1, 75) = .634, p < .43$ (Table B1). In contrast with the Selective recall measure, which all participants completed first, an overall mood incongruity effect in recall (i.e., more positive recollections after a failure than after success) was not evident on the Global recall measure. It should be noted, however, that mood incongruity on this measure was present for some types of individuals. These effects will be described below.

It was predicted that individuals with higher levels of meta-mood cognitions would recall a greater number of positive childhood experiences of their parents after failure than after success. In contrast, it was predicted that individuals lower in meta-mood cognitions would recall a greater number of negative childhood experiences of their parents after failure than after success. The present analyses, using the MES Index as a predictor, revealed a marginally significant interaction effect on the Combined Mother/Father scale, $F(1, 75) = 3.56, p < .06$ (Table B2). An examination of the means and contrasts relevant to this interaction reveal support for the predicted effect of meta-mood cognitions on the positivity of recall (all p values for t -tests are two-tailed). Participants high in meta-mood cognitions demonstrated mood incongruent recall, rating their parents more positively after negative feedback ($M = 3.61$) than after positive feedback, ($M = 3.37$), $t(75) = 2.89$. In contrast, participants low in meta-mood cognitions did not demonstrate a mood incongruity effect on the Combined Mother/Father scale ($M = 3.55$ for negative feedback, $M = 3.65$ for neutral feedback), $t(75) = 1.89$.

The pattern of mean positivity scores obtained on the separate Global subscales was generally similar to that present on the Mother/Father measure. Although participants exposed to failure rated their mothers and their fathers more positively than participants exposed to success, the differences between the groups were relatively small (when compared to the results obtained on the Selective measures) (see Table B1). However, examination of the positivity scores as a function of individual differences in meta-mood cognition (Table B2) provides some evidence of trait moderated mood incongruent recall. For example, on the Global Mother subscale, participants higher in meta-mood cognitions responded in the direction of mood incongruency ($M = 3.70$ for negative feedback, $M = 3.44$ for neutral feedback), whereas participants lower in meta-mood cognitions responded in the direction of mood congruency (e.g., Mother; $M = 3.61$ for negative feedback, $M = 3.70$ for neutral feedback). It should be noted that this pattern differs from that present on the Selective measures, where both participants higher in meta-mood cognition and participants lower in meta-mood cognition engaged in mood incongruent recall.

The hypothesis regarding the moderating effect of individual differences in meta-mood cognitions on mood incongruency was further explored by examining the mean positivity of recall scores for the individual MES scales (Control, Clarity, Changeability, Acceptance and Value). Findings suggestive of trait moderated mood incongruency were present primarily for the Acceptance (Table B6) and Value (Table B7) scales. For example, on the Combined Mother/Father scale, participants who value and appreciate the experience of moods rated their parents' parenting more positivity after negative feedback ($M = 3.69$) than after positive feedback ($M = 3.35$). In contrast, participants who do not value their mood states did not

demonstrate mood incongruent recall ($M = 3.43$ for negative feedback, $M = 3.66$ for positive feedback). However, this pattern is not present for the remaining meta-mood scales.²

Findings on the Global scales are somewhat supportive of the hypothesis regarding the moderating effect of individual differences in meta-mood on recall positivity. ANOVA results for the MES Index suggest that higher levels of cognitive awareness and regulation of mood were associated with more positive recall of parents after failure than after success. In contrast, lower levels of meta-cognition were not associated with mood incongruent recall. A similar recall pattern was present for the meta-mood Value and Acceptance subscales.

Analyses using attributional style as the trait variable. It was predicted that optimists would rate their childhood recollections of their parents more positively after failure than after success; in contrast, pessimists would recall more negative childhood experiences after failure than after success. 2 x 2 ANOVAs (Feedback: negative vs. positive; Attributional Style: high vs. low) were performed on the Global recall measures. The hypothesis predicting a relationship between individual differences in attributional style and positivity of recall was explored by examining the principal ANOVA results for the individual EASQ-S scales. No significant interaction effects were present for the EASQ-S Internal/External, Stable/Unstable, or Global/Specific scales on the Combined Mother/Father positivity ratings, $F(1, 74) = 2.91$, $F(1, 75) = .057$, $F(1, 75) = 1.15$, respectively (p 's > .05). However, recall positivity scores for the Internal/External dimension (Table B8) were suggestive of trait moderated mood incongruency. Participants who tend to attribute negative causes to external causes rated their parents more positively after negative feedback ($M = 3.71$) than after neutral feedback ($M = 3.54$). In contrast, participants who tend to attribute negative causes to

internal factors rated their parents more negatively after negative feedback ($M = 3.40$) than after neutral feedback ($M = 3.52$). Note that a similar pattern of results is present on the Global Father subscale (Table B8).

Predictions regarding the moderating effect of attributional style on positivity of recall were further explored by examining the separate 2 X 2 ANOVAs for the Personal Goals factors. The analyses revealed limited evidence of trait moderated mood incongruency: A marginally significant interaction effect for the PG Stable/Unstable scale (Table B11) was present on the Combined Mother/Father positivity ratings, $F(1, 75) = 3.78, p < .056$. Recall positivity scores for participants who attribute negative events to unstable causes were in the predicted direction ($M = 3.71$ for negative feedback, $M = 3.52$ for neutral feedback), but the difference between the means was not significant, $t(75) = 1.5$. No differences in recall positivity on the Mother/Father scale were in evidence for participants who attribute negative events to stable causes, ($M = 3.40$ for negative feedback, $M = 3.54$ for neutral feedback), $t(75) = 1.11$. No significant interactions were present for the PG Internal/External or Global/Specific, scales on the Combined Mother/Father positivity ratings, $F(1, 75) = .005$, and $F(1, 75) = 2.46$, respectively (p 's $> .05$).

Examination of the mean positivity scores on the Global subscales provide some further evidence of the moderating effect of personal goal attributions on mood incongruent recall (Table B11). For example, participants who attribute negative events to unstable causes rated their fathers more positively after negative feedback ($M = 3.68$) than after positive feedback ($M = 3.48$). In contrast, comparison of the mean positivity of Father scores for participants who attribute negative events to stable causes were suggestive of mood

congruent recall, ($M = 3.19$ for positive feedback, $M = 3.47$ for negative feedback). A similar pattern is present for the Global Mother subscale.³

Depression and Negative affectivity. 2 x 2 ANOVAs (Feedback: negative vs. positive x Negative Affectivity: high vs. low) were performed on the Global Combined Mother/Father recall scale. No significant main effects or interactions were revealed for analyses using the BDI-S, or the negative or positive affectivity scales of the PANAS as predictors (p 's > .05). Thus, individual differences in negative affectivity did not predict positivity of recall on the Global scales.

Discussion

The main purpose of Experiment 1 was to investigate the influence of motivational factors, specifically the motivation to improve one's mood, on the positivity of recollections of childhood. It was hypothesized that threats to self-esteem induced by a failure experience would produce mood incongruent recall of parental behavior. The second purpose of Experiment 1 was to examine the role of individual differences in attributions for negative events in moderating efforts at mood repair. It was hypothesized that individuals who acknowledge and value their mood states would be more likely to recruit positive memories of their parents in the presence of self-esteem threatening failure, than in the presence of success. Mood incongruent recall was also predicted for those individuals who externalize the causes of negative events.

The results for the Selective recall measure support the main hypothesis: participants experiencing a negative affective state (i.e., those exposed to negative feedback on a performance task) rated their memories of their parents more positively than participants experiencing a neutral affective state. This mood incongruency finding supports theories contending that individuals experiencing negative moods can be motivated to alleviate their distress by recruiting positive memories from the past. Therefore, the present findings suggest that autobiographical memories can be biased by threats to self-esteem.

Results for the Global recall measure offer some preliminary support for the second hypothesis: Statistically marginal mood incongruency effects were present for people who scored high on the overall index of meta-mood cognitions. In addition, findings for the separate meta-mood factors suggest that participants that value the experience of moods and participants that find their mood states acceptable rated common parent/child experiences

more positively after negative feedback than after positive feedback. These findings are in accordance with those of McFarland and Buehler (1996) demonstrating that individuals who are willing to acknowledge negative affect after a failure experience are more likely to engage in mood repair efforts by recruiting positive recollections.

Results for the Global recall measure provided only limited support for hypotheses regarding the moderating effect of individual differences in attributional style on recall positivity. A significant interaction effect in the predicted direction was achieved for the EASQ-S Internal/External scale on the combined Mother/Father ratings. A marginally significant interaction effect in the predicted direction was also obtained for the PG Stable/Unstable scale on the Mother/Father ratings. In each case, examination of the means relevant to these interactions was suggestive of trait moderated mood incongruent recall: Optimists who were exposed to a negative mood induction rated their parents more positively than Optimists who were exposed to a neutral mood induction. However, planned contrasts between the relevant mean positivity scores were not statistically significant. In the present experiment, it was proposed that people with an externalizing attributional style will tend to cope with threats to self-esteem by engaging in self-enhancement strategies. As a whole, the results for the Global measure only partially confirmed hypotheses concerning the moderating effect of individual differences in attributional style on mood repair efforts.

Evidence for the influence of individual differences in depression on the recollection of autobiographical experiences was provided by data from the Selective recall measure. Individuals with a general disposition to experience depression rated their parents significantly more negatively than did those without this disposition, regardless of experimental condition. The same finding was revealed for individuals with a disposition

towards experiencing a broad range of negative affective states. These mood congruency findings are consistent with past research showing a relation between depression levels and memory. Furthermore, the current findings indicate that this pattern occurs regardless of whether people are experiencing a temporary increase in negative affect or not. This pattern implies that the effects of depression levels on recall may derive more from negative self-conceptions than from mood states per se.

To summarize the basic pattern of results in the present experiment, an overall mood incongruency effect (i.e., more positive recollections after failure than after success) was present on the Selective recall measure, but not on the Global measure. In contrast, evidence supportive of the moderating effect of individual differences in meta-mood cognitions (and to a lesser extent, attributional style) on recall positivity was present on the Global recall measure, but not on the Selective measure.

CHAPTER 5: Experiment 2

There are two plausible accounts of the mood incongruity findings on participants' memories of their parents (Selective recall measures) in Experiment 1. The first is that, as predicted, participants exposed to failure feedback recruited positive childhood experiences of their parents in order to improve their mood -- a "pure" mood repair effect. A second possible reason, however, involves a somewhat more indirect process through which negative feedback influenced memories. It may be that the cover story presented with the social perceptiveness test provided those participants who received negative feedback with an alternative motive for recruiting positive memories. That is, the cover story presented an explicit association between above average performance on the social perceptiveness task and exposure as a child to positive experiences with parents. Thus, participants may have retrieved positive memories of their parents in an effort to discount the negative feedback. One way participants could lower the threat to self-esteem posed by the negative feedback is to deny that they have the personal qualities and background that are predictive of failure on the social perceptiveness task. Evidence for a discounting strategy on the part of some participants was revealed in the debriefing sessions. Over half the participants in the failure condition remarked that they dismissed the negative feedback as incorrect, as they felt they had come from family backgrounds with positive, supportive parents. Thus, participants could discount or dissociate themselves from the feedback by recalling a past that is inconsistent with the feedback itself. In summary, both "pure" mood repair efforts and discounting efforts could result in increased recall of positive experiences for those exposed to failure feedback. People may have retrieved positive memories in a direct attempt to

enhance their moods. Alternatively, they may have retrieved positive memories in order to discount the feedback and hence improve their moods.

The first goal of Experiment 2 was to investigate the possibility that informing participants of the association between success and positive parenting on the social perceptiveness task provided them with an alternative means of engaging in mood repair. Half of the participants in Experiment 2 were presented with a preamble that included information associating success on the social perceptiveness task with positive parenting during childhood. The other half received the identical preamble, but with the information regarding the association between parenting and task success omitted. If the “pure” mood repair hypothesis is correct, then mood incongruent recall will be present in both the “informed” and “uninformed” conditions. However, if participants are recruiting positive memories in order to discount the negative feedback, and hence improve their moods, then those in the informed condition will be more likely than their uninformed counterparts to demonstrate mood incongruent recall.

A second goal of Experiment 2 was to further explore the role of individual differences in moderating mood repair efforts. In the first study, mood incongruency findings for persons high in meta-mood cognitions are difficult to evaluate because they were present only for participant’s positivity ratings of their parents on common parent/child interactions (Global recall measure). For all participants in Experiment 1, the Global measure was presented after the Selective measure. Therefore, the procedure for Experiment 2 involved counterbalancing the order of presentation of the recall measures. Comparison of the pattern of results across the Selective and Global recall measures will help clarify if the trait moderated mood incongruent recall findings of Experiment 1 were due to an order effect. If the differential

pattern of trait moderated mood incongruent recall (across the two types of recall measures) observed in Experiment 1 is due to differences in task demands between the Selective and Global recall measures, then participants possessing traits predictive of greater mood repair efforts will rate their childhood experiences of their parents behavior more positively under conditions of failure than under conditions of success on the Global recall measures only (regardless of the order of presentation). An alternative account for the differential pattern of results across the Selective and Global scales in Experiment 1 is related to a fading of the induced negative mood state over time. It is possible that, because the Selective recall task was completed immediately after the presentation of the false feedback, the affect associated with the failure experience was at its strongest when completing this measure. In comparison, the attendant negative affect may have faded somewhat by the time participants completed the Global recall task. Fading would have resulted in relatively lower levels of mood incongruent recall on the Global measure, allowing for the emergence of trait moderated mood repair effects. If this alternative is correct, then trait moderated mood incongruent recall should only be present on the dependent measure presented second.

Predictions regarding the precise nature of the trait-moderated effects of mood on memory were identical to those of Experiment 1. When trait-moderated effects do occur, participants higher in meta-mood cognitions would recall more positive childhood experiences of their parents after failure than after success. In contrast, participants lower in meta-mood cognitions would be less likely to demonstrate a mood incongruent pattern of recall. The same predictions were made for the moderating effect of individual differences in attributional style on recall positivity: Participants with an optimistic attributional style should recall more positive childhood experiences of their parents after failure than after

success. It was further predicted that participants with a pessimistic attributional style would be less likely to demonstrate a mood incongruent pattern of recall.

One final purpose of Experiment 2 was to further examine the effect of individual differences in self-esteem on recall positivity. A recent series of studies by Smith and Petty (1995) suggest that self-esteem may be an important moderator of mood repair efforts. Whereas they were unable to provide direct evidence of mood incongruent recall, Smith and Petty (1995) reported modest positive correlations between self-esteem and the positivity of recollections of high school experiences for participants exposed to a negative mood induction. Experiment 2 attempted to extend the findings of Smith and Petty (1995) concerning the moderating effect of individual differences in self-esteem on mood repair efforts to include recollections of parents. It was hypothesized that individuals with high levels of self-esteem will be more likely to use self-enhancement strategies, rating their recollections of their parents more positively after failure than after success. In contrast, a mood congruency effect was predicted for individuals with low self-esteem.

Method

Participants

One hundred and thirty-five female ($M = 18.8$ years) undergraduates were recruited using the introductory psychology subject pool. Given that a comparatively small number of males volunteered for Experiment 1, only females were recruited for the second study.

Design

The design of Experiment 2 consisted of a series of 2 (Feedback: positive vs. negative) x 2 (Trait: high vs. low) x 2 (Information Condition: informed vs. uninformed) x 2 (Order: Selective recall first vs. Global recall first) factorials.

Procedure

In order to investigate the mechanisms underlying the mood incongruity effect obtained in Experiment 1 (i.e., pure mood repair versus discounting), Experiment 2 included a manipulation varying the cover story provided with the social perceptiveness task. The methods and procedures in Experiment 2 were similar to those in Experiment 1. However, only half the participants were informed that success on the social perceptiveness task is associated with positive parenting during childhood. The other half received the identical preamble with the information regarding the association between parenting and task success omitted (see Appendices A13 and A14). If the mood incongruity finding observed in Experiment 1 is due solely to pure mood repair, then this same recall pattern should be present across both the informed and uninformed conditions. However, if participants are recruiting positive memories in order to discount the negative feedback, then only those in the informed condition will demonstrate mood incongruent recall.

A pretest was conducted on an independent sample of 44 undergraduates to assess potential differences in the effectiveness of the mood manipulation between the two information conditions. It is possible that the presence of information regarding the relationship between parenting and success on the social perceptiveness task may heighten participants' affective reactions to negative feedback. This may occur because believing that one's family history is a contributing factor to one's poor performance may activate

additional negative self-thoughts (as compared to those negative self-thoughts activated by a failure that has not been associated with family history). Participants were randomly assigned to either the informed or uninformed groups, presented with the appropriate cover story and then exposed to either negative or neutral feedback. Immediately thereafter, they were asked to rate their moods on 9 dimensions (anxious, angry, sad, disappointed, happy, pleased, proud, competent and satisfied) on a scale ranging from 1 (not at all) to 9 (extremely). Analyses of an index representing average scores on the 9 items (with scoring reversed on the 4 negative mood items) confirmed that the manipulation was successful. Participants who received negative feedback reported significantly lower positive affect ($M = 4.63$) than participants who received neutral feedback ($M = 5.84$), $t(42) = 4.23$, $p < .001$, two-tailed. Furthermore, there was no significant difference in mood ratings between participants exposed to either the informed or uninformed conditions, $F(1, 40) = 1.28$, $p < .265$, nor was there a significant two-way interaction between the feedback and information conditions, $F(1, 40) = .142$, $p < .709$. Therefore, there was no difference in the effectiveness of the mood manipulation between the informed and uninformed groups.

Experiment 2 further investigated the role of individual differences in moderating mood repair efforts. In order to determine if the trait moderated mood incongruency results revealed in Experiment 1 are due to an order effect, the presentation of the dependent measures was counterbalanced. Half the participants completed the Selective recall measure first, the other half completed the Global recall measure first.

Measures

As in Experiment 1, the Meta-Mood Experience Scale (Mayer & Gaschke, 1988), the EASQ-S (Seligman et al., 1979; Peterson et al., 1982; Peterson & Villanova, 1988; Whitley,

1991), the short form of the Beck Depression Inventory (Beck & Beck, 1972) and the Positive and Negative Affect Schedule (Watson, Clark & Lee, 1988) were administered to all participants before completion of the social perceptiveness feedback portion of the experiment. Along with the meta-mood Control, Clarity, Acceptance, Changability (17 items) and Value (10 items) scales, an additional measure of meta-mood cognition was administered. All participants completed the Salovey et al. (1994) Trait Meta-Mood Scale (TMMS) (see Appendix A11 for all meta-mood items). Like the adapted MES (McFarland & Buehler, 1996; Mayer & Gaschke, 1988), the Salovey et al. (1994) measure is designed to assess individual differences in meta-mood cognitions, and in particular the ability to identify, reflect upon and manage one's emotions. The TMMS consists of 30 statements measuring 3 aspects of people's meta-mood cognitions, including: 1) the degree to which persons notice and think about their moods and emotions (Emotional Attention, "I pay a lot of attention to how I feel"); 2) the ability to discriminate clearly among them (Clarity, "I am rarely confused about how I feel"); and 3) regulate them (Repair, "I try to think good thoughts no matter how badly I feel"). Cronbach's alpha scores for each of the scales were computed for the current sample, and revealed high levels of reliability (.79 - .88). Response format for these items was identical to that of the MES. The remaining 6 items presented with the MES in the second study were included for exploratory purposes, and were not used in subsequent analyses.

Self-Esteem. A measure of trait self-esteem was included in Experiment 2 in order to determine if individual differences in this variable moderate mood repair efforts. All participants rated their level of self-esteem using Rosenberg's (1965) Self-Esteem Scale (SES) (Appendix A). The SES is scored using a 4-point response format (strongly agree,

agree, disagree, strongly disagree), resulting in a scale ranging from 10-40. Ratings were reverse scored so that higher scores on the SES represent higher levels of self-esteem.

Previous research has demonstrated internal consistencies (Cronbach's alpha) for the scale ranging from .77 (Dobson et al., 1979) to .88 (Flemming & Courtney, 1984). Test-retest correlations of .82 for a one-week interval to .85 for a five-week have been reported (Silber & Tippett, 1965). Participants were classified as either high or low in self-esteem on the basis of median split scores.

Results and Discussion

The principal analyses for Experiment 2 consisted of 2 x 2 x 2 x 2 ANOVAs (Feedback: negative vs. positive; Trait Index: high vs. low; Information Condition: informed vs. uninformed; Order: Selective measure presented first vs. Global measure presented first) performed separately on combined scales measuring the positivity of participants' own descriptions of childhood experiences (Selective recall) and of parental behaviors (Global recall). For the purposes of all hypotheses examined using the separate principal analyses, a significance level of .05 was employed. The relevant main effects and interactions for the principal analyses using the MES Index as a trait variable will be reported in the following order: a) type of mood induction (*Feedback*); b) individual differences in meta-mood cognitions (*Feedback x Trait*); c) varying mood repair strategies (*Feedback x Information*); and d) order of presentation of the dependent measures (*Feedback x Trait x Order*). To assist in determining whether the effects present on the combined recall positivity scales were present on all dependent measures, the pattern of mean recall positivity scores will then be reviewed for each Selective (Participant, Pretest and Observer) and Global (Mother and Father) subscale. Mean recall scores as a function of feedback and individual differences on the MES and TMMS scales will then be examined to determine whether the pattern of effects present for the overall index of meta-mood cognition were present for the separate meta-mood factors. The presentation of the relevant interaction effects for similar principal analyses using the individual attributional style factors as trait variables will proceed in the same order as above. The results section for Experiment 2 will conclude with findings for separate analyses concerning the effect of individual differences in negative affectivity and self-esteem on recall positivity.

The Effect of Mood Induction, Traits, Information and Order of Recall Measures on Recall Positivity

Analyses using meta-mood cognition as the trait variable. As in Experiment 1, it was predicted that participants exposed to a negative mood induction would retrieve a greater proportion of positive memories of their parents than those exposed to a neutral mood induction. To test this prediction, each Selective and Global combined scale was subjected to separate 2 x 2 x 2 x 2 ANOVAs with the MES Index (high vs. low), Information Condition (informed vs. uninformed) and Order (Selective measure 1st vs. Global measure 1st) as other variables. The results revealed a main effect for the feedback condition on the Selective Combined scale, $F(1, 119) = 6.77, p < .01$. Significantly higher mean positivity ratings of parental behaviors were demonstrated for the participants exposed to the negative mood induction ($M = .14$) as compared to the participants exposed to the neutral mood induction ($M = -.21$), $t(119) = 2.18$ (Table B16, Appendix B). The same pattern of mood incongruent recall demonstrated on the Selective measure was present on the Global Combined Mother/Father scale, $F(1, 119) = 5.02, p < .027$.⁴ These results offer considerable support for the principal hypothesis of the present studies: Individuals are more likely to recall positive autobiographical memories following a negative mood induction than following a neutral mood induction. However, the results for Experiment 2 stand in contrast to those for Experiment 1, where a main effect for type of feedback was present on the Selective recall measures only.

In the present study, the same hypotheses concerning the moderating effect of individual differences in meta-mood cognitions on recall positivity were made as in Experiment 1;

mood incongruent recall was predicted for individuals higher in meta-mood cognitions, whereas mood congruent recall was predicted for individuals lower in meta-mood cognitions. The principal analyses for the MES Index did not support the predicted pattern: Level of meta-mood cognition did not interact significantly with feedback on either the Selective Combined scale or the Global Combined Mother/Father scale, $F(1, 119) = .095, p < .758$ and $F(1, 119) = .380, p < .534$, respectively (Table B17).⁵ The results for the Selective Combined scale are consistent with Experiment 1, where individual differences on the MES Index did not moderate mood repair efforts. However, the results on the Global Mother/Father scale differ from Experiment 1, where individual differences on the MES Index were marginally predictive of mood incongruent recall.

One of the primary goals of Experiment 2 was to investigate the possibility that by associating success and positive parenting on the social perceptiveness task preamble in Experiment 1, participants were provided with an alternative means of engaging in mood repair (i.e., discounting). Half of the participants in Experiment 2 were presented with a preamble that included information associating task success with positive parenting, the other half received the identical preamble with the parenting/success information omitted. The present analyses were examined for significant interactions between type of feedback (negative or neutral) and information (informed or uninformed). If mood incongruency is due to “pure” mood repair (i.e., recruiting positive recollections of childhood experiences in a direct attempt to improve moods), then the pattern of results should be the same across the informed and uninformed conditions (i.e., there would be no significant *Feedback x Information* condition interactions). However, if participants are engaging in “discounting”,

then only those in the informed condition should recall their parents more positively after failure than after success (i.e., there will be significant *Feedback x Information* interactions). The present analyses revealed no significant *Feedback x Information Condition* interactions on either of the Selective or Global Combined scales, $F(1, 119) = .747, p < .39$, and $F(1, 119) = .01, p < .97$, respectively. Participants in the informed condition recalled their parents more positively after failure than after success ($M = .16$ for negative feedback, $M = -.36$ for neutral feedback), as did participants in the uninformed condition ($M = .12$ for negative feedback, $M = -.04$ for neutral feedback), on the Selective Combined scale. A similar pattern of results was present for participants in the informed and uninformed conditions on the Global Combined scale. Nor were there any other significant interaction effects between the information condition and other variables or meaningful combinations of variables. Therefore, the omission or inclusion of information regarding the influence of parents on social perceptiveness prior to the presentation of negative or neutral feedback did not moderate recall positivity. The present results therefore support the hypothesis that individuals recruit positive recollections of childhood experiences in a direct attempt to improve their moods.

In Experiment 1, individual differences in meta-mood cognitions moderated recall positivity on the Global measure only. Two hypotheses were put forward in Experiment 2 to account for this order effect; a) a fading of the affect associated with failure on the social perceptiveness task allowed trait moderated mood repair efforts to emerge on the dependent measure presented second; b) task differences between the Selective and Global measures resulted in trait moderated mood incongruent recall on the Global scales only. The procedure in Experiment 2 involved counterbalancing the order of presentation of the Selective and

Global measures. The present analyses were examined for significant 3-way interaction effects between type of feedback, level of meta-mood cognition and order of presentation of the dependent measures. If the Selective and Global measures differ in terms of task demands, then trait moderated mood incongruent recall should be present on the Global recall scales only, with no significant effect for order of presentation (i.e., there will be no significant *Feedback x Trait x Order* interactions). If the different findings for the Selective and Global scales in Experiment 1 are due to fading of the induced affect, then counterbalancing the dependent measures should result in trait moderated mood incongruency on both recall measures. Furthermore, a significant effect for order of presentation should emerge, such that trait moderated mood incongruency will be present only on the dependent measure completed second (i.e., there will be significant *Feedback x Trait x Order* interactions). The present analyses demonstrated no significant *Feedback x MES Index x Order* interactions on either of the Selective or Global Combined scales, $F(1, 119) = .684, p < .41$, and $F(1, 119) = .45, p < .50$, respectively. Nor were there any other significant interaction effects between the order condition and other variables or meaningful combinations of variables. The lack of effect for order suggests that task differences may have contributed to the presence of trait moderated mood repair efforts on the Global measure in Experiment 1.

Additional support for the primary hypothesis of the present investigation was provided by the results for the separate Selective and Global subscales. As is evident from examination of the mean positivity scores for each subscale (Table B16), the overall mood incongruency effect described above was present on almost every type of dependent measure. Participants rated their parents more positively after failure than after success on the

Selective recall Participant, Pretest and Observer subscales. The same pattern of mood incongruent recall demonstrated on the Selective measures was present on the Global Mother subscale. Only the results for the Global Father subscale were not suggestive of a mood incongruency effect. As with the ANOVA findings on the combined measures, examination of the results for the separate Selective and Global subscales do not support the hypothesis that individual differences in meta-mood cognition moderates mood incongruent recall: On all measures, both participants higher in meta-mood cognitions and participants lower in meta-mood cognitions rated their recollections of their parents more positively after negative feedback than after neutral feedback (Table B17).

To explore whether the results for the overall index of meta-mood were supported by findings for the separate meta-mood factors, the pattern of mean recall positivity scores as a function of feedback and the individual MES scales (Control, Clarity, Changeability, Acceptance and Value) and the additional Salovey et al. (1994) TMMS scales (Emotional Attention, Clarity and Repair) were examined. The results differed from those for the overall index of meta-mood cognition in only one respect: Findings for the TMMS Emotional Attention subscale were suggestive of trait moderated mood incongruency (Table B18). Specifically, participants who tend to pay attention to their moods and emotions rated their parents more positively after negative feedback ($M = 3.77$) than after neutral feedback, ($M = 3.49$) on the Global Mother/Father scale. In contrast, participants who tend not to pay attention to their moods and emotions did not demonstrate mood incongruent recall ($M = 3.44$ for negative feedback, $M = 3.50$ for neutral feedback). The same overall pattern was present for the Emotional Attention subscale on the separate Global Mother and Father subscales. It is interesting to note though that the mean positivity scores for the Selective

Participant, Pretest and Observer subscales were not suggestive of trait moderated mood incongruent recall.

To summarize, the prediction of mood incongruent recall in response to self-esteem threatening failure was supported by the findings in Experiment 2: Participants were more likely to recall positive autobiographical memories following a negative mood induction than following a neutral mood induction. Furthermore, mood incongruent recall was present on the majority of the Selective and Global recall scales. Limited support was present for predictions concerning the moderating effect of meta-mood cognitions on recall positivity: For all individual differences in meta-mood measured in Experiment 2, only participants who tend to notice and think about their feelings (Emotional Attention) rated their parents more positively after a negative mood induction than after a neutral mood induction. In addition, the results for the information condition support the “pure” mood repair hypothesis: Participants engaged in mood incongruent recall regardless whether or not they were provided with an opportunity to discount the feedback. Finally, the findings for Experiment 2 are suggestive of task differences between the dependent measures used in the present studies. Evidence that individual differences in meta-mood cognitions moderate mood incongruent recall was present almost exclusively on the Global measures. Furthermore, when the order of presentation of the dependent measures was included as an independent variable, the results provided no evidence that trait moderated mood repair effects were more likely on the recall measure completed second.

Analyses using attributional style as the trait variable. As in Experiment 1, mood incongruent recall was predicted for optimists, whereas mood congruent recall was predicted for pessimists. To test these predictions, the Selective and Global Combined scales were

subjected to 2 x 2 x 2 x 2 ANOVAs (Feedback: negative vs. positive; EASQ-S factor: high vs. low; Information Condition: informed vs. uninformed; Order: Selective measure presented first vs. Global measure presented first). The principal analyses using the attributional style factors (EASQ-S Internal/External, Stable/Unstable and Global/Specific) revealed no significant two way interactions with feedback on either of the combined scales (p 's > .05).⁶

The principal analyses were also examined for significant interaction effects between type of feedback and the presence or absence of parenting information within the social perceptiveness test preamble. The results for the EASQ-S factors were the same as those for meta-mood cognitions: No significant *Feedback x Information Condition* interactions were present on either the Selective or the Global Combined scales (p 's > .05). The analyses also examined for significant 3-way interaction effects between type of feedback, level of meta-mood cognition and order of presentation of the dependent measures. No significant *Feedback x Trait x Order* interactions were present on either of the combined scales (p 's > .05).⁷

To examine whether the effects described for the EASQ-S factors were replicated for causal attributions associated with personal goals, similar 4-way ANOVAs were performed using the PG scales (Internal/External, Stable/Unstable and Global/Specific) as predictors. No significant two-way interactions with feedback were present for any of the attributional style factors on the Selective Combined or Global Mother/Father scales (p 's > .05). However, for the PG Stable/Unstable scale the pattern of recall positivity on the combined scales were suggestive of trait moderated mood congruency effects (Table B19). No

significant *Feedback x Information Condition* or *Feedback x Trait x Order* interactions were present (p 's > .05).

Examination of the mean positivity of recall scores on the separate Selective and Global subscales provides partial support for predictions concerning the moderating effect of attributional style (Personal Goals) on mood repair efforts, but again only for the Stable/Unstable dimension. On the Selective Participant and Global Mother subscales, individuals who attribute negative events to unstable causes recalled their parents' parenting more positively when exposed to failure than when exposed to success. By comparison, individuals who attribute negative events to stable causes rated their parents slightly more negatively after failure than after success on these subscales (Table B19).

In summary, Experiment 2 provided limited evidence for the moderating effect of attributional style on recall positivity. Only findings for individual differences on the PG Stable/Unstable scale were suggestive of trait moderated mood incongruency. Overall though, individuals with an optimistic attributional style did not recall a greater number of positive childhood experiences of their parents after failure than after success. With respect to the information condition, the results for both attributional style and meta-mood cognition provided no evidence for the discounting hypothesis: Participants engaged in mood incongruent recall regardless of the preamble information presented. In addition, almost no evidence was provided by Experiment 2 that the presence of trait moderated mood incongruency on the Global measures in Experiment 1 was due to a fading of the induced negative affect over time. Rather, those limited trait moderated mood repair efforts (for both meta-mood cognitions and attributional style) that were present occurred almost exclusively

on the Global recall scales, regardless of whether this dependent measure was presented first or second.

Depression and Negative Affectivity

Preliminary evidence that level of depression influences the positivity of autobiographical memories was provided by Experiment 1. The influence of depression levels on recall positivity was further explored in Experiment 2. $2 \times 2 \times 2 \times 2$ ANOVAs (Feedback: negative vs. positive; Depression: high vs. low; Information Condition: informed vs. uninformed; Order: Selective measure presented first vs. Global measure presented first) were performed on the Selective and Global Combined measures of recall positivity, using the depression (BDI-S) scale as a predictor. The analyses revealed a main effect on the Selective Combined scale, $F(1, 119) = 11.15, p < .001$. Participants higher in depression rated their parents more negatively ($M = -.26$) than those lower in depression ($M = .30$) (Table B20). The main effect for depression obtained on the Selective Combined scale was present for the Global Mother/Father scale as well, $F(1, 119) = 8.29, p < .001$. As in Experiment 1, there were no significant interactions between participants' level of depression and type of feedback on the combined recall scales. Individual differences in depression did not moderate the positivity of participant's recollections of their parents on either of the Selective or Global Combined scales, $F(1, 119) = .114, p < .736$, and $F(1, 119) = .444, p < .444$, respectively.

Results of analyses for the PANAS Negative Affect (NA) scale were consistent with those for the depression measure. Those participants with higher levels of negative affectivity rated their parents more negatively than those participants lower in negative affectivity, on both the Selective and Global Combined scales, $F(1, 119) = 6.14, p < .015$, and $F(1, 119) = 11.99, p < .001$, respectively (Table B21). As with the BDI-S, individual

differences in negative affectivity did not moderate recall positivity on the combined recall scales.

Results for the PANAS Positive Affect (PA) scale were also consistent with those for depression. Participants higher in positive affectivity rated their parents more positively than those lower in positive affectivity, on both the Selective and Global Combined scales, $F(1, 119) = 21.81, p < .001$, and $F(1, 119) = 17.89, p < .001$, respectively (Table B22). This is in contrast to Experiment 1, where no significant main effect was revealed for the PA scale. As with the BDI-S, no significant two-way interactions with feedback were present for the PA scale on either of the combined recall positivity. Taken together, the results for the BDI-S and PANAS support the hypothesis that depression influences the positivity of autobiographical memories. In both Experiment 1 and Experiment 2, depressive participants recalled their parents significantly more negatively than did nondepressives. As well, the results did not support the hypothesis that individual differences in depression and negative affectivity moderate recall positivity.

Depression and self-esteem. The pattern of results from Experiment 1 suggested that the effects of depression levels on recall may derive more from negative self-conceptions than from mood states per se. As well, scores on the Self-Esteem scale and Beck Depression Inventory were highly correlated ($r = .69$) in the present sample. In order to determine the independent effect of individual differences in depression on mood repair efforts, the Selective and Global measures were subjected to $2 \times 2 \times 2 \times 2$ ANCOVAs (Feedback: negative vs. positive; Depression: high vs. low; Information Condition: informed vs. uninformed; Order: Selective measure 1st vs. Global measure 1st), using the BDI-S as a predictor and the Self-Esteem scale as a covariate. All group differences between

depressives and nondepressives on the dependent measures were nonsignificant when self-esteem was covaried (e.g., $F(1, 118) = .435, p < .511$ for the Selective Combined scale, and $F(1, 118) = .046, p < .830$ for the Global Combined Mother/Father scale) (Table B23).

These findings demonstrate that although depressive tendencies are associated with increased negative recollections of parents, the majority of this effect is attributable to self-esteem levels.

Self-Esteem

Mood incongruent recall was predicted for individuals with higher self-esteem, while mood congruent recall was predicted for individuals lower in self-esteem. To test this hypothesis, the Selective and Global measures were subjected to four-way ANCOVAs (Feedback: negative vs. positive x Trait: high vs. low x Information Condition: informed vs. uninformed x Order: Selective 1st vs. Global 1st), using the Self-Esteem scale as a predictor and the BDI-S as a covariate. The results revealed a main effect on the Selective Combined scale, $F(1, 117) = 6.36, p < .01$. Participants higher in self-esteem rated their parents more positively ($M = .15$) than participants lower in self-esteem ($M = -.18$) (Table B24). A main effect for self-esteem was also present for the Global Combined Mother/Father scale, $F(1, 115) = 7.80, p < .006$. Contrary to the present prediction however, individual differences in self-esteem did not moderate recall positivity on either the Selective or Global Combined scales, $F(1, 117) = .537$, and $F(1, 115) = .085$, respectively.

In summary, no support was provided for the hypothesis that individual differences in self-esteem would moderate the positivity of participant's recollections of their parents after a failure experience. However, higher self-esteem participants did rate their parents more positively than lower self-esteem participants.

CHAPTER 6: GENERAL DISCUSSION

The primary goal of the current studies was to explore whether motivational factors influence the positivity of peoples' recollections of their parents. It was hypothesized that individuals would recall a greater proportion of positive memories of their parents in response to negative moods induced by failure than in response to neutral moods induced by modest success. The hypothesis was based on the assumption that childhood experiences of parents would be a particularly rich source of material for restoring positive moods subsequent to a failure experience that threatened self-esteem. The present studies provide substantial support for this assumption. Mood incongruent recall occurred in two separate studies and on two types of recall measures. In Experiment 1, individuals exposed to negative feedback rated their own memories of their parents (on the Selective Combined scale) more positively than individuals exposed to neutral feedback. Mood incongruent recall for participants experiencing negative affect was even more pronounced in Experiment 2. Participants in the negative feedback condition rated their parents more positively than participants in the neutral feedback condition on both their own recollections (Selective Combined scale) and on descriptions of typical parent-child interactions (Global Mother/Father scale).

The present findings support the proposal that the use of positive memories in response to negative moods depends, at least partially, on whether individuals are prompted to retrieve material that is capable of improving mood. As noted in the introduction, there have been few previous studies demonstrating mood incongruent recall. One reason previous findings have been so limited may be that the memory tasks demanded of participants in the majority

of mood-memory studies lack the potential for initiating self-regulatory processes. Parrott and Sabini (1990) proposed that only memory tasks that are personally relevant to an individual's current mood and self-concept prompt mood incongruent recall. Childhood recollections of parents, with their relatedness to self-esteem, personal goals and their extensive emotional associations, were expected to have the required potential for mood regulation. The present findings support this contention, and indeed constitute the first known experimental evidence that individuals may employ autobiographical memories of their parents to improve their mood in the wake of self-esteem threatening failure.

Although the present studies provide evidence for the motivated recruitment of positive memories, they do not provide direct evidence that the retrieval of positive memories results in the alleviation of negative mood states. Future research should incorporate both pre and post-recall measures of mood in order to establish more firmly a causal chain, linking the retrieval of positive recollections in response to negative mood states with actual mood repair.

Determinants of the Effects of Mood on Memory

When considered alongside previous mood-memory research, the present findings confirm that negative moods can have two contrasting effects on memory, and that the presence or absence of negative moods prompted by self-relevant threats can determine which of these effects occurs. Clark and Isen (1982; Isen, 1984, 1987) have proposed that mood congruent recall in response to negative mood states is guided by automatic processing (characterized by the absence of awareness, effort and intentionality), whereas mood incongruent recall is guided by controlled processing (characterized by the presence of these factors). The present mood incongruity findings for participants exposed to self-esteem

threatening failure suggests that the motivation to generate counter-emotional thoughts must be present to override the more automatic tendency to retrieve mood congruent thoughts (Blaney, 1986; Bower, 1981). In order to determine the extent to which motivated recall strategies are conscious and effortful, future research examining the effects of mood on recall should incorporate procedures that interfere with controlled processing (e.g., dichotic listening tasks).

A second key purpose of the current investigations was to explore the role of individual differences in moderating mood repair efforts. Results pertaining to the assessed meta-mood and attributional style factors will now be reviewed. As will become evident, the present findings provide further support for the contention that autobiographical memories of parents are a particularly effective source of material for mood regulation.

Meta-Mood Cognitions and Recall Positivity

McFarland and Buehler (1996) proposed that people must first be inclined to acknowledge their negative mood before being able to invoke a strategy to deal with it. The present results were only somewhat supportive of this model of motivated recall. In Experiment 1, the pattern of findings suggests that an individual difference variable reflecting the tendency to value or disregard moods moderated recall positivity subsequent to a negative mood induction. Specifically, individuals possessing a tendency to value and appreciate their mood states responded to a negative mood induction by recruiting positive memories, whereas those individuals who possessed a tendency to disregard their mood states responded to the same induction by recalling somewhat more negative memories. The same pattern suggestive of trait moderated mood incongruity was present for individual differences in the acceptance of moods. That is, persons possessing a tendency to accept

their moods were more likely than their counterparts to engage in mood incongruent recall. For both the value and acceptance dimensions of meta-mood, findings in the hypothesized direction were limited to positivity ratings of typical parent-child interactions (Global scales). Evidence for the moderating effect of meta-mood cognitions on autobiographical memories was also present in Experiment 2, but the findings were not consistent with those of Experiment 1. In Experiment 2, individuals possessing a tendency to pay attention to their mood states were more likely than their counterparts to engage in mood incongruent recall. Across both studies, mean positivity of recall scores suggestive of trait moderated mood incongruency were present primarily on Combined Mother/Father ratings of typical parent/child interactions (on the Global scales). There was no evidence of trait moderated mood incongruent recall for any of the other meta-mood factors (MES Control, Clarity and Changeability in Experiment 1 and Experiment 2; TMMS Clarity and Repair in Experiment 2). Overall, the results of the current studies provide limited evidence that individual differences in meta-mood cognitions predict the occurrence of mood repair efforts.

This comparison to previous findings, the moderating effect of individual differences in meta-mood cognitions on recall positivity was considerably diminished in the present experiments. McFarland and Buehler (1996) reported significant levels of trait moderated mood incongruent recall for a combined index similar to that of the Mayer and Gaschke (1988) MES scales. However, no significant effect for individual differences on the MES Index was achieved in the present investigations (although marginal results in the predicted direction were present for this measure in Experiment 1). As the MES Index is an aggregate of all the individual meta-mood dimensions, McFarland and Buehler were able to provide evidence that individual differences in the *general tendency* to acknowledge and regulate

moods moderate recall positivity. In contrast, the present findings were limited primarily to specific meta-mood factors, and were inconsistent across Experiment 1 and Experiment 2. The reduced impact of individual differences in meta-mood cognitions in the present experiments is somewhat surprising, given that similar mood induction procedures and the same measures of meta-mood cognition were employed in both investigations. However, a key difference between the two investigations is that autobiographical memories of parents were used to elicit mood repair efforts in the present studies, whereas a broader range of autobiographical memories (involving friends and family members in common social situations) were used to elicit mood repair efforts in the McFarland and Buehler studies. Taking into account the proposal that autobiographical memories of parents are particularly effective at eliciting mood repair efforts, it may be that the current limited trait moderated mood incongruency findings are related to increased mood incongruent recall on the part of all participants.

It must be acknowledged that the present findings could be due to the impact of the neutral feedback (success) condition in addition to or rather than the impact of failure on the positivity of recall. The possibility of positive mood repair effects (i.e., recalling negative experiences in order to attenuate the disruptive effects of an overly positive mood) have been discussed in the research literature (Parrot & Sabini, 1990; Morris, 1989). However, this is not likely to have occurred in the present experiments. The “success” feedback presented to the participants was only slightly above average and designed to induce a neutral affective state (or at the least, not an intense positive mood), and would therefore be less likely to induce the motivational intensity needed to activate mood repair efforts. Still, it is

recommended that future studies incorporate a more intense positive mood manipulation to further explore the potential motivational properties of positive mood states.

In fact, when considered alongside the present main effect for feedback, the reduced trait moderated mood incongruency findings provide further evidence that the personal relevance of a recall task influences mood repair efforts. As previously noted, the results for the feedback condition demonstrated that those participants exposed to failure engaged in mood incongruent recall regardless of individual differences in mood acknowledgment. Thus, the moderating effects of individual differences in meta-mood cognitions on recall positivity were most likely masked by increased mood incongruent recall among *all* participants exposed to failure feedback. One hypothesis that could account for this relative increase for all participants is that they were better able to engage in mood repair efforts when presented with the opportunity to recall positive experiences with their parents.

However, caution is warranted when interpreting the current meta-mood findings. The Mayer and Gaschke (1988) MES, and in particular the Salovey et al. (1994) TMMS, are relatively new scales. Thus the association between the individual meta-mood factors and other aspects of affective and cognitive processing (construct validity), as well as the stability of the test scores over time (reliability), has not been well established. Furthermore, although the individual meta-mood scales were constructed on the basis of factor analytic studies, there are as yet no data available for the overall meta-mood index used in the present studies. Therefore, the validity of a single meta-mood index such as the above is as yet unknown. Given that the MES and TMMS will likely be employed in future experiments attempting to ascertain a relationship between meta-mood cognition and other aspects of social and emotional functioning, additional research on their reliability and validity is needed.

Attributional Style

As with meta-mood cognitions, individual differences in causal attributions for negative events were also hypothesized to influence the positivity of recalled childhood experiences. Given that an optimistic attributional style is associated with various self-enhancement strategies, it was hypothesized that individuals predisposed to minimizing failure would engage in mood incongruent recall. However, Experiments 1 and 2 provided only very limited evidence that individual differences in attributions for negative events moderated the positivity of people's recollections of their parents. In Experiment 1, a marginally significant interaction effect indicative of mood incongruency on the part of persons who attribute negative events to unstable causes (as measured by the Personal Goals version of the attributional style questionnaire) was present on participants positivity ratings of their parents on typical parent/child interactions (Global Mother/Father scale). Mean recall positivity findings of the same pattern were present for the External/Internal dimension of attributional style on the Global measures. Experiment 2 provided some additional support for the attributional style hypotheses: the overall pattern of recall positivity for individual differences along the stable/unstable (Personal Goals version) dimension were suggestive of trait moderated mood incongruency. Specifically, individuals possessing a tendency to attribute negative events to unstable causes responded to the negative mood induction by recruiting positive memories of their parents, whereas those who possessed a tendency to attribute negative events to stable causes responded to the same induction by recruiting somewhat more negative memories. Although these findings were present on both participants' own memories (Selective Combined measure), and on participants' ratings of their parents on common parent/child interactions (Global Mother/Father measure), they

were not present at significant levels. In summary, the overall pattern of results are weak at best, providing only limited evidence that individual differences in factors associated with the tendency to minimize one's personal causal responsibility for failure experiences moderate mood repair efforts.

Two factors may have contributed to the weak results concerning attributional style. The first is that, similar to meta-mood cognitions, the moderating effect of individual differences in causal attributions on recall positivity were masked by greater mood repair efforts across all participants. The second factor concerns the predictive validity of the attributional style measures used in the present experiments. As noted earlier, the stable/unstable and global/specific subscales are more predictive of hopelessness depression than the internal/external dimension (Abramson et al., 1989). Across both Experiment 1 and Experiment 2 only individual differences personal goal attributions along the stable/unstable dimension were suggestive of mood repair. It may be that attributing negative events to stable or unstable causes is more closely associated with the ability to regulate affect (as inferred from their greater relationship to depressive states) than are internal attributions. It is likely that the combination of increased mood repair efforts for all participants and poor predictive validity for the internal/external dimension reduced the probability of detecting significant moderating effects with this factor. Further studies, perhaps using less evocative recall tasks and/or mood inductions, are required in order to determine if individual differences in causal attributions for negative events moderate mood repair efforts.

In summary, the main findings of the two experiments demonstrate that individuals will retrieve positive memories of their parents when exposed to self-relevant failure. Unlike previous studies using failure feedback, the present studies indicate that individual

differences in meta-mood cognitions moderated the impact of negative feedback on recall positivity to a lesser degree. Rather, most persons were able to engage in mood repair regardless of individual differences in their dispositions towards mood acknowledgment. Findings for individual differences in attributional style were limited as well, but are nonetheless suggestive of a relationship between specific aspects of causal attributions for negative events and mood repair. The relative strength of the overall mood incongruency effect is attributable to the use of both a highly motivating negative mood induction, and to providing people with the opportunity to recall material with the potential for self-regulation. These results suggest that future mood-memory research should compare recall positivity on memory tasks of differing levels of personal relevance in order to determine if mood repair efforts vary accordingly.

The findings for the two additional experimental conditions investigated in Experiment 2 -- information and order-- will now be reviewed. The discussion will then conclude with an examination of the exploratory findings for individual differences in depression/negative affectivity and self-esteem.

The Influence of Discounting Negative Feedback on Mood Repair Efforts

In Experiment 2, the experimental manipulation of the motivational context in which feedback was presented provided an opportunity to examine the influence of different strategies for engaging in mood incongruent recall. During the debriefing sessions in Experiment 1 many participants exposed to failure discounted the veracity of the feedback they received. They remarked that the social perceptiveness test preamble information attributing their poor performance to an unhappy upbringing was false because they remembered their parents as being emotionally available and competent. The debriefing

comments suggested that participants' mood repair efforts may have been motivated by particular negative self-relevant cognitions in addition to negative mood states. In Experiment 2, by presenting the preamble information associating failure with poor parenting to only half the participants, it was possible to manipulate the opportunity to engage in this particular discounting strategy. The results of Experiment 2 demonstrated that the presence or absence of information that could prompt discounting was unrelated to recall positivity; participants in both the informed and uninformed conditions recalled their parents more positively following a negative mood induction than following a neutral mood induction. This suggests that participants' mood repair efforts were directed more towards obviating the negative affect associated with failure, than towards (indirectly) discounting the personal relevance of the failure itself.

The manipulation of one aspect of the motivational context in which a mood induction is presented provides an example of how to approach studying the effects of particular negative cognitions on recall positivity. There are other contextual and individual difference variables that may be important in initiating biased retrieval of positive experiences from memory. For instance, the degree of congruence between the type of feedback presented and an individual's self-concept may be important in determining their subsequent cognitive coping strategies. Swann (Swann, Wenzlaff, Krull & Pelham, 1992) provides evidence that failure feedback is perceived unfavorably only if the recipient possesses a positive self-concept. Individuals possessing a negative self-concept in fact prefer negative feedback, as it bolsters perceptions of predictability and control (hence the tendency for depressives to gravitate towards social contexts that reinforce their negative self-views). In the context of the present paradigm, it may be that negative feedback motivates mood incongruent recall only in those

individuals who perceive such feedback as discrepant with their self-concept. Future studies using failure feedback as a mood manipulation may need to account for the moderating effect of individual differences in self-concept (beyond the more limited domain of self-esteem) on recall positivity.

This is not to suggest that the effects of negative self-relevant thoughts on memory retrieval could be considered independently from the effects of mood states per se. As noted by McFarland and Buehler (1996), mood incongruent recall in response to a failure experience could be the result of one of two somewhat different processes: Either people retrieve positive memories in order to alleviate the negative affect associated with failure, or to alleviate the distress created by unfavorable self-relevant thoughts prompted by failure. However, even if individuals are responding to unfavorable self-relevant thoughts, it is presumably the affective content of these thoughts that prompts the retrieval of positive memories.

Task Demands

In Experiment 1, trait moderated mood incongruent recall was present exclusively on the dependent measure presented second (on the Global scales). Two alternative hypotheses were offered to account for this pattern; a) the negative affect induced by the failure feedback may have faded, allowing individual differences in traits associated with mood repair to emerge; or b) the specific task demands of the Global measure may have elicited relatively greater mood repair efforts from some individuals than from others. In Experiment 2, the dependent measures were counterbalanced, and serial position was included as an independent variable in subsequent analyses. The results confirm that the presence of trait moderated mood incongruency was unrelated to the order of presentation of the recall

measures: For the great majority of analyses involving meta-mood and attributional style, the *Feedback x Trait x Order* interactions were nonsignificant. Furthermore, individual differences in personality traits moderated the effects of feedback on recall positivity almost exclusively on the Global measures and not the Selective measures. The findings for the order condition suggest that differences in task demands between the dependent measures may account for the appearance of trait moderated mood incongruity primarily on the Global scales.

There may be differences in the intensity of the affective associations generated by the Selective and Global measures that could account for the types of mood incongruent recall present on each. The Selective measure involves both the written expression of specific memories and positivity ratings, whereas the Global measure involves only positivity ratings of parents on descriptions of common parent/child interactions. Presumably, having to articulate a specific memory would produce a greater number of affective associations than having to rate the positivity of descriptions of generic experiences. It may be that for all participants, the Selective measure task had more potential for improving participants' moods. In contrast, merely rating the positivity of a typical childhood event may have led to less intense positive affective associations. If fewer affective associations were prompted by completing the Global recall measure, then individual differences in traits associated with the tendency to engage in mood repair could have exerted a relatively greater influence on recall positivity.

The influence of different task demands between the Selective and Global recall scales cannot, however, completely account for the pattern of mood incongruent recall across both studies. Unlike Experiment 1, an overall main effect for the feedback condition was present

on *both* the Selective and Global recall scales in Experiment 2. One would expect that if task demands were the only influence on the differential pattern of mood incongruency between the dependent measures, then the findings would have remained the same for the feedback condition in both experiments (i.e., there would have been a main effect for feedback on the Selective measure only). The difference in outcome between Experiment 1 and Experiment 2 suggests that counterbalancing the dependent measures in Experiment 2 did have some influence on the occurrence of mood incongruent recall. Presumably, presenting the Global items first to half of the participants (when the affect associated with the failure experience was stronger) resulted in an overall increase in mood incongruent recall on that measure.

When considered together with previous research, the results for the feedback condition from Experiment 1 and Experiment 2 suggest that mood incongruent recall may be more likely on memories retrieved closest to the induction procedure. Parrott and Sabini (1990) reported stronger mood incongruency effects on the first memory retrieved than on subsequent memories. The authors proposed that a decrement in the intensity of the induced mood after the recollection of the first memory may have contributed to the lower levels of mood incongruency obtained on subsequent recollections. It should be noted though that any decrement in induced mood was not sufficient enough to result in a significant order effect in Experiment 2. A reasonable conclusion therefore, is that the pattern of mood incongruent recall across the feedback and trait conditions in the present studies demonstrates the influence of both task differences and fading on mood repair efforts.

In summary, the current findings point to the sensitive and context dependent nature of mood incongruent recall as a mood repair strategy. Both the present investigation and previous studies have noted the influence of factors such as experimenter demand effects, the

importance of activating self-relevant motivational concerns, the personal relevance of memory tasks and individual differences in traits associated with affect acknowledgment on mood repair. The present findings expand the range of factors influencing mood incongruent recall to include the specific task demands associated with the dependent measures being used. In order to explore more fully the relevance of task demands, future mood-memory studies should compare recall positivity on different types of measures using between-subject experimental designs. As well, the possible influence of fading in studies that ask participants to recall more than one memory subsequent to a mood induction should be considered.

Biased Memories vs. Biased Ratings

The issue of memory task demands raises the more general question of the nature of the recall bias observed in the present studies. It could be argued that the present mood incongruency findings do not reflect participants increased *retrieval* of positive memories (biased memory retrieval), but rather reflect participants *rating* their memories more positively (biased memory ratings). Whether mood induction procedures prompt biased memory retrieval or biased memory ratings has also been of concern to other researchers (Bower, 1981; Ehrlichman & Halpern, 1988). Teasdale (Teasdale, Taylor & Fogarty, 1980; Teasdale & Taylor, 1981) dealt with this concern by having participants rate the positivity of their memories well after the effects of a mood induction had dissipated. However, Ehrlichman and Halpern (1988) noted that having subjects rate their memories at a different time is still problematic, because the initial affective experience of a recollection may bias subsequent ratings. Ehrlichman and Halpern (1988) addressed this problem by having two judges independently rate the positivity of a randomly selected sample of recollections

obtained from participants subsequent to exposure to a mood induction. The authors note that even this procedure is not completely objective, because individuals current mood state could influence the descriptions of their memories. However, a convergence of participant and observer data make it less likely that the findings reflect the effects of mood on ratings independent from any effects on retrieval (Ehrlichman & Halpern, 1988).

Data from two different independent measures of recall positivity in the present investigations provide persuasive evidence of a memory retrieval bias. Similar to the Ehrlichman and Halpern (1988) study, an independent rater evaluated the positivity of participants' recollections, revealing significant levels of mood incongruent recall on the Selective Observer subscale (Experiment 2). In addition, the results for the Selective Pretest subscale demonstrate that participants in the failure condition elected to describe a greater proportion of positive parent/child experiences than did participants in the success condition (in both experiments). Since the Pretest data were obtained from an independent group of participants, mood incongruency findings on this measure are not subject to a ratings bias. The convergence of the Participant, Pretest and Observer findings provide as much support as is possible within the present research paradigm for the conclusion that negative moods induced by threats to self-esteem will motivate the retrieval of positive recollections. Research based on an information processing (IP) approach is needed in order to determine more precisely if negative moods prompt biased memory retrieval or biased memory ratings. IP approaches typically frame retrieval processes in terms of accessibility, or the ease with which cognitive contents are brought to mind (Higgins, 1987). Differences in the relative accessibility of material, operationalized via reaction time measures, are assumed to reflect biases in the retrieval of cognitive material (Fiske & Taylor, 1991). Measures of reaction

time have been used previously to investigate the effect of moods on the accessibility of recollections of other persons (Forgas & Bower, 1987), autobiographical memories (Teasdale et al., 1980), and the moderating effect of individual differences in affect acknowledgment on recall positivity (Davis, 1990). A reaction time paradigm could also be used to determine if the activation of self-relevant negative moods motivates access to positive memories.

Presumably, differences in retrieval latencies between individuals exposed to failure feedback and individuals exposed to success feedback would reflect the presence of biased memory retrieval. If, as suggested earlier, mood incongruent recall is the product of more controlled, effortful cognitive processes, then one would expect increased retrieval latencies for individuals exposed to failure feedback. Alternately, equivalent retrieval latencies would suggest the presence of biased memory ratings. This latter outcome would also suggest that mood incongruent recall is more of an automatic cognitive process, possibly the product of more well-rehearsed coping strategy.

Level of Depression and Memory for Childhood Experiences

There has been considerable debate in the experimental literature regarding the existence of “depressive distortion.” Indeed, some theorists have suggested that depression has no effect on the positivity of childhood recollections (Brewin et al., 1993). The present findings do not support this conclusion. Individuals with higher levels of preexisting depressive and/or negative affectivity recalled their parents more negatively than did their counterparts on the Selective (Experiments 1 and 2) and Global (Experiment 2) measures. Furthermore, this form of “mood congruency” (i.e., depressive individuals recalling negative memories) was present regardless of whether or not depressive participants experienced a temporary increase in negative affect. In both studies, individual differences in negative affectivity did

not moderate the effects of feedback on recall positivity for any of the dependent measures. The present investigations therefore provide support for the conclusion that the positivity of childhood recollections of parents are influenced by an individual's current level of emotional functioning (Gerlsma et al., 1990; Lewinsohn & Rosenbaum, 1987).

There is however a potential conflict between the present "*mood congruency*" findings for individual differences in depressive affect and the overall *mood incongruency* findings for the use of a negative mood induction. One would expect that if experimentally induced negative moods prompt the retrieval of positive memories (as the overall mood incongruency findings demonstrate), then individuals higher in preexisting depressive and negative affectivity should also engage in mood incongruent recall. The results from Experiment 2 resolve this conflict by demonstrating that the effects of depression levels on recall derive more from negative self-conceptions than from negative mood states alone. No significant differences in recall positivity between depressives and nondepressives were present when controlling for the effects of self-esteem. These findings provide support for theorists who contend that enduring maladaptive cognitions, reflected in pessimism and negative self-conceptions, maintain depressive states (Beck, 1974; Ellis, 1979). It may be that depressives do not engage in mood incongruent recall because associated cognitive processes actively work against the mobilization of mood repair efforts.

Alternatively, individual differences in self-esteem may be the product of pre-existing differences in the quality of actual experiences with parents. It may be that individuals with low self-esteem experienced a greater number of negative interactions with their parents in childhood. Both low self-esteem and depression are associated with family dysfunction, abuse and neglect. Therefore, depressed individuals may recall their parents more negatively

than non-depressed persons because they experienced a greater proportion of negative familial interactions in childhood.

Parrott and Sabini (1990) proposed that mood incongruent recall may be a means for preventing or alleviating depression. The present findings demonstrate that depressives cannot be motivated to engage in mood incongruent recall by self-esteem threat alone, a finding that is not exactly surprising given what is known in clinical psychology about how depressed persons react to failure. Nor is it likely that attempts to increase negative moods in depressives will result in the spontaneous retrieval of positive memories. What remains to be seen is under what conditions depressed persons can be motivated to recall more positive personal experiences and, more importantly, whether or not this will serve to alleviate their symptoms. Future experimental research directed at these questions could have significant implications for clinical psychology, and in particular cognitive-behavioral techniques for the treatment of depression.

Self-Esteem as a Moderator of Mood Incongruent Recall

Smith and Petty (1995) presented results from 3 studies suggesting that individual differences in self-esteem may contribute to moderating the effects of negative affective states on the positivity of recall. For exploratory purposes, the present Experiment 2 included a measure of self-esteem. It was hypothesized that high self-esteem individuals would retrieve a greater proportion of positive memories following a negative mood induction than following a positive mood induction. In contrast, low self-esteem individuals were expected to engage in mood congruent recall. However, the results of Experiment 2 did not support these hypotheses. No significant interactions between level of self-esteem and type of mood induction were present on any of the dependent measures. Instead, high self-

esteem participants recalled their parents more positively than low self-esteem participants, regardless of their mood. This main effect for self-esteem was present across all Selective and Global recall scales.

Although there is an apparent disagreement between the results of Experiment 2 and those of Smith and Petty (1995), a close examination of the latter suggests that the evidence for a relationship between self-esteem and mood repair is relatively weak. Smith and Petty (1995) were able to provide only indirect correlational support for their hypotheses. For high self-esteem participants, the authors were able to demonstrate a significant inverse correlation between mood state and positivity of recall, such that the more negative their mood, the more positive their recollections. In contrast, a significant positive correlation was present for low self-esteem participants: The more negative their mood, the more negative their recollections. However, tests of their hypotheses using ANOVA statistics yielded inconsistent or nonsignificant results across the three studies.

It should be noted that direct comparison between the present study and of Smith and Petty (1995) is not possible as the mood induction techniques differ considerably (failure feedback vs. exposure to sad narratives, respectively). It may be that high self-esteem persons are less threatened by failure feedback than average or low self-esteem persons, making it unlikely that such a mood manipulation would induce the necessary levels of negative affect to prompt mood repair efforts. In any case, further studies are needed before any firm conclusions can be drawn regarding the relationship between self-esteem and negative mood regulation.

Summary and Conclusions

The principal finding of the present studies is that the positivity of people's recollections of their parents can be biased by motivational factors, in particular the desire to restore positive moods after a self-esteem threatening failure experience. It was also demonstrated that recollections of parents are an effective source of material for restoring positive moods, independent of the potential moderating effect of individual differences associated with mood repair tendencies. The implications of the current studies for future motivated memory research include the need to more firmly establish the mood repair benefits of autobiographical memories, and to further explore those cognitive processes that may determine mood congruent or mood incongruent recall.

The present findings, in addition to elaborating on the determinants of motivated memory processes, have implications for future developmental, attachment and adult psychosocial adjustment research that rely on recollections of childhood experiences with parents. To avoid arriving at erroneous conclusions regarding the links between childhood experiences and current emotional and interpersonal functioning, researchers may need to control for the influence of current mood states and motivations on the positivity of recollections. As in mood-memory studies, experimenter and recall-task demands, priming effects and self-esteem concerns may be present in any investigation of autobiographical memories.

Finally, a note concerning the implications of the current studies for psychotherapy. If autobiographical memories are reconstructed to accommodate current concerns, motives and moods, then a preoccupation with establishing the *veracity* of past experiences in psychotherapy may result in neglecting significant aspects of who a client is in the present.

Perhaps research on the reconstructed nature of autobiographical memories will encourage the therapeutic community to challenge approaches to psychotherapy that subsume an individual's phenomenal experience to the goal of truthseeking. An alternative might be to more fully allow a client's experience of themselves, their social lives and their personal history inform and guide psychotherapy. This viewpoint does not diminish in any way the importance of attending to an individual's personal history when formulating a treatment approach. Rather, it encourages respect for the whole of a client's experience and discourages preconceived and deterministic notions of human potential. Within this context, the awareness that people reconstruct their past to help meet their needs in the present can only serve to enhance our understanding of another's phenomenal world.

Appendix A: Questionnaires and other Research Materials

Introduction to the Studies

Today you will be participating in two separate studies. We will provide instructions for completing the questionnaires in the second study later.

At this time please read the following instructions for the first study.

Personality Study

In the first study, we are interested in the relationship between various personality characteristics and "social perceptiveness ability" - the ability to accurately perceive other people's personality traits and motives. People with high social perceptiveness ability relate better to others, are better able to understand the causes of others' behaviours, and are more accurate in predicting others' moods and actions. Socially perceptive individuals often come from homes where their parents emphasized warmth, openness and positive structure.

First, you will complete a questionnaire designed to assess various aspects of your personality. After that, you will take a well-established test of social perceptiveness ability, and you will receive feedback concerning how you performed.

17. I often try to do things to change my negative moods.

strongly disagree 1 2 3 4 5 strongly agree

18. I often try to remind myself of reality and keep myself from getting too high.

strongly disagree 1 2 3 4 5 strongly agree

19. I try to get rid of negative moods by thinking more positively.

strongly disagree 1 2 3 4 5 strongly agree

20. I find I am often attempting to regulate and monitor my mood states.

strongly disagree 1 2 3 4 5 strongly agree

21. In general, I am usually aware of the causes of why I am feeling the way I am.

strongly disagree 1 2 3 4 5 strongly agree

22. I rarely think about why I am feeling the way I do - I just go with the flow.

strongly disagree 1 2 3 4 5 strongly agree

23. I almost always analyze my emotional states.

strongly disagree 1 2 3 4 5 strongly agree

24. I think it is important to monitor the causes of my feelings before acting (e.g., when making decisions).

strongly disagree 1 2 3 4 5 strongly agree

25. I believe that my feelings in response to a person provide me with valuable information about that person.

1 2 3 4 5
strongly disagree strongly agree

26. I learn more about myself by exploring my feelings.

1 2 3 4 5
strongly disagree strongly agree

27. My emotional reactions are a central and important part of who I am.

1 2 3 4 5
strongly disagree strongly agree

28. It is generally bad to suppress or ignore one's feelings.

1 2 3 4 5
strongly disagree strongly agree

29. It is important to use my feelings as a guide to help me make decisions.

1 2 3 4 5
strongly disagree strongly agree

30. My emotional experiences are rich and varied and add to my life.

1 2 3 4 5
strongly disagree strongly agree

31. I would rather experience my distress fully than deny it or avoid it.

1 2 3 4 5
strongly disagree strongly agree

32. It is generally important to be open about your feelings.

1 2 3 4 5
strongly disagree strongly agree

33. A self-actualized person is someone who is in touch with his/her feelings.

1 2 3 4 5
strongly disagree strongly agree

43. I always express disappointment when things don't go as I'd like them to.

strongly disagree 1 2 3 4 5 strongly agree

44. It is hard to find the right words to indicate to others what I am really feeling.

strongly disagree 1 2 3 4 5 strongly agree

45. I worry that if I express negative emotions such as fear and anger, other people will not approve of me.

strongly disagree 1 2 3 4 5 strongly agree

46. I want to express my emotions honestly but I am afraid that it may cause me embarrassment or hurt.

strongly disagree 1 2 3 4 5 strongly agree

47. I often cannot bring myself to express what I am really feeling.

strongly disagree 1 2 3 4 5 strongly agree

48. I'd like to talk about my problems with others, but at times I just can't.

strongly disagree 1 2 3 4 5 strongly agree

**Personality Styles
Part D**

Perceptions of Causes in Life Events

Please read through the following situations and answer questions related to *what you believe would cause these situations to happen*.

Please try to vividly imagine yourself in the situations that follow. If such a situation happened to you, what would you feel would have caused it? While events may have many causes, we want you to pick only one- the **major cause** if this event happened to **you**. Please write this cause in the blank provided after each event. Next we want you to answer some questions about the **cause** and a final question about the **situation**. To summarize, we want you to:

1. Read each situation and vividly imagine it happening to you.
2. Decide what you feel would be the **major** cause of the situation if it happened to you.
3. Write one cause in the blank provided.
4. Answer three questions about the **cause**.
5. Answer one question about the **situation**.
6. Go onto the next situation.

Start here

1. You experience a major personal injury.

A. Write down the **one** major cause _____.

B. Is the cause of your injury due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people
or circumstances 1 2 3 4 5 6 7 Totally due
to me

C. If in the future you experience another serious injury, will this cause again be present? (circle one number)

Will never again
be present 1 2 3 4 5 6 7 Will always
be present

D. Is the cause something that just influences your proneness for injury, or does it influence other areas of your life? (circle one number)

Influences just
this particular
situation 1 2 3 4 5 6 7 Influences
all situations
in my life

E. How important would this situation be if it happened to you?

Not at all
important 1 2 3 4 5 6 7 Extremely
important

F. Is the cause of your injury due to something over which you have control?

Within my personal control	1 2 3 4 5 6 7	Outside of my personal control
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2. You are fired from your job.

A. Write down the *one* major cause _____.

B. Is the cause of your being fired due to something about you, or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances	1 2 3 4 5 6 7	Totally due to me
---	---------------	----------------------

C. If you were to lose your job again in the future, would this cause again be present? (circle one number)

Will never again be present	1 2 3 4 5 6 7	Will always be present
--------------------------------	---------------	---------------------------

D. Is the cause something that just influences your work situation or does it influence other areas of your life? (circle one number)

Influences just this particular situation	1 2 3 4 5 6 7	Influences all situations in my life
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E. How important would this situation be if it happened to you?

Not at all important	1 2 3 4 5 6 7	Extremely important
-------------------------	---------------	------------------------

F. Is the cause of your job dismissal due to something over which you have control?

Within my personal control	1 2 3 4 5 6 7	Outside of my personal control
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3. After your first term at school, you are on academic probation.

A. Write down the *one* major cause _____.

B. Is the cause of your academic probation due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances	1 2 3 4 5 6 7	Totally due to me
---	---------------	----------------------

C. If you were to be placed on academic probation again in the future would this cause again be present?
(circle one number)

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

D. Is the cause something that just influences your school career, or does it influence other areas of your life? (circle one number)

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

E. How important would this situation be if it happened to you?

Not at all
important

1 2 3 4 5 6 7

Extremely
important

F. Is the cause of your being on academic probation something over which you have personal control?

Within my
personal control

1 2 3 4 5 6 7

Outside of my
personal control

4. Your best friend tells you that you are not to be trusted.

A. Write down the *one* major cause _____.

B. Is the cause of your best friend's lack of trust in you due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people
or circumstances

1 2 3 4 5 6 7

Totally due
to me

C. If in the future a serious challenge to trust in one of your friendships were to occur, will this cause again be present? (circle one number)

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

D. Is the cause something that just influences your friendships or does it influence other areas of your life? (circle one number)

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

E. How important would this situation be if it happened to you?

Not at all
important

1 2 3 4 5 6 7

Extremely
important

F. Is the cause of your friend believing they can't trust you something over which you have personal control?

Within my personal control	1 2 3 4 5 6 7	Outside of my personal control
-------------------------------	---------------	-----------------------------------

5. You cannot sleep soundly.

A. Write down the *one* major cause _____.

B. Is the cause of your inability to sleep due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances	1 2 3 4 5 6 7	Totally due to me
---	---------------	----------------------

C. In the future when you cannot sleep soundly, will this cause again be present? (circle one number)

Will never again be present	1 2 3 4 5 6 7	Will always be present
--------------------------------	---------------	---------------------------

D. Is the cause something that just influences your sleeping pattern or does it influence other areas of your life? (circle one number)

Influences just this particular situation	1 2 3 4 5 6 7	Influences all situations in my life
---	---------------	--

E. How important would this situation be if it happened to you?

Not at all important	1 2 3 4 5 6 7	Extremely important
-------------------------	---------------	------------------------

F. Is the cause of your sleeplessness due to something over which you have personal control?

Within my personal control	1 2 3 4 5 6 7	Outside of my personal control
-------------------------------	---------------	-----------------------------------

6. You experience sexual difficulties.

A. Write down the *one* major cause _____.

B. Is the cause of your sexual difficulties due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances	1 2 3 4 5 6 7	Totally due to me
---	---------------	----------------------

C. If you experience sexual difficulties in the future, will this cause again be present? (circle one number)

Will never again be present	1 2 3 4 5 6 7	Will always be present
--------------------------------	---------------	---------------------------

D. Is the cause something that just influences your sex life or does it influence other areas of your life? (circle one number)

Influences just this particular situation	1 2 3 4 5 6 7	Influences all situations in my life
---	---------------	--

E. How important would this situation be if it happened to you?

Not at all important	1 2 3 4 5 6 7	Extremely important
-------------------------	---------------	------------------------

F. Are the cause of your sexual difficulties something over which you have personal control?

Within my personal control	1 2 3 4 5 6 7	Outside of my personal control
-------------------------------	---------------	-----------------------------------

7. You confront a serious conflict in your values.

A. Write down the *one* major cause _____.

B. Is the cause of your conflict due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances	1 2 3 4 5 6 7	Totally due to me
---	---------------	----------------------

C. In the future when confronted with a serious values conflict, will this cause again be present? (circle one number)

Will never again be present	1 2 3 4 5 6 7	Will always be present
--------------------------------	---------------	---------------------------

D. Is the cause something that just influences your personal values or does it influence other areas of your life? (circle one number)

Influences just this particular situation	1 2 3 4 5 6 7	Influences all situations in my life
---	---------------	--

E. How important would this situation be if it happened to you?

Not at all important	1 2 3 4 5 6 7	Extremely important
-------------------------	---------------	------------------------

F. Is the cause of the conflict in your values something over which you have personal control?

Within my personal control 1 2 3 4 5 6 7 Outside of my personal control

8. There are few recreational activities in which you are interested.

A. Write down the *one* major cause _____.

B. Is the cause of your lack of interest in recreational activities due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

C. In the future when you loose interest in such activities, will this cause again be present? (circle one number)

Will never again be present 1 2 3 4 5 6 7 Will always be present

D. Is the cause something that just influences your leisure time, or does it influence other areas of your life? (circle one number)

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

E. How important would this situation be if it happened to you?

Not at all important 1 2 3 4 5 6 7 Extremely important

F. Is the cause of your lack of interest in recreation something over which you have personal control?

Within my personal control 1 2 3 4 5 6 7 Outside of my personal control

9. Your Christmas vacation plans are canceled.

A. Write down the *one* major cause _____.

B. Is the cause of the vacation cancellation due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

C. If in the future your vacation plans were canceled, would this cause again be present?
(circle one number)

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

D. Is the cause something that just influences your time-off, or does it influence other areas
of your life? (circle one number)

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

E. How important would this situation be if it happened to you?

Not at all
important

1 2 3 4 5 6 7

Extremely
important

F. Is the cause of your canceled vacation something over which you have personal control?

Within my
personal control

1 2 3 4 5 6 7

Outside of my
personal control

10. You have trouble with one of your instructors.

A. Write down the *one* major cause _____.

B. Is the cause of the conflict with the instructor due to something about you or to something
about other people or circumstances? (circle one number)

Totally due to other people
or circumstances

1 2 3 4 5 6 7

Totally due
to me

C. In the future when you have a conflict with an instructor, will this cause again be present?
(circle one number)

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

D. Is the cause something that just influences your relationships with your teachers, or does
it influence other areas of your life? (circle one number)

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

E. How important would this situation be if it happened to you?

Not at all
important

1 2 3 4 5 6 7

Extremely
important

F. Is the cause of your conflict with your instructor due to something over which you have personal control?

Within my personal control	1 2 3 4 5 6 7	Outside of my personal control
-------------------------------	---------------	-----------------------------------

11. You experience financial difficulties.

A. Write down the *one* major cause _____.

B. Is the cause of your money problems due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances	1 2 3 4 5 6 7	Totally due to me
---	---------------	----------------------

C. If you were to experience financial difficulties in the future, will this cause again be present? (circle one number)

Will never again be present	1 2 3 4 5 6 7	Will always be present
--------------------------------	---------------	---------------------------

D. Is the cause something that just influences your finances or does it influence other areas of your life? (circle one number)

Influences just this particular situation	1 2 3 4 5 6 7	Influences all situations in my life
---	---------------	--

E. How important would this situation be if it happened to you?

Not at all important	1 2 3 4 5 6 7	Extremely important
-------------------------	---------------	------------------------

F. Is the cause of your financial difficulties something over which you have personal control?

Within my personal control	1 2 3 4 5 6 7	Outside of my personal control
-------------------------------	---------------	-----------------------------------

12. Your attempt to capture the interest of a specific member of the opposite sex is a failure.

A. Write down the *one* major cause _____.

B. Is the cause of your lack of success in attracting another due to something about you or to something about other people or circumstances? (circle one number)

Totally due to other people or circumstances	1 2 3 4 5 6 7	Totally due to me
---	---------------	----------------------

C. In the future when you cannot capture the interest of a member of the opposite sex, will this cause again be present?
(circle one number)

Will never again
be present

1 2 3 4 5 6 7

Will always
be present

D. Is the cause something that just influences your ability to attract attention, or does it influence other areas of your life? (circle one number)

Influences just
this particular
situation

1 2 3 4 5 6 7

Influences
all situations
in my life

E. How important would this situation be if it happened to you?

Not at all
important

1 2 3 4 5 6 7

Extremely
important

F. Is the cause of your lack of success in capturing the attention of a member of the opposite sex due to something over which you have personal control?

Within my
personal control

1 2 3 4 5 6 7

Outside of my
personal control

Personality Styles

Part B

How you have been feeling in the past week

This part of the questionnaire consists of 21 groups of statements. After reading each group of statements carefully, circle the number (0,1,2 or 3) next to the statement in each group which **best** describes the way you have been feeling **the past week, including today**.

1. 0 - I do not feel sad
 1 - I feel sad
 2 - I am sad all the time and I cant seem to snap out of it
 3 - I am so sad or unhappy that I can't stand it

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

3. 0 - I do not feel like a failure
 1 - I feel I have failed more than the average person
 2 - As I look back on my life, all I can see is a lot of failure
 3 - I feel I am a complete failure as a person

4. 0 - I get as much satisfaction out of things as I used to
 1 - I don't enjoy things the way I used to
 2 - I don't get real satisfaction out of anything anymore
 3 - I am dissatisfied or bored with everything

5. 0 - I don't feel particularly guilty
 1 - I feel guilty a good part of the time
 2 - I feel quite guilty most of the time
 3 - I feel guilty all of the time

6. 0 - I don't feel disappointed in myself
 1 - I am disappointed in myself
 2 - I am disgusted with myself
 3 - I hate myself

7. 0 - I don't have any thoughts of killing myself
 1 - I have thoughts of killing myself, but I would not carry them out
 2 - I would like to kill myself
 3 - I would kill myself if I had the chance

8. 0 - I have not lost interest in other people
1 - I am less interested in other people than I used to be
2 - I have lost most of my interest in other people
3 - I have lost all of my interest in other people
9. 0 - I make decisions about as well as I ever could
1 - I put off making decisions more than I used to
2 - I have greater difficulty in making decisions than before
3 - I can't make decisions at all anymore
10. 0 - I don't feel I look any worse than I used to
1 - I am worried that I am looking old or unattractive
2 - I feel that there are permanent changes in my appearance that make me look unattractive
3 - I believe that I look ugly
11. 0 - I can work about as well as before
1 - It takes an extra effort to get started at doing something
2 - I have to push myself very hard to do anything
3 - I can't do any work at all
12. 0 - I don't get more tired than usual
1 - I get tired more easily than I used to
2 - I get tired from doing almost anything
3 - I am too tired to do anything
13. 0 - My appetite is no worse than usual
1 - My appetite is not as good as it used to be
2 - My appetite is much worse now
3 - I have no appetite at all anymore

Appendix A5: Positive and Negative Affect Schedule (PANAS)

Personality Styles

Part C

Types of Moods and Feelings You Generally Experience

Please rate the degree to which you generally experience each of the following 20 mood states. Think back over the past five years and indicate the general extent to which you experienced each of the moods listed below.

ENTHUSIASTIC

not at all 1 2 3 4 5 very much

SCARED

not at all 1 2 3 4 5 very much

INTERESTED

not at all 1 2 3 4 5 very much

AFRAID

not at all 1 2 3 4 5 very much

UPSET

not at all 1 2 3 4 5 very much

DISTRESSED

not at all 1 2 3 4 5 very much

JITTERY

not at all 1 2 3 4 5 very much

STRONG

not 1 2 3 4 5 very
at all much

PROUD

not 1 2 3 4 5 very
at all much

NERVOUS

not 1 2 3 4 5 very
at all much

ASHAMED

not 1 2 3 4 5 very
at all much

DETERMINED

not 1 2 3 4 5 very
at all much

EXCITED

not 1 2 3 4 5 very
at all much

INSPIRED

not 1 2 3 4 5 very
at all much

ACTIVE

not 1 2 3 4 5 very
at all much

GUILTY

not 1 2 3 4 5 very
at all _____ much

IRRITABLE

not 1 2 3 4 5 very
at all _____ much

ALERT

not 1 2 3 4 5 very
at all _____ much

ATTENTIVE

not 1 2 3 4 5 very
at all _____ much

HOSTILE

not 1 2 3 4 5 very
at all _____ much

Appendix A6: Selective Recall Measure (Part A of Recall Measure Test)

Dr. M. Forbes

Dept. of Psychology

Sex Differences in Recollections of the Past

Age: _____

Sex: _____

Past research in the memory area has revealed few differences between the sexes in memory strategies or in the types of events people recall. However, in virtually all of this past research, individuals have been asked to recall very simple and uninvolved material such as word lists or pictures. We believe that sex differences in childhood memories might possibly be revealed when individuals are asked to recall events from their own lives.

On the next page are descriptions of categories of events involving parents, that a person could recall from their childhood. We would like you to read through the list and then select 4 items to describe in a bit more detail.

So, after you have selected the 4 categories, move on to the subsequent pages and describe these events briefly.

After completing Part A of this study, please read and complete the questionnaire in Part B.

Sex Differences in Recollections of the Past

Below are some possible categories of events from individuals' childhoods that you probably have recollections of. These events involve different ways mothers and fathers relate to their children.

We don't have time to allow you to describe all of them, so we would like you to select **4** memories to recall **from between the ages of 6 and 16**.

Of the 20 items presented below, some of these memories are positive and some of them are negative. Read them over and choose **4** memories of your mother and/or father to describe briefly on the subsequent pages. You can choose positive memories, negative memories or a mixture of both.

1. Made an effort to understand what you needed or wanted.
2. Invaded your privacy.
3. Encouraged you to make your own decisions.
4. Seemed to have difficulty showing you their feelings.
5. Encouraged you to pursue the goals you wanted to achieve.
6. Strictly controlled what you did.
7. Enjoying talking things over with you.
8. Rejected you after you were bad.
9. Followed through on a promise or commitment to you.
10. Were verbally hostile to you.
11. Were affectionate towards you.
12. Using the "silent treatment" on you.
13. Made you feel better when you were upset.
14. Venting their anger on you.
15. Treated you fairly even though your behavior was wrong or bad.
16. Showed favoritism towards either you or your sibling.
17. Weren't overprotective of you, and let you learn from your own experiences
18. Made you feel like you could not take care of yourself unless they were around.
19. Were clear with you about their expectations for proper behavior, without getting angry.
20. Criticized your appearance or personal qualities.

Please circle the number beside the item to indicate your 4 choices, and then move on to the subsequent pages.

On this and the following pages, please describe some events from your past (memories from between the ages of **6 and 16**) in each of the categories you selected. Indicate the category number in the margin.

Memory #_

Memory #_

Memory #_

Memory #-

(please move on to the next page)

At this point, we would like you to rate these 4 events in terms of how they reflected on your mother and/or father's **parenting skills**.

For each of the four memories, please rate the event described on the following scale:

1 2 3 4 5 6 7 8 9
↑
Reflected very **negatively** on my mother/father's parenting ability **neutral** Reflected very **positively** on my mother/father's parenting ability

Please go back to each memory you described on the previous pages and assign the entire event a rating from the above scale. *Place your rating in the margin beside the event.*

Appendix A7: Global Recall Measure (Part B of Recall Measure Test)

Sex Differences in Recollections of the Past

On the following pages are descriptions of common parent/child interactions. Please rate the degree to which these interactions occurred during your own childhood (between the ages of 6 and 16), first for your mother, then *separately*, for your father.

Rate the following items (1-10) for you **mother**.

1. Expressed positive emotions when with you.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
never almost sometimes often very
never often

2. Criticized you when you failed at something.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
never almost sometimes often very
never often

3. Helped you develop a caring and respectful attitude towards other people.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
never almost sometimes often very
never often

4. Making you feel like you weren't wanted.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
never almost sometimes often very
never often

5. Wouldn't give in to your demands, and would stick by their rules.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
never almost sometimes often very
never often

6. Making sure you did the school work you were assigned.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
never almost sometimes often very
never often

7. Wouldn't give you good explanations to your questions.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
never	almost	sometimes	often	very
	never			often

8. Encouraged you to be independent.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
never	almost	sometimes	often	very
	never			often

9. Used threats to control you.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
never	almost	sometimes	often	very
	never			often

10. Generally letting you do anything you want.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
never	almost	sometimes	often	very
	never			often

Sex Differences in Recollections of the Past (Con't.)

Rate the following items (1-10) for you **father**.

1. Expressed positive emotions when with you.

1 2 3 4 5
never almost sometimes often very
 never often

2. Criticized you when you failed at something.

1 2 3 4 5
never almost sometimes often very
 never often

3. Helped you develop a caring and respectful attitude towards other people.

1 2 3 4 5
never almost sometimes often very
 never often

4. Making you feel like you weren't wanted.

1 2 3 4 5
never almost sometimes often very
 never often

5. Wouldn't give in to your demands, and would stick by their rules.

1 2 3 4 5
never almost sometimes often very
 never often

6. Making sure you did the school work you were assigned.

1 2 3 4 5
never almost sometimes often very
 never often

7. Wouldn't give you good explanations to your questions.

1 _____ 2 _____ 3 _____ 4 _____ 5
never almost sometimes often very
never often

8. Encouraged you to be independent.

1 _____ 2 _____ 3 _____ 4 _____ 5
never almost sometimes often very
never often

9. Used threats to control you.

1 _____ 2 _____ 3 _____ 4 _____ 5
never almost sometimes often very
never often

10. Generally letting you do anything you want.

1 _____ 2 _____ 3 _____ 4 _____ 5
never almost sometimes often very
never often

Information Regarding the Upshaw and Yates
Social Perceptiveness Test

The Upshaw and Yates Social Perceptiveness Test is the most widely used, and best validated test of social perceptiveness ability currently available. This test measures a person's ability to make accurate judgments of other people's personalities and motivations. The test is used in many fields to aid in job candidate selection and promotion decisions.

Research indicates that individuals who score higher on the test are more likely than those who score low to a) have careers in professional areas, b) report high job, marital, and life satisfaction, c) cope better with stress, d) have a wide circle of friends and interests, e) deal with interpersonal conflicts in satisfactory ways. Research also indicates that socially perceptive individuals were raised in homes where their parents emphasized warmth, openness and positive structure. These research findings are congruent with the theory that positive parenting encourages the development of empathy in children. Basically, it seems that the ability to accurately "read" other people leads individuals to be more successful in interpersonal situations, and consequently, leads them to have more fulfilling lives.

The test involves reading a case history of a person who is in a stressful period of his or her life. It is widely accepted by psychologists that people reveal strong clues about the nature of their basic personalities when they are under stress. Old patterns reveal themselves and new patterns tend to emerge. After reading the case history, you will be asked to make judgments about the person's past and present life experiences and personal qualities. People high in social perceptiveness ability are better able to discern the most diagnostic and relevant information in the case history. Consequently, they make more accurate judgments concerning the individual. That is, their judgments are comparable to those of experts who have been extensively trained in making interpersonal judgments.

Upshaw and Yates' Social Perceptiveness Test: FORM B

Read the biography thoroughly before answering any of the questions about the person. Be sure to do the following three things while reading the biography, 1) Think of the consequences of the decisions that the person made, 2) Think of the thoughts that the person had that would lead to the decisions she made, 3) Picture people that you know making decisions like the ones this person made.

Biography of Cynthia M.

Cynthia M. is a 40 year old mother of four. She met her husband John 10 years ago when they both were attending medical school. Although the relationship had its ups and downs while they were attending school together, Cynthia decided that she would marry John after they had completed their respective degrees. She felt that the problems they had encountered during medical school were a result of financial problems and school pressures. Although her parents were against the marriage, Cynthia insisted that John was the right person for her. She believed strongly that if she and John could work together to establish a successful medical practice, the problems they had encountered earlier would not reoccur. After they were married, Cynthia and John worked together in their medical practice and had 4 children over the course of 6 years. After 6 years of marriage, they went through a stressful, lengthy divorce and custody trial. Cynthia was awarded custody of the children - a decision that John plans to appeal. Cynthia initiated the divorce proceedings after a particularly intense fight in which John became physically violent and threatened her with further violence if she should attempt to leave. John had become physically violent at other times during, and prior to, their marriage, but Cynthia felt that this occasion was the last straw.

Cynthia views the breakdown of the marriage as resulting from many contributing factors. She claims that John's repeated involvement with other women is the most important factor leading to the breakup. John claims that he was forced into such behavior by Cynthia. He points out that after the children were born, she refused to have anything to do with him sexually, and that she became obsessed with religion - to the point where she would attend the local evangelical church twice daily. He also claims that Cynthia was intensely jealous, and would not allow him to develop any outside friendships. Cynthia does not deny these accusations. She states that a man who has made a marriage vow should remain faithful, regardless of his wife's actions. She claims that her father frequently cheated on her mother, and she feels that it is very difficult to be close to man because they cannot really be trusted.

According to Cynthia another major factor leading to the breakup was John's expectations of her. She claims that, on the one hand, he wanted her to be a perfect professional - and that he even admired her drive and ambition. On the other hand, he wanted her to be a perfect homemaker and mother, attending to all of her husband's needs. She feels that she could never live up to these standards, and that she turned to religion to obtain the comfort and support that she feels John refused to give her.

Although John was awarded visitation rights to the children, Cynthia refused to allow him to see the children. She feels that John has a bad influence on the children and is firmly committed to raising them on her own. She has even attempted to turn the children against their father by informing them of his extra-marital affairs. John feels that he has a right to see the children, and is very concerned about their welfare. He points out that Cynthia has not only refused to allow him to see the children, but also has refused to allow anyone else to see them. She discourages and undermines their friendships, and demands that they come home immediately after school. The only social activity that she condones is attending church. John is also concerned about the children because Cynthia has been giving large sums of money to the church, and neglecting the children's needs for adequate food and clothing. Cynthia defends these actions by stating that she has the right to raise the children anyway she likes and that a strict, religious upbringing, accompanied by a great deal of self-sacrifice, will be best for the children in the long run.

Using all of the information at your disposal, please choose the answer you think best characterizes Cynthia's past history.

1. Cynthia is most likely from a:

- a) high income background.
- b) moderate income background.
- c) low income background.
- d) Foster home of moderate income.

2. Cynthia's political orientation is most likely

- a) Conservative
- b) Liberal
- c) New Democratic Party (NDP)
- d) Reform

3. Cynthia most likely:

- a) had many casual acquaintances as a youngster.
- b) had many close and supportive friends as a youngster.
- c) had one major friend whom she socialized with.
- d) had no close friends as a youngster and was quite withdrawn with people.

4. Cynthia's main approach to navigating social and personal relationships can best be described as:

- a) Highly empathic, even over-sensitive to the moods and wishes of others.
- b) Trying to balance her own emotional and psychological needs with those of others.
- c) Most concerned with what will present herself in the best light to others.
- d) Manipulative and self-concerned, even at the cost of placing her in a bad light to others.

5. Cynthia most likely has which of the following attitudes towards education?

- a) It is absolutely necessary if one is to make a success of one's life.
- b) It is good for very young people, however, a person should work

- for a living past the late teens.
- c) It is an unnecessary cost to society to educate all people at the junior high school level.
 - d) Children should be trained at an early age to follow the work of their parents. Public education is not important, parents can fulfill this function.
6. Cynthia most likely has which of the following attitudes towards capital punishment?
- a) Killing another human being is a sin, no matter what the reason.
 - b) The State has a right to execute criminals in certain very limited circumstances (i.e. for the murder of a police officer).
 - c) People who kill others lose their right to live, and society has a moral obligation to execute them.
 - d) Matters of ethics and morality in crime are the responsibility of the religious clergy of a community; only they, and not the State, are capable of making decisions regarding capital punishment.
7. Cynthia could best be described as:
- a) A high energy person; enthusiastic and cheerful.
 - b) A nervous individual; active but anxious and preoccupied.
 - c) A calm person.
 - d) A very sad and lethargic person.
8. Cynthia could best be described as:
- a) Fearful of new experiences, and reluctant to try activities that are unfamiliar to her.
 - b) Cautious regarding new experiences, but willing to try some after careful consideration.
 - c) Neither closed nor excessively open to new experiences.
 - d) A risk-taker; more liable to jump head first into a situation than think it through.

9. In her relationship with her classmates when she was in school, her teacher likely described Cynthia as:
- a) Aggressively competitive with others.
 - b) Non-aggressively-competitive with others.
 - c) Cooperative with others.
 - d) Submissive to others.

The following questions ask you to make judgments about Cynthia's life two years after the events described in the biography.

10. With respect to Cynthia's work, which of the following is true:
- a) she works full-time in a practice with a female partner.
 - b) she has given up her practice and works full-time for her church.
 - c) she has remarried another man and is a full-time homemaker.
 - d) she has remarried John and is a full-time homemaker.
11. Which of the following characterizes Cynthia's relationship with John:
- a) extremely hostile.
 - b) moderately hostile.
 - c) moderately friendly.
 - d) extremely friendly.
12. Which of the following characterizes Cynthia's romantic involvement:
- a) She is likely to remarry.
 - b) She will reconcile with John.
 - c) She will be only casually involved with others.
 - d) She will avoid any romantic involvement.
13. In terms of her relationships with people outside of her family, Cynthia is:
- a) aggressively competitive with others.
 - b) non-aggressively competitive with others.
 - c) cooperative with others.
 - d) submissive to others.
14. Cynthia has had which of the following difficulties recently:
- a) alcoholism problem.
 - b) overeating problem.
 - c) extreme depression problem.
 - d) prescription drug dependence problem.
15. Cynthia's moods can be characterized in which of the following ways:
- a) positive and negative, fluctuating dramatically within a single day.
 - b) positive and negative fluctuating from one week to the next.
 - c) generally quite positive.
 - d) generally quite negative.

Appendix A10: Social Perceptiveness Feedback Materials

Coding Sheet - Social Perceptiveness Test

- | | | | | | |
|----|-----|-----|-----|-----|-----|
| 1. | J3 | 6. | R5o | 11. | A4 |
| 2. | R5 | 7. | QR6 | 12. | J9 |
| 3. | J2 | 8. | S1o | 13. | A3 |
| 4. | R7 | 9. | J7 | 14. | AR1 |
| 5. | R5o | 10. | S2 | 15. | JS9 |

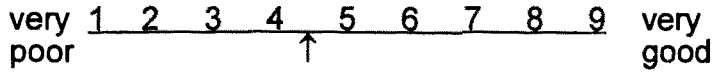
Feedback of Your Performance on the Social Perceptiveness Test

On the following page your performance on this social perceptiveness test (Part B) has been rated on six qualities. Your score on each of these qualities is circled in red ink. All data have been averaged, so you can evaluate how well you did on the test by comparing your score with how the average student did. (indicated by the centre arrow).

(Turn Page)

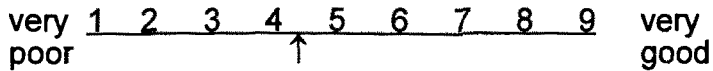
Feedback on Social Perceptiveness Test

1. Ability to accurately judge the person's past history.



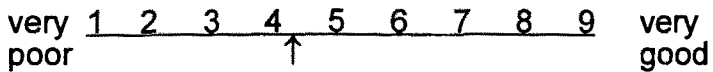
AVERAGE

2. Ability to accurately judge the person's present life situation.



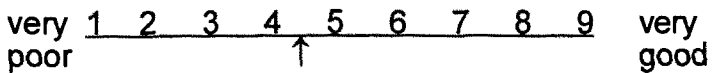
AVERAGE

3. Ability to accurately judge the person's relationships.



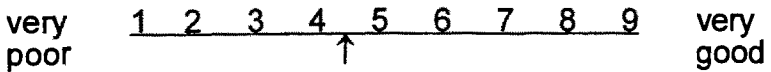
AVERAGE

4. Ability to accurately judge the person's personality.



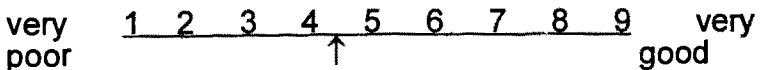
AVERAGE

5. Ability to accurately judge the difficulties the person had.



AVERAGE

6. Ability to accurately judge others' moods.



AVERAGE

23. My emotional experiences are rich and varied and add to my life.

1 _____ 2 _____ 3 _____ 4 _____ 5
strongly disagree strongly agree

24. I would rather experience my distress fully than deny it or avoid it.

1 _____ 2 _____ 3 _____ 4 _____ 5
strongly disagree strongly agree

25. It is generally important to be open about your feelings.

1 _____ 2 _____ 3 _____ 4 _____ 5
strongly disagree strongly agree

26. A self-actualized person is someone who is in touch with his/her feelings.

1 _____ 2 _____ 3 _____ 4 _____ 5
strongly disagree strongly agree

27. Well functioning adults are people who are fully attentive to their feelings and motives.

1 _____ 2 _____ 3 _____ 4 _____ 5
strongly disagree strongly agree

28. I try to think good thoughts no matter how badly I feel. _

1 _____ 2 _____ 3 _____ 4 _____ 5
strongly disagree strongly agree

29. People would be better off if they felt less and thought more.

1 _____ 2 _____ 3 _____ 4 _____ 5
strongly disagree strongly agree

30. I don't think it's worth it paying attention to your emotions or moods.

1 _____ 2 _____ 3 _____ 4 _____ 5
strongly disagree strongly agree

62. Right now I know what kind of mood I'm in.

1 2 3 4 5
strongly disagree strongly agree

63. I often evaluate my mood.

1 2 3 4 5
strongly disagree strongly agree

Appendix A12: Self-Esteem Scale

**Personality Styles
Part E**

How I Feel About Myself

1. I feel that I am a person of worth, at least on an equal basis with others.

1 _____ 2 _____ 3 _____ 4
strongly agree agree disagree strongly disagree

2. I feel that I have a number of good qualities.

1 _____ 2 _____ 3 _____ 4
strongly agree agree disagree strongly disagree

3. All in all, I am inclined to feel that I am a failure.

1 _____ 2 _____ 3 _____ 4
strongly agree agree disagree strongly disagree

4. I am able to do things as well as most other people.

1 _____ 2 _____ 3 _____ 4
strongly agree agree disagree strongly disagree

5. I feel I do not have much to be proud of .

1 _____ 2 _____ 3 _____ 4
strongly agree agree disagree strongly disagree

6. I take a positive attitude toward myself.

1 _____ 2 _____ 3 _____ 4
strongly agree agree disagree strongly disagree

7. On the whole, I am satisfied with myself.

1	2	3	4	
strongly	agree		disagree	strongly
agree				disagree

8. I wish I could have more respect for myself.

1	2	3	4	
strongly	agree		disagree	strongly
agree				disagree

9. I certainly feel useless at times.

1	2	3	4	
strongly	agree		disagree	strongly
agree				disagree

10. At times, I think I am no good at all.

1	2	3	4	
strongly	agree		disagree	strongly
agree				disagree

Appendix A13: Introduction to Experiment 2

Introduction to the Studies

Today you will be participating in two separate studies. We will provide instructions for completing the second study later.

At this time please read the following instructions for the first study.

Personality Study

In this study, we are interested in the relationship between various personality characteristics and "social perceptiveness ability" - the ability to accurately perceive other people's personality traits and motives. People with high social perceptiveness ability relate better to others, are better able to understand the causes of others' behaviours, and are more accurate in predicting others' moods and actions.

First, you will complete a questionnaire designed to assess various aspects of your personality. After that, you will take a well-established test of social perceptiveness ability, and you will receive feedback concerning how you performed.

Information Regarding the Upshaw and Yates
Social Perceptiveness Test

The Upshaw and Yates Social Perceptiveness Test is the most widely used, and best validated test of social perceptiveness ability currently available. This test measures a person's ability to make accurate judgments of other people's personalities and motivations. The test is used in many fields to aid in job candidate selection and promotion decisions.

Research indicates that individuals who score higher on the test are more likely than those who score low to a) have careers in professional areas, b) report high job, marital, and life satisfaction, c) cope better with stress, d) have a wide circle of friends and interests, e) deal with interpersonal conflicts in satisfactory ways. Basically, it seems that the ability to accurately "read" other people leads individuals to be more successful in interpersonal situations, and consequently, leads them to have more fulfilling lives.

The test involves reading a case history of a person who is in a stressful period of his or her life. It is widely accepted by psychologists that people reveal strong clues about the nature of their basic personalities when they are under stress. Old patterns reveal themselves and new patterns tend to emerge. After reading the case history, you will be asked to make judgments about the person's past and present life experiences and personal qualities. People high in social perceptiveness ability are better able to discern the most diagnostic and relevant information in the case history. Consequently, they make more accurate judgments concerning the individual. That is, their judgments are comparable to those of experts who have been extensively trained in making interpersonal judgments.

Appendix B: Tables of Results

Table B1.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Feedback Condition

Recall Measures	Positive Feedback		Negative Feedback	
	M	N	M	N
Selective				
Participant ^a	5.44	39	6.27	37
Pretest	4.86	40	5.66	38
Observer	5.17	40	5.86	38
Combined	-.24	40 ⁸	.21	39
Global				
Father	3.46	40	3.48	37
Mother	3.57	40	3.65	38
Mother/Father	3.51	40	3.58	39

Note: Higher numbers indicate more positive recollections on the measure indicated.

^aSubsidiary ANOVA results for the Participant, Pretest and Observer subscales were suggestive of mood incongruency effects, although not all at significant levels $F(1, 72) = 4.29, p < .04$, $F(1, 74) = 4.79, p < .03$, and $F(1, 74) = 3.18, p < .08$ respectively. In contrast, there were no significant main effects for feedback on either the Global Mother or Father subscales, $F(1, 74) = .563, p < .46$, $F(1, 73) = .046, p < .83$, respectively (Bonferroni-corrected alpha = .01).

Table B2.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood and Mood Induction

Measure	Mood Induction	Meta-Mood Index			
		Low		High	
		M	N	M	N
Selective					
Participant	Negative	6.33	15	6.21	22
	Neutral	5.71	22	5.25	17
Pretest	Negative	5.79	17	5.53	21
	Neutral	5.06	23	4.69	17
Observer	Negative	5.91	17	5.79	21
	Neutral	5.25	23	5.09	17
Combined	Negative	.282	17	.141	22
	Neutral	-.142	23	-.332	17
Global					
Father ^a	Negative	3.47	16	3.49	21
	Neutral	3.60	23	3.31	17
Mother	Negative	3.61	16	3.70	22
	Neutral	3.70	23	3.44	17
Mother/Father	Negative	3.55	17	3.61	22
	Neutral	3.65	23	3.37	17

Note: Higher numbers indicate more positive recollections on the measure indicated.

^aUnlike the principal ANOVA results for the Mother/Father scale, subsidiary analyses revealed no significant interaction effects for the MES Index on the separate Mother and Father subscales, $F(1, 74) = 2.12, p < .15$, $F(1, 73) = 1.97, p < .16$, respectively ($\alpha = .01$).

Table B3.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Control) and Mood Induction

Measure	Mood Induction	Meta-Mood			
		Not Control		In Control	
		M	N	M	N
Selective					
Participant	Negative	6.29	28	6.18	9
	Neutral	5.73	28	4.93	11
Pretest	Negative	5.75	27	5.38	11
	Neutral	5.00	28	4.60	12
Observer	Negative	5.95	27	5.59	11
	Neutral	5.44	28	4.58	12
Combined	Negative	.240	28	.106	11
	Neutral	-.093	28	-.525	12
Global					
Father	Negative	3.56	26	3.29	11
	Neutral	3.50	28	3.43	12
Mother	Negative	3.67	27	3.64	11
	Neutral	3.54	28	3.68	12
Mother/Father	Negative	3.63	28	3.46	11
	Neutral	3.52	28	3.55	12

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B4.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Clarity) and Mood Induction

Measure	Mood Induction	Meta-Mood			
		Not Clear		Clear	
		M	N	M	N
Selective					
Participant	Negative	7.06	8	6.03	29
	Neutral	5.78	15	5.33	24
Pretest	Negative	6.17	9	5.48	29
	Neutral	4.96	15	4.84	25
Observer	Negative	6.58	9	5.62	29
	Neutral	5.33	15	5.09	25
Combined	Negative	.603	9	.082	30
	Neutral	-.112	15	-.288	25
Global					
Father	Negative	3.43	8	3.50	29
	Neutral	3.48	15	3.48	25
Mother	Negative	3.67	9	3.66	29
	Neutral	3.61	15	3.57	25
Mother/Father	Negative	3.56	9	3.59	30
	Neutral	3.54	15	3.53	25

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B5.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Changeability) and Mood Induction

Measure	Mood Induction	Meta-Mood			
		Not Changeable		Changeable	
		M	N	M	N
Selective					
Participant	Negative	6.01	26	6.84	11
	Neutral	5.69	25	5.18	14
Pretest	Negative	5.47	27	6.07	11
	Neutral	5.03	26	4.61	14
Observer	Negative	5.72	27	6.16	11
	Neutral	5.34	26	4.90	14
Combined	Negative	.089	28	.491	11
	Neutral	-.131	26	-.392	14
Global					
Father	Negative	3.53	26	3.36	11
	Neutral	3.58	26	3.29	14
Mother	Negative	3.73	27	3.49	11
	Neutral	3.65	26	3.46	14
Mother/Father	Negative	3.66	28	3.43	11
	Neutral	3.62	26	3.38	14

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B6.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Acceptance) and Mood Induction

Measure	Mood Induction	Meta-Mood			
		Not Accept		Accept	
		M	N	M	N
Selective					
Participant	Negative	5.94	13	6.42	24
	Neutral	5.62	15	5.44	24
Pretest	Negative	5.23	15	5.91	23
	Neutral	4.95	16	4.85	24
Observer	Negative	5.45	15	6.12	23
	Neutral	5.13	16	5.22	24
Combined	Negative	.008	15	.324	24
	Neutral	-.214	16	-.228	24
Global					
Father	Negative	3.39	14	3.53	23
	Neutral	3.60	16	3.96	24
Mother	Negative	3.47	15	3.78	23
	Neutral	3.65	16	3.54	24
Mother/Father	Negative	3.44	15	3.67	24
	Neutral	3.63	16	3.47	24

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B7.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Value) and Mood Induction

Measure	Mood Induction	Meta-Mood			
		Not Value		Value	
		M	N	M	N
Selective					
Participant	Negative	6.14	14	6.33	23
	Neutral	5.71	22	5.24	17
Pretest	Negative	5.66	16	5.63	22
	Neutral	4.98	23	4.75	23
Observer	Negative	5.78	16	5.90	22
	Neutral	5.26	23	5.07	17
Combined	Negative	.197	16	.206	23
	Neutral	-.153	23	-.317	17
Global					
Father	Negative	3.37	15	3.56	22
	Neutral	3.59	23	3.34	17
Mother	Negative	3.46	16	3.81	22
	Neutral	3.75	23	3.37	17
Mother/Father ^a	Negative	3.43	16	3.69	23
	Neutral	3.66	23	3.35	17

Note: Higher numbers indicate more positive recollections on the measure indicated.

^aSubsidiary ANOVAs were supportive of the suggestion that individual differences on the Value scale moderated mood repair efforts on the Global measures, revealing a significant interaction effect in the predicted direction on the Combined Mother/Father scale, $F(1, 75) = 11.91, p < .001$. and Mother scales, $F(1, 75) = 10.41, p < .002$ ($\alpha = .01$).

Table B8.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Attributional Style (Internal-External) and Mood Induction

Measure	Mood Induction	Attributional Style			
		Internal		External	
		M	N	M	N
Selective					
Participant	Negative	5.90	15	6.50	22
	Neutral	5.61	20	5.40	19
Pretest	Negative	5.72	15	5.59	23
	Neutral	5.12	20	4.65	20
Observer	Negative	5.83	15	5.86	23
	Neutral	5.46	20	4.90	20
Combined	Negative	.127	16	.202	23
	Neutral	-.088	20	-.356	20
Global					
Father	Negative	3.29	15	3.61	22
	Neutral	3.58	20	3.38	20
Mother	Negative	3.47	15	3.79	23
	Neutral	3.45	20	3.71	20
Mother/Father	Negative	3.40	16	3.71	23
	Neutral	3.52	20	3.54	20

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B9.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Attributional Style (Stable/Unstable) and Mood Induction

Measure	Mood Induction	Attributional Style			
		Stable		Unstable	
		M	N	M	N
Selective					
Participant	Negative	6.28	13	6.24	24
	Neutral	5.84	23	5.03	16
Pretest	Negative	5.50	15	5.74	23
	Neutral	5.11	23	4.58	17
Observer	Negative	5.78	15	5.89	23
	Neutral	4.84	17	5.44	23
Combined	Negative	.189	15	.210	24
	Neutral	-.051	23	-.454	17
Global					
Father	Negative	3.36	14	3.56	23
	Neutral	3.44	23	3.52	17
Mother	Negative	3.73	15	3.63	23
	Neutral	3.57	17	3.58	23
Mother/Father	Negative	3.54	15	3.61	24
	Neutral	3.52	23	3.55	17

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B10.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Attributional Style (Global/Specific) and Mood Induction

Measure	Mood Induction	Attributional Style			
		Global		Specific	
		M	N	M	N
Selective					
Participant	Negative	6.22	18	6.29	19
	Neutral	5.65	18	5.38	21
Pretest	Negative	5.37	20	5.95	18
	Neutral	4.89	18	4.88	22
Observer	Negative	5.63	20	6.10	18
	Neutral	5.02	22	5.38	18
Combined	Negative	.120	20	.289	19
	Neutral	.145	18	.286	22
Global					
Father	Negative	3.43	19	3.54	18
	Neutral	3.42	18	3.53	22
Mother	Negative	3.49	20	3.85	18
	Neutral	3.58	18	3.59	22
Mother/Father	Negative	3.47	20	3.70	19
	Neutral	3.50	18	3.56	22

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B11.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Attributional Style (Personal Goal Items) and Mood Induction

Measure	Mood Induction	Personal Goal Attributions			
		Stable		Unstable	
		M	N	M	N
Selective					
Participant	Negative	6.21	14	6.28	23
	Neutral	5.86	21	5.10	18
Pretest	Negative	5.54	16	5.72	22
	Neutral	5.18	21	4.57	19
Observer	Negative	5.89	16	5.82	22
	Neutral	5.49	21	4.84	19
Combined	Negative	.206	16	.200	23
	Neutral	-.023	21	-.443	19
Global					
Father	Negative	3.19	15	3.68	22
	Neutral	3.47	21	3.48	19
Mother	Negative	3.58	16	3.72	22
	Neutral	3.61	21	3.55	19
Mother/Fathe	Negative	3.40	16	3.71	23
	Neutral	3.54	21	3.52	19

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B12.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Level of Depression

Measure	Level of Depression			
	Low		High	
	M	N	M	N
Selective				
Participant ^a	6.38	39	5.35	(37)
Pretest	5.75	40	4.77	(38)
Observer	5.94	40	5.06	38
Combined	.28	40	-.30	39
Global				
Father	3.57	39	3.40	38
Mother	3.67	38	3.55	39
Mother/Father	3.64	40	3.48	39

Note: Higher numbers indicate more positive recollections on the measure indicated.

^aSubsidiary ANOVAs support the principal analyses on the Selective and Global combined scales: A significant main effect for level of depression was present on the Participant and Pretest subscales, $F(1, 72) = 8.82, p < .006$ and $F(1, 74) = 7.97, p < .006$, respectively (a marginally significant effect was present for the Observer subscale, $F(1, 74) = 5.80, p < .02$) (alpha = .01).

Table B13.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Level of Depression and Mood Induction

Measure	Mood Induction	Level of Depression			
		Low		High	
		M	N	M	N
Selective					
Participant	Negative	6.78	18	5.76	19
	Neutral	5.99	21	4.94	18
Pretest	Negative	6.25	18	5.10	20
	Neutral	5.25	22	4.44	18
Observer	Negative	6.26	18	5.48	20
	Neutral	5.62	22	4.64	18
Combined	Negative	.536	18	-.084	21
	Neutral	.025	22	-.524	18
Global					
Father	Negative	3.60	17	3.38	20
	Neutral	3.53	22	3.42	18
Mother	Negative	3.77	17	3.57	21
	Neutral	3.62	22	3.54	18
Mother/Fathe	Negative	3.70	18	3.48	21
	Neutral	3.58	22	3.48	18

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B14.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Negative Affectivity

Measure	Negative Affectivity			
	Low		High	
	M	N	M	N
Selective				
Participant	6.28	41	5.40	35
Pretest	5.69	40	4.79	38
Observer	6.04	40	4.95	38
Combined	.25	41	-.30	38
Global				
Father	3.52	39	3.44	38
Mother	3.72	40	3.53	38
Mother/Father	3.63	41	3.48	38

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B15.

Experiment 1: Mean Ratings on the Recall Measures as a Function of Positive Affectivity

Measure	Positive Affectivity			
	Low		High	
	M	N	M	N
Selective				
Participant	5.98	49	5.71	27
Pretest	5.26	51	5.27	27
Observer	5.57	51	5.41	27
Combined	.01	52	-.05	27
Global				
Father	3.43	50	3.57	27
Mother	3.59	51	3.68	27
Mother/Father	3.52	52	3.62	27

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B16.

Experiment 2: Mean Ratings on the Recall Measures as a Function of Mood Induction

Recall Measures	Neutral Mood		Negative Mood	
	M	N	M	N
Selective				
Participant ^a	5.55	63	6.12	71
Pretest	5.04	64	5.79	71
Observer	5.13	64	5.81	71
Combined	-.21	64	.14	71
Global				
Father	3.43	69	3.47	69
Mother	3.54	64	3.74	71
Mother/Father	3.49	64	3.62	71

Note: Higher numbers indicate more positive recollections on the measure indicated.

^aSubsidiary analyses generally support the results for the principal analyses: A main effect for feedback was present on the Selective Pretest ($F(1, 119) = 8.85, p < .004$), and Observer ($F(1, 119) = 6.58, p < .01$) subscales (results for the Participant subscale were in the predicted direction, but were not significant, $F(1, 119) = 3.89, p < .05$). The same pattern was present on the Global Mother subscale, $F(1, 119) = 6.46, p < .01$. Results for the Global Father subscale did not indicate mood incongruity, $F(1, 116) = .723, p < .375$ (alpha = .01).

Table B17.

Experiment 2: Mean Ratings on the Recall Measures as a Function of Meta-Mood and Mood Induction

Measure	Mood Induction	Meta-Mood Index			
		Low		High	
		M	N	M	N
Selective					
Participant	Negative	5.32	35	6.90	36
	Neutral	4.70	25	6.11	38
Pretest	Negative	5.10	35	6.47	36
	Neutral	4.05	26	5.72	38
Observer	Negative	5.04	35	6.56	36
	Neutral	4.13	26	5.81	38
Combined	Negative	-.25	35	.52	36
	Neutral	-.70	26	.13	38
Global					
Father	Negative	3.26	35	3.69	34
	Neutral	3.16	26	3.62	37
Mother	Negative	3.55	35	3.93	36
	Neutral	3.15	26	3.82	38
Mother/Father	Negative	3.40	35	3.83	36
	Neutral	3.15	26	3.73	38

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B18.

Experiment 2: Mean Ratings on the Recall Measures as a Function of Meta-Mood (Emotional Attention) and Mood Induction

Measure	Mood Induction	Emotional Attention			
		Low		High	
		M	N	M	N
Selective					
Participant	Negative	5.63	34	6.51	36
	Neutral	3.44	36	5.70	27
Pretest	Negative	5.10	34	6.38	36
	Neutral	4.94	37	5.19	27
Observer	Negative	5.21	34	6.30	36
	Neutral	4.86	37	5.49	27
Combined	Negative	-.17	34	.40	36
	Neutral	-.29	37	-.09	27
Global					
Father	Negative	3.27	33	3.64	35
	Neutral	3.36	36	3.53	27
Mother	Negative	3.58	34	3.88	36
	Neutral	3.61	37	3.46	27
Mother/Father ^a	Negative	3.44	34	3.77	36
	Neutral	3.50	37	3.49	27

Note: Higher numbers indicate more positive recollections on the measure indicated.

^a Subsidiary ANOVAs revealed a marginally significant interaction effect with feedback for the Attention subscale on the Global Combined Mother/Father scale, $F(1, 118) = 5.93, p < .016, (\alpha = .01)$.

Table B19.

Experiment 2: Mean Ratings on the Recall Measures as a Function of Attributional Style (Personal Goal Items) and Mood Induction

Measure	Mood Induction	Personal Goal Attributions			
		Stable		Unstable	
		M	N	M	N
Selective					
Participant	Negative	5.86	30	6.41	33
	Neutral	5.88	38	5.27	33
Pretest	Negative	5.60	38	6.01	33
	Neutral	5.46	30	4.68	34
Observer	Negative	5.60	38	6.05	33
	Neutral	5.48	30	4.82	34
Combined	Negative	.03	38	.27	33
	Neutral	-.02	30	-.02	30
Global					
Father	Negative	3.39	38	3.58	31
	Neutral	3.35	29	3.50	34
Mother	Negative	3.66	38	3.84	33
	Neutral	3.74	30	3.37	34
Mother/Father	Negative	3.52	38	3.74	33
	Neutral	3.56	30	3.44	34

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B20.

Experiment 2: Mean Ratings on the Recall Measures as a Function of Level of Depression

Measure	Level of Depression			
	Low		High	
	M	N	M	N
Selective				
Participant ^a	6.54	57	5.35	77
Pretest	5.96	57	5.05	78
Observer	6.15	57	5.00	78
Combined	.30	57	-.26	78
Global				
Father	3.63	55	3.33	77
Mother	3.79	57	3.55	78
Mother/Father	3.72	57	3.44	78

Note: Higher numbers indicate more positive recollections on the measure indicated.

^aAdditional analyses confirmed that the main effects for depression on the combined scales was present on almost all Selective ($F(1, 118) = 10.08, p < .002$ (Participant), $F(1, 119) = 8.95, p < .003$ (Pretest), $F(1, 119) = 11.98, p < .001$ (Observer)) and Global ($F(1, 116) = 7.35, p < .008$ (Father)) recall measures (alpha = .01). There were no significant *feedback x depression* interactions on any of the Selective or Global subscales.

Table B21.

Experiment 2: Mean Ratings on the Recall Measures as a Function of Negative Affectivity

Measure	Negative Affectivity			
	Low		High	
	M	N	M	N
Selective				
Participant	6.33	62	5.44	72
Pretest	5.82	62	5.11	73
Observer	5.93	62	5.12	73
Combined	.20	62	-.22	73
Global				
Father	3.65	61	3.29	71
Mother	3.78	61	3.53	73
Mother/Father	3.72	62	3.42	73

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B22.

Experiment 2: Mean Ratings on the Recall Measures as a Function of Positive Affectivity

Measure	Positive Affectivity			
	Low		High	
	M	N	M	N
Selective				
Participant	5.16	73	6.69	61
Pretest	4.83	74	6.18	61
Observer	4.82	74	6.29	61
Combined	-.36	74	.39	61
Global				
Father	3.32	72	3.61	60
Mother	3.46	74	3.88	61
Mother/Father	3.41	74	3.75	61

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B23.

Experiment 2: Adjusted Mean Ratings on the Recall Measures as a Function of Level of Depression with Self-Esteem Covaried

Measure	Level of Depression			
	Low		High	
	M	N	M	N
Selective				
Participant	5.95	57	5.77	77
Pretest	5.51	52	5.37	78
Observer	5.75	57	5.39	78
Combined	.23	74	-.01	78
Global				
Father	3.50	55	3.42	77
Mother	3.65	57	3.64	78
Mother/Father	3.58	57	3.54	78

Note: Higher numbers indicate more positive recollections on the measure indicated.

Table B24.

Experiment 2: Adjusted Mean Ratings on the Recall Measures as a Function of Self-Esteem with Depression Covaried

Measure	Self-Esteem			
	High		Low	
	M	N	M	N
Selective				
Participant ^a	6.14	64	5.62	70
Pretest	5.71	64	5.21	70
Observer	5.83	64	4.19	71
Combined	.15	64	-.18	71
Global				
Father	3.52	64	3.33	71
Mother	4.10	64	3.71	71
Mother/Father	3.70	64	3.44	71

Note: Higher numbers indicate more positive recollections on the measure indicated.

^aAdditional analyses confirmed that the main effects for self-esteem on the combined measures was present on the Selective Observer and Global Mother subscales, $F(1, 117) = 7.14, p < .01$, and $F(1, 118) = 9.51, p < .003$, respectively. Results for the Participant and Pretest measures were in the hypothesized direction, but did not reach significant levels, $F(1, 116) = 3.37, p < .05$, and $F(1, 117) = 4.55, p < .035$, respectively ($\alpha = .01$). There were no significant *feedback x self-esteem* interactions on any of the Selective or Global subscales.

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Footnotes

1. Blaney (1986) notes that there is an alternative hypothesis as to how mood might affect recall, derived from the experimental literature on “state dependent” learning. State dependence refers to a phenomenon wherein events experienced in a given psychological state are better remembered on other occasions when in that same state. The difference between mood congruency effects and state dependence are that (1) the similarity between mood at encoding and mood at retrieval is critical for state dependency but irrelevant for mood congruence, and (2) state dependency predictions can be made for memory for neutral material, as well as for material which is of negative or positive hedonic significance. Mood congruence is relevant only to the extent that the material is, itself, affectively toned. In practice though, it is virtually impossible to determine if mood congruency or state dependency effects might account for any given set of results. The critical manipulation that would distinguish the two phenomena, the learning and recollection of neutral material in moods that either match or do not match each other, is in fact very difficult to achieve. This is because there is a reciprocal relationship between the valence of moods and stimulus events, such that any neutral material presented will tend to acquire the hedonic tone of an individual’s mood at the time of encoding (Blaney 1986).

2. Although not directly relevant to the principle prediction that meta-mood cognitions moderate the impact of mood on recall, ANOVA main effects for the MES Index were also examined. This was done in order to determine if meta-mood cognitions alone (independent of the presentation of performance feedback) predicts recall positivity. No significant main effects were present for the MES Index on the Selective Combined or Global Mother/Father scales.

3. ANOVA main effects for the EASQ-S and EASQ-S-PG scales were also examined in order to determine if attributional style, independent of performance feedback, predicts recall positivity. The following significant main effects for attributional style were revealed: for the EASQ-S Internal/External scale, externalizers reported higher mean positivity ratings than internalizers on the Global Mother/Father measure, $F(1, 74) = 6.37, p < .014$. For the Stable/Unstable scale of the EASQ-S-Personal Goals, subjects who attribute negative events to unstable causes reported higher mean positivity ratings than subjects who attribute negative events to stable causes, on the Global Mother/Father measures, $F(1, 75) = 3.87, p < .053$.

4. As in Experiment 1, the present analyses were examined in order to determine if meta-mood cognition independently predicts recall positivity. The results revealed a main effect for the MES Index, $F(1, 119) = 32.70, p < .001$. Those individuals higher in meta-mood cognitions rated their parents more positively overall ($M = .35$), than those lower in meta-mood cognitions ($M = -.43$), $t(133) = 5.58, p < .001$, two-tailed.

5. Because depression is associated with persistent negative cognitive patterns (Metalsky et al., 1982), some authors have suggested that it is necessary to control for the influence of depression on meta-mood cognitions (Mayer & Stevens, in press; Salovey et al., 1994). All of the analyses presented here were repeated using the Beck Depression Scale results as a covariate, and meta-mood cognitions, type of feedback, information condition and order of presentation of the recall measures as predictors. Comparison between the two types of analyses revealed that all effects were maintained when depression levels are controlled for. A similar comparison by McFarland and Buehler (1996), using repression-sensitization level and mood induction level as predictors, demonstrated that the moderating effects of

repression-sensitization on recall were maintained when depression levels were controlled for. Taken together with the McFarland and Buehler findings, the present results confirm that meta-mood cognitions, and not other mood related dimensions, are the primary determinant of the pattern of mood dependent recall obtained here.

6. The following significant main effect for the EASQ-S Index attributional style was revealed: Optimists rating their parents more positively than pessimists on the Selective recall Combined scale, $F(1, 119) = 3.90, p < .05$.

7. Occasionally, other significant interaction effects were revealed, but not consistently. Only an *Information Condition x Order* interaction was present across some analyses for both the meta-mood and attributional style variables, but this was not readily interpretable.

8. Higher total N's for the Selective and Global Combined scales in some instances reflects the use of means replacement when calculating scores for these measures.