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Examination of Threats to Self-Worth on Micro-Level Interpersonal Behaviour in Dating Couples, the Moderating Effects of Dependency and Self-Criticism

By

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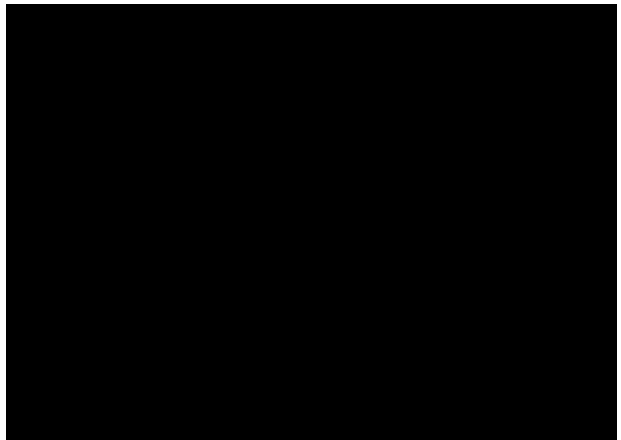
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Abstract

Few studies have examined how positive and negative interpersonal events activate depressive vulnerability factors, like dependency and self-criticism. The current studies examined how positive, negative, and neutral (bogus) personality feedback influenced both mood and communication patterns during a conflict resolution task between members of dating couples in two studies. The data from each study were first analyzed, using traditional macro-level analytic procedures examining the mean proportions of constructive and destructive communications adopted by members of couples. In order to understand the joint effects of the experimental manipulation (bogus personality feedback), personality, and influence of partner antecedent behaviours the data were re-analyzed using micro-level analyses, which examine the pattern of communication within individual dyads. Results, using traditional analytic procedures (i.e., multiple regression) and sequential analysis, revealed that positive feedback enhanced mood and facilitated communication, whereas negative feedback depressed mood and disrupted communication. Moreover, dependency and self-criticism moderated interpersonal behaviour. Specifically, dependent participants used positive communication strategies and were less likely to verbally attack their partner following positive personality feedback. Likewise, dependent participants appeased their partners following positive personality feedback. Conversely, self-critical participants used negative communication strategies including verbal attacks, and were less likely to appease their partners following negative personality feedback. Results from study two provided a partial replication of effects observed in study one. These results support interactional frameworks in which depressive personality styles, such as dependency and self-criticism, and interpersonal events interact to regulate interpersonal behaviour and depressed mood (Santor, Pringle, & Israeli, 2000; Zuroff, 1992).

Acknowledgements

CHAPTER 1. INTRODUCTION

Overview

Most individuals spend significant periods of time in relationships and must cope with disruptive interpersonal events from time to time. Disruptive events may originate from external forces, like being denied a promotion at work, or from forces within the relationship such as conflict with one's partner. Events akin to losing a promotion at work may threaten self-worth, and may lead to negative mood states. An individual may respond to this threat by seeking solace from his/her partner, but the partner may respond in an unsupportive manner, which in turn may lead to conflict affecting the quality of the interpersonal relationship (Baumeister, Smart, & Boden, 1996; Santor, Pringle, & Israeli, 2000) and individual well being (Coyne, 1976a).

Several lines of research suggest that threats to interpersonal relatedness and self-worth affect self-perceptions, mood, and interpersonal functioning (Baumeister et al., 1996; Santor et al., 2000; Santor & Zuroff, 1997, 1998; Tesser, Millar, & Moore, 1988), affecting the quality of interpersonal relationships. To date, the majority of studies have focused on measuring self-reports of interpersonal processes and distal outcomes like mood. Few studies have evaluated how threats to self-worth and interpersonal relatedness affect sequences of communication between members of dating couples trying to resolve conflict in the relationship. Little is known regarding the strategies individuals adopt to cope with these events. It is unclear whether these events lead to escalations in hostility between members of couples (verbal attacks), or to consoling or supportive behaviours (verbal appeasement). Although researchers have evaluated differences in the interpersonal strategies adopted by members of distressed and non-distressed couples

(Billings, 1979; Gotlib & Robinson, 1982; Johnson & Jacob, 1997; McCabe & Gotlib, 1993), few have explicitly examined how individual dispositions, like dependency and self-criticism, moderate interpersonal responses to such threats. Knowledge regarding the impact of dispositional characteristics on dyadic functioning may aid researchers in understanding their role in a) influencing interpersonal behaviour, and b) depressive processes. This knowledge may also aid researchers and clinicians in developing treatments aimed at modifying dysfunctional interpersonal behaviour, which may activate or maintain depressed mood in vulnerable individuals.

Three theories will be examined in trying to understand the relationships among vulnerability, disruptive events, interpersonal behaviour and mood outcomes. First, cognitive models of depressed mood and behaviour will be considered, followed by interpersonal models, and lastly social-psychological frameworks derived from work on social rank and self-evaluation maintenance processes. Cognitive theorists argue that disruptive events that match an underlying vulnerability will activate latent vulnerability factors, directly contributing to negative mood states. Although cognitive theorists have studied the interpersonal behaviour of couples (Alden & Bieling, 1996), few have examined the moderating influence of threats to self-worth and interpersonal relatedness, and cognitive vulnerability on conflict resolution strategies in couples.

More recently it has been argued that cognitive and interpersonal processes interact with one another contributing to depressive processes. Indeed, the attributions an individual has for his/her partner's behaviour will likely affect the types of strategies the individual adopts in response to these antecedent situational influences. Interpersonal theorists, like Coyne, maintain that dysfunctional interpersonal processes and conflict

result from interpersonal deficits, which can contribute to the onset and maintenance of depression (Coyne, 1976a, 1976b). Central to this model is the notion that disruptions in social support contribute to depressed mood (Coyne, 1976a, 1976b). Specifically, Coyne (Coyne, 1976a, 1976b) argues that excessive reassurance seeking by vulnerable individuals leads to withdrawal of support from close others, and that this pattern of reassurance seeking and withdrawal contribute to the onset and maintenance of depressed mood. However, the majority of studies have focused on macro-level behaviours rather than the pattern of interaction between members of couples (Alden & Bieling, 1996; Santor et al., 2000; Zuroff & Duncan, 1999a). Few studies have specifically examined the sequences of behaviours (micro-level) between vulnerable individuals and close others to examine whether these patterns occur, and if such patterns contribute to depressive experiences. Indeed, Coyne's model suggests that the identifiable features of interpersonal behaviours are likely responsible for the mediating role of social support in depressive processes. As a result, it is imperative that research focus on sequences of interpersonal behaviours, rather than the mean proportion of behaviours, when studying factors that lead to or undermine supportive processes.

Evolutionary and social-psychological frameworks, which consider the role of social rank and self-evaluation maintenance processes in depression will be presented as a means of integrating cognitive and interpersonal perspectives. Rank theorists argue that threats to self-worth represent a change or threat to social status, which may influence behaviour and mood (Gilbert, 1990; Gilbert & Allan, 1994; Price, Sloman, Gardner, Gilbert, & Rohde, 1994). These approaches provide specific predictions regarding the effects of threatening events on interpersonal functioning and may thus increase our

understanding of the impact of these events on interpersonal functioning and mood. In humans, disruptive events may be perceived as a threat to one's status within a relationship and threatened individuals may retaliate (verbal attack) to regain status and enhance mood. Conversely, submitting (verbal appeasement) to a higher-ranking partner, or failing to win a battle with a higher-ranking partner may call off an attack. The adoption of attacking or appeasing strategies over the long-term may affect the dynamics of interpersonal relationships, and may affect one's ability to garner and maintain support.

Following examination of cognitive, interpersonal and social-psychological (e.g., social rank, self-evaluation maintenance) perspectives, discussion will focus on integrating aspects of these seemingly disparate models in order to understand: a) how disruptive events may activate underlying vulnerability factors, and b) how vulnerability factors moderate interpersonal behaviour. The broader aim of this thesis is to examine how individual differences in behaviour patterns contribute to the maintenance of dysfunctional interpersonal environments. Previous research has shown their effects on mood (Bagby et al., 1994; Bartlestone & Trull, 1995; Beck, 1983; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982; Clark, Purdon, & Beck, 1997; Teasdale, 1988; Zuroff, 1992). The purpose of this thesis is to evaluate the behavioural strategies at both a macro and micro level. That is, examining the most common strategies adopted by individuals (macro) as well as the sequences of behaviour individuals adopt following partner antecedent behaviours (micro).[1] To examine the impact of threats to interpersonal relatedness and self-worth, members of couples were provided positive or negative feedback regarding individual personality traits to induce either a gain/loss of

status relative to their romantic partner. Given that proximate antecedent behaviours are the strongest predictors of consequent behaviours, it is imperative to demonstrate that the interaction between disruptive events and personality holds while accounting for antecedent behaviour from partners (Bakeman & Gottman, 1997; Cordova, Jacobson, Gottman, Rushe, & Cox, 1993; Gottman & Bakeman, 1979; Gottman, Markman, & Notarius, 1977; Heyman, 2001). This thesis extends earlier work by emphasizing analytic models, in which antecedent and consequent behaviours between members of couples are distinguished, rather than aggregated, and by examining the manner in which dependency and self-criticism moderate responses. Investigating the sequence of events permits an examination of the manner in which dependency is related to appeasing behaviour following threats to interpersonal relatedness, as well as the manner in which self-criticism is related to the use of attacking behaviour following threats to self-worth. As such, the studies reported herein have implications for a number of lines of research examining the role of individual differences in influencing interpersonal behaviour, vulnerability to depression, and the methods used in such research.

Importance of Depressive Vulnerability Research and use of Analog Populations

Several factors may contribute to increasing an individual's risk of experiencing both depressed mood states, and more severe forms of depression (e. g., Major Depressive Disorder, Dysthymia) including, biological, environmental, and psychological variables. The theoretical models reviewed in this thesis represent psychological theories of both depressive mood states and clinical depression. Studies testing these models have employed clinical and analog samples, and have utilized naturalistic and experimental paradigms (c.f., Alloy, Fedderly, Kennedy-Moore, & Cohan, 1998; Bagby, Schuller,

Parker, Levitt, Joffe, & Shafir, 1994; Beck, 2000; Coyne, 1987; Gruen, Gwadz, &

Morrobel, 1994; Joiner, Alfano, & Metalsky, 1992; McCabe, & Gotlib, 1993; Santor,

Pringle, & Israeli, 2000; Zuroff, Igreja, & Mongrain, 1990). However, in order to test the

viability of a depressive vulnerability model, that is a model which proposes that certain

factors may increase an individual's risk of experiencing depression, one must study non-

depressed samples to see if there is a link between the proposed factors and depressive

outcomes, or variables which have already been shown to have links with depressive

outcomes like diminished social support. Much like the genetic high risk paradigms

employed to study vulnerability to diseases like cancer, studies of individuals who are not

currently depressed, but which contain individuals varying in their degree of risk for

depression across a continuum, allows for the examination of how these vulnerability

factors contribute to outcomes like depressed mood or clinical depression including the

processes (e.g., behavioural) which increase risk. Studying depressed samples, such as

couples where one or both members are currently experiencing a depressive episode,

does not permit inferences to be drawn regarding the effects of proposed vulnerability

factors and experimental manipulations in relation to depressive outcomes, as any

observed effects could be attributed to either the proposed vulnerability factors, the

experimental manipulation, or the pre-existing depressive state (Alloy, Abramson,

Whitehouse, Hogan, Tashman, Steinberg, Rose, & Donovan, 1999). Presently,

considerable research exists delineating the cognitive, interpersonal, and behavioural

consequences associated with depressive states and clinical depression (see following

review of studies). In contrast, few studies have examined depressive vulnerability

factors in and of themselves. To advance our understanding of the variables that might

increase individuals' risk of experiencing depressive mood states, or clinical depression,

research efforts must first test the link between proposed vulnerability factors and other

known risk factors like diminished social support (c.f., McCabe & Gotlib, 1993).

Although this thesis focuses on the relationship between a specific subset of depressive

vulnerability factors, namely dependency and self-criticism, disruptive events, and

behavioural sequences, the broader scope of this thesis is to examine proximal variables

which are believed, by virtue of the theoretical models presented and existing research

(cognitive, interpersonal, evolutionary/social-psychological), to contribute to distal

outcomes like depressed mood and clinical depression. In testing a theoretical model,

one must first demonstrate that the proposed vulnerability factors are linked to proximal

outcomes (e. g., dysfunctional interpersonal behaviour, lack of social support) prior to

demonstrating their links to distal outcomes like depressed mood and clinical depression.

The three theoretical models of depressive vulnerability are presented reviewing both

studies on outcomes such as depressed mood states and clinical depression. Then, the

links between depressive vulnerability and interpersonal behaviour are described, within

each theoretical framework and within an integrated model, as the focus of this thesis is

on proximal rather than distal outcomes associated with depressive vulnerability (e. g.,

dependency and self-criticism). However, it is recognized that retrospective, prospective,

and longitudinal designs, and replications in distressed couples, and clinical samples are

needed to fully validate the integrated depressive vulnerability model described in this

thesis.

<u>Cognitive Vulnerability to Depressed Mood</u>

Cognitive models continue to dominate contemporary conceptualizations of depressive vulnerability (Abramson, Metalsky, & Alloy, 1989; Beck, 1967, 1987; Clark, Beck, & Alford, 1999; Teasdale, 1988). Cognitive theories emphasize the role that cognitive processes play in the development, maintenance and recurrence of depression. According to Beck (1967, 1987), individuals vulnerable to depressive experiences possess maladaptive attitudes and dysfunctional beliefs about the self, others, and the future, which influence mood (Beck, 1983). These cognitive patterns (schemas) are believed to arise from negative life experiences and childhood traumas, which contribute to the onset of depression via biased processing of current information and recalled details from memory. These dysfunctional schemas serve as vulnerability markers (diathesis) to depression and are maintained by distorted thinking processes, which are reflected in negative automatic thoughts. Exposure to negative life events or stressors which match the content of underlying schemas can activate these structures, increasing the risk for negative affective states and depression (Beck, 1967).

<u>Sociotropy and Autonomy</u>

In the nineteen-eighties, Beck (1983; 1987) proposed that an underlying cognitive vulnerability may moderate the relationship between negative life events and depression. Beck suggested that certain socialization experiences lead to the development of ostensibly different personality dimensions that contribute to depressive vulnerability following congruent negative life events, which parallel underlying vulnerability. Beck described two personality dimensions, sociotropy and autonomy. Sociotropic individuals derive self-worth through close relationships, focus on acceptance, reassurance and

support from others (Beck, 1983, 1987). Depressive affect might arise following events that lead to a loss of social resources (e.g., acceptance and nurturing from close others; Clark et al., 1999). Autonomous individuals are hypothesized to be achievement oriented. Self-worth and well-being arise from independence and self-achievement (Beck, 1983, 1987). Depressive affect might occur following events that interfere with goal oriented activities and strivings for achievement and independence (Clark et al., 1999).

<u>Dependency and Self-Criticism</u>

From a different theoretical orientation, Blatt (D'Afflitti, & Quinlan, 1976; 1992) proposed that individuals who place too much emphasis on either interpersonal relatedness or self-definition are at greater risk for experiencing depression (Blatt, 1990; Blatt et al., 1982). Like sociotropic individuals, dependent individuals' self-worth derives from support and acceptance by others. They place considerable emphasis on acquiring and maintaining strong interpersonal ties with others, and perceive themselves as unable to care for themselves (Blatt & Zuroff, 1992). Thus, depressed mood may be activated under conditions of perceived or real loss/abandonment from others. Because of their strong interpersonal orientation, dependent individuals may have difficulties asserting themselves in relationships, showing negative emotions to close others (e.g., sadness or anger), and are likely to appease others during conflict (Blatt & Zuroff, 1992; Mongrain & Zuroff, 1994; Santor et al., 2000; Santor & Zuroff, 1997, 1998). Like autonomous individuals, self-critical individuals derive self-worth from personal achievements, and admiration from others. This orientation may lead to competitive behaviour and perfectionist strivings (Blatt & Zuroff, 1992). At the same time, self-critical individuals may act aloof or apprehensive in relationships with others because they fear disapproval

or reproach from others (Blatt & Zuroff, 1992; Santor et al., 2000; Santor & Zuroff, 1997, 1998). Likewise, they may engage in behaviours reflecting self-reproach such as self-blame and self-pity.

Theorists and researchers have noted many similarities between the constructs of sociotropy and dependency and between autonomy and self-criticism, as well as the validity and reliability of these constructs as depressive vulnerability factors (Clark et al., 1999; Zuroff, 1992, 1994). Broadly speaking, sociotropy and dependency represent personality dimensions reflecting a need for acceptance and approval from others, whereas autonomy and self-criticism reflect a need for self-determination and status/achievement. Generally, sociotropy and dependency have been more strongly related than autonomy and self-criticism, but both Beck's and Blatt's constructs represent facets of neuroticism, which is a higher order general personality trait (Mongrain, 1993; Zuroff, 1994).

Disruptive Activating Events: Congruence between Activating Events and Diathesis

In the cognitive model (Beck, 1983, 1987; Beck, Epstein, Harrison, & Emery, 1983) vulnerability factors like sociotropy and autonomy may affect appraisals of self-worth and interpersonal relatedness. Events that match an underlying vulnerability are thought to activate latent maladaptive beliefs and underlying schemas (Kovacs & Beck, 1978). This activation will then lead to a disregulation of self-concept, and may subsequently trigger depressive experiences. Thus, not only must an individual possess a predisposing diathesis, which makes him/her vulnerable to depressive experiences, but there must also be a concomitant event or stressor of significant enough threshold to activate dysfunctional semantic nodes and schemas. Until recently, studies have rarely

employed experimental manipulations which are analogous to activating events.

Studies that include a negative mood induction procedure (i.e., mood prime) have

produced promising results (Dykman, 1997; Ingram, Miranda, & Segal, 1998; Miranda,

Gross, Persons, & Hahn, in press; Santor et al., 2000; Santor & Zuroff, 1997, 1998;

Segal, Shaw, & Vella, 1989).

However, according to the congruency hypothesis, activation should only occur

when the negative life events/stressors are congruent with the specific underlying

vulnerability (i.e., loss of supportive relationships for dependency; loss of status for self-

criticism). Blatt (1982) believes that dependent individuals are vulnerable to depressive

experience reflecting loss of support and interpersonal relatedness following disruptions

in interpersonal relatedness (i.e., anaclitic depression), and self-critics are predicted to be

vulnerable to depressive experiences following a loss of status or failure (i.e., introjective

depression). Supporters of this specificity model argue that dependent and self-critical

individuals are vulnerable to depression following specific eliciting events, and that they

experience different forms of depression. Although research on this latter

conceptualization of the cognitive model is tenuous, there is moderate support for this

hypothesis (Nietzel & Harris, 1990; Zuroff, Igrega, & Mongrain, 1990b; Zuroff &

Mongrain, 1987).

Despite receiving support as a general heuristic, there are many problems inherent

in the method of classifying events used in diathesis-stress studies. First, studies in which

events have been classified on interpersonal or achievement dimensions have frequently

failed to demonstrate congruency (Bartlestone & Trull, 1995; Brown & Silberschatz,

1989; Burgess, Dorn, Haaga, & Chrousos, 1996; Clark, Purdon, & Beck, 1997; Drury,

1998; Gilchrist, 1998; Gupta-Rogers, 1999; Kwon & Whisman, 1998; Lakey & Thomson-Ross, 1994; Luthar & Blatt, 1995; Oliver, Ross, Maier, & Wiener, 1991). Initially, Zuroff and Mongrain (1987) proposed a gradient model to explain these observations in which the level of activation within a cognitive structure, such as dependent and self-critical self-schemas, will vary as a function of the amount of similarity of an eliciting situation and the underlying content of the schema. Hence, the more dissimilarity between the event and the structure, the lower the activation and level of negative mood.

Alternatively, the lack of consistent support for the congruency model may have less to do with the validity of Beck's model than with the failure to recognize that personality and environment are dynamic factors, which can exert considerable influence on each other and thus moderate cognition, emotion, and behaviour. One weakness of cognitive vulnerability models is that interpersonal or life events, characterized on the basis of their disruptive features, are viewed simply as factors which activate latent schemas. This view neglects the role that events may play in terms of meeting or fulfilling underlying interpersonal needs (Rotter, 1954). For example, ambiguous situations may be perceived by a dependent individual as representing instances of personal rejection from others, whereas a self-critical individual may perceive the same situation as representing a failure to achieve (Santor & Zuroff, 1997, 1998). Thus, a highly dependent individual who loses his/her job may become depressed as he/she mourns the loss of friendships established with coworkers. A self-critical individual may become dysphoric following the same event because he/she believes that coworkers see him/her as a failure. Few attempts have been made to examine how similar events might

be threatening to dependent and self-critical individuals (Nietzel & Harris, 1990). The

research to date suggests that events can be categorized and perceived in a variety of

ways (Santor et al., 2000; Santor & Zuroff, 1997, 1998). Therefore, the experimental

paradigms adopted in the studies of this thesis specifically involve an eliciting event

which could plausibly represent a threat to self-worth, interpersonal relatedness, or both.

Moreover, events may arise as a consequence of behaviours that emerge from individuals

who possess maladaptive schemas (Hammen, 1999). Taken from this standpoint, events

serve as self-fulfilling prophecies, which confirm underlying negative beliefs.

Consequently, individuals shape their interpersonal environments, via their behaviour, in

a manner which reinforces underlying beliefs. In order to examine this hypothesis,

researchers should move away from trying to distinguish events as uniquely representing

either interpersonal or achievement/status domains, and focus on the individual needs that

situations fulfill for individuals, including the behaviours individuals engage in to ensure

that underlying needs are fulfilled.

The activation of underlying vulnerability may have significant interpersonal

consequences. It is plausible that these interpersonal consequences are responsible for the

observed shifts in mood and or the maintenance of a depressive state (Nietzel & Harris,

1990). Few studies specifically examine the processes that underlie the relationship

between activating events and mood. Congruent negative events are hypothesized to

activate cognitive vulnerability factors (schemas) leading to negative affective states.

However, it is likely that cognitive vulnerability contributes not only to biasing

interpersonal perceptions, but also to influencing interpersonal behaviour (Alloy et al.,

1999). Cognitive theorists have been relatively silent on this issue despite the fact that

Nietzel and Harris (1990) argued for the importance of examining interpersonal behaviour in trying to understand the relationship between negative life events and depressed mood. Hence, it is plausible that underlying schemas influence behaviour, which directly affects the quality of an individual's interpersonal environment. Negative behaviours such as reassurance seeking and/or attacks may contribute to the experience of negative interpersonal events, which in turn, reinforce underlying maladaptive beliefs that then propel further dysfunctional interpersonal behaviour (Coyne & Joiner, 1999). From this perspective, the link between cognitive vulnerability and depression occurs as a result of negative interpersonal behaviour which not only reduces opportunities for individuals to receive support, but which confirms negative self-beliefs.

The majority of vulnerability studies have generally relied on a macro level analysis of behaviour rather than examining the micro-level behaviours which contribute to negative affective states (Mongrain, Vetesse, Shuster, & Kendal, 1998; Santor et al., 2000; Santor & Zuroff, 1997, 1998). In order to disentangle the important relation between events and mood, research must focus on measuring the cognitive and interpersonal processes at a micro level. This involves examining the influence of cognitive processes from moment to moment by measuring sequences of behaviour, which are assumed to be the consequence of these underlying processes which are purported to contribute to depressed mood. Studying sequences of behaviour permits examination of not only how constructive or destructive dependent and self-critical individuals are with their partners, but also whether they appease or attack their partners.

Cognitive Vulnerability as Moderator of Behavioural Sequences

Cognitive theorists have emphasized the primacy of cognitive processes in determining affective outcomes. As a result, research has focused on examining how depressive vulnerability factors moderate mood in response to life events. Few studies have explicitly examined the effect of cognitive vulnerability factors across situations, and those which have included an activating event have measured distal outcomes like mood rather than proximal factors like sequences of behaviour that may be moderated by personality. Moreover, cognitions are viewed as direct causes of distal factors like depressed mood. However, the relationship between depressive vulnerability factors and depression is likely complex, involving many intervening variables. This standpoint has led to an almost complete neglect of more proximal variables such as how cognitive vulnerability factors influence behaviour.

Failure to examine how vulnerability factors like dependency and self-criticism moderate responses to interpersonal events such as loss of a job or the break-up of a significant relationship impede our understanding of the nature of these vulnerability factors and their impact on interpersonal functioning and mood. Once activated, underlying schematic processes may influence behaviour, which may contribute to the maintenance of dysfunctional interpersonal environments. This may place someone at risk for experiencing depression, and for being unable to recover from this state once onset has occurred. For example, a dependent individual who is in a conflict-ridden relationship may engage in support seeking behaviours in an effort to draw his/her partner close. However, the failure to disengage from such behaviour may lead to sadness and frustration if such efforts are not reciprocated. Furthermore, partners may experience

a dependent individual's efforts as aversive and may either distance themselves from

the individual and/or become more hostile leading to an escalation in conflict and a

further reduction in support. This failure to disengage support-seeking behaviours can

have severe consequences for the dependent individual such as an increase in depressed

mood and a decrease in feelings of self-efficacy. A self-critical individual, who is also in

a conflict-ridden relationship, may view his/her partner's discussion as a personal attack

and may engage in retaliatory hostile behaviours. This may lead to an escalation in

conflict and may subsequently lower mood. Moreover, the partner of the self-critical

person may also respond by either withdrawing from the situation or by engaging in tit

for tat behaviour. This may be further interpreted by the self-critical person as a

confirmation of his/her failure to maintain close ties and may lead to further reductions in

self-worth and mood.

Cognitive theorists have been relatively silent about the role that interpersonal

behaviour plays in the link between cognitive vulnerability and depression. In order to

understand the impact of disruptive events on interpersonal functioning, research must

focus on examining sequences of verbal behaviours between members of couples to

assess the interpersonal processes which purportedly lead to the onset or maintenance of

depression. In fact, Beck (Robbins, Taylor, & Baker, 2000) showed that sociotropy and

autonomy are positively correlated with re-assurance seeking in a self-report study, but

only sociotropy scores predicted excessive re-assurance seeking. However, the design of

this study precluded an examination of the situations which activate sociotropic schemas,

and subsequent re-assurance seeking, or how the two are linked to depressive outcome.

Cognitive theorists propose that disruptive events congruent with an underlying

vulnerability should lead to predictable patterns of behaviour and mood for dependent

and self-critical individuals. Thus, an event which threatens the interpersonal relatedness

of a dependent individual should lead to a pattern of interaction whereby the dependent

individual uses an inordinate number of constructive behaviours and appeases his/her

partner in order to regain closeness and repair mood. Moreover, an event which threatens

the self-worth of a self-critical individual should lead to a pattern of interaction that is

highly destructive (hostile, negative), whereby the self-critical individual attacks his/her

partner in order to regain self-worth and repair mood. Although studies have examined

the interactions of dependent and self-critical individuals these studies have failed to: a)

include an eliciting event which threatens self-worth and interpersonal relatedness (cf.

Mongrain, Vetesse, Shuster, & Kendal, 1998; Zuroff & Duncan, 1999a), or b) have

looked at the mean proportion of constructive (supportive) and destructive (hostile)

behaviours (cf. Santor et al., 2000) rather than examining the specific sequences of

behaviour which are hypothesized to be moderated by activating events and personality

dimensions like dependency and self-criticism. In order to understand the interpersonal

consequences of these vulnerability factors, it is important to examine whether vulnerable

individuals attack or appease their partners (micro-level). Either behaviour pattern can

affect the quality of the interpersonal interaction, and the relationship, by reducing

opportunities to garner or maintain support.

Interpersonal Theories of Depressed Mood

In contrast to cognitive models of depressed mood, interpersonal models have

focused on situational factors that are believed to maintain depressive symptoms (Coyne,

1976a; Lewinsohn, 1974; Lewinsohn, Steinmetz, Larson, & Franklin, 1981). Coyne

(1976a; 1982) proposed that the interpersonal environments of depressed individuals are dysfunctional leading to disruptions in social support. The model downplays the role that individual differences play in contributing to dysfunctional interactions and depressed mood. Coyne (1976a) argues that increases in support and reassurance seeking behaviour occur following the onset of depressed mood. Depressed persons engage in this pattern of behaviour as a means of receiving validation, support and nurturance from others to repair mood and self-worth. Depressive symptoms are thus conceptualized as behavioural signs used to elicit supportive responses in others (Coyne, 1976a). As depression continues and support and reassurance seeking escalates, close others may withdraw from the depressed individual because of the aversive nature of the depressed person's interpersonal behaviour which makes them frustrated and angry (Alloy, Fedderly, Kennedy-Moore, & Cohan, 1998). Their withdrawal may lead to increases in support seeking behaviours by the depressed individual, causing an intensification of symptoms and a dysfunctional feedback cycle.

Most studies examining the interpersonal model have focused on measuring social support or correlates of social support, and assessing whether poor social support is correlated with depressive symptoms (see Barnett & Gotlib, 1988). Research demonstrates that the interactions of dyads or couples in which one member is depressed are characterized as hostile and unsupportive (Elliott, MacNair, Herrick, & Yoder, 1991; McCabe & Gotlib, 1993; Ruscher & Gotlib, 1988). Both depressed targets and their non-depressed partners engage in more negative than positive behaviours during interactions (Gotlib & Robinson, 1982; Johnson & Jacob, 1997; Kowalik & Gotlib, 1987; Ruscher & Gotlib, 1988), which in turn lead to increases in negative affect that are thought to

maintain depressive symptoms. Furthermore, depressed subjects report feeling

depressed, rejected, and criticized by others (Hooley & Teasdale, 1989; Strack & Coyne,

1983), whereas those in contact with depressed individuals experience anger, distress, a

sense of burden, and find the interaction to be aversive (Coyne, 1987; Stephens,

Hokanson, & Welker, 1987; Strack & Coyne, 1983). Furthermore, depressed individuals

are viewed more negatively than others, and are frequently rejected by others. However,

the interpersonal sequences which lead to outcomes such as being rejected by one's

partner have not been examined. For example, it is unclear whether partners withdraw

support because the vulnerable individual does not utilize support. Conversely, partners

may withdraw support because they perceive the vulnerable individual's appeasing

behaviour as a sign of excessive neediness, leading partners to become increasingly

hostile and rejecting as the interaction cycle progresses.

Interpersonal theorists have conceptualized behavioural responses as factors that

arise from disruptive social environments rather than as factors which may result from

stable vulnerability factors. Individual differences, which might be reflected in

behaviours such as support/reassurance seeking, self-blame, or support giving are

reduced to differences in environmental contexts and are treated as error variance to be

controlled for in research paradigms. As a result, studies have focused on the behaviours

that characterize interactions between depressed and non-depressed individuals rather

than on individual differences that moderate these behaviours. In contrast, the present

studies investigate how personality moderates responses to disruptive interpersonal

events which contribute to disruptions in support.

Additionally, many studies have focused on self-reports of support rather than trying to evaluate supportive behaviours. In fact, Coyne (1991; 1990) has recently argued that a more productive approach to understanding vulnerability to depression should involve examining "identifiable features" of supportive and conversely, non-supportive relationships. He goes further to suggest that behaviours such as support seeking may be a sign of a deteriorating relationship rather than as a mechanism to improve mood (Coyne, 1990). Indeed, features in relationships such as poor or negative communication styles may lead to disruptions in support between members of a couple and may ultimately lead to negative affective states (Coyne, 1991; Coyne, 1990). In fact, overt conflict in a relationship may do more in contributing to depressive affect than the absence of support from one's loved ones (Coyne, 1991).

In general, studies examining the features of interpersonal relationships show that distress in couples is influenced sharply by social context. For example, in a diary study with married couples, Bolger, Kessler, and Schilling (1989) found that distress increased following negative events if support was not perceived by the recipient of such actions. Likewise, Notarius, Benson, Sloane, and Vanzetti (1989) found that distressed couples are more likely to perceive ambiguous or neutral communications from their partner as reflecting malcontent, and Davila and colleagues (1995) found that interpersonal stress (e.g., conflict with others, social deficits) mediates the relationship between initial symptoms of depression and depressive symptoms following interpersonal stressors. Similarly, depressed individuals are poor in providing emotional support to their partners (Ziomek & Coyne, 1983). Despite providing information pertaining to the quality of interpersonal dynamics in distressed couples these studies do not address, nor ever test,

the contributions of individual differences to the observed behaviours, nor how

individual differences influence the ability to garner or maintain support. Micro level data

analytic techniques which examine individual's responses to partner antecedent

behaviours may shed light on the precise features of interpersonal transactions which

contribute to relationship dysfunction and distal outcomes such as distress.

<u>Personality as Moderator of Interpersonal Behaviour</u>

A few studies have examined the moderating role that personality has on

behaviour. For example, depressed subjects act helpless, self-effacing, and sadder than

control subjects regardless of the role being enacted by the confederates. Moreover,

when interacting with a confederate who enacts a helpless-dependent role, depressed

individuals use a higher frequency of negative self-statements than control subjects.

Finally, when interacting with a critical-competitive confederate, depressed individuals

tend to be more punitive than controls (Blumberg & Hokanson, 1983). These results

suggest that the behaviours of others may moderate responses in depressed subjects. Katz

and Beach (1997) found that male partners of depressed females are less satisfied with

their relationship and dissatisfaction is highest in relationships in which the depressed

female engages in reassurance seeking and negative self-referent feedback seeking

behaviours. Consistently Joiner (1992, 1993) has found that this pattern of behaviour

leads to the rejection of depressed undergraduates by their roommates. Finally, it is the

combination of support seeking and rejection that leads to the highest levels of depressive

affect (Joiner, 1995; Joiner, Alfano, & Metalsky, 1992, 1993). Hence, dispositional

characteristics (e.g., reassurance seeking) may moderate the relationship between support

seeking, relationship satisfaction, and mood. Second, individual differences appear to moderate responses to the eliciting behaviours of others.

These studies suggest that the quality of relationships and features within relationships (e.g. conflict) contributes not only to disruptive interpersonal events but also to depressed mood. Finally, individual differences in the ability to provide support and reduce conflict appear to be responsible for the disruptive interpersonal milieus. Hence, disruptive behaviours such as attacking one's partner not only affect self-worth, but may disrupt interpersonal relatedness, or both. Cognitive theorists would argue that the interpretation of, and response to, these events will be moderated by individual differences in personality, like dependency and self-criticism. Furthermore, although interpersonal theorists hypothesize disruptions in support to be responsible for the onset and maintenance of depression, the interpersonal events which lead to such disruptions have not been explicitly studied. As well, one would expect that the eliciting behaviours of partners could activate underlying vulnerability factors, like dependency and self-criticism, leading to appeasing or attacking behaviours and contributing to dysfunctional interpersonal cycles and losses of support. It is the interaction of these vulnerability factors and disruptive events (including partner antecedent behaviour) that likely explicates the relationship between cognitive vulnerability and depressive outcome.

Personality as Moderator of Depressed Mood

Examining the impact of personality on behaviour may offer new insights into how interpersonal behaviour contributes to depressed mood. Coyne has argued that perhaps individual differences in a) need for support and need to provide support, b) ability to communicate support, c) and response to others' demands for reassurance, help,

support, and depressive symptomatology exist (Coyne, 1991; Coyne, 1990; Coyne & Whiffen, 1995). Indeed, Coyne argues that dysfunctional interpersonal behaviours lead to the onset and maintenance of depression. For example, an individual may ask his/her spouse for reassurance and the spouse may respond with an ambivalent statement. The individual may interpret the statement as a sign that his/her partner is rejecting him/her, which in turn triggers negative affect and compensatory behaviours to elicit support. This may lead to a cycle of dysfunctional communication and rejection which fuels the depressive state.

Support for this notion can be drawn from a series of self-report studies using high-risk samples. Hammen and colleagues (1999) discovered, via self-report interviews and questionnaires, that "at risk" individuals contribute to their experience of negative interpersonal events via dysfunctional interpersonal processes, and dysfunctional interpersonal behaviour precedes onset of depressive episodes. Hammen argues that the joint effects of maladaptive cognitions and interpersonal deficits contribute to the experience of negative interpersonal events such as conflict with close others. A limitation of Hammen's work is that sequences of behaviour are not analyzed which would provide specific information pertaining to the precise antecedents which activate dysfunctional interpersonal behaviour, and how such behaviour actually contributes to depression.

Although dysfunctional behavioural sequences are thought to contribute to depressive processes, few studies have specifically looked at these sequences. Instead, studies have focused on examining self-reports of supportive and non-supportive behaviours and their relationship to depression. Conversely, when interactions have been

examined, researchers have looked at the mean frequency of behaviours rather than the actual sequences of behaviour which can lead to supportive or non-supportive interactions. This statistical approach makes it difficult to determine how individual differences moderate moment to moment changes in response to partner antecedent behaviours. Hence, no empirical evidence exists which demonstrates that sequences of dysfunctional interpersonal behaviours contribute to depressive symptoms. Several investigators have argued that situational variables such as a partner's antecedent behaviour are likely to influence the behaviours of individuals in dyadic interactions (Bakeman & Gottman, 1997; Gottman et al., 1977). Thus, statistical techniques which allow for the investigation of patterns of communication between members of dyads are needed to shed light on the role of individual differences in moderating responses to situational events and the reciprocal relationship between the two.

Integration of Cognitive and Interpersonal Vulnerability Models: Evolutionary Models

Several frameworks have been proposed for integrating cognitive and interpersonal models of depression (Hammen, 1999; Safran & Segal, 1990). However, most of these approaches have relied on a diathesis stress or interactionist conceptualization of cognitive and interpersonal vulnerability. Clearly there is a need to design vulnerability models, which consider the reciprocal relationship between underlying vulnerability factors and disruptive events. One model or approach which holds promise derives from work in evolutionary psychology, namely social rank theory, and more specifically work arising from the "self-evaluation maintenance" literature. Central to these models is that dominance (attack) and submission (appeasement) behaviours serve a functional purpose of maintaining one's well-being. However, these

same behaviours may increase risk of dysphoria if they are adopted in unsuitable environments. For example, although submitting to one's partner (appeasement) may initially reduce conflict, overuse of this behavioural action pattern may prevent the individual from getting his/her needs met by others. Evolutionary models may help us understand the impact of threats to self-worth and how threats may affect interpersonal behaviour. Finally, an expanded vulnerability model which integrates all material previously discussed will be proposed.

Social Comparison and Rank

Disruptive events, like those arising from threats to interpersonal relatedness and self-worth can be interpreted within a formal model, namely social rank. This model provides a framework for unifying work on depressive vulnerability factors and behavioural responses to threats. Social rank theories propose that one's position or status within one's social group or community (dominance hierarchy) plays a significant role in determining the well being of the individual and how he/she gets along with others (Gilbert, 1990; Price, Sloman, Gardner, Gilbert, & Rohde, 1993). These behaviours are viewed as adaptive responses following threats to self-worth. These behaviours enable the individual to reply to perceived or actual reductions in goal achievement that may arise from a loss of status or a loss of control over resources (Gilbert, 1990; Gilbert & Allan, 1994; McGuire & Troisi, 1998; Price et al., 1993; Sloman, Price, Gilbert, & Gardner, 1994).

Price (1967) suggests that emotional experiences, such as depressed mood, are intricately related to one's social rank within a dominance hierarchy and that depressed mood is a by-product of a behavioural mechanism designed to negotiate changes in status

and rank among individuals. Stratification amongst individuals prevents chaos, fighting, and ensures group harmony. Furthermore, being aware of one's status in a social group may prevent the waste of personal and communal resources if this awareness inhibits the individual from unnecessarily expending energy by engaging in conflict with others when the interests of members come into disagreement, or from having to renegotiate leadership on a continual basis.

Price (1967) also believes that emotional experiences like depression, anxiety, anger and related behaviours that arise from these states are essential for maintaining a dominance hierarchy within groups. In fact, members of society who achieve high status tend to benefit from their rank as they may be admired and worshiped by those around them. This may produce positive affective experiences in high-ranking individuals. However, challenges to rank can lead to disruptive behaviour. Indeed, a threat or loss of status may trigger negative affective experiences and may motivate retaliatory behaviours such as using verbal or physical attacks to fend off an opponent. Failure to win a challenge, however, may lead to feelings of defeat and dysphoria. At the same time, some individuals may submit in the face of competition and may sacrifice status by appeasing an opponent in order to maintain social harmony and interpersonal relatedness within the status hierarchy (Santor et al., 2000; Santor & Zuroff, 1997, 1998). However, this submissive behavioural tendency may increase risk for depressive experiences because the individual is afforded few opportunities for mastery if s/he engages with others in a stereotyped fashion such as chronically appeasing others.

According to rank theory, perceived or actual disruptions in rank may affect the self-worth, behaviour, and mood of the individual. For example, an individual who is

upset with her boss at work may seize opportunities where she can embarrass and act

critically toward her boss. It is plausible that the individual has chosen this strategy,

because she possesses social deficits that preclude her from acquiring rank via channels

such as garnering the support of others. Therefore, the only strategy she has available

involves attacking others. Unfortunately, this behaviour may have consequences such as

leading to further rejection from her co-workers and boss. One implication of this view

for researchers studying depressive vulnerability models is that the behaviours adopted

by individuals in response to disruptive events become central to understanding the

processes that may confer vulnerability to depression on individuals. How individuals

contribute to the maintenance of their vulnerability can be examined from this standpoint.

Consistent with this view, analytic methods which examine the sequences of interaction

between individuals may shed light on how individuals negotiate changes in status and

rank that may arise following threats to interpersonal relatedness and self-worth, as well

as on the mechanisms which are thought to regulate behaviour and emotion.

Depressed Mood and Social Rank

Rank theorists believe that when eliciting events can be identified, depressed

mood may be viewed as the sequelae of behaviours designed to negotiate changes in rank

among individuals within a status hierarchy (Sloman et al., 1994). Although the

experience of losing one's status may produce negative affect and increase one's desire to

contest such an event, such losses will not necessarily produce a depressive episode. The

recognition, by the individual, of a depressive state may lead to preserving energy

resources, as well as providing signals to others to garner support (Price, 1967; Sloman &

Price, 1987). For example, if a member of a family loses his/her job, the depressive

behaviours the individual expresses (e.g., crying, sleeping) may lead family members to provide support and assistance. Furthermore, depressive behaviours like submissiveness may protect the individual from further conflict and competition. It is plausible that the individual may be motivated to act in a submissive manner to repair or maintain interpersonal relatedness with the aggressor and inhibit further aggression (Gilbert & Allan, 1994). Consequently, the aggressor may interpret submissive behaviour as a sign that he/she has won the competition so further conflict is unnecessary.

Conversely, one's perception of neutral or ambiguous events such as a threat to status and rank may lead to the adoption of maladaptive behaviour. For example, an individual may perceive his loved one's ambiguous behaviour as a sign of rejection. The individual may become upset with his partner and respond with verbal attacks leading to conflict rather than mutual support. Submissive behaviours such as support and reassurance seeking, and appeasing others, although intended to increase interpersonal relatedness, may have the unintentional consequence of increasing others' resentment toward the individual (Coyne, 1976a, 1976b; Joiner, 1995; Joiner et al., 1992). Therefore, repeated submissive behaviour may represent one behavioural mechanism which increases risk of depression (Gilbert & Allan, 1994). It is plausible that rejection from others following excessive submissiveness accounts for this pattern of findings; alternatively, submissiveness may lead to feelings of helplessness and worthlessness in individuals. This thesis addresses individuals' responses to eliciting events as well as the possible benefits and pitfalls of dominance (attack) and submissive (appeasement) behaviours. Although clinical depression may be a distal outcome of harmful behaviours

like submission and dominance, this thesis focuses on behavioural mechanisms using analogue populations. The objective was to examine an integrated depressive vulnerability model which required the study of non-depressed populations (Alloy et al., 1999).

Several theorists (Beach & Tesser, 1993; Gilbert, 1990; Gilbert & Allan, 1994; Santor et al., 2000) argue that under certain conditions, members of romantic couples may feel threatened if one member of the couple receives positive self-evaluation information. Threats to self-worth are not only critical to how we feel about ourselves, but also how we respond to these experiences is pivotal in defining how we get along with others. Contesting a threat to self-worth that arises from ranking lower than a partner, or the threat to interpersonal relatedness arising from ranking higher than a partner, may threaten the quality of interpersonal interactions between members of the couple and may further competition and conflict. Conversely, if one member receives negative self-evaluation information he/she may act to re-establish self-worth. The manner in which the "threatened" partner reacts to either of these scenarios has an impact on the quality of the relationship. For example, the individual may temporarily suspend relations with his/her partner or engage in conflict to reduce negative feelings. An examination of these very processes may increase our understanding of the impact of disruptive events on relationship functioning and distal outcomes like depressed mood.

Knowledge regarding the types of strategies individuals adopt in order to negotiate the effects of disruptive events has become a growing area of theoretical and research interest in social psychology and communications research fields (cf. Buss, Gomes, Higgins, & Lauterbach, 1987). Recently, Buss (1991; 1992; 1990; 1987) has

conducted several self-report studies on verbal manipulation tactics to develop a model

of interpersonal influence. Buss, Higgins, Lauterbach, & Gomes (1987) posit that

individuals with certain personality traits are likely to select milieus which are adaptive

for these traits. Furthermore, individuals are likely to evoke unintentional reactions from

others in their environments, and actively manipulate others to achieve personal goals.

Buss's research, using self-report methodology, demonstrates that personality correlates

with the tendency to appease or attack one's partner. Unfortunately, Buss's research does

not delineate the sequences of behaviour that contribute to dysfunctional interpersonal

processes, nor how personality moderates these sequences. When studying interpersonal

behaviours it is essential that personality variables be assessed as they may predict how

and what a person does under conditions where self-worth or interpersonal relatedness is

threatened.

Integration of Cognitive and Interpersonal Models: Social Psychological Models

Self-Evaluation Maintenance

One model which examines the impact of threats to self-worth is the Self-

Evaluation Maintenance model (SEM; Beach & Tesser, 1993; Tesser & Campbell, 1982;

Tesser & Cornell, 1991; Tesser et al., 1988; Tesser & Moore, 1989; Tesser & Smith,

1980) which proposes that individuals are sensitive to threats to self-worth in

interpersonal contexts, especially when there is explicit competition between individuals

and a risk of being outperformed by a close other. The model assumes that individuals

are motivated to preserve or bolster feelings of self-worth under conditions when there is

perceived competition with a close other. Hence, social comparison processes and rank

are central to the model. Any changes in status between members of a couple may harm

perceptions of self-worth, affect subsequent patterns of interaction and ultimately one's mood.

Under the SEM model, how a person acts and feels when a close other does well depends on two processes labelled *reflection* and *comparison*. For instance, individuals may bask in the glory of the good performance of a close other if that performance is of low relevance for the individual (reflection process). For example, a husband who is a lawyer may boost his ego through the accomplishment of his wife in receiving a research grant in her own career as a research psychologist. However, if both the husband and wife are members of a prestigious organization and the wife is nominated for a position in the organization's executive, a position the husband was hoping to be nominated for, he may perceive the event as a threat to self-worth (comparison process). One has several options to maintain feelings of self-worth under potentially threatening circumstances. He/she may reduce the level of interpersonal relatedness to the other individual, he/she can decrease the level of relevancy of the dimension, he/she can take action to reduce the differential in performance with the other individual (i.e., sabotage, self-handicap, appease), or he/she can confront the other individual directly (i.e., retaliate, attack)(Beach & Tesser, 1993). Overall, studies by Tesser and colleagues (1980, 1982) find that participants provide less assistance to friends versus strangers following threats to self-worth. In romantic couples, Beach and Tesser (1993) find that individuals are agreeable with their partner if it provides personal benefits, otherwise participants tend to be less helpful and report lowered relationship satisfaction.

Although the SEM model describes the impact of threatening events, some problems remain. In a study of romantic partners, Beach (1998) observed that

outperforming one's partner, in a task relevant to the partner, led to less positive

interactions. Outperforming one's partner led to lower reports of activity sharing in self

and partner relevant domains. In order to minimize status differentials and maintain

interpersonal relatedness it appeared as though higher-ranking individuals adopted

strategies to minimize achievements. Finally, higher-ranking individuals self-reported

lower positive affect if the domain of achievement was relevant to their partner. Thus, in

close relationships, individuals may be more motivated to maintain relationship harmony.

An alternative, however, which has not been explored, is that individual differences

moderate behaviours following disruptive events.

Personality as a Moderator of Self-Evaluation Maintenance

The SEM model has not examined the role of personality in moderating responses

to threats. The model implies that contextual factors determine behavioural outcomes.

Mendolia (1996) suggests that individual differences may affect responses to being

outperformed by one's partner. Santor and Zuroff (1997, 1998) argue that individuals are

motivated to preserve self-worth. For example, Santor and Zuroff (1997, 1998) find that

dependent individuals relinquish gains in status, when such gains are acquired at the

expense of a close friend- this is neither predicted nor explained by the SEM model.

Self-critical individuals, on the other hand, experienced more negative affect and

decreases in interpersonal relatedness when self-worth was threatened. Thus, Tesser's

(1988) model does not examine how individual differences may moderate behaviour.

Indeed, studies suggest that reactions and perceptions of outperforming or being

outperformed by others are moderated by individual differences (Exline & Lobel, 1999;

Santor et al., 2000). Recent reviews (see Exline & Lobel, 1999) suggest that gains in rank

or outperforming others on relevant social dimensions may lead to ambivalent behaviour, dysphoric affective states, and strategies aimed at minimizing one's own achievements in order to bolster the self-worth of threatened parties.

Rank and SEM theories neglect the role that dispositional factors play in determining one's reaction to gains, and for that matter, losses in rank. First, little research evaluates how threats to self-worth affect communication patterns in romantic couples. It is not known whether threats to self-worth lead to escalation in hostility between members of couples or have little impact on interactions. Second, the model predicts negative behavioural and affective reactions in individuals who are outperformed by close others, but the theory does not describe the specific behavioural and affective reactions of individuals toward their partners when the threat to self-worth comes from an external source (i.e., criticism from a superior at work). In many instances an individual may receive criticism about his/her behaviour from a superior at work, and the criticism may be perceived as a threat to self-worth. The individual may return to his/her household upset by the criticism and may take out his/her frustration on their partner even though the partner was not the original threat source. Third, the model does not explain the specific types of behavioural strategies individuals adopt to re-establish self-worth. It is plausible that some individuals may use strategies that are coercive or denigrate their partners (e.g., destructive, attack). According to self-verification theory (Swann, 1987) individuals are resistant to changing their own self-views. Individuals with fluctuating self-esteem or self-views are particularly vulnerable to such behaviour as they have unstable perceptions regarding their competency on certain dimensions of high self-relevance. Thus they may be more sensitive to the reactions of others in their

environment as they draw their sense of worth and competency from external sources,

and may react in a more hostile/defensive way to that feedback. Fourth, it is unclear how

or if threats to self worth will undermine a couple's ability to resolve difficulties. Finally,

the model does not look at the impact and influence of personality dispositions in

responding to threats to self-worth and how this plays out in interactions between

members of a romantic couple.

In response to the aforementioned criticisms, a revised self-evaluation

maintenance model has been developed (Beach et al., 1998; 1996). Although much of

the current literature in social psychology suggests that people are motivated to achieve

status via the outperformance of others, a growing body of research reveals the contrary.

It appears as though some people feel ambivalent or uncomfortable under conditions in

which they achieve higher status in relation to others. Some outperformers experience

distress and discomfort when they perceive that others are engaging in upward

comparisons (see Santor et al., 2000; Santor & Zuroff, 1997, 1998). Any private

moments of positive affect gleaned from outperformance may be overshadowed by the

individual's concern for the welfare of the outperformed person. Hence, the outperformer

may engage in appeasing behaviour because of his/her own sense of anxiety in the

presence of the outperformed person. Studies on couples (Beach et al., 1998; Santor et

al., 2000) demonstrate that some outperformers' initial experience of positive affect is

often dampened if the outperformance is at the expense of the partner. Outperformers will

go to great pains to maintain interpersonal relatedness under these circumstances (e.g.,

appeasing their partners) with the risk of decreasing their own sense of self-worth.

Outperformers should feel less positive if they believe that close others are not benefiting

from positive reflections or are experiencing negative comparisons. Studies using

friends rather than romantic partners reveal similar patterns (Exline & Lobel, 1997a,

1997b, May; Juola-Exline, 1996). Hence, some outperformers may fear retribution or

negative comparisons from those they outperform or may use appeasing behaviour due to

concerns regarding the welfare of close others.

The results of studies on threats to interpersonal relatedness and self-worth

suggest the need to expand current conceptualizations regarding the impact of such

events on individuals. Clearly, individual differences moderate responses to challenges

in rank/status leading some individuals to retaliate (attack) and others to placate

(appease). Each can have significant consequences on interpersonal functioning, and

may contribute to distal outcomes like depressed mood. How individuals actually

negotiate the effects of disruptive events has not been specifically examined. In order to

gain insight into these effects, analytic models that assess micro-levels of behaviour

between individuals are needed. Such methods permit an in-depth examination of the

antecedent and consequent interactions between individuals that are purported to leave

individuals vulnerable to not only dysfunctional interpersonal relationships, but also to

depressed mood.

Expanded Vulnerability Model

Recently, Santor (2000; 1998; 1997) has proposed an expanded vulnerability

model, which builds on theoretical and research advances on cognitive and interpersonal

vulnerability to depression (Bolger et al., 1989;Coyne, 1976a). Consistent with previous

work, the model acknowledges that depressive vulnerability factors contribute to negative

affective states following congruent disruptive events. Thus, dependent individuals are

thought to be more adversely affected by events that threaten interpersonal relatedness and self-critics by events that disrupt status and self-worth. However, in contrast to previous work, Santor argues that events should not be classified on the basis of their descriptive features, but rather on the needs they fulfill for vulnerable individuals. This view accounts for the disparate findings observed in studies examining the congruency hypothesis as it acknowledges that similar events fulfill different needs across individuals, and conversely that different events can fulfill similar needs across individuals. Finally, the central principle of this expanded vulnerability model is that depressive vulnerability also influences interpersonal strategies adopted by individuals following events that threaten interpersonal relatedness or self-worth and status, including the subtle cognitive processes that affect internal representations of disruptive events. Hence it is argued that dependent and self-critical individuals will respond uniquely to threats to interpersonal relatedness and self-worth. Although the interpersonal strategies they adopt may have short-term benefits, it is maintained that these responses are likely to lead to long-term disruptions in mood and relationship quality.

Research has demonstrated that dependency and self-criticism dispose individuals to depressive moods (Blatt et al., 1982; Zuroff & Mongrain, 1987), influence the quality of interpersonal environments (Zuroff, 1994) and moderate responses to disruptive events (Blatt et al., 1982; Santor & Zuroff, 1997, 1998; Santor et al., 2000). Dependent individuals are motivated to establish and maintain interpersonal relatedness, and their primary interpersonal strategy is to rely on others for support and a sense of well-being. As a result, dependent individuals have difficulty expressing negative emotion or

dissatisfaction with their partners under conditions where interpersonal relatedness has been threatened. They may respond to such instances in a placating manner in order to minimize conflict.

In contrast, self-critical individuals are pre-occupied with issues pertaining to self-definition and worth. They desire respect and admiration from others, and fear disapproval and recrimination. As a result, they are ambivalent about interpersonal relationships (Blatt et al., 1982) and may be willing to sacrifice feelings of interpersonal relatedness in order to increase feelings of self-worth and status (Zuroff & Duncan, 1999a). Blatt and Zuroff (1992) believe that self-critics are at risk for depression if a threat to self worth disrupts self-concept. When depressed, self-critics may feel inferior to others, feel like personal failures, and experience guilt over this fact. Self-critics derive their sense of self-worth from external sources as they have an unstable sense of self. Their sense of competency and worth depend on how others react toward them and how they perceive themselves as performing in their environment. Mongrain et al. (1998) and Zuroff and Duncan (1999a) posit that self-critics are concerned about how they compare to others. They take glory when things go well and pass on blame when things go poorly as they have an excessive need to maintain a high sense of self-worth.

Researchers are now looking at how these two personality dimensions affect interpersonal interactions. Santor and Zuroff (1997) conducted a study on interpersonal responses to changes in social rank in 40 pairs of female college students. They found that dependent females relinquished status in order to maintain interpersonal relatedness with their friend and praised their friends even when friends disagreed. Self-critical females contested losses in rank, sacrificed feelings of closeness in order to

maintain/bolster self-worth, praised friends less, and disagreed with their friend's feedback. In a second study Santor and Zuroff (1998) examined the influence of dependency and self-criticism on the exertion and relinquishing of control over shared resources following threats to self-worth and status. They found that when dependent individuals were told that they outperformed their friend (threat to interpersonal relatedness) they adopted the opinions of their less competent friend, relinquished control over shared resources, and disagreed with friends less frequently. Self-critical women, on the other hand, bolstered their status regardless of whether they had been told they had outperformed a friend or were outperformed by that friend, by taking control over shared resources. These findings demonstrate the moderating effect of personality in predicting responses to threats to interpersonal relatedness and self-worth. According to Santor and Zuroff (1997; 1998) dependents will take a loss in rank and self-worth to maintain closeness with others, whereas self-critics struggle to maintain rank and will sacrifice interpersonal relatedness to maintain self-worth.

Extension to Behavioural Sequences

Although studies reveal that dependency and self-criticism moderate responses to events and mood, it is imperative to demonstrate that these vulnerability factors moderate the interpersonal behaviour of individuals in response to the antecedent behaviours of those interacting with vulnerable individuals. Moreover, these sequences should be examined under the rubric of a formal theory such as that represented by work which examines the effects of threats to self-worth and interpersonal relatedness (cf. Exline & Lobel, 1999; Gilbert, 1990; Price et al., 1993; Sloman & Price, 1987; Tesser et al., 1988; Tesser & Moore, 1989). These models provide specific predictions regarding how

individuals are likely to respond to disruptive events. Additionally, it is essential to demonstrate that the effects of disruptive events and personality moderate not only mean proportions of behaviour and mood, but that they moderate the sequences of interactions between individuals. Based on the expanded vulnerability model, dependent individuals are hypothesized to be motivated to maintain interpersonal relatedness and thus to adopt submissive and appeasing strategies following events that disrupt interpersonal relatedness. Self-critics are hypothesized to be motivated to preserve self-worth and to adopt competitive and attacking strategies following events that threaten self-worth and status.

More recently, several theorists have acknowledged that individuals elicit reactions in others, which then moderate the situation (Buss, 1988, 1989, 1991, 1992, 1995; Buss & Dedden, 1990; Buss et al., 1987; Kenny, 1996). The interplay between person and environment is an ongoing dynamic process. In order to understand this process precisely, sequences of behaviours between members of couples are examined in this thesis. An understanding of the impact of vulnerability factors, like dependency and self-criticism, on proximal outcomes such as interpersonal behaviour may shed light on the role of these factors in distal outcomes such as clinical depression.

Macro versus Micro Analytic Techniques in the Study of Close Relationships, and the Link Between Vulnerability, Mood, and Behaviour

Over the past three decades a considerable amount of effort has been placed in examining the quality of close relationships, how individuals function within relationships, and the impact of these variables on mental health (Baucom, 1989; Beach, 1996; Beach, 1998; Buss, 1991; Cordova, 1993; Hammen, 1978; Hooley, 1989; Katz,

1997; Pasch, 1997). Specifically, an emphasis has been placed on the relationships of

heterosexual dating and married couples. Studies have incorporated self-report and

observational methodologies with the purpose of examining differences between

distressed and non-distressed couples.

Macro-Analytic Techniques

A popular methodology that has been employed in the couples literature involves

observing and recording the interactions of members of couples engaged in a discussion

task to either resolve conflicts or problems within the relationship (Gotlib & Robinson,

1982; Heyman, 2001; Johnson & Jacob, 1997; McCabe & Gotlib, 1993). Trained coders

rate participants' verbal and/or non-verbal behaviours on a series of categorical

dimensions using either a standardized coding scheme, like the Marital Interaction

Coding Scheme-IV (Heyman, Eddy, Weiss, & Vivian, 1995), or a coding scheme

developed for a specific study. The coded responses are then aggregated and transformed

into a proportion reflecting the frequency of a given response divided by the total number

of responses for a subject. Traditional parametric analyses can then be employed to

examine whether members of distressed couples use more destructive than constructive

behaviours, or more frequently whether spouses of depressed individuals are less

supportive than spouses of non-depressed persons. This data analytic strategy represents a

macro-analysis, which can provide meaningful information regarding group differences

on specific behavioural dimensions.

Macro-analytic techniques have been employed in a number of investigations on

couples. Studies where one member suffers from depression reveal a considerable

number of unsupportive behaviours between individuals, which in turn are correlated

with negative affect during the experiment (Gruen, Gwadz, & Morrobel, 1994; Johnson & Jacob, 1997; McCabe & Gotlib, 1993). Moreover, the interactions of satisfied couples are characterized by a larger proportion of supportive behaviours (Gruen et al., 1994). The results of these studies confirm that depressed and distressed couples experience a greater degree of negative communication and negative affect than satisfied couples.

Dependent and Self-Critical Macro Behaviours in Relationships

The majority of research on depressive vulnerability has focused on macro level relationships between constructs. Studies of couples in romantic relationships have generally shown that dependent individuals perceive their relationships as being more supportive, regardless of whether their partners experience hostility and negative affect (Mongrain et al., 1998). Self-critical individuals perceive their partners as more hostile and less loving and their partners see them similarly, and their interactions tend to be characterized as hostile by objective observers (Mongrain et al., 1998; Zuroff & Duncan, 199a). Similarly, following threats to interpersonal relatedness and/or self-worth dependent individuals are agreeable and try to avoid conflict whereas self-critical individuals behave in a hostile defensive manner and pursue conflict (Santor et al., 2000).

Clearly, dependency and self-criticism are pervasive and stable characteristics which moderate the degree to which threats to self-worth affect interpersonal functioning. It appears as though dependent individuals will display submissive behaviours in order to maintain contact with close others and are not likely to try to bolster their self-worth when given the opportunity to. Self-critics, on the other hand, are motivated to maintain or bolster feelings of self-worth and will sacrifice closeness with others in order to achieve this goal. They are also likely to react in hostile, disagreeable manners when

interacting with others in order to bolster self-worth. These data demonstrate that depressive vulnerability moderates responses to threats to self-worth and interpersonal relatedness, affecting the quality of interactions in couples.

Although recent studies have evaluated the interpersonal behaviours of dependent and self-critical individuals, the reliance on macro-analytic techniques has imposed limitations on the type of information that can be extracted from studies. First, aggregating behaviours does not permit an analysis of the dynamic nature of social interactions. Undoubtedly, situational characteristics such as a partner's antecedent behaviours are likely to influence the responses of individuals. Second, the patterns of communication that are influenced by both experimental manipulations and underlying dispositional characteristics of individuals cannot be evaluated from aggregated scores. Indeed, those interested in the influence of both a) the impact of threats or bolstering of self-worth and b) depressive vulnerability factors on interpersonal behaviour may be precisely interested in knowing how behaviours unfold during a discussion. It has been hypothesized that self-criticism moderates responses to negative feedback such that self-criticism is positively related to the use of destructive comments during conflict resolution tasks (Santor et al., 2000). However, a macro-analysis of a data set in which constructive and destructive behaviours have been coded does not permit an analysis of additional questions like whether self-criticism following negative feedback is related to negative reciprocal behaviour between members of couples, or whether it is related to a response style whereby partner antecedent constructive behaviours are followed by destructive behaviours (attacks). This type of in-depth analysis is simply not possible when the mean frequency of behaviours has been used in inferential statistics.

The validity of the integrated model (Santor et al., 2000) rests on demonstrating

that the predicted behaviours of dependent and self-critical people following threats

moderate ongoing behaviours between members of couples. Specifically, Coyne (1976a)

proposes that excessive support seeking occurs following signs of perceived withdrawal

and rejection by close others, leaving individuals vulnerable to depressive experiences.

Second, it is the continuous cycle of partner rejecting or attacking and the individual

appeasing which is thought to maintain depression once activated. Furthermore, research

on cognitive vulnerability to depression has demonstrated that vulnerability factors like

dependency and self-criticism moderate responses to activating events such as a threat to

self-worth or interpersonal relatedness (cf. Santor et al., 2000; Santor & Zuroff, 1997,

1998). However, no studies have examined how dependency and self-criticism moderate

responses to partner antecedent behaviours. This thesis extends previous work by

examining how threats to self-worth and interpersonal relatedness contribute to an

interpersonal environment in which dependents appease close others and self-critics

attack those trying to assist them. These hypotheses can only be tested by examining the

sequences of behaviour between members of couples.

This dissertation differs from previous research as it examines the interaction

between personality and environment on how members of couples resolve conflict under

conditions in which the self-worth of the individual is either bolstered or threatened,

relative to his/her partner, using sequential analytic techniques. It is hypothesized that

following events that threaten interpersonal relatedness, such as receiving positive

(bogus) personality feedback relative to one's partner receiving negative (bogus)

personality feedback, dependency should be positively related to the use of constructive

(e.g., supportive; macro-level analysis) and appeasing (micro-level analysis)

behaviours during the conflict resolution task. Conversely, in conditions mimicking

threats to self-worth, such as receiving negative (bogus) feedback relative to one's

partner receiving positive (bogus) personality feedback, self-criticism should be

positively related to the use of destructive (macro-level analysis) and attacking

behaviours (micro-level analysis) and negatively related to the use of constructive

(macro-level analysis) and appeasing (micro-level analysis) behaviours. This research is

unique in that it uses an analogue experimental paradigm to examine the content of

communications between members of dating couples during a conflict resolution task. It

also examines qualitative differences in communication content as a function of

personality. Moreover, this research examines the interpersonal interactions of romantic

partners rather than using confederates and strangers.

Previous studies in this field have relied on aggregated act frequency responses in

statistical analyses (see Santor et al., 2000). This macro-level data analytic method does

not permit the disentangling of experimental and personality effects from the influences

of ongoing communication patterns between members of couples. In order to provide

confirmative evidence of the joint influence of personality styles, such as dependency and

self-criticism, and disruptive events, like that proposed in the expanded vulnerability

model (cf. Santor et al., 2000, 1998; 1997) these two factors should moderate ongoing

sequences of behaviour between members of couples in the predicted directions. Thus,

this thesis incorporates traditional analytic procedures in which the mean frequency of

responses (i.e., constructive and destructive verbal behaviours) of members of couples are

analyzed in hierarchical regression models including gender, experimental condition,

personality (dependency or self-criticism) and all two-way and three way interactions.

The data are then re-analyzed using sequential analyses, which facilitate the investigation

of the influence of ongoing partner behaviour in relation to the experimental design to

ascertain whether the observed effects remain after accounting for ongoing behaviour

between members of the couple.

Disruptive events were conceptualized within a formal model, namely social

comparison (cf. Exline & Lobel, 1999; Tesser & Cornell, 1991; Tesser et al., 1988;

Tesser & Moore, 1989), which acknowledges that similar events can threaten

interpersonal relatedness and/or self-worth and hence influence interpersonal behaviour

between members of couples. Receiving positive (bogus) personality feedback and

receiving negative (bogus) personality feedback relative to one's partner were each

conceptualized as events that could affect the needs of both dependent and self-critical

individuals. Finally, a control group was included in this study to examine the effects of

these two personality styles on conflict resolution behaviours in the absence of a threat.

Micro-Analytic Techniques: Sequential Analyses of Behavioural Data

Data analytic techniques which examine ongoing behaviour between members of

couples have been developed and widely used (Bakeman & Gottman, 1997; Bakeman,

McArthur, & Quera, 1996; Bakeman, Robinson, & Quera, 1996; Gottman, 1979;

Gottman & Bakeman, 1979; Gottman et al., 1977; Heyman, 2001; Iacobucci &

Wasserman, 1988). These micro-analytic techniques are referred to as sequential

analyses in the literature, which facilitate the assessment of how members of couples are

responding to their partner's antecedent behaviours to examine characteristic response

styles of the members of the couple. Consequently, one can determine whether threats to

self-worth disrupt attempts to resolve difficulties in a relationship, and conversely,

whether bolstering of self-worth increases attempts to resolve difficulties.

In order to make a data set amenable to sequential analyses, one has to ensure that

trained observers code the following information over trials (turns taken by each member

of the couple): a) the speaker, b) the behavioural code based on the coding scheme

adopted, c) the time that each speaker takes per trial, and d) turn onsets and offsets.

Once the data have been coded they can be tallied as cross-classified events in a

contingency table. Rows represent antecedent behaviours of target person x (i.e., partner)

and columns represent consequent responses of target person y (i.e., the individual). In

many cases, behavioural coding systems can be reduced into a manageable set of

categories to use in a sequential analysis such as reducing codes to two global categories

like constructive and destructive behaviour. Often, coding schemes with many categories

result in cells with minimal or no tallies. For a sequential analysis to be practical a

considerable number of sampling tallies are needed, thus a reduction of codes based on a

theoretical or empirical basis is suggested (Bakeman & Gottman, 1997). For a scheme

with 2 codes, a 2 x 2 contingency tale can be constructed (see Table 1.). The cross-

classified events in the contingency table represent mutually exclusive and exhaustive

codes.

Recently, Bakeman (Bakeman & Gottman, 1997; 1996; Bakeman, Robinson et

al., 1996) has proposed that the sequential data contained within contingency tables can

be transformed into a variety of statistics such as an odds ratio, log-odds ratio, and Yule's

Q, which measure the strength of association between cells.[2] However, given the

popularity of measures like the Pearson correlation coefficient in psychological research

many prefer to compute Yule's Q which is a transformation of the odds ratio which ranges from −1 to +1, with zero representing no association between cells. Yule's Q can be calculated using the following formula [(ad-bc)/(ad+bc)] and the resulting statistic gauges the magnitude of association (see table 1.). Like the odds and log-odds ratio, Yule's Q is unaffected by the number of tallies contained within cells. Furthermore, the results can be pooled across subjects, and then parametric analyses, like multiple regression, can be employed to assess individual and group differences.

Sequential analytic strategies have been widely employed in marital interaction studies and have provided a wealth of information regarding complex patterns of verbal processes in couples (Heyman, 2001; Jacob & Leonard, 1992; Pasch, Bradbury, & Davila, 1997). The most striking feature of these studies is the tendency for couples to reciprocate negative behaviours, especially in couples that are distressed (i.e., marital dissatisfaction or presence of a depressed member of the couple) primarily capturing the concordance of behaviour between members of couples.

Much of the focus in this area has surrounded the association between concordant events or the tendency for individuals to engage in reciprocal behaviours with their partner (e.g., positive or negative tit for tat) and hence, omnibus measures like Yule's Q have been effectively applied to assess concordance of behaviours. However, those interested in the impact of threats to self-worth and the moderating influence of dependency and self-criticism on interpersonal behaviours may be interested in discordant rather than concordant events or the occurrence of rare events (e.g., attacks, appeasements). For instance, if the total number of tallies in concordant cells of a contingency table is really large versus discordant cells then the odds ratio, log-odds

ration, and Yule's Q will also increase (see Table 1.). Nevertheless, the statistic that is

computed will not provide information regarding the occurrence or non-occurrence of

rare events. For example, in Table 1 the number of concordant events is large. At the

same time, event (b; attack) which represents a discordant event did not occur, and

although infrequent- event (c; appease) also occurred. The fact that (c) occurred and (b)

did not may reflect the joint effects of an experimental manipulation and personality.

Unfortunately, if Yule's Q were computed from this data set the researcher would be left

with a global analysis of the contingency table and would draw only one conclusion, that

subjects tended to reciprocate behaviours. In order to evaluate whether the experimental

manipulation and personality had contributed to the occurrence of discordant events an

examination of the marginal row probabilities would be necessary (e.g. $c/(c+d)$; appease).

For example, one hypothesis regarding dependency is that it is positively related to the

use of appeasing (cell c) behaviours with partners, and negatively related to the use of

attacking (cell b) behaviours following bolstering of self-worth. Hence, in addition to

calculating omnibus statistics like Yule's Q it is important to do a series of secondary

analyses which decompose the contingency table to examine the impact of the

experimental manipulation and personality on rare and/or discordant behaviours. In

summary, sequential analytic strategies permit the identification of patterns of complex

verbal processes, which may unfold following events that affect self-worth and

interpersonal relatedness in conjunction with effects due to personality.

Insert Table 1 Here

Overview and Hypotheses

Both thesis studies examine the joint influence of personality and disruptive events on sequences of interpersonal behaviours during conflict resolution tasks. In the first study, members of couples were asked to discuss and come to a resolution of three issues that the male member of the couple nominated (see Appendix B). The three topics pertained to areas of difficulty in the relationship and things the male partner disliked about his girlfriend that he wanted her to change. Study two served as a replication of the results of study one using conflict resolution topics nominated by female partners. Given that a novel research paradigm and statistical approach was being adopted for this thesis, replicability of findings was important.

In summary, events that disrupt interpersonal relatedness and self-worth are hypothesized to influence mood, and how members of couples respond to such events is a critical factor that influences the quality of the relationship. Thus, the findings from the two thesis studies will be of interest to researchers in the fields of depressive vulnerability, and those interested in the quality of interpersonal relationships. These studies provide information regarding how personality dimensions, like dependency and self-criticism, contribute to interpersonal functioning within an expanded vulnerability model; the behaviours adopted by individuals following disruptive events and antecedent partner behaviours; and how personality and events jointly contribute to escalations or de-escalations in conflict between members of couples.

Formal Hypotheses

For all analyses of the behavioural data it was hypothesized that the effects of dependency and self-criticism would be strongest for conditions that were congruent

activators of each vulnerability factor. Receiving positive personality feedback relative to one's partner would activate concerns regarding interpersonal relatedness in dependent individuals leading to behaviours aimed at maintaining interpersonal relatedness and support. In contrast, receiving negative feedback relative to one's partner receiving positive feedback was considered a threat to self-worth for self-critics in the current studies. In negative feedback conditions self-criticism was predicted to be positively related to behaviours aimed at bolstering self-worth. At the same time, ambiguous situations, like that represented by the no-feedback condition, were also thought to be perceived as potentially threatening to self-critics and as a result it was expected that the effects of self-criticism might be observed under the no-feedback condition.

Manipulation Check. Given findings from previous studies on the impact of threats to self-worth and interpersonal relatedness (Santor et al., 2000; Santor et al., 1997b; Santor et al., 1998), it was expected that mood in participants given (bogus) negative personality feedback would decrease immediately following feedback compared to baseline levels. Conversely, mood was expected to increase in participants given (bogus) positive personality feedback. No mood changes were expected in the no-feedback group.

Main Effect Situational Hypothesis. According to research on the impact of threats to self-worth, participants receiving (bogus) negative personality feedback were expected to engage in behaviours aimed at bolstering self-worth (e.g., destructive behaviours) relative to their partner who received positive feedback, and no-feedback controls. Moreover, it was hypothesized that participants who received positive feedback would engage in behaviours aimed at maintaining interpersonal relatedness (e.g.,

constructive behaviours). No differences in the behaviours adopted during the conflict resolution task were predicted for participants in the control group.

Macro Level Vulnerability Hypothesis. In accord with the proposed model, dependency and self-criticism were expected to moderate participants' responses to the experimental manipulation (bogus feedback: negative, positive, no-feedback) in the macro-analyses of the data. First, a main effect for dependency was predicted such that dependency would be positively related to the proportion of constructive behaviours and negatively related to the proportion of destructive behaviours across conditions. Second, a dependency by experimental condition interaction was also anticipated such that in the (bogus) positive personality feedback condition dependency would be positively related to the proportion of constructive behaviours to maintain interpersonal relatedness with their threatened partners. Third, a main-effect for self-criticism was also predicted such that self-criticism would be positively related to the proportion of destructive comments during the conflict resolution task. Fourth, since self-critics are motivated to preserve self-worth, according to the expanded vulnerability model, an interaction was predicted between self-criticism and experimental condition. Specifically, it was believed that self-criticism would be positively related to the proportion of destructive comments in the (bogus) negative and no-feedback conditions, and negatively related to the use of constructive behaviours in the (bogus) negative and no-feedback conditions.

Micro Level Vulnerability Hypothesis. It was predicted that a sequential or micro-analysis of the data would reveal a main effect for dependency whereby dependency would be positively related to the proportion of positive tit for tat across conditions. Second, a dependency by experimental condition interaction was expected

such that dependency would be positively related to the use of positive tit for tat and appeasements, and negatively related to the use of negative tit for tat and attacks following positive feedback. It was further hypothesized that dependency would be negatively related to the use of appeasements and positively related to the used of negative tit for tat in the negative feedback condition as interpersonal relatedness would not have been threatened in this condition. Dependency was predicted to be unrelated to the use of attacks in the negative feedback condition as dependent individuals are unlikely to respond in a hostile fashion to their partner's antecedent positive or supportive comments (cf. Santor et al., 2000). Third, given previous findings (cf. Mongrain et al., 1998; Santor et al., 2000; Santor & Zuroff, 1997, 1998; Zuroff & Duncan, 1999a) it was predicted that self-criticism would be negatively related to the use of positive tit for tat and appeasements, and positively related to the use of attacks and negative tit for tat across conditions. Moreover, a self-criticism by experimental condition interaction was expected whereby self-criticism would be negatively related to the use of positive tit for tat and appeasements, and positively related to the use of negative tit for tat and attacks following negative feedback and in the no-feedback condition. It was hypothesized that receiving positive feedback would have buffering effects such that self-criticism would be unrelated to the use of positive or negative tit for tat, or attacks and appeasements as self-worth would have been bolstered in this condition.

CHAPTER 2. METHOD

Participants

Sixty heterosexual dating couples between the ages of 18-30 were recruited for each of the two studies. Couples were recruited through notices displayed around the campuses of Dalhousie, Saint Mary's and Mount Saint Vincent universities, as well as through advertisements published in the Dalhousie Gazette, Chronicle Herald newspaper, and the local cable TV network. All potential participants were contacted by phone for a brief screening interview to ensure that they had been in a heterosexual dating relationship for a minimum of 6 months and were between the ages of 18-30. Couples who had been dating for less than 6 months or who did not meet the age requirements were ineligible to participate. Students who were taking Introductory Psychology at Dalhousie University were eligible to receive two credit points toward their grade for participating or couples were remunerated with $20.00.

Design

In order to examine the effects of threats to interpersonal relatedness and self-worth on conflict resolution patterns, couples were assigned to one of three experimental conditions (male received bogus negative personality feedback, female received bogus positive personality feedback; male received bogus positive personality feedback, female received bogus negative personality feedback; no feedback control group). The resulting 2 x 3 matrix (Table 2) represented two conditions in which the self-worth of one member of the couple was threatened relative to his/her partner's self-worth being bolstered, and a control condition in which self-worth was not manipulated. This ensured that males and

females would be equally represented in each of the feedback conditions. Dependency

and self-criticism, as assessed by the McGill revision of the Depressive Experiences

Questionnaire (Santor, Zuroff, Mongrain, & Fielding, 1997b; Santor, Zuroff, & Fielding,

1997a), were treated as continuous variables in analyses to examine their moderating

effect on the relationship between threats to self-worth and conflict resolution patterns.

Insert Table 2 Here

Measures

Demographics

At the beginning of the experiment participants completed a questionnaire (See

Appendix A) which contained questions evaluating demographic characteristics including

age, year of study or occupation of the individual, whether the individual was living with

his/her partner at the time of the study or had ever lived with his/her partner, length of

time the couple had been dating, the number of hours spent with the individual's partner

per week, as well as the seriousness of the relationship rated on a 9 point scale (1 = not at

all serious, 9 = very serious).

Conflict Resolution Topics

Each participant was asked to complete a questionnaire in which he/she listed,

and rank ordered, 3 things that he/she disliked that his/her partner did or three things

about his/her partner that he/she disliked and would like his/her partner to change.

Participants then filled out questions pertaining to each of the 3 nominated issues (See

Appendix B). The three nominated issues were subsequently used as the topics for

discussion during the conflict resolution task. In study 1 the 3 topics the male partners

nominated were used for the conflict resolution task whereas in study 2 the 3 topics the

female partners had nominated were used.

Relationship Satisfaction

At the beginning of the experiment, participants completed the Dyadic

Adjustment Scale (DAS; Spanier, 1976), which consists of 31 items assessing

relationship satisfaction, adjustment, happiness in the relationship, and areas of

disagreement in the relationship. The DAS has good internal consistency (alpha = 0.96).

The scale also has good criterion-related, construct (Spanier, 1976), and predictive

validity (Kurdek, 1992). Recent research suggests that the 31 items can be summed

together to form an overall measure of adjustment (relationship satisfaction) without

negatively affecting the psychometric and predictive properties of the scale (Hunsley,

Pinsent, Lefebvre, James-Tanner, & Vito, 1995;Kurdek, 1992). As a result total scores on

the DAS were compared between experimental groups to ascertain levels of adjustment

between groups (See Appendix C).

Current Mood

In order to evaluate the effectiveness of the experimental manipulation,

participants completed a measure of affect at the beginning of the experiment and after

they were given bogus personality feedback profiles (Appendix D). The mood scale

consisted of four positively valenced adjectives (happy, joyful, fun, pleased) and five

negatively valenced adjectives (depressed, unhappy, worried, frustrated, angry) scored on

a 10 point scale according to how the individual felt at the present moment (Larsen &

Kasimatis, 1990). Participants circled 0 for "not at all" and 9 for "extremely". This

affect scale is sensitive to experimental mood manipulations (Larsen & Ketelaar, 1991).

Baseline Depressive Complaints or Symptoms

At the beginning of the experiment each participant completed the Centre for

Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), which is a 20 item self-

report measure of depressive affect and symptoms (see Appendix E). The scale has good

internal consistency (alpha = 0.84), and split-half reliabilities ranging from 0.77-0.92 in

the general population (Corcoran & Fischer, 1987). Recent studies suggest that the CES-

D may be better at discriminating differences in depressive severity than the Beck

Depression Inventory (Santor, Zuroff, Ramsay, Cervantes, & Palacios, 1995). However,

one is cautioned about using the CES-D as a measure of depression without using other

assessment sources including clinical interviews (Santor et al., 1995). Thus, the CES-D

was used as a measure of subjective distress rather than depression in the current studies.

Dependency and Self-Criticism

Each participant completed the McGill Revision of the DEQ at the beginning of

the experiment (DEQ-R; Santor et al., 1997a). The scale consists of 48 items rated on a 7

point scale, with "1" indicating that the individual "strongly disagreed" with the item and

"7" indicating that the individual "strongly agreed" with the item (see Appendix F). The

McGill Revision of the DEQ preserves key properties of the original scale, but uses unit-

weighted rather than factor derived scores for dependency and self-criticism.

Dependency and self-criticism scores are computed by summing scores from individual

items. The scales of the DEQ-R have adequate internal consistency (alpha = 0.78), and

have been validated in both clinical and non-clinical populations (Santor et al., 1997b).

The DEQ-R represents an improvement from the original scale as the correlation

initially observed between dependency and self-criticism has been reduced via the

elimination of items which fail to discriminate between subtypes (Santor et al., 1997b;

Santor et al., 1997a). Indeed, there is considerable overlap between Beck's sociotropy

and Blatt's construct of dependency, although Beck's autonomy and Blatt's self-

criticism overlap to a lesser degree (Alden & Bieling, 1996; Bartlestone & Trull, 1995;

Blaney & Kutcher, 1991). However, dependency and self-criticism are more consistently

related to depressive affect than are sociotropy or autonomy (Enns & Cox, 1997).

Filler Questionnaires

In order to convince the participants that personality traits were being examined

during the study participants were asked to complete a variety of filler questionnaires,

which purportedly measured personality traits. However, these questionnaires were

simply used to increase the face validity of the experimental manipulation and were not

used for the purposes of data analysis.

Behaviour Coding

The Marital Interaction Coding Scheme IV (MICS-IV; Heyman et al., 1995) was

used to assess how partners interacted during the conflict resolution task (see Appendix

G). The MICS-IV consists of 9 global categories: Blame, Problem Description,

Dysphoric Affect, Facilitation, Invalidation, Irrelevant speech, Propose Change,

Validation, and Withdrawal. The MICS-IV coding system has been successfully used in

previous studies evaluating conflict resolution patterns in dating and married couples

(Heyman et al., 1995). Following initial coding of the data, the MICS-IV categories were

subsequently collapsed into two main categories (constructive and destructive behaviour)

based on existing literature using the scale (Heyman et al., 1995), and current trends in

interpersonal and relationship research which focus on constructive (supportive) and

destructive (unsupportive) interpersonal strategies (Baucom & Sayers, 1989; Billings,

1979; Cordova et al., 1993; Coyne, 1976b; Johnson & Jacob, 1997).

Four undergraduate psychology students and one master coder were trained over a

3-month period to use the MICS-IV coding scheme. Coders met once a week for a 3-hour

period in which they practiced using the MICS-IV coding scheme using video clips from

an earlier pilot study. Coders were trained to 100% reliability criterion with the master

coder for constructive and destructive codes prior to rating test videotapes. Following

this training period coders were then permitted to code videotapes from the two studies

(see Appendix H for sample coding form). The master coder coded one tape from the

early, middle, and late phase of the coding period for each of the coders in order to

compute inter-rater reliability estimates and to minimize coder drift from the criterion

established during the training period. In order to reduce the effects of "coder-drift"

during the coding phase the master coder coded one videotaped segment per week with

each of the coders. The coders were unaware of a) the experimental hypotheses, b) the

experimental condition to which participants were assigned and c) participants' scores on

questionnaire measures. Following completion of the study, twenty percent (12) of the

videotapes from each study were randomly selected and coded for inter-rater reliability

with the master coder using Cohen's kappa (Bakeman & Gottman, 1997). The reliability

analyses are presented with the results of each of the two studies.

Bogus Personality Feedback Profiles

After completing questionnaires at the beginning of the experiment and following

the first discussion task, participants in the experimental groups were given a profile of

30 adjectives (bogus) describing their personality as well as a copy of 30 adjectives

(bogus) describing their partner's personality (Baumeister & Cairns, 1992) based on the

experimental design matrix (see Table 1). All participants in the experimental groups

received the same bogus personality feedback profiles. These bogus personality feedback

profiles were used to bolster or threaten the self-worth of each member of the couple (see

Appendix I and J). Moreover, individual members of the couple received either a

negative or positive profile whereas their partners received the opposite valenced profile

(i.e., male received a more negatively valenced profile, female received a more positively

valenced profile in condition 1 in both studies). Each profile presented the individual's

and his/her partner's results. Hence, each participant was privy to his/her own and his/her

partner's feedback.

Materials

Two computers were used in the current studies to administer questionnaires and

obtain participants' responses. Participants completed the paper and computer

administered tests in separate rooms. A video camera was used to videotape the

discussion tasks. The camera was placed behind a 24" one-way mirror in order to

preserve a naturalistic environment for the couples. The camera was mounted on a

Canon tripod within a 24" black box, which was attached to the one-way mirror. A

microphone was hung from the ceiling in the room where couples engaged in the

discussion task. A black and white monitor and speaker system were connected to the

video camera in order to playback the tapes for coding purposes.

Procedure

The Dalhousie University Faculty of Graduate Studies, and Psychology

Department Human Ethics committees jointly approved the two studies. Data collection

for Experiment 1 was conducted between January – August 1998 and between October

1998 – January 1999 for experiment 2.

<u>Overview and Informed Consent</u>

During the telephone screening process and again upon arrival at the laboratory,

potential participants were told that the purpose of the study was to examine the

relationship between personality traits and communication patterns between members of

couples. Participants were told that they would be asked to complete several

questionnaires, which assessed demographic characteristics, mood, personality, and

questions pertaining to their current relationship. Participants were also told that they

would be asked to do two discussion tasks with their partner, one involving a conflict

resolution task based on topics they would nominate on a questionnaire at the beginning

of the experiment. They were informed that the discussions would be videotaped and

coded by a research team affiliated with the project. Each participant was then asked to

provide informed consent by signing a consent form before participating in the study,

including permission to be videotaped during the two discussion tasks. All participants

were informed that they could discontinue the experiment at any time without facing

penalty. Participants were also told that their data from the questionnaires and videotapes

would remain confidential and that their results would be averaged with the data from

all other couples for the purposes of statistical analysis (Appendix K).

Baseline Questionnaires

Each member of the couple was then brought into a separate room to complete a

series of questionnaires. Some of the questionnaires were completed via pencil and paper

administration (demographics, conflict resolution topics, DAS, relationship patterns) and

some of the questionnaires were completed via computer administration (mood

adjectives, CES-D, DEQ-R, filler questionnaires).

First Discussion Task: Acclimatization to Laboratory Videotaping

Following completion of the baseline questionnaires both members of the couple

were brought into another room in the laboratory to complete the discussion tasks. Before

being permitted to engage in the first discussion task, participants in the two experimental

groups were told that they would receive a personality feedback profile based on their

responses to the questionnaires they completed on the computer at baseline. Participants

in the experimental groups were told that they would be permitted to view both their

partner's and their own profiles following the first discussion task. In order to acclimatize

participants to being videotaped, participants were asked to spend five minutes with their

partner discussing positive aspects of their relationship including activities both members

of the couple enjoyed doing together, qualities they liked about each other, and recent

events that they had mutually experienced. Participants were informed that the

discussions were being videotaped. Once the instructions were read to the couple the

experimenter left the room.

Experimental Manipulation: Personality Feedback

After the first discussion task, the experimenter brought the female member of the couple into another room and then individually provided each member of the couple a copy of the bogus personality feedback profiles (Appendix I and J). Each personality feedback profile contained both the individual's and their partner's profile. The experimenter explained the results of the profiles to each participant and ensured that each participant understood their profile. Then each participant was left alone to look over the personality feedback profiles for approximately 5 minutes. Following this period the experimenter collected the profiles from each participant and gave each participant the mood adjective questionnaire to assess the effect of the experimental manipulation. Participants in the control group were simply separated following the first discussion task and were asked to complete the mood adjective questionnaire.

Second Discussion Task: Conflict Resolution

Upon completion of the mood adjective questionnaire the female members of the couple were brought back into the videotaping room where their male partner had remained. At this point the participants were informed that they were to commence the second discussion task. Participants were told that this discussion would be based on the three conflict issues that one of the members of the couple had nominated at baseline. In study one the men were told that their three issues had been chosen for the discussion, whereas, in study two the women were told that their three issues had been chosen for the discussion. The experimenter proceeded to read aloud the three nominated issues and then instructed the leader of the discussion (male in study 1, female in study 2) to discuss with their partner what they disliked about each of the nominated issues. The partners

were informed that the format was a discussion and as a result they were permitted to discuss their feelings, attitudes, and beliefs regarding each of the issues. Couples were also informed that the goal of the discussion was to come to a solution or resolution of the issues within a ten-minute period. The leader of the discussion was provided with a reminder sheet which included the three issues he/she had nominated as well as instructions regarding areas to cover during the conflict resolution task (see Appendix L). After reading the instructions aloud and ensuring that each member of the couple understood the instructions the experimenter left the room.

Follow-Up Questionnaires

After ten minutes the experimenter returned to the videotaping room to inform the couple that this phase of the experiment was complete. Each member of the couple was then brought into the original room where they had completed the baseline questionnaires and were asked to complete a series of follow-up questionnaires including a questionnaire assessing participants' impression of the personality feedback manipulation (see Appendix M).

Debriefing

Upon completion of the final set of questionnaires both members of the couple were brought back to the main laboratory room and were fully debriefed. Participants who had received bogus personality feedback profiles were informed that these profiles were not real and had been designed for the purpose of manipulating the affect of participants and did not represent their actual personality traits. No participants indicated any residual distress or lingering negative affect following the debriefing procedure (See Appendix N for the experimental protocol and script).

CHAPTER 3. RESULTS

Analytic Plan

The data will be analyzed in several sections. First, univariate statistics and zero-order correlations among dependency, self-criticism and the dependent measures are reported. Second, the effects of the threat manipulation on mood and time spoken are reported. Third the effects of dependency and self-criticism and the experimental manipulation, on the MICS-IV behaviour codes, which were reduced to two main categories (constructive, destructive) are presented. Fourth, similar analyses are presented including partner parallel behaviour as a covariate. Fifth, the joint effects of dependency and self-criticism and the experimental manipulation are examined using sequential analyses of the behavioural data. Sixth, the occurrence of non-concordant (e.g., appeasements, attacks) behaviours is examined given their centrality to the micro-level vulnerability hypotheses.

Given that the moderating effects of depressive vulnerability factors, like dependency and self-criticism, following threats to interpersonal relatedness and self-worth are hypothesized to affect the behavioural strategies adopted by individuals both at macro and micro levels, several analytic methods were employed. Consistent with previous studies, the mean proportions (macro-level) of constructive and destructive behaviours of participants were subjected to hierarchical multiple regression analyses including a dummy coding for a) gender, and b) experimental condition (positive, negative, no-feedback), followed by the c) personality variables (either dependency or self-criticism), followed by all two-way and three-way interaction terms. However, since partner behaviour was also thought to have a considerable influence on the behaviours of

participants a second series of regressions, which included relevant partner behaviour, were conducted. Although interest was focused on the moderating effects of dependency and self-criticism on interpersonal behaviour following events that either bolstered or threatened interpersonal relatedness and self-worth, it was imperative to account for effects due to partner behaviour before considering the effects of the experimental manipulation and personality. A multiple regression approach was deemed suitable for this task, as the degree to which couple behaviour is correlated was not of particular theoretical interest for conducting macro-analyses on the data set (Kenny, 1988).

A second part of this thesis focused on demonstrating that individual behaviours were not only a consequence of the experimental manipulation and personality, but that these factors influenced participants' responses to their partners' antecedent behaviours. As such, sequential data analytic techniques, which assess the degree of reciprocity between members of a couple were employed to assess characteristic response styles between members of couples. However, measures like the odds ratio, log-odds ratio, and Yule's Q are omnibus measures of association. Therefore, the ability to detect the occurrence of discordant or rare responses (e.g., appeasements, attacks) is obscured by such measures. As a result, the sequential contingency tables (see table 1 for example) were decomposed so that the proportions of positive and negative reciprocal behaviours, and more importantly, the discordant rare events (e.g., appeasements and attacks) could be analyzed. These proportions, which reflected participants' responses to their partners' antecedent behaviours, were subjected to hierarchical multiple regression analyses similar to those previously discussed.

Rationale for Analyzing the Two Studies Separately

The two studies were analyzed separately rather than combining the data sets into a larger pool as the studies were conceptually different from one another. The first study focused on couples' ability to resolve conflict based on topics nominated by male members of couples whereas study two focused on females' topics. Although, the broader scope of this thesis was to examine the joint effects of threats to interpersonal relatedness and self-worth, and depressive vulnerability factors, on micro-level interpersonal behaviour, it was necessary to examine if the predicted effects would hold in two different samples based on topics nominated by different genders. For example, some theorists argue that women may hold back from expressing their views when discussing relationship problems they attribute to their partners (Jack, 1991).

Additionally, the aim of this thesis was not to directly compare conflict resolution styles based on males versus female's topics, which has been extensively examined (Cordova et al., 1993; Gottman et al., 1977; Gruen et al., 1994). Hence, this variable was not entered as a main effect term, nor crossed with other study variables to form an interaction term. Moreover, given the number of variables that were examined in the two studies, combining both data sets would have necessitated examining 4-way interactions increasing the complexity in understanding obtained effects (Pedhazur, 1997). Other factors contributed to analyzing the data sets separately. First, the two studies were conducted a year apart from one another. The first study was conducted during the fall of 1997, whereas the second study was conducted during the summer of 1998. Second, there were several differences between participants in each of the studies, including a larger proportion of mature participants in the second study (median age = 24), and more

undergraduate first year students in the first study (median age = 19). Third,

participants in the first study had dated their partners for a shorter number of years ($\underline{M}$ =

1.88, $\underline{SD}$ = 1.30) than participants in the second study ($\underline{M}$ = 2.63, $\underline{SD}$ = 2.67). Fourth, a

new methodology and statistical approach were employed for this research warranting an

exploration of the replicability of the findings rather than treating gender of topic

nominator as a factor to be analyzed in one large study.

<div align="center">Results: Study 1</div>

Demographics

Several demographic variables, which have been associated with the quality of

dating relationships, were examined in the present study (Brehm, 1992). Variables

examined included age, length of the relationship, time spent together, level of

relationship commitment and satisfaction, education, and socio-economic status. A

gender by condition analysis of variance on age revealed a significant main effect for

gender $\underline{F}$(1, 114) = 10.14, $\underline{p}$ < 0.002 in which male participants ($\underline{M}$ = 20.97, $\underline{SD}$ = 2.57)

were slightly older than female participants ($\underline{M}$ = 19.72, $\underline{SD}$ = 1.91). Couples reported

dating their partners for an average of 1.88 years ($\underline{SD}$ = 1.30) and spending an average of

50.85 ($\underline{SD}$ = 37.05) hours together per week. Twenty couples indicated that they were

currently living together during the time of the study. The number of co-habiting couples

was relatively stable across experimental conditions. On average, couples rated their

relationship as being quite serious ($\underline{M}$ = 8.17, $\underline{SD}$ = 0.92) on a scale of 1 (not very

serious) to 9 (very serious). Couples completed an average of 2.10 years post-secondary

education ($\underline{SD}$ = 1.29), with 102 subjects indicating that they were currently enrolled in

university, 11 were engaged in blue collar labour, 3 in white collar labour, 1 in a

profession (i.e., medical, legal etc), and 1 subject indicated that he/she was currently

unemployed, whereas 2 subjects did not indicate their current employment status. Age,

years dated, time spent together, and relationship seriousness were analyzed in analyses

of variance with gender and experimental condition (negative, positive, no feedback) as

the independent variables. Months dated and hours spent together were first log

transformed. No significant effects were observed. Although participants were assigned

to conditions randomly, they participated with their girlfriends/boyfriends. As a result,

the degree to which dependency and self-criticism might be correlated between partners

was calculated by computing intra-class correlations. Results revealed that dependency

was not significantly correlated in couples ($r = 0.03$, $p > 0.05$) whereas self-criticism was

($r = 0.42$, $p < 0.0001$). However, there were no significant mean differences in

dependency and self-criticism scores across experimental groups.

<u>Ratings of Conflict Resolution Topics</u>

A series of one-way ANOVA's across experimental conditions (negative,

positive, no-feedback) was conducted based on the males' responses to each of the six

questions regarding their ratings of the three conflict resolution topics that they had

nominated for discussion (see Appendix B). Although participants answered the same

six questions for each of the three nominated topics, scores were averaged across topics

for the analyses. No significant group differences were observed (see Table 3.) using

males' ratings. Moreover, the results of the ratings reveal that male participants tended to

nominate topics that were mild in degree of impact and importance to the relationship.

This is not surprising given the fact that participants were aware that they would be

discussing the topics they nominated during the experiment.

Insert Table 3 Here

Inter-Rater Reliability

Following completion of the study, twenty percent (12) of the videotapes were randomly selected and coded for inter-rater reliability with the master coder (Anne Israeli) using Cohen's kappa (Bakeman & Gottman, 1997). The inter-rater reliability kappa's for each coder with the master coder were as follows: coder 1 = 0.98, coder 2 = 0.96, coder 3 = 0.97, coder 4 = 0.96, and the mean kappa across coders was 0.97 indicating high inter-rater reliability across coders.

Univariate Statistics

Means, standard deviations and zero-order correlations between dependency, self-criticism and all dependent variables, aggregated across experimental conditions, are presented in Table 4. Dependency and self-criticism were positively related to depressive affect. Moreover, self-criticism was negatively related to relationship satisfaction indicating that highly self-critical subjects were less satisfied with their relationships. Self-criticism was negatively related to the adoption of constructive behaviour (macro-level), positive tit for tat, and appeasements (micro-level); and self-criticism was positively related to destructive behaviour (macro-level), attacks, and negative tit for tat. Furthermore, depressive affect was negatively related to relationship satisfaction. Thus, individuals high in depressive affect were less satisfied with their current relationship. However, mean depressive affect scores were below cut-off scores for depressed mood, and relationship satisfaction scores revealed that subjects were, on average, highly

satisfied with their current relationship. In order to assess whether depressive affect and relationship satisfaction differed across experimental groups a gender by experimental condition analysis of variance was conducted on each of the dependent variables. No main effects or interactions between the independent variables were observed for depressive affect and relationship satisfaction.

Mood Ratings

In order to examine whether the experimental manipulation (personality feedback: positive, negative, no-feedback) led to changes in mood, post-manipulation mood scores were regressed on baseline mood scores. Residual mood scores were then used as the dependent variable in two hierarchical regression analyses (Pedhazur, 1997) examining the effects of gender and experimental condition, which were coded as dummy variables, and either dependency or self-criticism, which were included as continuous variables, followed by all two-way and three-way interaction terms. An effect for experimental condition was found in the regression analysis including dependency, $F_{(2,108)} = 78.33$, $p < 0.0001$. No interactions between the gender, experimental condition dummy variables and dependency were observed. A similar result for condition was observed in the regression analysis including self-criticism $F_{(2,108)} = 75.95$, $p < 0.0001$. Post hoc t-tests revealed that subjects who received negative personality feedback experienced a decrease in mood relative to subjects who received positive $t_{(78)} = -10.60$, $p < 0.0001$, or no personality feedback $t_{(78)} = -10.76$, $p < 0.0001$. No significant interactions were observed between the gender and threat dummy variables, and either dependency or self-criticism (see Figure 1).

Insert Figure 1 Here

Time

Hierarchical regression analyses were performed to examine main effects and

interactions between gender, threat and dependency on amount of time spoken, in

minutes, during the conflict resolution task. A main effect for gender was observed,

$\underline{F}(1,108) = 41.15$, $\underline{p} < 0.0001$ in which males ($\underline{M} = 4.92$) spoke longer than females ($\underline{M} =$

3.73). A similar hierarchical regression model for self-criticism was conducted. No

effect for self-criticism was observed.

Macro Level Analyses

MICS-IV Behaviour Codes

In order to examine the effects of the experimental manipulation and depressive

vulnerability factors (dependency and self-criticism) on MICS-IV behaviours, each

participant's constructive and destructive behaviours were divided by the total number of

behaviours observed for that participant. The computed proportions of constructive and

destructive behaviours engaged in by each participant during the conflict resolution task

were then used in subsequent hierarchical regression models to examine the effects of the

experimental manipulation and personality on behaviours aggregated across the conflict

resolution time series. Although a number of analytic techniques have been proposed to

examine the effects of one individual's behaviour on another, the use of hierarchical

regression analyses was employed since the focus of this study was to examine the effects

of dependency and self-criticism on conflict resolution patterns in response to positive or

negative feedback, rather than the degree to which behaviour between members of

couples was correlated (Kenny, 1996; Kenny & Judd, 1996). The construction of these

aggregated variables afforded the opportunity to conduct a macro-analysis of the

behavioural data.

Dependency and MICS-IV Behaviour Codes

Constructive behaviour. Hierarchical regression analyses were performed to

examine main effect and interactions among dependency, gender, and experimental

condition (Pedhazur, 1997). The dependent variable assessing the proportion of

constructive behaviours was regressed on the three main effect terms, the three two-way

interaction terms, and the single three-way interaction term. Main effect terms for gender

and experimental condition were entered prior to dependency, and the interaction effects

for gender and experimental condition were entered prior to interaction terms involving

dependency. A significant dependency by experimental condition interaction was

observed $F(2, 108) = 4.95$, $p < 0.008$. Analyzing simple slopes revealed that when

participants received positive feedback at the expense of their partners, dependency was

positively related to engaging in a greater proportion of constructive behaviours $t(38) =$

2.78, $p < 0.008$ (see figure 2a). The results are consistent with the view that, in order to

maintain interpersonal relatedness, dependent participants in the positive feedback

condition may have been motivated to engage in a larger proportion of constructive

behaviours in an effort to garner support from partners.

Destructive behaviour. Similar hierarchical regression analyses were conducted

for the proportion of destructive behaviours. A significant dependency by experimental

condition interaction was observed $F(2, 108) = 3.98$, $p < 0.02$. Analyzing simple slopes

revealed that, in the positive feedback condition, dependency was negatively related to the use of destructive behaviours $t(38) = -2.49$, $p < 0.02$ (see figure 2b). Again, as predicted, individuals high in dependency in the positive feedback condition may have been motivated to maintain interpersonal relatedness and thus engaged in a lower proportion of destructive behaviours to reduce conflict with their partners.

Insert Figure 2 Here

Self-Criticism and MICS-IV Behaviour Codes

Constructive behaviour. Analogous hierarchical regression analyses were performed to examine the main effects and interactions among self-criticism, gender, and experimental condition. A significant main effect for self-criticism was observed $F(1, 108) = 10.31$, $p < 0.002$ revealing that self-criticism was negatively related to the use of constructive comments during the conflict resolution task. A significant self-criticism by experimental condition interaction $F(2, 108) = 4.00$, $p < 0.02$ was also detected. Analyzing simple slopes revealed that when subjects were threatened, self-criticism was negatively related to the proportion of constructive comments $t(38) = -4.55$, $p < 0.0001$. Self-criticism was also negatively related to the use of constructive comments for subjects who received no personality feedback $t(38) = -2.24$, $p < 0.03$ (see figure 3a). As predicted, self-criticism was negatively related to the proportion of constructive comments engaged in by participants when their self-worth was threatened (negative feedback). Under this condition, self-critics may have been motivated to increase their status and self-worth at the expense of their partner. Interestingly, self-criticism was

negatively related to the use of a lower proportion of constructive comments in the no-feedback condition, suggesting that ambiguous situations may be perceived as potentially threatening to individuals who are highly self-critical. Moreover, bolstering of self-worth appeared to offset the effects of self-criticism.

Destructive behaviour. Regressing the proportion of destructive behaviour on main effect and interaction terms revealed a significant main effect for self-criticism $F(1, 108) = 7.87$, $p < 0.006$ in which self-criticism was positively related to the proportion of destructive comments engaged in by participants, and a significant self-criticism by experimental condition interaction $F(2, 108) = 4.17$, $p < 0.02$. Analyzing simple slopes revealed that in the negative feedback condition, self-criticism was positively related to the use of destructive comments $t(38) = 4.35$, $p < 0.0001$ (see figure 3b). This observation was consistent with initial hypotheses that self-criticism, in the negative feedback condition (threat to self-worth), would motivate attempts to re-gain status and would promote conflict behaviours with partner to achieve this goal.

Insert Figure 3 Here

Influence of Partner Behaviour

Given that participants partook in the studies as couples, it is likely that the behaviours exhibited by participants during the conflict resolution task were correlated with partner behaviours (Kenny, 1996a, 1996b; Kenny & Judd, 1996). In order to control for such partner effects, the MICS-IV behaviour codes were re-analyzed in a series of

hierarchical regression analyses in which partner behaviour was first included as a covariate.

Dependency and MICS-IV Behaviour Controlling for Partner Behaviour

Constructive behaviour. Hierarchical regression analyses were performed to examine main effects and interactions between dependency, gender, and experimental condition on constructive behaviour (Pedhazur, 1997) while controlling for partner effects. A significant main effect for proportion of partner constructive behaviour was observed $F(1, 107) = 102.49$, $p < 0.0001$ in which partner constructive behaviour was positively related to participants' use of constructive behaviour. Moreover, results revealed a significant dependency by experimental condition interaction $F(2, 107) = 4.28$, $p < 0.02$. Analyses of the simple slopes, including partner behaviour as a covariate, for the condition by dependency interaction revealed a positive relationship between dependency and the proportion of constructive behaviour use in participants who received positive feedback $t(37) = 2.91$, $p < 0.006$ (see figure 4a).

Destructive behaviour. Similar hierarchical analyses were conducted for the proportion of destructive behaviours. Results indicated a significant main effect for partner destructive behaviour $F(1, 107) = 134.54$, $p < 0.0001$ and a trend for a dependency by experimental condition $F(2, 107) = 2.64$, $p < 0.07$ interaction. Proportion of partner destructive behaviour was positively related to the proportion of participant destructive behaviour. Analyses of the simple slopes for the dependency by experimental condition interaction revealed that dependency was negatively related to the proportion of destructive comments in positive feedback (bolstered) participants $t(37) = -2.62$, $p < 0.01$ (see figure 4b). These results confirmed the original hypothesis that individuals scoring

high on dependency would be motivated to maintain interpersonal relatedness and would thus be less likely to engage in destructive communication with their partners. Moreover, it was hypothesized that outperforming one's partner would be perceived as a threat to interpersonal relatedness and would thus lead to the use of a lower proportion of destructive behaviours in dependent participants who received positive feedback.

Insert Figure 4 Here

Self-Criticism and MICS-IV Behaviour Controlling for Partner Behaviour

Constructive behaviour. Similar hierarchical regression analyses, in which partner behaviour was included as a covariate, were conducted to examine the relationship between gender, experimental condition, and self-criticism on constructive behaviour (Kenny, 1996a, 1996b; Kenny & Judd, 1996; Pedhazur, 1997). Results revealed a significant main effect for partner behaviour $F(1, 107) = 95.92$, $p < 0.0001$ in which the proportion of partner constructive behaviour was positively related to the proportion of subject constructive behaviour. A trend for a self-criticism by condition interaction was also observed $F(2, 107) = 2.38$, $p < 0.09$. Analyses of simple slopes, in which partner behaviour was included as a covariate, revealed that self-criticism was negatively related to the use of constructive behaviours in the negative feedback condition $t(37) = -3.19$, $p < 0.003$ (see figure 5a). As predicted, self-critical participants who received negative feedback engaged in a lower proportion of constructive behaviours.

Destructive behaviour. Analogous hierarchical regressions were performed on the proportion of destructive behaviours. Results revealed a significant main effect for the proportion of partner destructive behaviours $F(1, 107) = 132.19$, $p < 0.0001$ in which partner behaviour was positively related to the proportion of subject destructive behaviour. A trend for a significant self-criticism by experimental condition interaction was also observed $F(2, 107) = 2.85$, $p < 0.06$. Analyses of the simple slopes, including partner behaviour as a covariate, revealed that self-criticism was positively related to the use of destructive behaviours in participants receiving negative feedback $t(37) = 2.73$, $p < 0.009$ (see figure 5b), supporting the initial hypothesis regarding the relationship between threatened self-worth and self-criticism.

Insert Figure 5 Here

Micro Level Sequential Analysis

One of the main goals of this research was to differentiate the effects of personality at a macro level which represents scores aggregated across trials from effects of personality at a micro level which considers the impact of one discrete behavioural act on another over a time series. Thus, we were not only interested in the mean proportion of behaviours engaged in by members of couples during the conflict resolution task (macro), but were also concerned with how individual behaviour was influenced by partner behaviour at each trial over the time series (micro). Hence, we re-analyzed our data using sequential analyses (Allison & Liker, 1982; Bakeman & Gottman, 1997; Bakeman, Robinson et al., 1996; Gottman & Bakeman, 1979; Gottman et al., 1977;

Iacobucci & Wasserman, 1988; Jacob & Leonard, 1992). Four new behaviour codes

representing participant behaviours given specific partner antecedent behaviours across

the ten minute time series (see Table 1.) were calculated to decompose the sequence of

interaction between members of couples during the conflict resolution task. For example,

the frequency of positive tit for tat was calculated by computing the number of times

participants used constructive comments following partner's constructive comments;

whereas the frequency of attacks was calculated by computing the number of times

participants used destructive comments following partner's constructive comments.

Furthermore, the frequency of appeasements represented the number of times participants

used constructive comments following partner use of destructive comments, and negative

tit for tat represented the number of times participants used destructive comments

following partner use of destructive comments. These computations enabled the creation

of 2 x 2 tables, for each subject, which reflected participants' consequent MICS-IV

behaviours (based on original constructive, destructive behaviour classification)

following partner's antecedent behaviours.

From these new 2 x 2 data tables a variety of related statistics representing

strength of association or effect size were computed (Bakeman & Gottman, 1997), such

as a) the log-odds ratio [log of (ad/bc)], which can vary from minus infinity to positive

infinity, and equals zero when there is no effect, and b) Yule's Q, which is a

transformation of the odds ratio which varies from −1 to +1 with zero indicating no effect

just like the Pearson product moment correlation. Yule's Q is computed using the

following formula: [ad −bc/ad+bc] (see Table 1).Both the log-odds ratio and Yule's Q

gauge the magnitude of the effect of sequential associations, and are unaffected by the

number of tallies contained within cells, making them excellent candidates for standard

parametric testing (Bakeman & Gottman, 1997; Bakeman, McArthur et al., 1996;

Bakeman, Robinson et al., 1996).

Analyses Involving Dependency

Log-Odds Ratio. Hierarchical regression analyses were performed to examine

main effects and interactions between gender, experimental condition, and dependency

(Pedhazur, 1997). The log-odds ratio was regressed on the three main effect terms, the

three two-way interaction terms and the three-way interaction term. Main effect terms

for experimental conditions were entered prior to dependency, and the interaction effects

for gender and experimental condition were entered prior to interaction effects involving

dependency. A significant gender by experimental condition interaction was observed

$F(2, 108) = 3.07$, $p < 0.05$. A series of Bonferroni adjusted post hoc t-tests revealed no

significant group differences. However, the overall log-odds ratio was 0.85 ($SD = 0.96$),

revealing that participants reciprocated behaviours. As a supplementary analysis the log-

odds ratio was examined within each experimental group using t-tests for single samples.

Mean log-odds ratios for negative, positive, and no feedback conditions were ($M = 0.92$,

$SD = 1.03$), ($M = 0.80$, $SD = 0.92$), and ($M = 0.84$, $SD = 0.95$) respectively, and all were

significantly different than zero using a Bonferroni adjusted alpha level ($p < 0.01$).

Yule's Q. Similar analyses for Yule's Q revealed no significant main effects or

interactions for gender, experimental condition and dependency. However, the overall

Yule's Q was 0.34 ($SD = 0.34$). The mean Yule's Q scores for each of the three

experimental groups were re-analyzed using single sample t-tests. Mean Yule's Q for

negative, positive, and no feedback conditions were ($M = 0.36$, $SD = 0.39$), ($M = 0.33$,

$\underline{SD} = 0.35$), and ($\underline{M} = -.34$, $\underline{SD} = 0.31$) respectively, and all scores were significantly different from zero using a Bonferroni adjusted alpha level ($\underline{p} < 0.01$) indicating that participants reciprocated their partner's antecedent behaviours.

Analyses Involving Self-Criticism

Log-odds ratio. Analogous analyses were conducted for self-criticism. A significant gender by condition interaction was observed $\underline{F}(2, 108) = 2.98$, $\underline{p} < 0.05$. However a series of Bonferroni adjusted post hoc t-tests revealed no significant differences.

Yule's Q. Similar analyses were conducted for Yule's Q and produced no significant findings.

Limitations of Sequential Analyses

One concern regarding the log-odds ratio and Yule's Q is that both measures reflect an overall summary of behaviours engaged in by subjects during the experiment. As with other studies of dyads (Bakeman, 1996; Bakeman, 1997; Cordova et al., 1993; Gottman, 1979; Gottman & Bakeman, 1979; Gottman et al., 1977; Notarius et al., 1989; Santor et al., 2000), participants used a much higher proportion of constructive than destructive comments during the conflict resolution task and engaged in a higher proportion of tit-for-tat responses (positive and negative), thus decreasing the ability to detect statistically significant differences for non tit-for-tat events. The log odds ratio and Yule's Q combine constructive and destructive behavioural events into one number, which reflects an overall index of contingency. In general, most behavioural sequences are concordant with constructive behaviours eliciting constructive behaviours, and destructive behaviours eliciting destructive behaviours. Similar to Chi-Square

estimations, the overall frequency and degree of concordance of observable events influence the significance of the resulting statistic. Since a greater number of constructive event sequences occurred during the conflict resolution task, statistics like the log odds ratio and Yule's Q were influenced primarily by the level of constructive events, while all other events were concealed within these statistical computations. This was not surprising given that this study focused on non-clinical, non-distressed subjects in an experimental setting with all of its expectations and demand characteristics. Focusing only on the log-odds ratio and Yule's Q, or any other measures of concordance, which are largely affected by a high preponderance of concordant behaviours (e.g., positive tit for tat) may camouflage important effects of discordant behaviours. The rationale for conducting micro-level analyses using sequential methods was to detect the occurrence and pattern of discordant behaviours such as appeasements (e.g., occurrence of constructive behaviour given partner antecedent destructive behaviour) and attacks (e.g., occurrence of destructive behaviour given partner antecedent constructive behaviour). Thus further analyses were conducted to tease apart important effects that may have been missed by using the log odds ratio and Yule's Q.

The sequential data were re-analyzed in another series of multiple regression analyses. For these subsequent analyses four variables, based on the sequential 2 x 2 tables depicted in Table 1, were computed. The proportion of positive tit-for-tat was calculated by dividing the frequency of participant positive tit-for-tat behaviours by the row total given partner constructive antecedent behaviour (top row of table 1). The proportion of attacks was computed dividing by the same row total. The proportion of appeasements was computed by dividing the frequency of participant appeasements by

the row total given partner destructive antecedent behaviour (bottom row of table 1).

The proportion of negative tit-for-tat was computed by dividing the number of participant

negative tit-for-tat behaviour by the bottom row marginal total.

Analyses for Dependency

Proportion of positive tit-for-tat. Hierarchical regression analyses were performed

to examine main effect and interactions among gender, experimental condition, and

dependency on positive tit-for-tat (Pedhazur, 1997). The dependent variable assessing

the proportion of positive tit-for-tat used by participants during the conflict resolution

task was regressed on the three main effect terms, the three two-way interaction terms

and the three-way interaction term. Results revealed a dependency by condition trend

$F(2, 108) = 2.37, p < 0.09$. Analyses of the simple slopes revealed a trend in which

dependency was positively related to the use of positive tit-for-tat in the positive

feedback condition (bolstered) $t(38) = 1.81, p < 0.07$. Thus, when participants received

positive feedback in the context of their partner receiving negative personality feedback,

dependency was related to the use of supportive behaviours (positive tit-for-tat)(see

figure 6a).

Proportion of attacks. Similar hierarchical analyses were conducted for the

proportion of attacks. Given that positive tit for tat and attacks were computed based on

the same row-marginal, the F statistics are necessarily the same for each of these

analyses. A dependency by experimental condition trend was observed, and a priori

analyses of the simple slopes revealed that in the positive feedback condition,

dependency was negatively related to the use of attacking behaviours (see figure 6b).

Thus, dependent participants who received positive personality feedback (status/self-

worth enhancing) relative to their partners who received negative personality feedback (status/self-worth declining) were less likely to engage in attacking behaviours as they were motivated to maintain interpersonal relatedness.

Proportion of appeasements. Analogous hierarchical analyses were conducted for the proportion of appeasements (constructive behaviour following partner antecedent destructive behaviour). Results revealed a significant dependency by experimental condition interaction $F(2, 108) = 5.73$, $p < 0.004$. Analyzing simple slopes revealed that dependency was negatively related to the use of appeasing behaviour when subjects received negative personality feedback $t(38) = 2.59$, $p < 0.01$ relative to their partner, and was positively related to the used of appeasing behaviour when subjects received positive personality feedback relative to their partner $t(38) = 2.59$, $p < 0.01$)(see figure 6c). These findings are consistent with initial hypotheses regarding the interactive effects of experimental condition and dependency.

Proportion of negative tit-for-tat. Given that appeasements and negative tit for tat were computed based on the same row-marginal, the F statistics are necessarily the same for each of these analyses. Hierarchical analyses performed on the proportion of negative-tit-for-tat behaviour revealed a significant dependency by experimental condition interaction. Analyses of the simple slopes revealed that when participants received negative feedback, dependency was positively related to the use of negative tit-for-tat (see figure 6d). Moreover, under positive feedback conditions, dependency was negatively related to the use of negative tit-for-tat $t(38) = 2.58$, $p < 0.01$.

Insert Figure 6 Here

Analyses for Self-Criticism

Proportion of positive tit-for-tat. Analogous hierarchical analyses were conducted

for the proportion of positive tit-for-tat. A main effect for self-criticism $F(1, 108) = 7.87$,

$p < 0.006$ was observed in which self-criticism was negatively related to the use of

positive tit-for-tat. Second, a significant self-criticism by experimental condition

interaction was observed $F(2, 108) = 3.36$, $p < 0.04$. Analyzing simple slopes revealed

that when participants received negative feedback, self-criticism was negatively related to

the use of positive tit-for-tat $t(38) = 3.76$, $p < 0.0006$. At the same time, in participants

who received no feedback, there was a trend for self-criticism to also be negatively

related to the use of positive tit-for-tat $t(38) = 1.75$, $p < 0.09$ (see figure 7a).

Proportion of attacks. Given that positive tit for tat and attacks were computed

based on the same row-marginal, the F statistics are necessarily the same for each of

these analyses. Regressing the proportion of attacks on main effect and interaction terms

revealed a significant main effect for self-criticism in which self-criticism was positively

related to the use of attacking behaviour across conditions. Second, a significant self-

criticism by experimental condition interaction was observed. Analyzing simple slopes

revealed that in the negative feedback condition, self-criticism was positively related to

the use of attacking behaviours supporting initial hypotheses (see figure 7b). Thus, self-

criticism tended to be related to the use of attacking behaviour in conditions where self-

worth had been threatened. However, when self-critical subjects received positive

personality feedback (status/self-worth enhancing), self-criticism was unrelated to the use of attacking comments, supporting secondary hypotheses.

Proportion of appeasements. Similar analyses were conducted for the proportion of appeasements. Results revealed a significant main effect for self-criticism $F(1, 108) = 3.91$, $p < 0.05$, in which self-criticism was negatively related to the use of appeasing behaviour across conditions. Second, a self-criticism by experimental condition trend F $(2, 108) = 2.97$, $p < 0.06$ was observed. Moreover, analyses of the simple slopes revealed that self-criticism was negatively related to the use of appeasing behaviour in the negative feedback condition $t(38) = 3.62$, $p < 0.0008$ (see figure 7c).

Proportion of negative tit-for-tat. Given that appeasements and negative tit for tat were computed based on the same row-marginal, the F statistics are necessarily the same for each of these analyses. Regressing the proportion of negative tit-for-tat behaviour on main effect and interaction terms revealed a significant main effect for self-criticism in which self-criticism was positively related to the use of negative tit-for-tat across conditions. A self-criticism by experimental condition trend was also observed. Analyses of the simple slopes revealed that under conditions where self-worth was threatened (negative feedback), self-criticism was positively related to the use of negative tit-for-tat behaviour (see figure 7d). Thus self-critics, who received negative personality feedback were more likely to engage in conflict behaviour by responding to their partner's destructive comments with further destructive comments.

Insert Figure 7 Here

Results: Study 2

Demographics

Several demographic variables, which have been associated with the quality of

dating relationships, were examined in the present study (Brehm, 1992). Variables

examined included age, length of the relationship, time spent together, level of

relationship commitment and satisfaction, education, and socio-economic status. The

mean age of participants was 21 ($\underline{SD}$ = 2.96). Couples reported dating their partners for

an average of 2.63 years ($\underline{SD}$ = 2.67) and spending an average of 52.85 ($\underline{SD}$ = 34.24)

hours together per week. Twenty-one of the couples indicated that they were currently

living together during the time of the study. On average, couples rated their relationship

as being quite serious ($\underline{M}$ = 8.02, $\underline{SD}$ = 1.35) on a scale of 1 (not very serious) to 9 (very

serious). Couples completed an average of 2.35 years post-secondary education ($\underline{SD}$ =

1.56). Ninety-eight participants indicated that they were currently enrolled in university,

8 were engaged in blue collar labour, 3 in white collar labour, 1 in a profession (i.e.

medical, legal etc), and 2 were unemployed. Eight subjects did not indicate their current

employment status. Age, time spent together, and relationship seriousness were analyzed

in analyses of variance with gender and experimental condition (positive, negative, no-

feedback) as the independent variables. Months dated and hours spent together were first

log transformed before being analyzed. No significant findings were observed.

Although participants were assigned to conditions randomly, they participated

with their girlfriends/boyfriends. As a result, the degree to which dependency and self-

criticism might be correlated between partners was calculated by computing intra-class

correlations. Results revealed that dependency was not significantly correlated in couples

(r = -0.06, p = 0.001), but self-criticism was (r = 0.38, p < 0.001). Furthermore, there were no significant mean differences in dependency and self-criticism scores across experimental groups.

Ratings of Conflict Resolution Topics

A series of one-way ANOVAs across experimental conditions (positive, negative, no-feedback) were conducted based on the females' responses to each of the six questions regarding their ratings of the three conflict resolution topics that they had nominated for discussion (see Appendix B). Although participants answered the same six questions for each of the three nominated topics, scores were averaged across topics for the analyses. No significant group differences were observed (see Table 3). Moreover, the results of the ratings revealed that female participants tended to nominate topics that were mild in degree of impact and importance to the relationship. This is not surprising given the fact that participants were aware that they would be discussing the topics they nominated during the experiment.

Inter-rater Reliability

Following completion of the study, twenty percent (12) of the videotapes were randomly selected and coded for inter-rater reliability with the master coder using Cohen's kappa (Bakeman & Gottman, 1997). The inter-rater reliability kappa's for each coder with the master coder were as follows: coder 1 = 0.98, coder 2 = 0.84, coder 3 = 0.96, coder 4 = 0.96, and the overall kappa across coders was 0.95, indicating that there was high agreement between coders' ratings of constructive and destructive behaviour and those of the master coder.

<u>Univariate Statistics</u>

Means, standard deviations and zero-order correlations among dependency, self-criticism, depressive affect (CES-D) and relationship satisfaction (Dyadic Adjustment Scale) are presented in Table 5. Results show that dependency and self-criticism were positively related to depressive affect. Moreover, self-criticism was negatively related to relationship satisfaction, indicating that highly self-critical subjects were less satisfied with their relationships. Self-criticism was also positively related to destructive behaviour (macro-level) and attacks, and negatively related to positive tit for tat (micro-level). Furthermore, depressive affect was negatively related to relationship satisfaction. Thus, individuals high in depressive affect were less satisfied with their current relationship. However, mean depressive affect scores were well below cut-off scores indicating that, on average, subjects were not depressed. Moreover, relationship satisfaction scores were high, on average, indicating that subjects were highly satisfied with their current relationship. In order to assess whether depressive affect and relationship satisfaction differed across experimental groups a gender by experimental condition analysis of variance was conducted on each of the dependent variables. No main effects or interactions between the independent variables were observed for depressive affect and relationship satisfaction.

<u>Mood Ratings</u>

In order to examine whether the experimental manipulation (personality feedback: positive, negative, no-feedback) led to changes in mood, post-manipulation mood scores were regressed on baseline mood scores. Residual mood scores were then used as the dependent variable in two hierarchical regression analyses (Pedhazur, 1997) examining

the effects of gender and experimental condition, which were coded as dummy

variables, and either dependency or self-criticism, which were included as continuous

variables, followed by all two-way and three-way interaction terms. An effect for

experimental condition was found in the regression analysis including dependency

$F(2,108) = 56.90$, $p < 0.0001$. No interactions between the gender, threat dummy

variables and dependency were observed. Post hoc t-tests revealed that subjects who

received negative feedback experienced a decrease in mood relative to subjects who

received positive $t(78) = -9.45$, $p < 0.0001$, or no personality feedback $t(78) = -8.39$, $p <$

0.0001. A similar result for threat was observed in the regression analysis including self-

criticism $F(2,108) = 57.10$, $p < 0.0001$. Post hoc t-tests revealed that subjects who

received negative feedback experienced a decrease in mood relative to subjects who

received positive $t(78) = -9.37$, $p < 0.0001$, or no personality feedback $t(78) = -8.44$, $p <$

0.0001 (see Figure 8). No significant interactions were observed between the gender or

experimental condition dummy variables and either dependency or self-criticism.

Insert Figure 8 Here

Time

In order to examine whether the experimental manipulation affected the amount

of time participants spoke during the conflict resolution task hierarchical regression

analyses were performed to examine main effects and interactions between gender,

experimental condition, and dependency (Pedhazur, 1997) on the mean proportion of

time participants spoke during the conflict resolution task. A main effect for gender on

the mean proportion of time (in minutes) spoken was observed $\underline{F}(1,108) = 29.07$, $\underline{p} <$

0.0001 in which females (M = 4.86) spoke longer than males (M = 3.52). Similar

hierarchical analyses were conducted for self-criticism. Again a main effect for gender

was observed $F (1, 108) = 29.52$, $p < 0.001$. Consistent with study 1, the person whose

issues were being discussed spoke the most. No interactions between gender, threat,

dependency or self-criticism were observed.

Macro Level Analyses

MICS-IV Behaviour Codes

In order to examine the effects of the experimental manipulation and depressive

vulnerability factors (dependency and self-criticism) on MICS-IV behaviours, each

participant's constructive and destructive behaviours were divided by the total number of

behaviours observed for that participant. The computed proportions of constructive and

destructive behaviours engaged in by each participant during the conflict resolution task

were then used in subsequent hierarchical regression models to examine the effects of the

experimental manipulation and personality on behaviours aggregated across the conflict

resolution time series. The construction of these aggregated variables afforded the

opportunity to examine behaviour at a macro level.

Dependency and MICS-IV Behaviour Codes

Constructive behaviour. Hierarchical regression analyses were performed to

examine main effects and interactions between gender, experimental condition, and

dependency (Pedhazur, 1997). The dependent variable assessing the proportion of

constructive behaviours was regressed on the three main effect terms, the three two-way

interaction terms and the three-way interaction term. Main effect terms for experimental

conditions were entered prior to dependency, and the interaction effects for gender and

experimental condition were entered prior to interaction effects involving dependency. A

main effect trend for gender was observed $\underline{F}(1,108) = 3.54$, $\underline{p} < 0.06$, indicating that

females engaged in a greater proportion of constructive behaviours than their partners

(see Figure 9). There were no other significant main effects or interactions.

Insert Figure 9 Here

Destructive behaviour. Similar hierarchical regression analyses were performed

for the proportion of destructive behaviours. A main effect trend for experimental

condition was observed $\underline{F}(2,108) = 2.60$, $\underline{p} < 0.08$. A series of post-hoc t-tests revealed a

trend in which negative feedback participants (threatened) used more destructive

comments than positive feedback participants (bolstered), $\underline{t}(78) = 1.79$, $\underline{p} < 0.07$ and

subjects who received no personality feedback, $\underline{t}(78) = 1.75$, $\underline{p} < 0.08$ (see Figure 10).

Insert Figure 10 Here

Self-Criticism and MICS-IV Behaviour Codes

Constructive behaviour. Analogous hierarchical regression revealed a main effect

trend for gender was observed $\underline{F}(1,108) = 3.54$, $\underline{p} < 0.06$ in which females engaged in a

greater proportion of constructive behaviour than their male counterparts during the

conflict resolution task (see Figure 9). No other main effects or interactions were

observed.

Destructive behaviour. The analysis for the proportion of destructive behaviour

revealed a main effect trend for experimental condition $F(2,108) = 2.62$, $p < 0.08$. A

series of post-hoc t-tests were conducted to examine this trend. Results indicated that

negative feedback participants (threatened) used a greater proportion of destructive

comments than subjects who received no personality feedback $t(78) = 1.98$, $p < 0.05$ (see

Figure 10).

Influence of Partner Behaviour

Given that subjects participated as couples, it is likely that the behaviours

exhibited by subjects during the conflict resolution task were correlated with partner's

behaviours (Kenny, 1996; Kenny, 1996; Kenny & Judd, 1996). In order to control for

such partner effects, we re-analyzed our MICS-IV behaviour codes in a series of

hierarchical regression analyses in which relevant partner behaviour was included as a

covariate. Although a number of analytic techniques have been proposed to examine the

effects of one individual's behaviour on another, the use of hierarchical regression

analyses was employed because the focus of this study was to examine the effects of

dependency and self-criticism on conflict resolution patterns in response to positive or

negative feedback, rather than the degree to which behaviour between members of

couples was correlated (Kenny, 1996a; Kenny, 1996b; Kenny & Judd, 1996).

Dependency and MICS-IV Behaviour Controlling for Partner Behaviour

Constructive behaviour. Hierarchical regression analyses were performed to

examine main effects and interactions between dependency, gender, and experimental

condition on the proportion of constructive behaviour (Pedhazur, 1997), while

controlling for partner effects. We regressed the proportion of constructive behaviour on

the proportion of partner's constructive behaviours followed by the gender,

experimental condition, and dependency main effect terms, the two-way interaction

terms, and the three-way interaction term. Main effects for the proportion of partner

constructive behaviour $\underline{F}(1,107) = 75.49$, $\underline{p} < 0.0001$, gender $\underline{F}(1,107) = 16.44$, $\underline{p} <$

0.0001, and experimental condition $\underline{F}(2,107) = 9.41$, $\underline{p} < 0.0002$ were observed. The

proportion of partner constructive behaviours was positively related to the proportion of

subject constructive behaviours in all personality feedback conditions. On average,

females used a greater proportion of constructive behaviours than males (see Figure 9).

A series of post-hoc t-tests on the adjusted means revealed that negative feedback

participants engaged in a lower proportion of constructive communication than positive

feedback $\underline{t}(78) = -4.31$, $\underline{p} < 0.0001$ or no-feedback participants $\underline{t}(78) = -2.12$, $\underline{p} < 0.03$

(see Figure 11). As predicted, threats to self-worth led to decreased use of constructive

behaviour in comparison to participants whose self-worth was bolstered as a result of the

experimental manipulation. Contrary to predictions, no significant effects for dependency

were observed.

Insert Figure 11 Here

Destructive behaviour. Hierarchical regression analyses for proportion of

destructive behaviour revealed significant main effects for partner destructive behaviour

$\underline{F}(1, 107) = 102.91$, $\underline{p} < 0.0001$, gender $\underline{F}(1,107) = 8.25$, $\underline{p} < 0.005$, and experimental

condition $\underline{F}(2,107) = 11.79$, $\underline{p} < 0.0001$. The proportion of partner destructive behaviour

was positively related to the proportion of subject destructive behaviour. Moreover,

females engaged in a lower proportion of destructive behaviour than males (see Figure

12). Post-hoc t-tests on the adjusted means for experimental condition revealed that

negative feedback participants used a larger proportion of destructive behaviours than

positive feedback $t(78) = 4.80$, $p < 0.0001$ participants and more destructive behaviours

than participants who received no feedback $t(78) = 2.19$, $p < 0.03$ (see Figure 10). As

predicted, threats to self-worth, via negative personality feedback, led to the use of

destructive behaviour. However, contrary to predictions, no effects for dependency were

observed.

Insert Figure 12 Here

Self-Criticism and MICS-IV Behaviour Controlling for Partner Behaviour

Constructive behaviour. Analogous hierarchical regression analyses, in which the

proportion of partner's constructive behaviour was included as a covariate, were

conducted to examine the main effects and interactions among gender, experimental

condition, and self-criticism (Pedhazur, 1997). Significant main effects for partner's

constructive behaviour $F(1,107) = 77.55$, $p < 0.0001$, gender $F(1,107) = 16.89$, $p <$

0.0001 and condition $F(2,107) = 9.67$, $p < 0.0001$ were observed along with a main effect

trend for self-criticism $F(1,107) = 2.77$, $p < 0.09$. The proportion of partner constructive

behaviour was positively related to the proportion of participant constructive behaviour,

while self-criticism was negatively related to constructive behaviour. Females used a

higher proportion of constructive comments than males (see Figure 9). Post hoc t-tests

on the adjusted means revealed that negative feedback participants used fewer

constructive comments than positive feedback, $\underline{t}(78) = -3.91$, $\underline{p} < 0.0002$, or no-feedback participants, $\underline{t}(78) = -2.58$, $\underline{p} < 0.01$ (see Figure 11).

Destructive behaviour. Similar hierarchical regression analyses were performed, in which the proportion of partner destructive behaviour was included as a covariate, to examine the main effects and interactions among gender, experimental condition, and self-criticism on the proportion of destructive behaviours. Significant main effects were observed for the proportion of partner destructive behaviours $\underline{F}(1,107) = 106.05$, $\underline{p} < 0.0001$, gender $\underline{F}(1,107) = 8.50$, $\underline{p} < 0.004$, experimental condition $\underline{F}(2,107) = 12.15$, $\underline{p} < 0.0001$, and self-criticism $\underline{F}(1,107) = 3.93$, $\underline{p} < 0.05$. Self-criticism was positively related to the adoption of destructive behaviour. The proportion of partner destructive behaviours was positively related to the proportion of participant destructive behaviours as was self-criticism. Males used more destructive comments than females (see Figure 12). Negative feedback participants used a greater proportion of destructive comments than positive feedback, $\underline{t}(78) = 4.32$, $\underline{p} < 0.0001$, or no-feedback participants $\underline{t}(78) = 2.88$, $\underline{p} < 0.005$ (see Figure 10). As predicted, threats to self-worth led to an increase in the use of destructive behaviours relative to bolstered and neutral groups. These results run contrary to our predictions that self-criticism would lead to increases in destructive comments only in threatened subjects.

Micro Level Sequential Analysis

Analyses Involving Dependency

Log-Odds Ratio. Hierarchical regression analyses were performed to examine main effects and interactions between gender, experimental condition, and dependency (Pedhazur, 1997). The log-odds ratio was regressed on the three main effect terms, the

three two-way interaction terms and the three-way interaction term. Main effect terms

for experimental conditions were entered prior to dependency, and the interaction effects

for gender and threat were entered prior to interaction effects involving dependency. No

significant main effects or interactions were observed. However, the overall log-odds

ratio was 1.07, revealing that participants reciprocated their partner's antecedent

behaviour. As a supplementary analysis, the log-odds ratio was examined within each

experimental group using t-tests for single samples. Mean log-odds ratios for negative,

positive, and no-feedback participants were (M = 0.98, SD = 0.84), (M = 1.02, SD =

0.89), (M = 1.20, SD = 0.95) respectively and all were significantly different than zero ($\underline{p}$

< 0.0001).

Yule's Q. Similar analyses for Yule's Q revealed no significant main effects or

interactions. The overall Yule's Q was 0.42 ($\underline{SD}$ = 0.31) indicating that participants

engaged in tit for tat behaviour with their partner (p < 0.0001). The mean Yule's Q

scores for each of the three experimental groups were examined using single sample t-

tests. Mean Yule's Q for negative, positive, and no-feedback participants were ($\underline{M}$ =

0.40, $\underline{SD}$ = 0.32), ($\underline{M}$ = 0.41, $\underline{SD}$ = 0.31), ($\underline{M}$ = 0.46, $\underline{SD}$ = 0.31) and all scores were

significantly different from zero ($\underline{p}$ < 0.0001), indicating significant associations or high

concordance between partner and participant behaviours (e.g., tit for tat).

Analyses Involving Self-Criticism

Log-odds ratio. Analogous analyses were conducted for self-criticism. A gender

by self-criticism trend $\underline{F}$(1,108) = 3.21, $\underline{p}$ <0.08 was observed. Analyses of the simple

slopes for gender revealed that self-criticism was negatively related to the log-odds ratio

in males $F(1,58) = 4.32$, $p < 0.04$ suggesting that self-critical males were less likely to engage in concordant behaviours with their partner.

Yule's Q. Similar analyses were conducted for Yule's Q. A gender by self-criticism trend $F(1,108) = 2.97$, $p < 0.09$ was observed. Analyses of the simple slopes for gender revealed that self-criticism was negatively related to Yule's Q in males $F(1,58) = 3.48$, $p < 0.07$). Again, self-critical males were less likely to engage in concordant behaviours with their partners.

Given concerns regarding the utility of the log odds ratio and Yule's Q (see previous discussion) in detecting differences based on the experimental design the data were re-computed into four new variables: positive tit for tat, attacks, appease, negative tit for tat (see Table 1).

Analyses for Dependency

Proportion of positive tit-for-tat. Hierarchical regression analyses were performed to examine main effect and interactions among gender, experimental condition, and dependency on positive tit-for-tat (Pedhazur, 1997). The dependent variable assessing the proportion of positive tit-for-tat used by participants during the conflict resolution task was regressed on the three main effect terms, the three two-way interaction terms and the three-way interaction term. A main effect for experimental condition $F(2, 108) = 3.42$, $p < 0.04$ was observed. A series of post-hoc t-tests on the adjusted means revealed that negative feedback participants engaged in fewer positive tit-for-tat exchanges with their partners than positive, $t(78) = -2.14$, $p < 0.03$ or no-feedback participants, $t(78) = -2.01$, $p < 0.05$ (see Figure 13). Consistent with initial hypothesis, threats to self-worth led to a decrease in the use of positive behavioural exchanges and thus to a decrease in the

use of supportive comments. However, contrary to predictions, dependency did not

lead to an increase in positive behavioural exchanges following threats to interpersonal

relatedness (positive feedback).

Insert Figure 13 Here

Proportion of attacks. Similar hierarchical analyses were conducted for the

proportion of attacks. Given the non-dependence between positive tit for tat and attacks,

resulting F values are the same and will not be reported again. A main effect for

experimental condition was observed. A series of post hoc t-tests revealed that negative

feedback participants used a higher proportion of attacks than positive or no-feedback

participants. As predicted, threats to self-worth, in the form of negative personality

feedback, not only led to a decrease in mood but also led to the use of unsupportive

behaviours during the conflict resolution task (see Figure 14).

Insert Figure 14 Here

Proportion of appeasements. Analogous hierarchical regression analyses were

conducted for the proportion of appeasements. A trend for a main effect for experimental

condition $F(2,108) = 2.72$, $p < 0.07$ was observed. Post hoc t-tests were conducted to

tease apart the main effect trend for experimental condition and revealed that negative

feedback participants used a lower proportion of appeasements than positive feedback

participants, $t(78) = -2.26$, $p < 0.02$ (see Figure 15). This finding suggests that threatened participants were less motivated to reduce the occurrence of negative interaction patterns with their partners. Predictions for dependency were not confirmed. However, female gender and dependency were highly correlated in this study.

Insert Figure 15 Here

Proportion of negative tit-for-tat. Similar analyses were conducted for the proportion of negative tit-for-tat. Given the non-dependence between appeasements and negative tit for tat, F values will not be presented. A trend for experimental condition was observed. Post hoc t-tests revealed that negative feedback participants used a higher proportion of negative tit-for-tat than positive feedback participants (see Figure 16), $t(78) = 2.62$, $p < 0.02$. Threatened participants were motivated to keep the conflict going during their interaction with their partner.

Insert Figure 16 Here

Analyses for Self-Criticism

Proportion of positive tit-for-tat. Similar hierarchical regression models were conducted for self-criticism. Results revealed significant main effects for experimental condition $F(2,108) = 3.58$, $p < 0.03$ and self-criticism $F(1,108) = 3.65$, $p < 0.05$. Post-hoc t-tests revealed that negative feedback participants engaged in less positive tit-for-tat than

positive feedback, $t(78)$ = -1.93, p < 0.05 or no-feedback participants, $t(78)$ = -2.29, p < 0.02 (see Figure 13). Moreover, self-criticism was negatively related to the use of positive tit-for-tat $F(1, 118)$ = 4.07, p < 0.05.

Proportion of attacks. Similar hierarchical regression analyses were conducted for the proportion of attacks. Main effects for experimental condition and self-criticism were observed (see F values reported for positive tit for tat). Post hoc t-tests revealed that negative feedback participants used a higher proportion of attacks than positive feedback, or no-feedback participants (see Figure 14). Furthermore, analyses of the simple main effect for self-criticism revealed that self-criticism was positively related to the use of attacking behaviour during the conflict resolution task. As predicted, threats to self-worth led to a preponderance of negative interaction sequences as did self-criticism. However, a self-criticism by experimental condition interaction was predicted, but did not occur. Specifically, it was hypothesized that the effects for self-criticism on attack sequences would have been most prevalent in the negative feedback condition.

Proportion of appeasements. Similar analyses were conducted for the proportion of appeasements. A main effect trend for experimental condition $F(2, 108)$ = 2.78, p < 0.06 was observed. Consistent with the original hypotheses, post hoc analyses of the experimental condition main effect revealed that negative feedback participants used a lower proportion of appeasements than positive feedback participants, $t(78)$ = -2.01, p < 0.04 (Figure 15).

Proportion of negative tit-for-tat. Similar analyses conducted on the proportion of negative tit-for-tat behaviour revealed trends for experimental condition (see F values reported for appeasements). Post hoc t-tests on the experimental condition trend revealed

that negative feedback participants used a larger proportion of negative tit-for-tat than positive feedback participants (see Figure 16), suggesting that threatened subjects were motivated to keep negative behavioural sequences going during the conflict resolution task.

Summary of Main Findings Across the Two Studies

The results of study 1 largely supported predictions made by the expanded vulnerability model. Dependent individuals who receive positive feedback were more likely to use constructive behaviours with their partners and less likely to adopt destructive behaviours, at a macro level, and more likely to use positive tit for tat and appeasements at a micro level. However, dependent individuals who received negative feedback were less likely to appease their partners and were more likely to engage in negative tit for tat. In contrast, self-criticism was negatively related to the use of constructive behaviours and positively related to the use of destructive behaviours in the negative feedback condition, at a macro level. At a micro-level, self-criticism was negatively associated with positive tit-for-tat in both the negative and no-feedback conditions, and was positively related to the use of attacks in these two conditions. Self-criticism was negatively associated with appeasing partners in the negative and no-feedback conditions, but this effect was strongest in the negative feedback condition, suggesting that threats to self-worth increased the self-critic's tendency to focus on conflict escalation rather than de-escalation. Lastly, self-criticism was positively related to the use of negative tit-for-tat following negative feedback. These results suggest that dependent individuals were primarily motivated to de-escalate conflict with their partners

when interpersonal relatedness was threatened, whereas self-critics were motivated to escalate conflict when self-worth was threatened.

The results of study 2 partially replicated results observed in study 1 and, more broadly, supported the main effect situational hypothesis. In addition, self-criticism tended to produce strong effects on both macro-level and micro-level behaviours. Prior to controlling for partner effects, females tended to use more constructive behaviours (macro-level) than males, and negative feedback participants used more destructive behaviour than participants in the other conditions. When partner parallel behaviour was entered as a covariate, individuals who received positive feedback were more likely to use constructive behaviours with their partners and less likely to adopt destructive behaviours, at a macro level, and positive tit for tat and appeasements at a micro level. The opposite held for participants receiving negative feedback as they used more destructive behaviour (macro-level), attacks, and negative tit for tat (micro-level). In addition, self-criticism was negatively associated with the adoption of constructive behaviour, and positively associated with destructive behaviour across experimental conditions (macro-level). Self-criticism was further negatively related to positive tit for tat, and was positively related to attacks (micro-level). In contrast to findings in study 1, in which interactions between experimental condition and personality (e.g., dependency or self-criticism) were observed, the results of study 2 did not support an interactional model. The results of study 2 indicated that gender, experimental condition, and self-criticism exerted independent effects on behaviour.

CHAPTER 4. DISCUSSION

Overview of Findings

The purpose of the two studies was to examine the impact of threats to

interpersonal relatedness and self-worth on couples' ability to resolve conflict and the

manner in which vulnerability factors, like dependency and self-criticism, moderate

responses to such events. The first objective was to demonstrate that dependency and

self-criticism moderate behavioural responses following disruptive interpersonal events

(Santor et al., 2000). A second aim was to incorporate analytic techniques, like sequential

analyses, which permit a micro level examination of how dependency and self-criticism

moderate an individual's responses to his/her partner's antecedent behaviours. A third

goal was to demonstrate how personality, as represented by underlying vulnerability

factors like dependency and self-criticism, and disruptive interpersonal events interact

with one another to influence both behavioural responses to such events and to partner

antecedent behaviours. Essentially, it was argued that disruptive events activate

underlying vulnerability factors, like dependency and self-criticism, contributing to

dysfunctional interpersonal behaviour which might contribute to relationship disharmony.

The last is a variable known to be related to depressed mood and clinical depression

(Alloy et al., 1998; Barnett & Gotlib, 1988; Billings, 1979; Blumberg & Hokanson, 1983;

Cordova et al., 1993; Coyne, 1976a, 1976b, 1987; Coyne & DeLongis, 1986; Davila et

al., 1995; Gotlib & Robinson, 1982; Hammen & Doyle-Peters, 1978; Hokanson, Sacco,

Blumberg, & Landrum, 1980; Johnson & Jacob, 1997; Joiner et al., 1992; Katz & Beach,

1997; Kowalik & Gotlib, 1987; McCabe & Gotlib, 1993; Mendolia et al., 1996; Pasch et

al., 1997; Santor et al., 2000; Swann, Wenzlaff, & Tafarodi, 1992; Ziomek & Coyne,

1983). The objective was to integrate theoretical and empirical work on threats to

self-worth, and cognitive and interpersonal vulnerability to depression within an

expanded vulnerability model which recognizes that individual differences in dependency

and self-criticism moderate responses to disruptive events, like receiving negative or

positive feedback relative to one's partner (Santor et al., 2000). The model emphasized

the role that behavioural variables play as plausible proximal antecedents to relationship

dysfunction. As a result it was necessary to employ samples of non-distressed couples.

Distinct from other research in this area, the focus was on behavioural sequences and

how personality and environmental factors, including partner antecedent behaviour,

jointly influence interpersonal behaviour, rather than on distal outcomes such as

depressed mood.

Study one examined the behavioural responses of members of heterosexual dating

couples who were asked to resolve three issues, nominated by the male partner, following

a disruptive interpersonal event. Participants received either (bogus) negative, or positive

personality feedback profiles or received no feedback prior to engaging in the conflict

resolution task. Couples were exposed to both their own and their partner's feedback to

emulate a situation whereby either interpersonal relatedness or self-worth could be

threatened. Given the fact that a new experimental method was developed for study one,

as well as the application of statistical techniques (i.e., sequential analyses), which have

not been used in prior research on depressive vulnerability factors, study two was

conducted as a replication study. In study two, couples discussed three issues that the

females had nominated. Since the effects of laboratory mood manipulations are brief it

was impossible to have members of couples discuss the issues nominated by both

partners in one study. Moreover, given that a new methodology and analytic approach was being applied to understand the impact of threats to self-worth and interpersonal relatedness on communication in couples, it was important to conduct a second replication study. Consistent with previous studies (Santor et al., 2000; Santor & Zuroff, 1997, 1998) favourable personality feedback bolstered mood, whereas negative feedback depressed mood in both studies. In contrast to previous studies (Zuroff, Igrega, & Mongrain, 1990b; Zuroff & Mongrain, 1987) dependency and self-criticism did not moderate responses to the mood manipulation.

Utility of Studying Vulnerability Factors in Non-Depressed Samples

Although this thesis focused on interpersonal behaviour rather than distal outcomes like depressed mood, the two studies are relevant in the development and validation of models of depressive vulnerability. Many of the studies conducted to date have focused on depressed mood in analog or vulnerable populations, in addition to studies of depressed patients (Alloy et al., 1999; Alloy, 1997; Alloy et al., 1999; Beck, 1987; Clark et al., 1997; Santor et al., 2000; Santor & Zuroff, 1997, 1998; Segal, Gemar, & Williams, in press; Segal et al., 1989; Teasdale, 1988; Zuroff et al., 1990b). Testing vulnerability models necessitates the use of non-clinical populations, such as the non-distressed dating couples utilized in the current studies, in order to examine the factors which make individuals vulnerable to experiences such as dysfunctional interpersonal behaviour and distal outcomes like depressed mood or clinical depression (Alloy et al., 1999). Presently, considerable information exists regarding clinical depression (i.e., symptomatology, incidence, consequences, interpersonal and cognitive manifestation of symptoms), but less is known regarding the factors that increase vulnerability to

depression (Clark et al., 1999). To make advances in the field it is necessary to conduct studies, like those presented in this thesis, which test the link between vulnerability factors, like dependency and self-criticism, and other known risk factors like diminished social support or dysfunctional interactions. Experimental studies using vulnerable populations, in addition to studies using clinical populations, will enhance our understanding of the factors which increase risk for depression, as well as factors that may maintain depressive episodes once activated (Alloy et al., 1999). This in-depth analysis of interactive processes may also shed light on how dependency and self-criticism, following disruptive events, contributed to decreased social support and relationship dysfunction, which are known factors that contribute to the onset and maintenance of depression (Barnett & Gotlib, 1988; Coyne, 1976a; Coyne & DeLongis, 1986; Hammen, 1999).

<u>Cognitive Vulnerability</u>

<u>Re-Evaluation of the Congruency Hypothesis: Categorization Versus Interpersonal Needs</u>

Cognitive models of depressive vulnerability have generally emphasized that activation of schemas occurs following negative events which match the underlying vulnerability factor, and further that such activation usually leads to a specific form of depressed mood (Zuroff & Mongrain, 1987). The results of both Study 1 and 2 revealed the need to revise and expand the cognitive model. First, dependency and self-criticism did not moderate mood in either study. Second, although positive feedback enhanced mood in both studies, it influenced patterns of behavioural responses relative to no-feedback conditions. Hence, the results of the studies described herein amplify the necessity to move away from classifying events as specifically representing interpersonal

or achievement needs and focusing efforts on evaluating how similar events can activate differential needs, and thus differentially affect behaviours in dependent and self-critical individuals.

In the present studies, receiving positive or negative (bogus) personality feedback, relative to one's partner receiving the opposite feedback, was formulated as a potential threat to interpersonal relatedness and self-worth. Based on work on cognitive vulnerability (Beck, 1983, 1987; Blatt et al., 1982; Zuroff, 1992; Zuroff & Mongrain, 1987), it was hypothesized that positive feedback would activate dependency needs, whereas negative feedback would activate self-critical needs. As a result, following positive feedback it was predicted that dependency would be positively related to the use of constructive behaviours and negatively related to destructive behaviours, at a macro-level; and positively related to the use of positive tit for tat and appeasements and negatively related to negative tit for tat and attacks, at a micro-level of analysis. Conversely, following negative feedback, self-criticism was predicted to be negatively related to the use of constructive behaviour and positively related to the use of destructive behaviour, at a macro level; and negatively related to the use of positive tit for tat and appeasements and positively related to the use of negative tit for tat and attacks. Moreover, given that ambiguous situations, like that being represented by the no-feedback condition, may also be perceived as potentially threatening by self-critical individuals similar results were expected for self-criticism in the no-feedback condition (Mongrain et al., 1998; Zuroff & Mongrain, 1987). The predicted patterns of behaviour were largely observed in Study 1 and were partially replicated in Study 2.

In the current studies, behavioural responses of dependent and self-critical individuals varied as a function of experimental condition (Nietzel & Harris, 1990; Zuroff et al., 1990b; Zuroff & Mongrain, 1987). For example, dependency was only associated with affiliative behaviours when interpersonal relatedness was threatened (positive feedback), and was actually associated with hostility when self-worth had been threatened (negative feedback). Previous studies examining the congruency hypothesis categorized events based on whether they appeared to represent a failure or interpersonal loss (e.g., loss of a job, break-up of a relationship). The current findings suggest that in order to understand the impact of a dependent or self-critical style, it is important to look at the particular needs activated by a specific environmental context (Rotter, 1954). Similar activating events led to different patterns of responding by dependent and self-critical individuals. It is likely that dependent and self-critical individuals both experience needs for interpersonal relatedness and self-worth, but that situations might determine which needs take precedence for the individual at a given time. As well, ambiguous situations like having to resolve conflict with one's partner may trigger sensitivity toward interpersonal rejection for dependent individuals, and activate needs for self-determination in self-critical individuals.

Cognitive Vulnerability Moderates Behavioural Sequences

Findings from these studies demonstrate that cognitive vulnerability factors have significant interpersonal consequences. It is likely that the behaviours adopted by dependent and self-critical individuals following disruptive events contribute to shaping interpersonal environments and hence confirming underlying beliefs. Additionally, these interpersonal strategies may lead to negative affective shifts and/or the maintenance of a

depressive state. Over the long-term, chronic interpersonal dysfunction may confirm

maladaptive schemas leading to negative behavioural patterns compromising the quality

of the relationship, thus leaving an individual vulnerable to depressive experiences. In

Study 1, self-critical individuals were less likely to reciprocate supportive behaviours and

instead attacked their partners across the interaction time series in the negative and no-

feedback conditions. This behavioural strategy may have reduced opportunities to utilize

partner's support to reduce the impact of receiving negative feedback. The fact that self-

critical individuals were hostile in the no-feedback condition further suggests that their

persistence in escalating conflict may have served only to confirm self-critical beliefs,

reducing the opportunities to gather schema-disconfirming information. Since couples

were only examined in a laboratory setting over a short interaction period, the long-term

consequences of behavioural strategies adopted by self-critical and dependent individuals

could not be examined. However, it is plausible that chronic adoption of rigid

maladaptive behaviours might lead to withdrawal of support from partners (Coyne,

1976b; Joiner, 1995).

The results obtained in study two were less consistent than those observed in

study one. Consistent with hypotheses (hypothesis two) regarding the impact of threats

to self-worth and interpersonal relatedness in general (Beach et al., 1996; Tesser et al.,

1988) the macro level findings demonstrated that participants who received negative

feedback used fewer constructive comments than positive feedback or no-feedback

condition participants, and used considerably more destructive comments than the other

two groups. Moreover, positive feedback participants were less likely to adopt

destructive behavioural strategies than the other groups, suggesting that participants in

this condition were motivated to resolve the conflict and maintain interpersonal relatedness. At the same time, self-criticism was negatively related to the use of constructive behaviour and positively related to the use of destructive behaviour. A micro-analysis of the same data set revealed a similar pattern to the macro analysis in that negative feedback participants were less likely to reciprocate support (positive tit for tat) or to appease (de-escalate arising conflict) their partners, relative to participants who received positive or no-feedback. However, negative feedback participants appeared to be motivated to keep the conflict going as they were more likely to attack (respond to partner's attempt at support and problem solving strategies by blaming or acting hostile toward their partner) and to reciprocate hostile behaviours, relative to positive and no-feedback participants. At the same time, self-criticism continued to exert strong effects in this study as it was negatively related to the use of positive tit for tat and positively related to the use of attacking behaviour across conditions. As such, this personality dimension tended to lead to a negative interpersonal style, which disrupted couples' ability to resolve the conflict.

According to Nietzel & Harris (1990) self-critical individuals may have a chronic heightened sensitivity to environmental cues such that they may interpret almost all events as signs of provocation and may respond accordingly. Thus, it is not surprising that a main effect rather than an interaction between self-criticism and experimental condition was observed in Study 2. Having to resolve conflict with one's partner may have been perceived by highly self-critical individuals as very threatening, leading to activation of self-critical schematic processes and hence hostile interpersonal behaviour across conditions (Beach et al., 1998; Exline & Lobel, 1999; Mendolia et al., 1996;

Tesser et al., 1988). This is consistent with other studies that have investigated the interpersonal behaviours of self-critical individuals as well as how these individuals perceive their partners (Mongrain et al., 1998; Vetesse & Mongrain, 1997; Zuroff & Duncan, 1999a). It is plausible that the no-feedback condition, in Study 1, was also perceived as threatening to self-critical participants as they possess a lower threshold of perceiving events as representing possible threat (Zuroff et al., 1990b; Zuroff & Mongrain, 1987). This viewpoint reflects a gradient of activation model, whereby the amount of similarity of an eliciting situation and underlying schema lead to varying levels of activation and behavioural display. The results also suggest that self-critical individuals may have misinterpreted their partner's intent during the interaction. For example, verbal attacks represented responding to the partner's supportive behaviour with hostility. This may have contributed to affective lability and the subsequent hostility displayed by self-critical participants.

Cognitive Vulnerability, Behavioural Sequences, and Depressed Mood

Previous research has focused on examining the congruence between activating events and underlying vulnerability with regards to activation of dependent (anaclitic) and self-critical (introjective) depressions (Zuroff et al., 1990b; Zuroff & Mongrain, 1987). The current findings reveal the need to examine how eliciting events and underlying vulnerabilities activate specific behavioural responses. The adoption of maladaptive behavioural strategies may serve to increase one's risk of experiencing depression and maintaining an episode once activated. For example, the tendency for dependent individuals to appease partners following threats to interpersonal relatedness may have prevented the escalation of conflict on the one hand, but this strategy may have

prevented opportunities for individuals to discuss their personal needs with their partners. Self-sabotage of one's own needs could leave an individual vulnerable to depression longitudinally (Hammen et al., 1999).

The use of attacking behaviours observed in participants who were highly self-critical may have alienated and frustrated partners, leading to a possible loss in support for the individual. Over time, such losses of support could undermine self-worth and emotional well being for the self-critical individual. Self-critical individuals desire admiration and respect from others. In fact previous research (Zuroff et al., 1990b; Zuroff & Mongrain, 1987) has shown that self-critical individuals experience introjective depressed mood following interpersonal events that reflect failure and rejection. Hence, it is likely that repetitive conflict in a relationship could lead to feelings of failure in self-critical individuals, leaving them vulnerable to depression (Blatt et al., 1982; Blatt & Zuroff, 1992). Although not assessed in the current studies, it is plausible that self-critics feared their partners would reject them, and they may have responded in a hostile fashion to push their partners away before their partners could reject them (Dunkley & Blankstein, 2000; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000). The interactions of self-critical participants in the current studies were characterized by escalating hostility, lending support to this latter hypothesis.

<u>Interpersonal Vulnerability</u>

Until recently, interpersonal theorists have largely ignored the role that personality plays in moderating responses to disruptive interpersonal events (Coyne, 1976a; Coyne, 1990; Coyne & DeLongis, 1986; Coyne & Whiffen, 1995) and how disruptive events reduce an individual's ability to acquire and maintain support. The

findings from these and other studies (Santor et al., 2000) demonstrate the need to

examine interpersonal behaviour, rather than focusing solely on the cognitive processes

and emotions associated with vulnerability factors, like dependency and self-criticism.

Notwithstanding that dysfunctional environments are believed to cause and maintain

depression, the data reported here indicate that individuals can contribute to the

experiencing of negative interpersonal environments via the adoption of dysfunctional

behaviour.

Although interpersonal theorists (Coyne, 1976a; Joiner, 1995) have argued that

losses of social support contribute to depression, the specific behavioural sequences

between individuals that disrupt interpersonal relationships have not been given adequate

research attention. The findings of the current study suggest that excessive neediness, as

displayed by appeasing behaviour, following threats to interpersonal relatedness in

dependents, may lead to a pattern of behaviour in which the individual seeks support and

the partner withdraws or acts hostile. Although appeasing one's partner may prevent

conflict from escalating in the short term, prolonged submissive behaviour may adversely

affect self-concept and mood over the long term (Price et al., 1994; Sloman & Price,

1987). Close others may view appeasing behaviour as a form of excessive support and re-

assurance seeking and may reject the individual (Coyne, 1976b; Joiner et al., 1992; Katz

& Beach, 1997). Alternatively, some have argued that only the "neediness" component,

rather than the "connectedness" component of dependency affects interpersonal

functioning and mood (Rude & Burnham, 1995). In fact, being able to foster healthy

social relationships may actually serve as a buffer against depression (Coyne, 1976a). On

the other hand, self-critics' hostile attacking behaviour, following threats to self-worth,

may create an interpersonal environment in which there is little opportunity to provide

or receive support, which is important for relationship harmony and positive affect. In

accord with this expanded vulnerability model, it appears as though the dysfunctional

behaviours displayed by dependent and self-critical individuals in the two studies

negatively affected their interpersonal environment, which in turn may explain why they

are vulnerable to depressive experiences following events that disrupt interpersonal

relatedness and self-worth.

Contrary to predictions made by Joiner and others (Coyne, 1976a; Joiner, 1995;

Joiner et al., 1992, 1993), only dependency was associated with the tendency to engage in

support and reassurance seeking as evidenced by the adoption of constructive and

appeasing behaviour. The findings of Study 1 revealed that this tendency was heightened

following threats to interpersonal relatedness. Furthermore, the sequential analyses of the

data sets demonstrated that highly dependent individuals repeatedly appeased their

partners, even when such behaviours failed to result in increases in support from the

partners, at least in Study 1. In fact, partners continued to act hostile during the

interaction. At the same time, receiving positive feedback, alone (threat to interpersonal

relatedness) led to the adoption of appeasing behaviour in Study 2.

Social Deficits and Dysfunctional Communication Processes

The inability of dependent and self-critical individuals to modify behavioural

strategies during the conflict resolution task, despite the ineffectiveness of adopted

strategies, suggests that dependency and self-criticism may be associated with social

deficits which impede individuals' ability to garner and maintain support from others

(Coyne, 1991; Coyne, 1990). Possession of social deficits, as reflected by excessive

reassurance seeking and appeasing behaviours, or hostility and attacks, may increase

one's chances of becoming depressed (Davila et al., 1995; Ziomek & Coyne, 1983).

Taken this way, disruptive events may activate underlying vulnerabilities, reducing

positive reinforcements. Indeed, it is the joint effects of personality and disruptive events

that led to the dysfunctional interactions observed in the current studies.

Recently, Coyne (1991; 1990) and others have noted that for advances to be made

in understanding the variables that increase risk for depression, research should focus on

proximal factors, such as the identifiable features of supportive and unsupportive

relationships. Although this thesis did not directly examine the relationship between

relationship dysfunction and depression, the results suggest that the maladaptive

behaviours adopted by individuals may represent the features of interpersonal

relationships which increase risk for depression. This thesis further demonstrated that

personality contributed strongly to the behavioural strategies adopted by individuals,

revealing that these behaviours are not simply the result of a dysfunctional environment,

as previously proposed by interpersonal theorists (Coyne, 1976a, 1976b; Gotlib &

Robinson, 1982; Gruen et al., 1994; Hammen & Doyle-Peters, 1978). Possession of

certain personality characteristics, namely dependency and self-criticism, influenced the

behaviours adopted by individuals following disruptive events.

In summary, this thesis elucidated the interpersonal mechanisms linking

personality to conflict and relationship dysfunction. Consistent with this view, poor

communication between members of couples disrupted support, albeit differently for

dependent and self-critical individuals. In previous studies, behaviours such as excessive

support seeking and hostile communication have been negatively related to outcome in

depressed people (Coyne, 1990; Joiner et al., 1992). The current results provide

information regarding why this might be. For example, positive feedback relative to

one's partner receiving negative feedback may have been perceived as a threat to

interpersonal relatedness, particularly for individuals scoring high in dependency. This

event may have activated dependency needs leading to the deployment of support seeking

and appeasing behaviours. On the other hand, negative feedback and no feedback led to

the activation of self-critical needs and the adoption of hostile and attacking behaviours,

which contributed to escalations in conflict between members of couples. Both appeasing

and attacking behaviours affected the quality of the interpersonal environments

experienced by dependent and self-critical individuals by affecting levels of support

available from partners. Over time, dysfunctional communication sequences and lack of

support (or ability to perceive support offered) between partners could increase risk of

isolation and depression. This was the first series of studies to demonstrate how

sequences of interactions between members of couples can contribute to dysfunctional

interpersonal environments, with particular emphasis on the interactive influence of

disruptive events, personality, and partner antecedent behaviour.

Threats to Self-Worth and Social Rank

Depressive vulnerability factors, namely dependency and self-criticism, and

disruptive interpersonal events were formulated within broader theoretical work focusing

on threats to self-worth and social rank (cf. Gilbert, 1990; Gilbert, 1994; Price, 1994;

Sloman, 1992; Tesser, 1989; Tesser, 1988;). Receiving positive or negative (bogus)

personality feedback, relative to one's partner receiving the opposing feedback, was

conceptualized in terms of the potential threat to interpersonal relatedness or self-worth

that each type of feedback would provide to individuals. This thesis was the first to

explicitly delineate the types of behaviour (e.g., appease, attack) emitted following such

events and the precise conditions where such behaviours might be observed (Exline &

Lobel, 1999).

Self-Evaluation Maintenance Effects

In contrast to rank research, SEM theorists acknowledge that an individual's

adoption of attacking or appeasing behaviour results not only from disruptions of self-

worth, but depends on whether an individual can regain self-worth via positive reflection

or social comparison. In the current studies, the experimental manipulation provided

participants with indications of how they performed relative to their partner. Moreover,

the profiles were hypothesized to be highly self-relevant. In accordance with Tesser's

model (1982; 1988; 1989) it was believed that outperforming one's partner (positive

feedback condition) might produce feelings of guilt leading the individual to reduce the

differential in performance between self and partner by appeasing the partner.

Underperformance (negative feedback condition) was hypothesized to produce negative

affect (sadness, anger) leading the individual to reduce interpersonal relatedness and

confrontation by attacking the partner. Consistent with previous research in couples

(Beach & Tesser, 1993) the type of behavioural strategy adopted was believed to be

influenced by the relative benefit that a particular behaviour would have for the

individual. In the current studies, the reciprocation of supportive behaviour (positive tit

for tat) and appeasing (being supportive when partner's antecedent behaviour was

destructive) one's partner had the personal benefit of increasing interpersonal relatedness.

Specifically, appeasing behaviour provided an opportunity for individuals to console their

angered partners. Furthermore, threatened participants' destructive behaviour, which included the reciprocation of negative, unsupportive comments and attacks (being hostile when partner's antecedent behaviour was constructive) may have provided personal benefits as it afforded the opportunity to reduce the status differential between members of the couple. Unfortunately, SEM theorists have paid little attention to how individual differences might influence the adoption of appeasing or attacking strategies following threats.

The current findings reveal that not all individuals benefit from outperforming others, nor do all individuals contest threats to self-worth (Beach et al., 1998; Exline & Lobel, 1997a, 1997b, May; Exline & Lobel, 1999; Mendolia et al., 1996; Santor et al., 2000; Santor & Zuroff, 1997, 1998). Dependent individuals were more concerned with attachment needs, leading to behaviours aimed at maintaining interpersonal relatedness when they had outperformed their partner. Beach (1998) argues that some individuals experience guilt following the outperformance of a partner, which leads to an increase in agreeable behaviour. In the current studies, positive feedback participants were more likely to engage in supportive and appeasing behaviour and this strategy was particularly associated with dependency. Given that dependent individuals are motivated to maintain interpersonal relatedness and engage in support-seeking behaviours (Blatt & Zuroff, 1992; Mongrain et al., 1998; Mongrain & Zuroff, 1994; Santor et al., 2000; Santor & Zuroff, 1997, 1998) it is likely that highly dependent individuals adopted these strategies, as a means of garnering support in response to the threats to interpersonal relatedness and partner antecedent behaviour that arose in this condition.

Santor (& Zuroff, 1997, 1998) also found that dependent individuals relinquished status when they had outperformed a close friend. Other studies have also demonstrated that perceptions and behaviours in response to being outperformed or outperforming are moderated by individual differences (Santor & Zuroff, 1997, 1998). In the current studies, receiving a more favourable personality profile than one's partner could have lead to ambivalent behaviour and concern for the welfare of one's partner, particularly for dependent individuals. This concern may have then led to the observed adoption of behavioural strategies which minimized one's own achievement to bolster the self-worth of the defeated partner. A macro-analysis of the data revealed that dependency was associated with constructive behaviour, in general. At a micro-level, it appeared as though this behavioural strategy was specifically adopted to ward off one's partner's hostility, via appeasements, and to deescalate the conflict (Coyne & Whiffen, 1995; Gilbert & Allan, 1994). Hence, dependents' anxiety at doing well appeared to stimulate the activation of appeasing behaviour. Therefore, dependent individuals sacrificed their own self-worth and achievement for the benefit of their partner. Dependent individuals may also have been concerned that their partners were not able to benefit from positive reflection, or they may have feared that their partners were engaging in a negative comparison (Beach et al., 1998; Beach et al., 1996; Tesser & Cornell, 1991; Tesser & Moore, 1989). As well, the opposite pattern was observed when self-worth was threatened (negative feedback) as dependency was associated with the adoption of hostile behaviour. Hence, this event may have elicited comparison processes in dependent individuals.

Individual differences also moderated responses to threats to self-worth in the current studies. Although a main effect for self-criticism was observed in Study 2, in Study 1 self-criticism moderated responses in the negative and no-feedback conditions. Self-critical individuals contested outperformance and sacrificed interpersonal relatedness in order to enhance self-worth. As in previous studies (Santor et al., 2000; Santor & Zuroff, 1997, 1998; Zuroff & Duncan, 1999a) self-critical individuals engaged in hostile and destructive behaviours that may undermine couples' ability to resolve the conflict. Sequential analyses revealed that hostile responses were not only adopted as a means of reciprocating negative behaviour, but were also used to attack one's partner to thwart the partner's attempt to resolve the conflict. Self-critics' probable anger at being outperformed, and resulting negative comparison processes, likely stimulated the adoption of attacking behaviour. Unfortunately, this also served to undermine their ability to resolve the conflict, leading to a pattern of dysfunctional communication, and reduced opportunities for self-critical individuals to utilize the support being offered by their partner, which could have softened the blow of the negative feedback (Coyne, 1976a, 1976b). Consistent with work on fluctuating self-esteem (Baumeister et al., 1996; Swann, 1987), self-critical individuals appeared to have fragile self-concepts and attacked their partners. However, Santor et al. (2000) found that self-criticism moderated responses to threats to self-worth, even when dating couples were asked to engage in a cooperative task. Given that a main effect for self-criticism was observed in Study 2, it is likely that this personality style may lower thresholds of sensitivity toward perceived threats from others under stressful situations such as those represented by the conflict resolution tasks utilized in the two studies. Previous research suggests that self-critical

individuals may have deficits in social information processing which accounts for their tendency to misperceive the support of their partners as representing hostility (Aube & Whiffen, 1996). This generalized deficit may explain why a main effect rather than an interaction effect for self-criticism was observed in Study 2.

In summary, the current results demonstrate the need to expand research on threats to interpersonal relatedness and self-worth to a) consider the moderating role of individual difference variables, like those represented by depressive vulnerability factors such as dependency and self-criticism and, b) consider how threatening events disrupt interpersonal behaviour. Finally, sequential analyses of the data provided an opportunity to delineate the specific circumstances, including the partner's antecedent behaviour, which led to the adoption of either appeasing or attacking behaviour. It was thus possible to examine how highly dependent individuals minimized outperforming their partner, and how highly self-critical individuals contested being outperformed, including the consequences that adopted strategies had at the individual and couple level.

Micro-Level Analysis: Theoretical Advances Via the Examination of Behavioural Sequences

To date, researchers interested in examining the joint effects of disruptive events and personality on interpersonal behaviour have focused on examining the mean proportion of behaviours exhibited by participants during lab interaction tasks (Beach et al., 1998; Hokanson et al., 1980; Santor et al., 2000; Santor & Zuroff, 1997, 1998). This research demonstrates that disruptive events and personality jointly influence behaviour, at a macro-level (Mongrain et al., 1998; Newton, Kiecolt-Glaser, Glaser, & Malarkey, 1995; Santor et al., 2000; Santor & Zuroff, 1997, 1998; Zuroff, Moskowitz, & Cote,

1999b), affecting mood and relationship quality. Bakeman and others (1997; Gottman

& Bakeman, 1979; Gottman et al., 1977) note that the aggregation of responses (macro-

level) prevents the investigation of the influence of specific situational variables (e. g.,

partner antecedent behaviour) on behaviour and thus, the specific antecedent events,

which purportedly activate underlying vulnerabilities like dependency and self-criticism.

The results reported here demonstrate that personality can affect the behavioural

sequences individuals adopt when interacting with others following a threat to

interpersonal relatedness or self-worth, and that proximal factors like behaviour might

contribute to dysfunctional interpersonal environments. Over the long-term,

dysfunctional interpersonal transactions might contribute to distal outcomes like

depression or relationship dissolution (Beach et al., 1998; Coyne, 1987; Hammen &

Doyle-Peters, 1978; Johnson & Jacob, 1997; Katz, Beach, & Joiner, 1999; Katz & Beach,

1997; Kowalik & Gotlib, 1987).

Parallel to research on marital interaction, sequential analyses of the data exposed

a tendency for partners to reciprocate constructive and destructive behaviours (i.e.,

positive and negative tit for tat) during the conflict resolution task (Bakeman & Gottman,

1997; Gottman et al., 1977; Jacob & Leonard, 1992; Pasch et al., 1997). However, the

primary aim of this thesis was to examine whether the experimental manipulation and

personality would moderate non-concordant behaviours such as verbal appeasements and

attacks. As a result, the interaction contingency tables (see Table 1) were further

decomposed to permit the calculation of these variables. The rationale for computing

marginal proportions also had to do with the fact that a main focus of the study was to

look at verbal appeasements and attacks. Appeasements only occurred when partner

antecedent behaviour was destructive and individual respondent behaviour was constructive. Conversely, attacks only occurred when partner antecedent behaviour was constructive and individual respondent behaviour was destructive. Hence, marginal proportions were adopted to compute these variables in a manner which reflected the underlying construct of these variables. The results of this decomposition provided a fine grained analysis in which to examine the expanded vulnerability model proposed in the introduction of this thesis. The tendency to appease or attack one's partner was also highly dependent on the joint effects of the experimental manipulation, personality, and partner's antecedent behaviour. This micro-analysis of the behavioural interaction data enabled the identification of the patterns of complex verbal processes which occurred during the conflict resolution task.

The present studies delineate the specific sequences of interactions, between members of couples, which led to the onset and maintenance of dysfunctional interpersonal behaviour. In fact, Coyne (1976a) argued that depression arises from a cycle of dysfunctional interpersonal behaviour whereby the vulnerable individual seeks support from close others and perceives withdrawal and rejection from close others leading to an increase in support seeking behaviour. In both studies, threats to interpersonal relatedness led to an increase in analogous behaviour. Participants were more likely to use constructive behaviour with their partners in this condition. Furthermore, micro-analyses of the data revealed that they were more likely to appease their partners (i.e., use constructive comment in response to partners antecedent destructive comment). In Study 1, an interaction was observed in which the combination of high scores on dependency and receiving positive feedback was positively associated

with appeasing behaviour, and reciprocation of supportive behaviour. Alternatively,

negative feedback had the opposite effects. A micro-analysis of the sequences of

behaviour between members of couples further indicated that participants were more

likely to use destructive remarks following partner's antecedent constructive (supportive)

behaviour. These verbal attacks arose under very specific conditions. Additionally, an

interaction was observed in Study 1 such that attacking behaviour was greater in

conditions reflecting threats to self-worth or potential threat (e.g., negative and no-

feedback conditions), especially for self-critical individuals. Buss (1987;1989; 1991;

1992; 1990) has suggested that individuals adopt specific behavioural strategies in order

to shape their interpersonal environments. The results of the micro-analyses revealed that

participants actively structured their behaviours in response to both the experimental

manipulation and their partner's antecedent behaviours.

Dependency appeared to be highly associated with a strategy of trying to resolve

conflict via the adoption of appeasements (behavioural termination). Highly dependent

participants may have been motivated to re-establish harmony in the relationship at the

expense of self-worth (Santor et al., 2000; Santor & Zuroff, 1997, 1998). Appeasing

one's partner may have undermined the dependent individual's ability to garner and

maintain support, as partners may have felt burdened and frustrated. In fact, partners

withdrew from highly dependent individuals, or were hostile and rejecting. Partner

withdrawal and hostility heightened support-seeking behaviour, in highly dependent

individuals, leading to a negative spiral in which increased support seeking led to further

withdrawal of support by the partner. Over the long-term this behavioural pattern might

leave dependent individuals vulnerable to depression (Buss, 1991; Elliott et al., 1991;

Hammen & Doyle-Peters, 1978; Jacobson et al., 1994; Katz & Beach, 1997). Indeed,

research on reassurance seeking, which represents the behaviour adopted by dependent

individuals at a macro-level, supports this latter hypothesis (Gilbert, 1990; Joiner, 1995;

Joiner et al., 1992, 1993; Mongrain et al., 1998), as reassurance seeking is associated with

depressive outcome.

In contrast, self-criticism was associated with escalating hostility (behavioural

instigation; Buss et al., 1987) rather than conflict resolution. Self-critical individuals

engaged in negative tit for tat and attacked partners as a means of acquiring self-worth,

particularly following events which activated these specific vulnerabilities. Self-critics'

attacking behaviour might decrease opportunities to receive support from partners by

alienating partners and decreasing their respect and admiration for the self-critical

individual. This might contribute to the experience of depressed mood as this situation

might be perceived as a sign of personal failure (Mongrain et al., 1998; Santor et al.,

2000; Vetesse & Mongrain, 1997; Zuroff & Duncan, 1999a; Zuroff & Giannopoulos,

1990c; Zuroff et al., 1999b).

In conclusion, the results of the micro-analyses of the studies presented herein

demonstrate that dependency and self-criticism, in conjunction with disruptive events,

influence the behavioural strategies individuals adopt when interacting with close others.

The findings provided a superior examination of the expanded vulnerability model as the

behaviour of individuals was examined in the context of its close relation to partner

antecedent behaviour, via the adoption of sequential analytic strategies. Clearly,

dependency and self-criticism are more than vulnerability factors for depression. They

represent broad personality dimensions, which influence and shape the experience of

interpersonal environments via the adoption of unique behavioural strategies following threats to interpersonal relatedness, self-worth, and partner antecedent behaviour. It is likely that the interpersonal style associated with these two personality dimensions represents the mechanism that leads to distal outcomes like relationship dissolution and depression, as they have significant effects on the quality of interpersonal relationships (Bolger et al., 1989; Coyne, 1991; Coyne, 1987; Coyne, 1990; Coyne & DeLongis, 1986). However, longitudinal designs are necessary to test this latter hypothesis. Appeasing or attacking one's partner may represent strategies aimed at increasing closeness or self-worth, but these behaviours can also increase one's chances of experiencing rejection from others and hence failure in relationships if they are over employed, or inappropriately employed during an interaction.

Clinical Implications and Possible Therapeutic Links

The utility of the work presented in this thesis is its clinical value. The focus of the two studies was on how couples resolve conflict following disruptive events, and how vulnerability factors moderated constructive and destructive behaviour (macro-level) and appeasements and attacks (micro-level). The analysis of interpersonal behaviours may lead to progress in the development of therapeutic interventions which target the dysfunctional behaviour displayed by dependent and self-critical individuals which leave them vulnerable to relationship dysfunction and depression (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 2000; Gruen, Folkman, & Lazarus, 1987). The results suggest a need to focus therapeutic efforts on remediating the cognitions of dependent and self-critical individuals, and modifying interpersonal behaviours which place individuals at risk for experiencing losses of support and consequently depressed mood.

By identifying the dysfunctional interpersonal processes we will have a larger set of

tools to focus on with clients in therapy.

Given that contextual factors, including partner antecedent behaviour, activated

underlying vulnerability factors like dependency and self-criticism, it is likely that

therapies aimed at the couple level will need to focus on how interaction cycles between

members of the couples exacerbate conflict and psychopathology. Furthermore,

integrative therapies which include both cognitive and interpersonal strategies are more

likely to lead to long-term changes in both individual and couple functioning. For

example, self-critical individuals engaged in unsolicited attacks of their partners,

following negative feedback in study 1 and across conditions in study 2, following their

partners' antecedent supportive behaviour. Cognitive strategies aimed at modifying self-

critical schemas and which focus on helping self-critical individuals entertain alternative

understandings of their partner's behaviour may reduce hostility levels displayed by these

individuals. Alternatively, self-critics' hostility towards partners may reflect a sense of

failure in the relationship and thus techniques which assist self-critics in restructuring

these negative assumptions may be necessary to enhance self-worth and interpersonal

behaviour. In fact, previous research (Dunkley et al., 2000; Mongrain, Kendal, Vetesse,

& Shuster, 1997; Mongrain et al., 1998; Vetesse & Mongrain, 1997) suggests that self-

critical individuals perceive hostility from their partners and thus have negative

perceptions regarding the availability of social support, including doubts regarding their

own efficacy at garnering support from close others. Moreover, interpersonal strategies

which focus on the possible social deficits experienced by self-critical individuals may

enhance their ability to garner the support of close others in times of need, such as

following a threat to self-worth or instance of perceived failure.

Alternatively, dependent individuals appear to be sensitive to threats to

interpersonal relatedness and respond by appeasing others. These behaviours continued

despite the fact that partners withdrew or were hostile to dependent individuals in the

current studies. Cognitive behavioural techniques that shift a dependent individual's

attention toward recognizing instances of personal efficacy may increase self-reliance.

Therapeutic techniques which enable dependent clients to recognize the negative impact

their appeasing behaviour has for self and partner, as well as instruction on how to adopt

less submissive interpersonal strategies may enhance couple functioning.

<u>Limitations and Strengths of the Studies</u>

<u>Limitations</u>

Although the results of these studies are promising, there are certain limitations

on the generalizability of the findings. One concern relates to the use of statistical

significance testing rather than using effect sizes as a means of describing experimental

effects. The rationale for using traditional significance testing had to do with the fact that

the studies were experiments that imposed artificial conditions and tasks on participants.

It was unclear what measures of effect size, obtained from the two studies, would have

generalized to. Experimental studies are different from epidemiological studies, which

commonly include effect size measures. For example, one can look at the effect size of

sexual abuse in depressed populations when the study has included stratified samples of

groups based on characteristics such as age. However, in an experiment several factors

could influence the size of effects that are unrelated with the real effect size. In fact,

factors other than the depressive vulnerability variables or bogus personality feedback manipulation used in the current studies may have influenced the size of observed effects. However, we were more interested in seeing if an effect was present at all rather than being concerned with the actual size of the effect. As a result, significance testing was deemed more suitable than effect size measures for the two studies.

Another concern centres on the relation between the populations employed in the first two studies (normal) vs. clinical populations. Previous studies indicate that dependency and self-criticism are stable vulnerability factors which are present, to varying degrees, prior to, during, and following a depressive episode (Bagby et al., 1994; Enns & Cox, 1997; Franche & Dobson, 1992; Klein, Harding, Taylor, & Dickstein, 1988; Klein, Wonderlich, & Shea, 1993). Furthermore, dependency and self-criticism have been previously associated with negative affect and unique interpersonal styles in non-clinical populations (Santor et al., 2000; Zuroff & Fitzpatrick, 1995; Zuroff & Mongrain, 1987). However, the direct links between dependency, self-criticism and depression were not the focus of the current studies. Instead, the emphasis was to investigate how dependency and self-criticism make individuals, because of their responses to disruptive events and partner behaviour, vulnerable to the experiencing of negative interpersonal environments. It was decided to develop the model in a group of non-distressed dating couples, prior to validating the model in couples where one or both partners is depressed. Future research examining the expanded vulnerability model will need to include clinical populations and longitudinal designs to investigate whether the actual interpersonal behaviour of dependent and self-critical individuals leads to losses in support and clinical depression. Moreover, although several of the effects observed in the two studies were

weak, it was decided to include trend results which did not meet a strict significance

cut-off point of $p < 0.05$. Trends with significance values of $p < 0.09$ were presented

because a new model, experimental paradigm, and analytic approach were used in the

two studies. Clearly, the effects observed in the two studies were interesting, but warrant

further investigation.

Critics of the current studies may further argue that relationship satisfaction and

levels of current dysphoria accounted for the observed behaviours. Although there may

be some merit to this standpoint, it must be recognized that mean relationship satisfaction

and mood scores were well below the clinical range (see Tables 4 and 5). Despite the

fact that relationship satisfaction and current dysphoria varied as a function of level of

dependency and self-criticism, these variables were not included as covariates in the

analyses. One reason for not including these variables in the analyses was that

personality should contribute to the quality of interpersonal relationships and mood

(Santor et al., 2000). These outcomes are hypothesized to result from the interpersonal

styles adopted by dependent and self-critical individuals. As well, research indicates that

the strongest and most reliable predictor of interpersonal behaviour is the antecedent

behaviour of interaction partners. Hence, the effects of the experimental manipulation

and personality were examined in analyses in which partner behaviour was included as a

covariate, for the macro-level analyses (Kenny, 1988, 1996a, 1996b; Kenny & Judd,

1996). However, a secondary aim of the research was to examine how individuals

responded to partner antecedent behaviour. Consequently, sequential analyses and the

decomposition of contingency tables to examine behaviours such as positive and negative

tit for tat, appeasements and attacks were employed to facilitate this aim.

Additionally, other variables, which were not measured, may have mediated the observed results. For example, cognitive theorists argue that internal perceptions and attributions can moderate behaviour (Abramson, Metalsky, & Alloy, 1989; Beck, 1987; Clark et al., 1999; Kovacs & Beck, 1978). Even so, the findings from the current studies reveal the importance of measuring behavioural sequences in addition to perceptions because the interpersonal behaviour displayed by dependent and self-critical individuals can affect the quality of interpersonal environments. Furthermore, studies which have focused on cognitive processes have relied on macro-level analyses such as examining dependent and self-critic's perceptions of negative life events, or quality of interpersonal interactions and relationships (Mongrain et al., 1998; Zuroff & deLorimier, 1989; Zuroff & Giannopoulos, 1990c). In the current studies behavioural effects emerged quickly in response to the moment to moment changes in situational factors that arose in response to partner behaviour. Measurements of perceptions and attributions cannot explain how dependent or self-critical individuals behave, when they will engage in reciprocation of behaviour, appease, or attack partners. Such questions can only be answered by doing a fine grained analysis of behavioural sequences.

Another weakness is that the findings in study 2 did not fully replicate those observed in the initial study. The predicted effects of the experimental manipulation held, but only a main effect for self-criticism emerged. Several factors may account for the disparity in findings between the studies. First, the topics discussed in each of the studies were either based on issues males (Study 1) or females (Study 2) nominated. This could have affected the dynamic of the interactions. However, a series of t-tests, based on nominees ratings of the topics, between the two studies revealed no significant

differences in how nominees perceived the topics they nominated (see Table 3).

There were no mean differences in the frequency that topics had been previously

discussed by members of the couples, ruling out the possibility that participants had

nominated "overdiscussed" issues in Study 2. However, a qualitative analysis of the

topics listed by male participants in Study 1 and female participants in Study 2 revealed

that females were less likely to nominate topics that might be upsetting to partners. As a

result, the discussions in Study 2 were less heated than those observed in Study 1.

Research on gender differences in communication further suggests that women are less

likely to engage in overt conflict with their male partners, and tend to self-silence during

stressful interactions (Jack, 1991). Study 2 involved discussion of the female partners'

issues and may have been perceived as highly stressful for female participants leading to

the adoption of behaviours to minimize conflict. For example, inspection of the

videotapes revealed that participants went off-topic more frequently in study two and

that there were more pauses and dead air during the interaction. Finally, although

dependency was significantly correlated with being female in both studies, the coefficient

was particularly high in study 2 ($r = 0.25$, $p < 0.05$). A t-test showed that females ($M =$

130.82, $SD = 14.46$) were much more dependent than males ($M = 121.92$, $SD = 19.28$) in

this study, $t(118) = 2.86$, $p < 0.005$. Additionally, sampling for the two studies occurred

in two different years and there may have been different sample characteristics that were

not adequately captured by the measures used in the current studies which contributed to

the differing results across studies.

Several other factors limit the conclusions that can be drawn from these studies.

First, the participants in the studies were involved in dating rather than marital

relationships, and were young in age. It would be interesting to conduct a similar study in couples who have been together for a considerable period of time. Second, even though the effects of the mood manipulation were strong, couples tended to nominate issues for the conflict resolution task which were not excessively acerbic. However, the fact that such strong effects were observed using an analogue paradigm in a laboratory setting does suggest that vulnerability factors exert considerable influence on interactions between members of couples following disruptive events. Third, in order to gain a fuller understanding of how vulnerability factors influence social environments, methods that examine how individual dispositions provoke behaviours in partners are needed. Finally, it would be interesting to study the impact of threats to interpersonal relatedness and self-worth on social cognitive processes as well as how these events are internally represented.

Strengths

The studies presented in this thesis represent a unique approach to investigate the joint influences of personality and situational events on interpersonal behaviour. Both studies involved an experimental manipulation to delineate the role that personality plays in moderating behavioural sequences. The inclusion of an activating event provided important information regarding the specific situations through which the effects of dependency and self-criticism could be observed, including the situations that place these individuals at risk for engaging in maladaptive interpersonal behaviours which may increase risk for depressed mood (cf. Clark et al., 1999; Ingram et al., 1998; Segal, Gemar, & Williams, in press; Segal et al., 1989). The analogue experimental design was implemented to create an environment in which interpersonal relatedness and self-worth

could be experimentally manipulated. Moreover, the inclusion of a control group enabled the examination of the role that personality plays in influencing conflict resolution behaviours, in general.

Much of the current debate regarding vulnerability to depression focuses on the unique role that situations and underlying vulnerabilities contribute to depression (Beck, 1987; Coyne, 1976b; 1982). Cognitive theorists argue that vulnerability factors influence perceptions of events and hence, the responses of individuals to events. In contrast, interpersonal theorists argue that differences in behaviour can be attributed to differences in environments experienced by vulnerable individuals. Presently, it has been recognized by many (i.e., Buss et al., 1987; Cordova et al., 1993; Magnusson, 1990; Mischel & Shoda, 1995; Santor et al., 2000; Zuroff, 1992) that personality and situational factors are inseparable; each influences the other. Furthermore, individuals can influence the quality of their interpersonal environments via the utilization of specific behavioural strategies in response to the antecedent behaviour of their partners (Buss, 1987; 1989; 1991). Since environmental factors were experimentally manipulated in the current studies, the specific influence that personality plays in moderating behaviour could be observed. Moreover, the interaction effect between personality and disruptive events could be examined without concern regarding the influence of extraneous factors, which can occur using naturalistic designs or self-reports rather than measurement of behaviour.

Although the joint influence of personality and disruptive events on interactions between close others has been examined previously (Clark et al., 1997; Santor et al., 2000; Santor & Zuroff, 1997, 1998), research has relied on aggregating responses between members of couples. This type of macro-level analysis inhibits the investigation

of the specific antecedent situational factors which activate dependent or self-critical interpersonal styles, and how these styles moderate features of situations. In order to circumvent this limitation, micro-level analyses of the data were conducted which examined sequences of behaviour between members of couples. These analyses further revealed the behavioural strategies that dependent and self-critical individuals adopted when partners were supportive or unsupportive, which has not been previously examined. Indeed, dependency and self-criticism not only moderated responses to the experimental manipulation, but also influenced responses to partner's antecedent behaviour, which shaped the quality of the interpersonal environment.

Several other factors contributed to the success of these studies. First, the topics selected for the conflict resolution task were based on "real life" issues that members of couples nominated for discussion. In order to make participants more accustomed to the lab setting and being videotaped, participants were asked to discuss current events and positive aspects of their relationships before receiving the experimental manipulation and engaging in the conflict resolution task. Since the effects of the feedback manipulation were short-lived in pilot studies, it was decided to conduct two parallel studies so that the issues nominated by both male and female participants could be used. Indeed, behavioural differences emerged between the two studies. Moreover, the type of feedback manipulation had not been used in previous studies on couples and the second study was conducted as a replication study.

Second, the studies investigated the joint effects of personality and situational factors within an expanded vulnerability model (cognitive-interpersonal). Events were classified based on the needs that situations fulfilled for individuals. Additionally, the

behaviours of participants were coded using a standardized interaction coding scheme

(MICS-IV; Heyman et al., 1995) which permitted reliability checks between coders.

Finally, dating couples were employed as the subjects in this research as most individuals

spend significant periods of their life in close relationships and how individuals respond

to distressing events can impact on the quality of relationships.

Conclusions

In summary, the findings of these studies may be of interest to researchers in the

field of depressive vulnerability, and those interested in the quality of relationships and

events that contribute to disharmony in close relationships. The studies reported in this

thesis demonstrate the need to integrate cognitive and interpersonal models (Gotlib &

Hammen, 1992; Safran & Segal, 1990; Santor et al., 2000; Santor & Zuroff, 1997, 1998)

within a broader framework like that represented by rank/self-evaluation maintenance

theories. Results revealed that depressive vulnerability factors like dependency and self-

criticism contribute to dysfunctional interpersonal processes, and that disruptive

interpersonal events can activate underlying vulnerabilities, leading to the adoption of

maladaptive behavioural strategies. In fact, in the current studies disruptive events, such

as receiving positive or negative feedback, relative to one's partner, in conjunction with

dependency and self-criticism moderated the strategies individuals used when interacting

with their partners. Thus, personality was shown to influence the behavioural strategies

adopted by individuals following disruptions to interpersonal relatedness and self-worth.

This could be seen because a fine grained analysis of the interaction sequences between

members of couples (micro-level) was adopted. It elucidated the interpersonal

mechanism linking personality to conflict. If such instances were to repeat in the daily

lives of vulnerable individuals, one can see how underlying maladaptive beliefs and

perceptions might be reinforced, leading to the adoption of ineffective behavioural

strategies and quite possibly distal outcomes like relationship dissolution and/or

depressive states.

Appendix A
General Information and Demographics

1. Age: _____ years   Date of birth: _____

2. If you are a student, what year of university are you presently in? _____

3. Do you and your partner presently live together? _____

4. Have you ever lived with your partner? _____

5. How long have you dated your partner? _____

6. How many hours do you and your partner spend together each week? _____(hrs)

7. What is your partner's date of birth? _____

8. How serious is your relationship?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

not   somewhat   very
at all   serious   serious
serious

9. If you are not a student, what is your current occupation? _____

Appendix B
Conflict Resolution Topics Nomination Form

In the space provided below please list three things you dislike that your partner does, and/or three things about your partner you dislike, that you would like him/her to change. Please rank order them from most important to least important (e.g. the most important one goes in #1 and the least important one goes in #3)

Things I dislike about my partner and/or things I'd like my partner to change:

1. _____

a) How likely is it that your partner would change this behaviour if you discussed it with them?

    0   1   2   3   4   5   6
not at all   somewhat   extremely
likely   likely   likely

b) How important is this to your relationship with your partner?

    0   1   2   3   4   5   6
unimportant   somewhat   extremely
             important   important

c) What kind of impact does this have on your relationship?

    0   1   2   3   4   5   6
hurts   no impact   enhances
relationship   on relationship relationship

d) How often have you talked about this with your partner?

    0   1   2   3   4   5   6   7   8   9
never   approximately   more than
          four times   nine times

e) How much do you dislike this behaviour?

    0   1   2   3   4   5   6
I don't   I dislike it   I dislike
mind   moderately   it a lot
it

f) How much does this behaviour upset you?

    0   1   2   3   4   5   6
it does   moderately   upsets me
not upset   upsets me   a lot
me

2. _____

a) How likely is it that your partner would change this behaviour if you discussed it with them?

    0   1   2   3   4   5   6
not at all   somewhat   extremely
likely   likely   likely

b) How important is this to your relationship with your partner?

    0   1   2   3   4   5   6
unimportant   somewhat   extremely
             important   important

c) What kind of impact does this have on your relationship?

    0   1   2   3   4   5   6
hurts   no impact   enhances
relationship   on relationship relationship

d) How often have you talked about this with your partner?

0	1	2	3	4	5	6	7	8	9
never				approximately four times					more than nine times

e) How much do you dislike this behaviour?

0	1	2	3	4	5	6
I don't mind it			I dislike it moderately			I dislike it a lot

f) How much does this behaviour upset you?

0	1	2	3	4	5	6
it does not upset me			moderately upsets me			upsets me a lot

3. _____

_____

a) How likely is it that your partner would change this behaviour if you discussed it with them?

0	1	2	3	4	5	6
not at all likely			somewhat likely			extremely likely

b) How important is this to your relationship with your partner?

0	1	2	3	4	5	6
unimportant			somewhat important			extremely important

c) What kind of impact does this have on your relationship?

0	1	2	3	4	5	6
hurts relationship			no impact on relationship			enhances relationship

d) How often have you talked about this with your partner?

0	1	2	3	4	5	6	7	8	9
never				approximately four times					more than nine times

e) How much do you dislike this behaviour?

0	1	2	3	4	5	6
I don't mind it			I dislike it moderately			I dislike it a lot

f) How much does this behaviour upset you?

0	1	2	3	4	5	6
it does not upset me			moderately upsets me			upsets me a lot

Appendix C
Dyadic Adjustment Scale

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement of disagreement between you and your partner for each item on the following list. Please circle the number that most appropriately reflects the way you feel.

                    0 ..... 1 ..... 2 ..... 3 ..... 4 5
                 Always   **Always**
                 Disagree   **Agree**

1. Handling family matters

2. Matters of recreation

3. Religious matters

4. Demonstrations of affection

5. Friends

6. Sex Relations

7. Conventionality (correct or proper behaviour)

8. Philosophy of life

9. Ways of dealing with parents or in-laws

10. Aims, goals, and things believed important

11. Amount of time spent together

12. Making major decisions

13. Household tasks (fill out only if living together)

14. Leisure time interests and activities

15. Career decisions

For the following questions (16-22), please indicate how often each event occurs within your relationship

0 = Never
1 = Rarely
2 = Occasionally
3 = More often than not
4 = Most of the time
5 = All of the time

16. How often do you discuss or have considered breaking up with your partner

17. How often do you or your partner leave the situation/scene after a fight

18. In general, how often do you think that things between you and your partner are going well

19. Do you confide in your partner

20. Do you ever regret being with your partner

21. How often do you and your partner quarrel

22. How often do you and your mate "get on each other's nerves?"

23. Do you kiss your mate? *(Circle below)*

Never   Rarely   Occasionally   Almost every day   Every day

24. Do you and your partner engage in outside interests together *(Circle below)*

None   Very few   Some   Most   All Activities

How often would you say the following events occur between you and your mate?

0 = Never   3 = Once or twice a wee
1 = Less than once a month   4 = Once a day
2 = Once or twice a month   5 = More often

25. Have a stimulating exchange of ideas

26. Laugh together

27. Calmly discuss something

28.   Work together on a project

These are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (circle yes or no).

29.   Being too tired for sex   Yes   No

30.   Not showing love   Yes   No

31.   The numbers on the following line represent different degrees of happiness in your relationship. The middle point "happy", represents the degree of happiness of most relationships. Please circle the number which best describes the degree of happiness, all things considered, of your relationship.

0	1	2	3	4	5	6
Extremely unhappy	Fairly unhappy	A little unhappy	Happy	Very happy	Extremely happy	Perfect

Appendix D
Current Mood

Below are a number of words that describe different thoughts and feelings. Read each item and then indicate to what extent you feel this way right now. Use the following scale to record your answers.

not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

1. worried/anxious
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

2. happy
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

3. frustrated
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

4. pleased
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

5. angry
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

6. enjoyment/fun
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

7. unhappy
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

8. joyful
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

9. aggravated
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

10. depressed/sad
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

11. mad
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

12. inferior
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

13. competitive
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

14. worthless
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

15. competent
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

16. superior
not at all 0 ... 1 ... 2 ... 3 ... 4 ... 5 ... 6 ... 7 ... 8 ... 9 extremely

Center for Epidemiologic Studies Depression Scale

Now we would like you to answer some questions about how you have been feeling recently. Here are a series of statements describing different feelings you may have felt, as well as different things you may have done. There are four numbers beside each statement, "1 2 3 4". Using the scale below, we would like you to circle the number which best describes how often you felt or behaved this way--DURING THE PAST WEEK.

> 1 = Rarely or none of the time (**less than once a week**)
> 2 = Some or a little of the time (**1-2 days a week**)
> 3 = Occasionally or a moderate amount of time (**3-4 days**)
> 4 = Most or all of the time (**5-7 days in the week**)

DURING THE PAST WEEK:

1.	I was bothered by things that usually don't bother me	1 2 3 4
2.	I did not feel like eating; my appetite was poor	1 2 3 4
3.	I felt that I could not shake off the blues even with the help from my family or friends	1 2 3 4
4.	I felt that I was just as good as other people	1 2 3 4
5.	I had trouble keeping my mind on what I was doing	1 2 3 4
6.	I felt depressed	1 2 3 4
7.	I felt that everything I did was an effort	1 2 3 4
8.	I felt hopeful about the future	1 2 3 4
9.	I thought my life had been a failure	1 2 3 4
10.	I felt fearful	1 2 3 4
11.	My sleep was restless	1 2 3 4
12.	I was happy	1 2 3 4
13.	I talked less than usual	1 2 3 4
14.	I felt lonely	1 2 3 4
15.	People were unfriendly	1 2 3 4
16.	I enjoyed life	1 2 3 4
17.	I had crying spells	1 2 3 4

18.	I felt sad	1 2 3 4
19.	I felt people disliked me	1 2 3 4
20.	I could not get going	1 2 3 4

Appendix F
McGill Revision of the Depressive Experiences Questionnaire

Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree, in general, and to what extent. If you **strongly agree**, press "7" on the computer number pad. If you **strongly disagree**, press "1". If you feel you are somewhere in between, press any one of the numbers between 1 and 7 on the computer number pad. If you are **not certain or don't know**, press "4".

1............2............3............4............5.........6............7

| Strongly | Disagree | Don't | Agree | Strongly |
| Disagree | | Know | | Agree |

1.   Without support from others who are close to me, I would be helpless.

2.   I tend to be satisfied with my current plans and goals, rather than striving for higher goals.

3.   When I am closely involved with someone, I never feel jealous.

4.   I often find that I don't live up to my own standards or ideals.

5.   The lack of permanence in human relationships doesn't bother me.

6.   If I fail to live up to expectations, I feel unworthy.

7.   Many times I feel helpless.

8.   I seldom worry about being criticized for things I have said or done.

9.   There is a considerable difference between how I am now and how I would like to be.

10.   I enjoy sharp competition with others.

11.   There are times when I feel "empty" inside.

12.   I tend not to be satisfied with what I have.

13.   I don't care whether or not I live up to what other people expect of me.

14.   I become frightened when I feel alone.

15.   I would feel like I'd be losing an important part of myself if I lost a very close friend.

16.   People will accept me no matter how many mistakes I have made.

17.   I have difficulty breaking off a relationship that is making me unhappy.

18.   I often think about the danger of losing someone who is close to me.

19. I am not very concerned with how other people respond to me.

20. No matter how close a relationship is between two people is, there is always a large amount of uncertainty and conflict.

21. I am very sensitive to others for signs of rejection.

22. Often, I feel I have disappointed others.

23. If someone makes me angry, I let him (her) know how I feel.

24. I constantly try, and very often go out of my way, to please or help people I am close to.

25. I find it very difficult to say "No" to the requests of friends.

26. I never really feel secure in a close relationship.

27. The way I feel about myself frequently varies: there are times when I feel extremely good about myself and other times when I see only the bad in me and feel like a total failure.

28. Even if the person who is closest to me were to leave, I could still "go it alone."

29. One must continually work to gain love from another person: that is, love has to be earned.

30. I am very sensitive to the effects my words or actions have on the feelings of other people.

31. I am a very independent person.

32. I often feel guilty.

33. I think of myself as a very complex person, one who has "many sides."

34. I worry a lot about offending or hurting someone who is close to me.

35. Anger frightens me.

36. I can easily put my own feelings and problems aside, and devote my complete attention to the feelings and problems of someone else.

37. If someone I cared about became angry with me, I would feel threatened that he (she) might leave me.

38. After a fight with a friend, I must make amends as soon as possible.

39. I have a difficult time accepting weaknesses in myself.

40. After an argument, I feel very lonely.

41. In my relationships with others, I am very concerned about what they can give to me.

42. I rarely think about my family.

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43. Very frequently, my feelings toward someone close to me vary: there are times when I feel completely angry and other times when I feel all-loving towards that person.

44. I grew up in an extremely close family.

45. I am very satisfied with myself and my accomplishments.

46. I tend to be very critical of myself.

47. Being alone doesn't bother me at all.

48. I very frequently compare myself to standards or goals.

Appendix G
Couples Interaction Coding Scheme Based on MICS-IV (Heyman et al., 1995)

The coding system consists of 9 global categories, each consisting of several micro-units of affect/affect. Coders will check the relevant global category for each turn a member of the observed couple makes. Coders will also be responsible for marking the order of turn taking (e.g., male, code), and the amount of time spoken per turn. This will enable us to conduct sequential analyses of the data. A turn will begin when a given speaker takes the floor or begins a new thought. This will constitute a Dyadic Behaviour Unit (DBU). For each DBU with double or triple codes, the code with the highest position in the hierarchy is retained and the rest are discarded. For sequential analyses, codes will be entered into the data matrix based on Heyman et al's., (1995) code hierarchy.

The following is a list of the Global Categories and their Micro-Units of Affect/Affect

1). Blame (Destructive)
This dimension refers to verbalized, negative evaluations of the other person's personality, ideas, suggestions, ability, or behaviours. It involves criticism, denigration, fault-finding, or mocking of one's partner or the relationship.

    a) Criticize – hostile statement of unambiguous dislike or disapproval of a specific behaviour of the partner. Non-neutral voice tone.

        "If you had kept the apartment clean, like I asked, I wouldn't have gotten mad at you in the first place. This is your fault."

    b) mindread negative- statement which infers or assumes negative attitude or feeling on the part of the other.

        "I know that you did this on purpose just to tick me off and get me upset."

    c) Putdown- a comment intended to hurt, demean or embarrass the partner.

"If you weren't so stupid I wouldn't have to nag. You are such a loser sometimes."

d) Turn-off- nonverbal gestures which communicate disgust, displeasure, disapproval, or disagreement. Can also indicate negative voice tone with statements of positive or neutral content.

2). Description (Constructive)

This dimension refers to attempts at verbalizing the reasons for problems within and outside the relationship. It is reflective, and does not contain blame or hurtful commentary.

a) Problem description internal- a statement describing a problem which is internal to both parties. Usually neutral or friendly tone of voice.

"I think that the problem lies in the fact that we often forget to make time for each other"

b) Problem description external- a statement describing a problem which is external to both parties. Usually neutral or friendly voice tone.

"If we were both earning more money, we wouldn't have such a hard time paying our rent. It isn't our fault."

3). Dysphoric Affect (Destructive)

a) sad, angry, upset mood as indicated by voice tone, or physical/behavioural cues (i.e. grunt, cry). Complains about self, whining, crying, and sad affect.

4). Facilitation (Constructive)

This dimension refers to behaviours used to engage the partner in conversation and to assist with the task of resolving the issues being discussed rather than escalating problems/difficulties.

a) Assent - listener says "yeah", nods head, etc. to indicate "I'm listening" or to facilitate conversation. Verbatim parroting. Listener code only.

b) Disengage- requests to postpone discussion of a topic in a neutral or positive voice tone.

"Maybe it would be better if we waited until tomorrow to talk about this so that we can gather our thoughts rather than fighting."

c) Humour- light-hearted humour; not sarcasm

"Oh, that was so funny. You make me laugh."

d) Mindread Positive- statement which infers or assumes a positive attitude or feeling on the part of the other.

"From the sounds of it, you didn't tell me what happened because you didn't want me to feel bad. Thanks."

e) Positive Touch- affectionate touch, like a hug etc or caress etc.

f) Paraphrase/reflect- a statement which mirrors or restates statement of the other which has been previously expressed within the negotiation.

"So, what you are saying is that you come home late every night because of work."

g) Question- any interrogative statement, including rhetorical questions

"What does that mean then?"

h) Smile/Laugh- smile or laughter.

5) Invalidation (Destructive)
This dimension refers to behaviours used to negate or undermine the partner's opinions, feelings, or to undermine the discussion itself.

a) Disagree- statement of disagreement with partner's opinion.

"I disagree with that."
"No, you are not looking at it the right way."

b) Disapprove- statement of non-approval of partner's behaviour.

"I'm really peeved about the fact that you did not tell me where you were all night."

c) Deny responsibility- a statement that "I" or "we" are not responsible for the problem at hand.

"It is not my fault that things turned out like this."
"If your mother hadn't interfered with the plans, we wouldn't be arguing right now."

d) Excuse- any reason given for not performing a behaviour

"I didn't take out the trash because I had to finish my homework."

e) Non-Comply- failure to fulfill a command within 10 seconds of command. Speaker code only.

6). Irrelevant (Neutral)

a) unintelligible talk

b) Off-topic- statements not pertaining to the discussion topic.

7). Propose Change (Constructive)
This dimension refers to attempts to negotiate change within the relationship with the goal of improving the relationship.

a) Compromise- A negotiation of mutually exchanged behaviours

"Why don't I do the dishes and you can sweep the floor from now on."

b) Negative Solution- a solution proposing the termination of or a decrease in the frequency of some behaviour.

"We can save money if we stop eating out every night and give up drinking on weekends."

c) Positive Solution- A solution proposing the initiation of or an increase in the frequency of some behaviour. Also, a metacommunication attempt.

"Perhaps if we spent more time together we'd feel better about our relationship."

8). Validation (Constructive)
This dimension refers to attempts to express understanding of the partner's feelings and opinions as well as authenticating these feelings and opinions.

a)Agree- statement of agreement with partner's opinion. Or the speaker verbally acknowledges the correctness of their partner's statements, opinions, suggestions, criticisms, wishes, and demands.

"Okay, I can see your point there. You were right to think that I should try harder not to fly off the handle."

"Yeah, I think you are right about this."

a) Approve- respondent favours partner's or couple's attributes, actions, or statements.

"I really think you made a good decision when you moved away from your parent's place."

b) Accept Responsibility- statement conveying that "I" or "we" are responsible for the problem at hand.

"I know it was my fault that this got out of hand."
"We both got angry with each other."

c) Comply- fulfills command within 10 seconds of command. Speaker code only.

9). Withdrawal- (Destructive)

Moving body away from partner such as turning head around, looking away etc. Behaviours which indicate one partner is avoiding or closing off the other (e.g. rolling eyes, closed body language, little or no eye contact, muscular rigidity and tenseness, decrease in baseline levels of body movements).

Appendix H

Coding Scheme Forms

Couple Code Number: _____

Speaker (male or female)	Time Spoken (seconds, msec: onset-offset)	Interruption (check only if occurred)	MICS IV Code Number (e.g. 1 = blame.... 9 = withdrawal)

Appendix I
Negative Feedback Profile
The Personality Adjustment Profile ©1994 T

The Personality Adjustment Profile ©1994 identified the following descriptions on the basis of responses to items completed as highly descriptive of this individual's personality.

Internal consistency coefficient for the items compiled exceed: **0.85**

Results indicate how the individual compares to college-aged individuals (90% means this individual scores higher than 90% of individuals, in general, on a specific characteristic).

Results also provide a comparison of this individual to their partner.

The following adjectives are highly descriptive of: person's name

```
skeptical      0%----*--100%  (75%)   moderate       0%---*---100%  (56%)
unforgiving    0%----*--100%  (70%)   objective      0%------*100%  (93%)
obliging       0%--*----100%  (40%)   unreasonable   0%---*---100%  (56%)
shrewd         0%----*--100%  (76%)   narrow-minded  0%------*-100% (86%)
conceited      0%----*--100%  (68%)   inconsiderate  0%----*--100%  (72%)
pleasant       0%----*--100%  (76%)   irresponsible  0%----*--100%  (70%)
jealous        0%----*--100%  (68%)   selfish        0%---*---100%  (50%)
meddlesome     0%----*--100%  (77%)   untrustworthy  0%---*---100%  (59%)
understanding  0%------*-100% (85%)   thoughtless    0%---*---100%  (53%)
imaginative    0%------*-100% (84%)   unreliable     0%---*---100%  (51%)
persistent     0%----*--100%  (75%)   shallow        0%---*---100%  (58%)
warm           0%----*--100%  (70%)   petty          0%---*---100%  (57%)
good-natured   0%--*----100%  (50%)   childish       0%----*--100%  (74%)
changeable     0%------*100%  (94%)   insecure       0%---*---100%  (58%)
normal         0%------*100%  (92%)   intolerant     0%----*--100%  (60%)
```

The following adjectives are highly descriptive of: partner's name

```
skeptical      0%---*---100%  (55%)   moderate       0%----*--100%  (75%)
unforgiving    0%-*-----100%  (36%)   objective      0%----*--100%  (76%)
obliging       0%----*--100%  (75%)   reasonable     0%----*--100%  (69%)
shrewd         0%-*-----100%  (28%)   open-minded    0%----*--100%  (70%)
conceited      0%-*-----100%  (28%)   considerate    0%-----*-100%  (83%)
pleasant       0%------*100%  (88%)   responsible    0%-----*-100%  (80%)
jealous        0%-*-----100%  (25%)   unselfish      0%---*---100%  (56%)
meddlesome     0%*------100%  (15%)   trustworthy    0%-----*-100%  (85%)
understanding  0%-----*-100% (85%)    thoughtful     0%-----*-100%  (87%)
imaginative    0%------*100%  (93%)   dependable     0%------*-100% (81%)
persistent     0%---*---100%  (64%)   shallow        0%-*-----100%  (31%)
warm           0%----*--100%  (74%)   likable        0%----*--100%  (73%)
good-natured   0%------*100%  (90%)   good-humoured  0%-----*-100%  (83%)
changeable     0%----*--100%  (77%)   sincere        0%-----*-100%  (84%)
normal         0%------*100%  (95%)   mature         0%-----*-100%  (80%)
```

Positive Feedback Profile
The Personality Adjustment Profile ©1994 P

The Personality Adjustment Profile ©1994 identified the following descriptions on the basis of responses to items completed as highly descriptive of this individual's personality.

Internal consistency coefficient for the items compiled exceed: **0.85**

Results indicate how the individual compares to college-aged individuals (90% means this individual scores higher than 90% of individuals, in general, on a specific characteristic).
Results also provide a comparison of this individual to their partner.

The following adjectives are highly descriptive of: <u>person's name</u>

```
skeptical       0%---*---100%  (55%)   moderate       0%----*--100%  (75%)
unforgiving     0%-*------100%  (36%)   objective      0%----*--100%  (76%)
obliging        0%----*--100%  (75%)   reasonable     0%----*--100%  (69%)
shrewd          0%-*------100%  (28%)   open-minded    0%----*--100%  (70%)
conceited       0%-*------100%  (28%)   considerate    0%-----*-100%  (83%)
pleasant        0%------*100%  (88%)   responsible    0%-----*-100%  (80%)
jealous         0%-*------100%  (25%)   unselfish      0%---*---100%  (56%)
meddlesome      0%*------100%  (15%)   trustworthy    0%-----*-100%  (85%)
understanding0%------*-100%  (85%)   thoughtful     0%-----*-100%  (87%)
imaginative     0%----*--100%  (77%)   dependable     0%-----*-100%  (81%)
persistent      0%---*---100%  (64%)   shallow        0%-*------100%  (31%)
warm            0%----*--100%  (74%)   likable        0%----*--100%  (73%)
good-natured    0%------*100%  (90%)   good-humoured  0%-----*-100%  (83%)
changeable      0%----*--100%  (77%)   sincere        0%-----*-100%  (84%)
normal          0%------*100%  (95%)   mature         0%-----*-100%  (80%)
```

The following adjectives are highly descriptive of: <u>partner's name</u>

```
skeptical       0%----*--100%  (75%)   moderate       0%---*---100%  (56%)
unforgiving     0%---*----100%  (50%)   objective      0%------*100%  (93%)
obliging        0%--*-----100%  (40%)   unreasonable   0%---*----100%  (56%)
shrewd          0%----*--100%  (76%)   narrow-minded  0%-----*-100%  (86%)
conceited       0%----*--100%  (68%)   inconsiderate  0%----*--100%  (72%)
pleasant        0%----*--100%  (76%)   irresponsible  0%----*--100%  (74%)
jealous         0%----*--100%  (68%)   selfish        0%---*----100%  (55%)
meddlesome      0%----*--100%  (77%)   untrustworthy  0%---*----100%  (59%)
understanding   0%-----*-100%  (85%)   thoughtless    0%---*----100%  (53%)
imaginative     0%-----*-100%  (84%)   unreliable     0%---*----100%  (51%)
persistent      0%----*--100%  (75%)   shallow        0%---*----100%  (58%)
warm            0%----*--100%  (70%)   petty          0%---*----100%  (57%)
good-natured    0%--*-----100%  (50%)   childish       0%----*--100%  (74%)
changeable      0%------*100%  (94%)   insecure       0%---*----100%  (58%)
normal          0%------*100%  (92%)   intolerant     0%----*--100%  (60%)
```

Appendix K

Informed Consent

During this experiment you will be asked to fill out a number of questionnaires about different feelings, attitudes, interpersonal style, and areas of difficulty (conflict) in your current relationship with your boyfriend/girlfriend. You will be given a computer generated feedback profile based on your responses to the questionnaires. While the computer is generating the feedback profile you and your partner will be asked to spend five minutes discussing shared interests and/or a current event. After this discussion you will be given the opportunity to look at both your and your partner's feedback profile, and will be asked to fill out an additional questionnaire about how you are feeling. Following this you will be reunited with your partner and will be asked to spend ten minutes discussing the three topics that either you or your partner nominated on one of the questionnaires pertaining to areas of difficulty (conflict) in your relationship. **Please note that your interactions with your partner will be videotaped and coded by the members of our research team.** After the second discussion task you will be asked to fill out another series of questionnaires which are similar in content to those administered at the beginning of the experiment.

Your decision whether or not to participate in this experiment will in no way affect your standing in the university or in any of your courses if you are a student here. Participation is voluntary, and hence you may discontinue at any point during the experiment. Your name will not appear on the questionnaires or videotapes, nor will names or identifying information appear in any publication which may result from this study. All of the data you provide us will remain anonymous. No one except the director of the project (Dr. Darcy Santor), and the staff of the research project will be authorized to view any of the data, including your videotaped discussions. The data will be stored in a locked cabinet in Dr. Santor's lab.

Following the experiment you will be given a full debriefing regarding the experiment and will have the opportunity to discuss your impressions and reactions to the experiment. If you have any questions or concerns about the study or concerns regarding confidentiality, now or in the future, please feel free to contact us at 494-6962. You will also be given a copy of this consent form if you so desire.

Thanks for your cooperation

_____   Signature: _____

Date   Witness: _____

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Appendix L
Discussion Task Topics

Earlier you listed three things that you dislike that your partner does and/or three things about your partner you dislike, that you would like them to change.

Those three things were:

1.

_____

2.

_____

3.

_____

For the next 10 minutes I want you to discuss what it is about each of these three things that you want your partner to change and why you want them to change them.

Tell your partner:
1) **what you dislike**
2) **why you dislike these 3 things**
3) **why you think your partner should change these things**
4) **how they impacts on your relationship**
   any other things that you want your partner to change that you did not list earlier

Appendix M

Participant's Impression of Personality Feedback

1) In a few sentences describe how you felt after receiving the personality feedback profile.
2) Also, how did the feedback affect the way you interacted with your partner during the discussion task that followed the feedback?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Appendix N

Experimental Protocol and Script

Phase 1:

Both members of the couple are brought into the main lab and are given instructions for the three phases of the experiment. Participants in Psychology 1000 complete credit point forms.

> "For the first hour of the experiment I am going to have the two of
> you fill out a package of questionnaires in separate rooms. Some
> of the questionnaires will be filled out by pen and paper and other ones
> will be administered via a computer. These questionnaires will assess
> various things about what your relationship is like, your mood and feeling,
> and your personality traits. In particular the questionnaires that
> you will be filling out on the computer are part of a program
> that was designed at a US university to assess common personality
> traits. We are trying to see if there is a relationship between
> an individual's personality and how they communicate with their partner.
> Thus, we will be using the results from the personality program to
> examine whether it predicts your communication style with your
> partner. So, after you have completed the questionnaires I will
> be able to get a computer output which includes your 30 highest
> personality traits and your partner's 30 highest personality traits.
> I will be happy to give you a copy of your profiles once
> they have been computed. Thus, you can see how you are similar
> and different from each other. However, it usually takes a couple
> of minutes for the program to compute your profiles so I will get
> you to start your discussion tasks and will bring in your profiles
> then. Any questions? Great let me take you to read and sign
> your consent forms and to begin the questionnaires."

Give subjects time to read over and sign consent forms

> "Remember, your discussions with your partner will be
> videotaped and coded by our research team as indicated in
> the informed consent forms you signed. Do you have any
> questions regarding this? (wait for reply and answer questions
> accordingly) Okay, lets begin the experiment."

Phase 2
Turn on camera.
Experimenter collects each of the participant's questionnaire packets and brings both participants into the videotaping room.

"Now we will begin the second phase of the experiment. In this part
of the study we are interested in seeing how couples interact
with each other. So now I will get you to spend the next five
minutes talking about what you like about each other, how
you like spending your time together and about the things
that makes your relationship great, or a current event.
Remember, I will be videotaping your discussion.
While you are doing this I will go to the main lab to see if the computer has
finished calculating your personality profiles. When they
are done I will come back and give them to you to look at.
You can begin talking as soon as I leave this room and close
the door behind me. Please stay on topic for the next five
minutes."

Experimenter leaves the room and returns to main lab.

After five minutes the experimenter returns to the videotaping room with the (bogus)
personality feedback profiles.

"The computer has printed out your personality profiles so what
I'll do is take you (female) to the next room to explain your
Profile to you and to give you a chance to look it over for
a few minutes. I will come back to do the same with you (male).

The female is then taken to a room next to the videotaping room and is given
her profile.

"Just to let you know, your profile is the profile on top and your
partner's is the one on the bottom. See, your names are beside
your profiles. Also, when the program was designed 2000
people (1000 males, 1000 females) completed the same
questionnaires that you filled out on the computer. From
this a set of norms were created so that we can look at how
you and your partner compare to other people between the
ages of 18-30. Basically, the program prints out your top
30 traits and shows you how you compare to the group
of 2000 people from which the program was created. That
is what those numbers that are written as percentiles are beside
each of your traits and your partner's traits. Lets look at your
profile so that I can explain this to you. See, your first trait
was ___ and you scored in the ___ percentile on that which is high.
That means you scored higher on ___ than ___ percent of those
2000 people who filled out the same set of questionnaires.
If you look at your partner's profile he/she had the same trait, but

he/she scored in the ___ percentile. That is a low score and means
that they were higher than only ___ percent of those 2000
people for that trait, whereas ___ percent of those 2000 people scored
higher than your partner for that trait. Do you understand? Great,
I will leave you alone for a couple of minutes so that you can
look at your profile and your partner's profile. I will now go
to the other room to give your partner their profile and give
them some time to look over their profile too."

Experimenter goes into the videotaping room and goes through the same instructions with
the male partner. After five minutes the experimenter first goes to the room where the
female is and collects her personality profile sheet.

"Hi, I am just going to collect your profile from you and will let you
take it with you at the end of the experiment. Right now I would like
to get back to the actual experiment and would like to have you fill
out this short questionnaire. Basically, we are interested in knowing
how you are feeling at this very moment. There are several adjectives
listed on this questionnaire and I want you to use this number scale
to rate how you feel on each of these adjectives. Please read the
instructions carefully. I will come back to get you in a couple
of minutes once you and your partner have completed this questionnaire."

Experimenter leaves room and returns to videotaping room and goes through the same
instructions with the male partner. Once both participants finish the questionnaire
the experimenter collects the questionnaires and brings the female back to the
videotaping room.

Phase 3

Second Discussion Task: Conflict Resolution

The experimenter ensures that the each member of the couple is directly seated
across from one another and begins the conflict resolution task. In study one the couple
is asked to resolve the 3 issues that the male listed in her questionnaire package at the
beginning of the experiment, whereas the couple is asked to discuss the issues the female
nominated in study 2.

"Earlier you listed (experimenter reads the three nominated issues to couple)
that you either disliked about your partner or that you wanted
him/her to change. I would like you to discuss each of these issues with
your partner for the next ten minutes. When discussing each of these issues
tell your partner what it is you dislike about these three things, why you want
your partner to change them, how they bug you or impact on your relationship,
as well as telling your partner about any other things that you want them

to change that you did not list as I only asked for three."

Experimenter then turns to the other partner and says:

"Now this is a discussion. Thus, you don't have to sit and only listen.
You can tell your partner your thoughts, feelings, and opinions on each of these
issues. The goal is for you to mutually discuss the issues and try to come
to a resolution."

Experimenter then looks at both partners and says:

"So, you have ten minutes to discuss each of these things. Please
stay on topic. The whole goal is to come to a solution or resolution
on these issues. I will come back to get you once the ten minutes has passed.
You can begin talking once I leave this room. Remember to discuss
all three topics."

Phase 4

Follow-Up Questionnaires

Experimenter returns to videotaping room

"Okay, that is it for the discussion tasks. Now I would like each of
you to fill out another serious of questionnaires that look at how
you are feeling now, how you think you acted and how you
think your partner acted during the experiment. You will
fill out these questionnaires in separate rooms like we did
at the beginning of the experiment. Do you have any questions?"

The experimenter then gives each participant a pen and paper questionnaire package and
sets up the computers in each room for the participants to fill out the follow-up measures.

Phase 5

Full Debriefing

The experimenter then provides each participant with a full debriefing and
ensures that both members of the couple are not feeling any residual dysphoria from the
personality feedback and conflict resolution task. The couple is informed that the
feedback was bogus and that all subjects in the study are given the bogus profiles to make
one member of the couple upset and to make the other partner feel good. Couples are
also told that the purpose of the study is to look at how threatening or bolstering one
member's self-worth affected the communication patterns between the members of the

couple during the conflict resolution task. Couples are given ample time to discuss the impact of the study on their mood and interpersonal behaviour and extreme caution is taken to ensure that the members of the couple are not adversely affected by the experimental manipulation.

Also, the experimenter is expected to take full precautions not to unduly harm any of the participants. Thus, if any participant appears distressed or indicates such feelings, at any time during the experiment, the experimenter is to halt the experiment. In the instance that any participants continue to feel distressed at the end of the debriefing session, Dr. Santor will be contacted to organize a discussion with the participant. In addition, extremely distressed subjects will be given contact numbers for the Dalhousie Counselling Centre and the QEII Health Sciences Centre. The experimenter will contact such participants, under the supervision of Dr. Santor, a week following the experiment to ensure that the individual is either a) feeling better or b) has received the appropriate follow-up from a professional.

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Table 1.

Contingency Table of Cross-Classified Events for Sequential Data.

		Individual Consequent Behaviour	
		Constructive	Destructive
Partner Antecedent Behaviour	Constructive	*Positive tit for tat* (a) 30	*Attack* (b) 0
	Destructive	*Appeasement* (c) 5	*Negative tit for tat* (d) 65

Table 2.

Experimental Design for Study I and Study II.

Gender	Feedback Groups		Control Group
	Condition 1	Condition 2	Condition 3
Male	*negative feedback*	*positive feedback*	*neutral feedback*
Female	*positive feedback*	*negative feedback*	*neutral feedback*

Table 3.

Means, and Standard Deviations for Participant's Ratings Averaged Across the Three Conflict Resolution Topics.

Conflict Resolution Ratings	Study 1 Male's Ratings	Study 2 Female's Ratings
a) How likely is it that your partner would change this behaviour if you discussed it with them?	2.79 (1.32)	3.12 (1.29)
b) How important is this to your relationship with your partner?	2.61 (1.22)	2.64 (1.22)
c) What kind of impact does this have on your relationship?	2.48 (0.73)	2.55 (0.82)
d) How often have you talked about this with your partner?	5.16 (2.27)	4.85 (2.09)
e) How much do you dislike this behaviour?	3.12 (1.30)	3.17 (1.55)
f) How much does this behaviour upset you?	2.50 (1.36)	2.67 (1.42)

Table 4.

Correlations, Means, and Standard Deviations for Dependency, Self-Criticism, and Dependent Measures Summed Across Experimental Conditions Study 1.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	Mean	SD
1. DEQ Dependency										127.91	18.43
2. DEQ Self-Criticism	-0.004									112.38	20.24
3. DAS Adjustment	0.02	-0.46****								103.80	14.92
4. CES-D Dysphoria	0.22**	0.58****	-0.31****							13.14	9.29
5. MICS-IV Constructive Behaviour	0.02	-0.29***	0.39****	-0.09						0.65	0.17
6. MICS-IV Destructive Behaviour	-0.04	0.25***	-0.38****	0.09	-0.93****					0.28	0.18
7. Sequential: Positive Tit for Tat	0.06	-0.25***	0.36****	-0.05	0.89****	-0.93****				0.72	0.16
8. Sequential: Attack	-0.06	0.25***	-0.36****	0.05	-0.89****	0.93****	-1.00****			0.27	0.16
9. Sequential: Appease	-0.03	-0.18*	0.19*	-0.13	0.65****	-0.69****	0.51****	-0.51****		0.56	0.18
10. Sequential: Negative Tit for Tat	0.03	0.18*	-0.19*	0.13	-0.65****	0.69****	-0.51****	0.51****	-1.00****	0.43	0.18

Note: DEQ = Depressive Experiences Questionnaire. DAS= Dyadic Adjustment Scale. CES-D = Center for Epedemiologic Studies Depression Scale. MICS-IV Behaviours represent mean proportion of Constructive and Destructive Behaviour.
+$p < 0.10$ *$p < 0.05$ **$p < 0.01$ ***$p < 0.001$ ****$p < 0.0001$

Table 5.

Correlations, Means, and Standard Deviations for Dependency, Self-Criticism, and Dependent Measures Summed across Experimental Conditions Study 2.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	Mean	SD
1. DEQ Dependency										126.37	17.55
2. DEQ Self-Criticism	0.16									109.84	18.24
3. DAS Adjustment	-0.03	-0.37****								106.71	13.40
4. CES-D Dysphoria	0.25***	0.67****	-0.39****							10.86	7.57
5. MICS-IV Constructive Behaviour	-0.02	-0.14	0.26***	-0.17*						0.68	0.16
6. MICS-IV Destructive Behaviour	0.07	0.15+	-0.32****	0.26***	-0.78****					0.23	0.14
7. Sequential: Positive Tit for Tat	-0.04	0.18*	0.32****	-0.26***	0.78****	-0.92****				0.78	0.13
8. Sequential: Attack	0.04	0.18*	-0.31****	0.26***	-0.78****	0.92****	-1.00****			0.22	0.13
9. Sequential: Appease	0.09	-0.04	0.11	-0.09	0.68****	-0.67****	0.52****	-0.52****		0.58	0.18
10. Sequential: Negative Tit for Tat	-0.09	0.04	-0.11	0.09	-0.68****	0.67****	-0.52****	-0.52****	-1.00****	0.42	0.18

Note: DEQ = Depressive Experiences Questionnaire. DAS = Dyadic Adjustment Scale. CES-D = Center for Epedemiologic Studies Depression Scale. MICS-IV Behaviours represent mean proportion of Constructive and Destructive Behaviour.

+p < 0.10 *p < 0.05 **p < 0.01 ***p < 0.001 ****p < 0.0001

Footnotes

[1] Macro-level analysis refers to aggregating subject responses to compute the mean proportion of a specific behaviour (e.g., constructive), whereas micro-analytic strategies involve examining the sequences of behaviour individuals adopt following partner antecedent behaviour (e.g., attack).

[2] The odds ratio measures the degree to which one variable influences another, and is neither affected by the number of tallies contained within cells nor unequal row or column totals (Bakeman & Gottman, 1997). The odds ratio is computed using the following formula: ad/bc and ranges from zero to infinity, and equals one when there is no row classification effect. However, the log odds ratio which is calculated by taking the natural logarithm of the odds ratio [ln (ad/bc)] is often preferred as the computed statistic ranges from negative to positive infinity and equals zero when there is no effect. Both statistics are independent of sample size and are amenable to traditional parametric analysis. Each is similar to a likelihood chi-square test of independence and is unaffected by the presence of unequal marginal distributions.
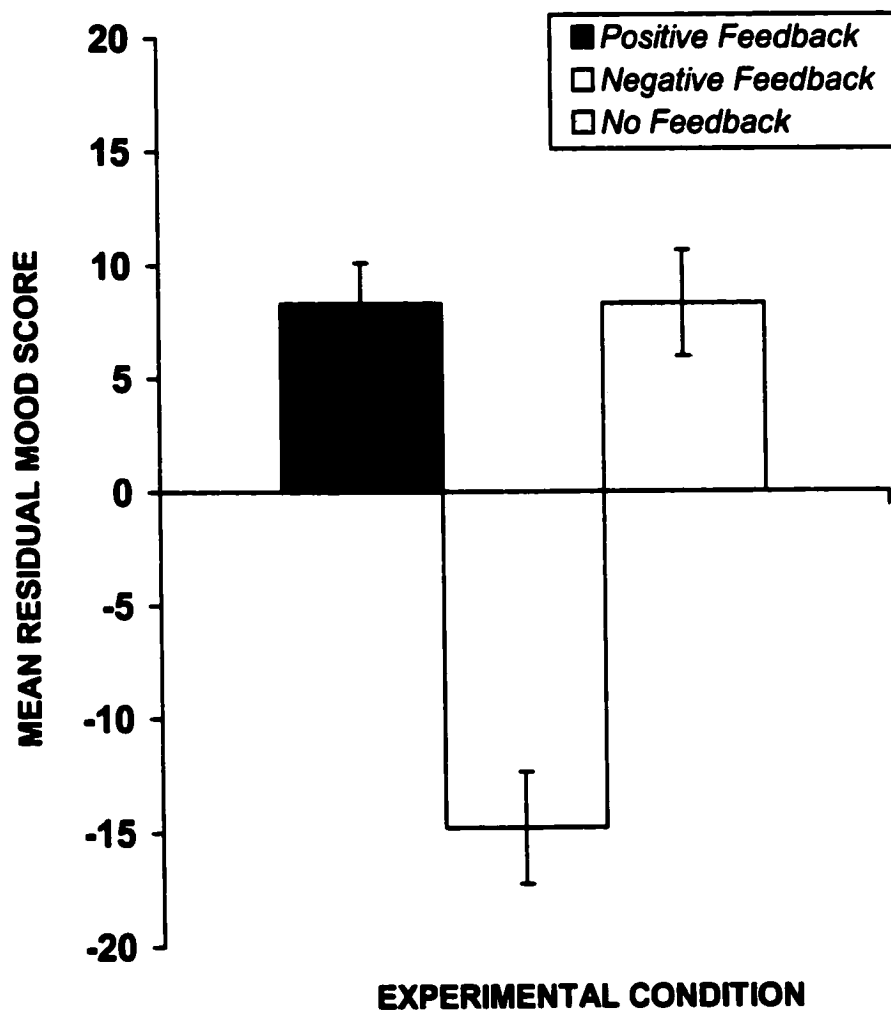
Figure 1. Mean (standard deviation) residual mood scores as a function of experimental condition.

Figure Caption

<u>Figure 2</u>. Study 1, mean proportion of macro-level behaviours as a function of dependency and experimental condition. Figure 2a. constructive behaviours and Figure 2b. destructive behaviours.
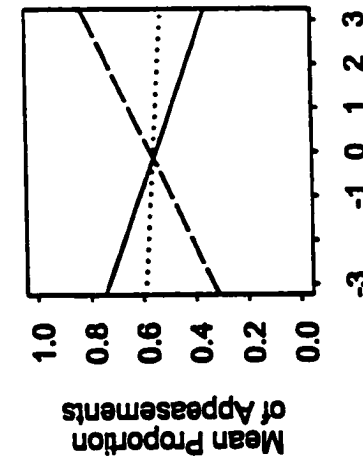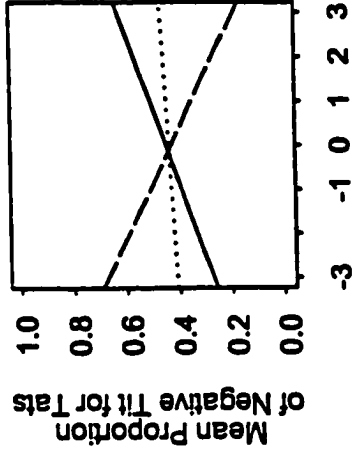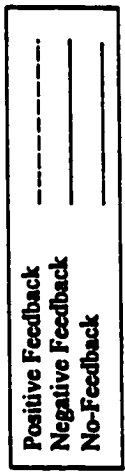
Mean Proportion
of Constructive Behaviours

Dependency
(a)
(Standardized Scores)

Mean Proportion
of Destructive Behaviours

Dependency
(b)
(Standardized Scores)

Positive Feedback
Negative Feedback
No-Feedback
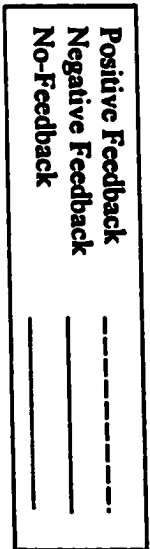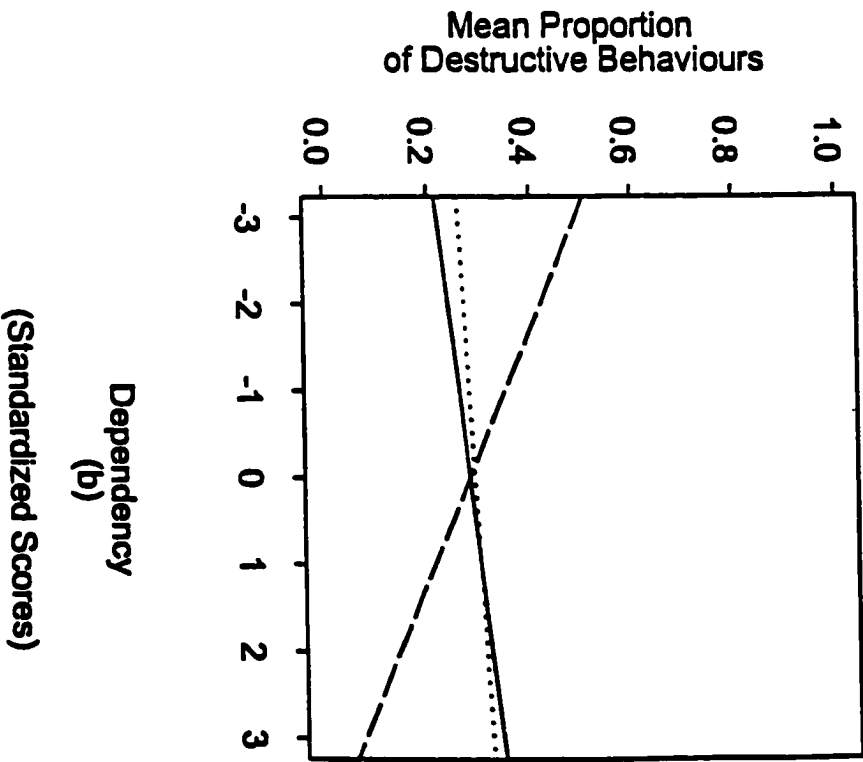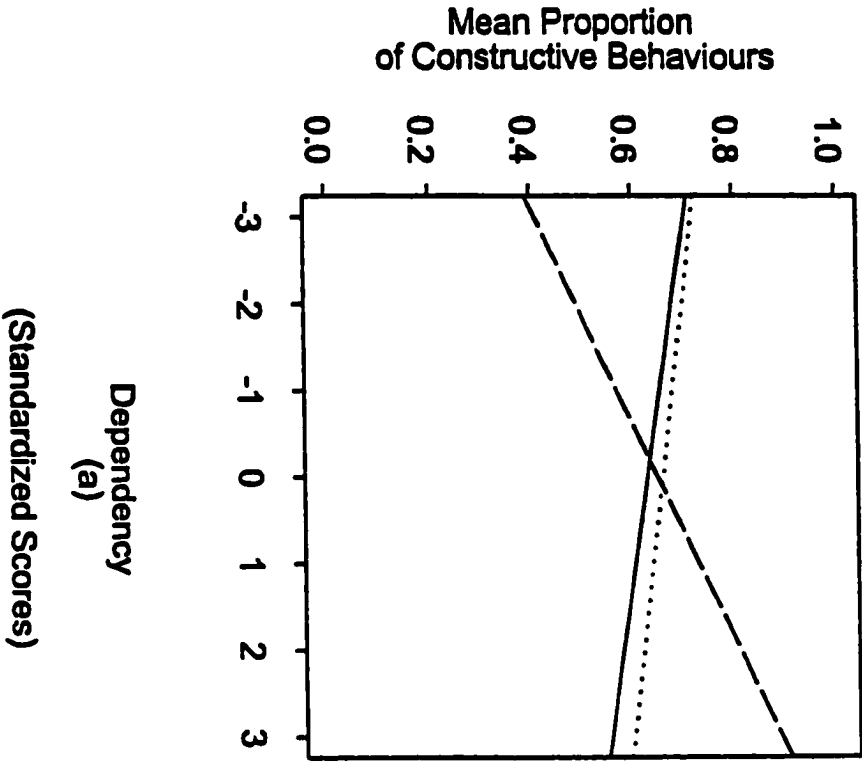
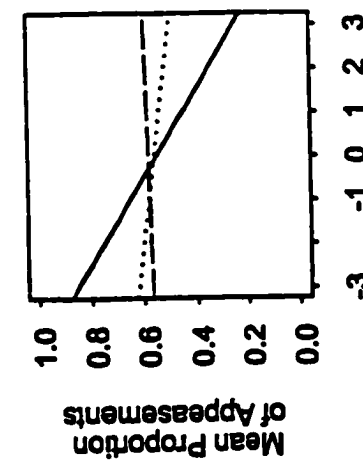Figure Caption

<u>Figure 3</u>. Study 1, mean proportion of macro-level behaviours as a function of self-criticism and experimental condition. Figure 3a. constructive behaviours and Figure 3b. destructive behaviours.

**Mean Proportion
of Constructive Behaviours**

Self-Criticism
(a)
(Standardized Scores)

**Mean Proportion
of Destructive Behaviours**

Self-Criticism
(b)
(Standardized Scores)

Positive Feedback
Negative Feedback
No-Feedback
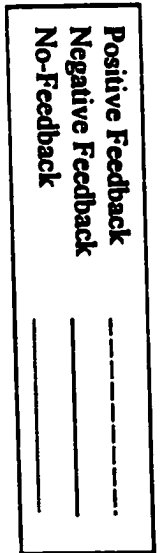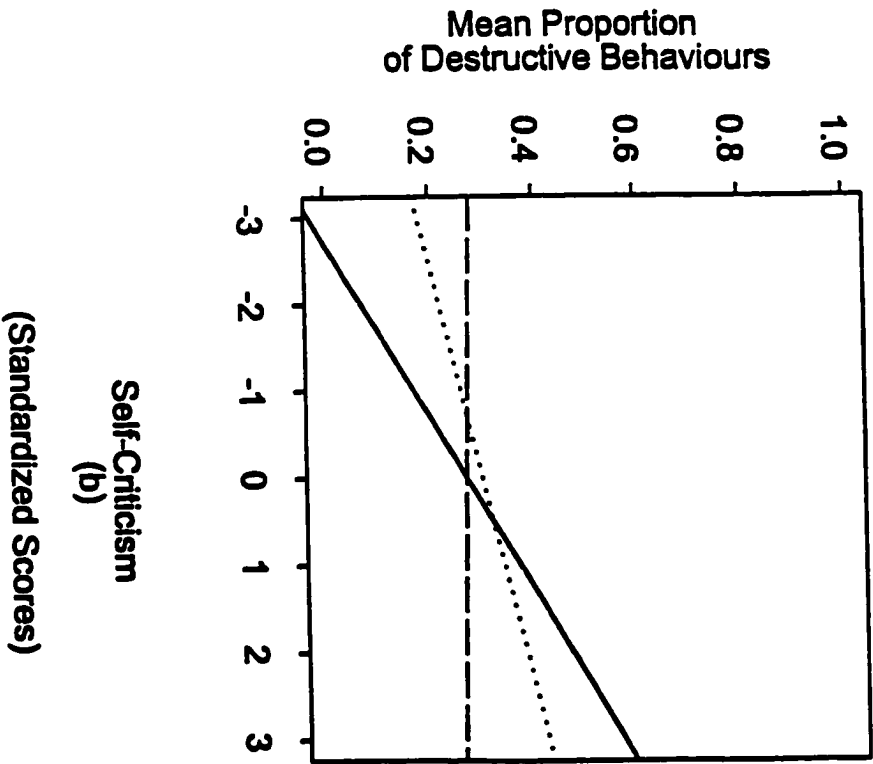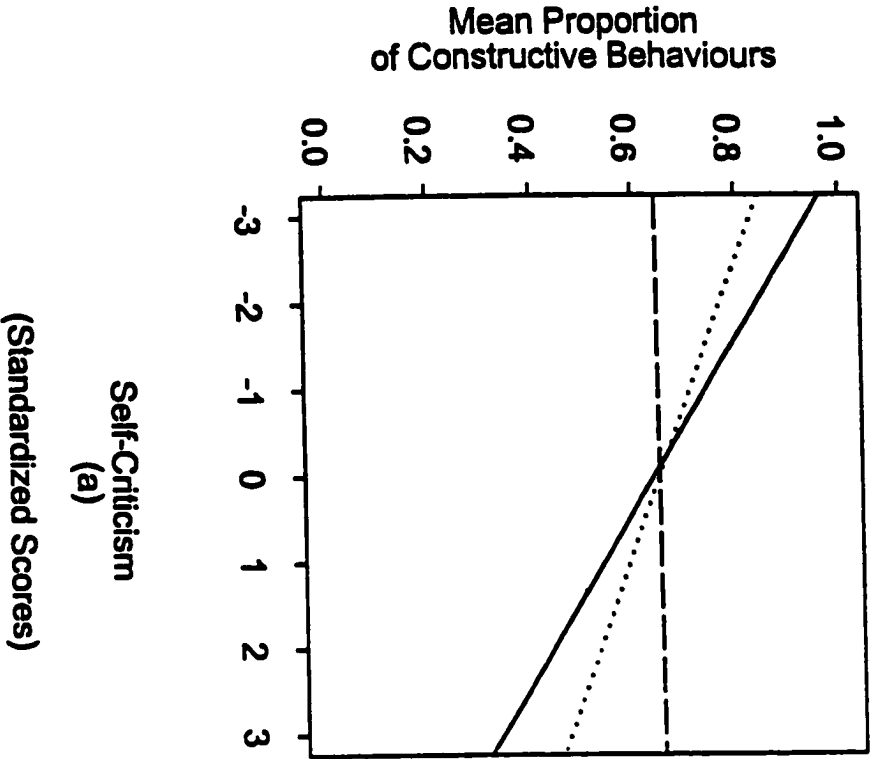
Figure Caption

Figure 4. Study 1, mean proportion of macro-level behaviours, controlling for partner parallel behaviours, as a function of dependency and experimental condition. Figure 4a. constructive behaviours and Figure 4b. destructive behaviours.
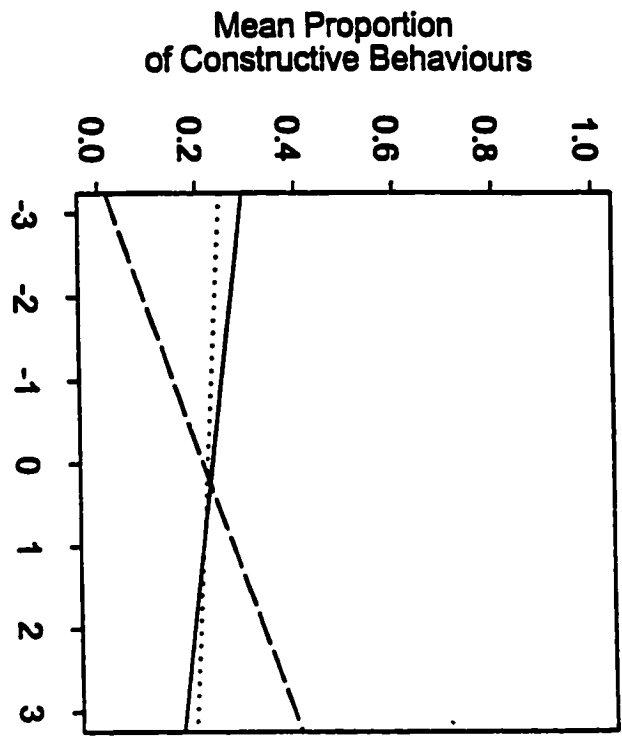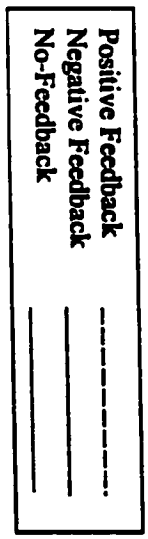
Mean Proportion
of Constructive Behaviours

Dependency
(a)

(Standardized Scores, Controlling for Partner Effects)

Mean Proportion
of Destructive Behaviours

Dependency
(b)

(Standardized Scores, Controlling for Partner Effects)

Positive Feedback
Negative Feedback
No-Feedback
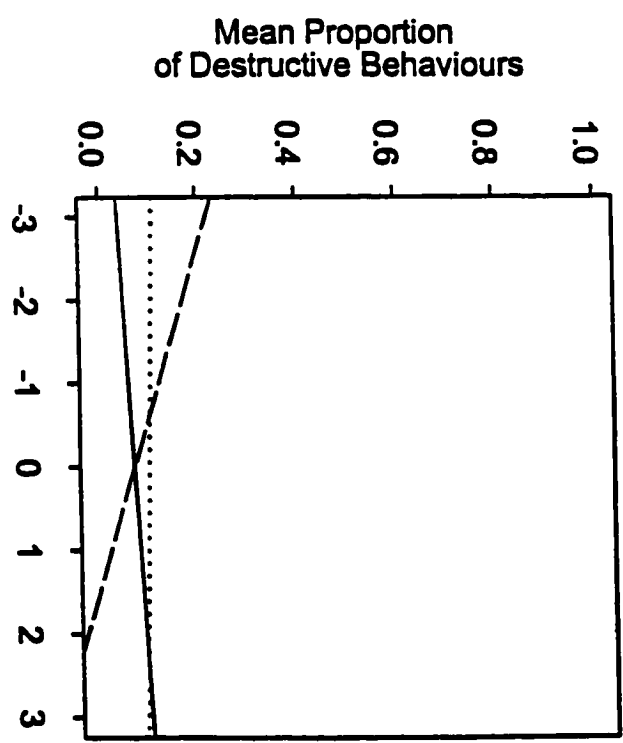
Figure Caption

Figure 5. Study 1, mean proportion of macro-level behaviours, controlling for partner parallel behaviour, as a function of self-criticism and experimental condition. Figure 5a. constructive behaviours and Figure 5b. destructive behaviours.
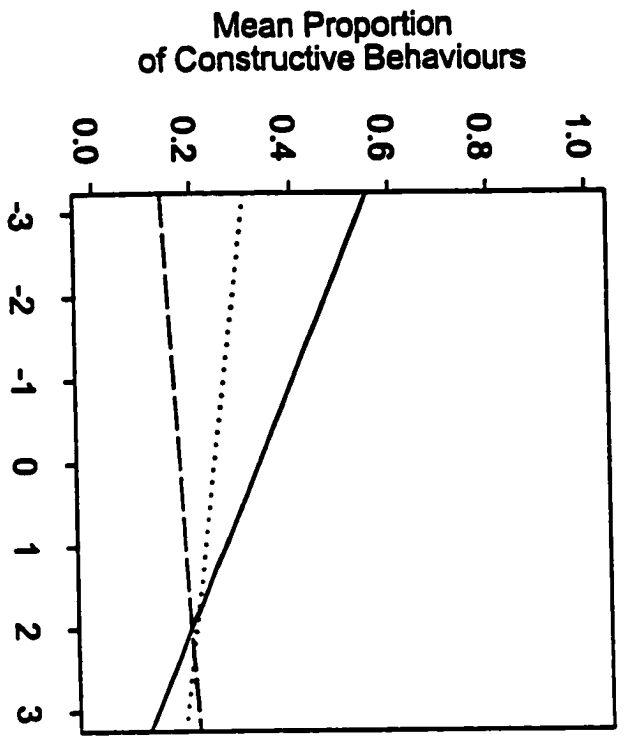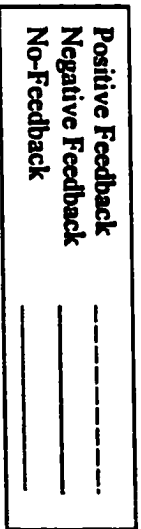
Mean Proportion
of Constructive Behaviours

Self-Criticism
(a)

(Standardized Scores, Controlling for Partner Effects)

Mean Proportion
of Destructive Behaviours

Self-Criticism
(b)

(Standardized Scores, Controlling for Partner Effects)

Positive Feedback
Negative Feedback
No-Feedback
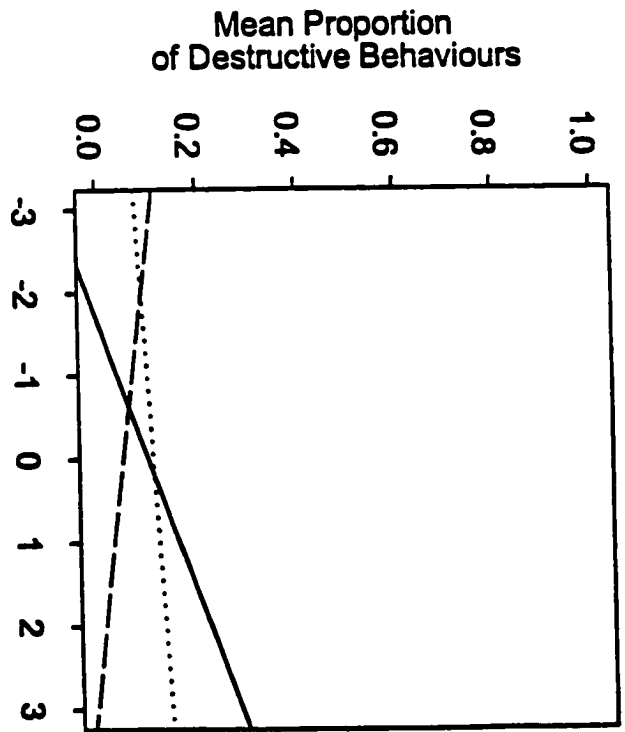
Figure Caption

Figure 6. Study 1, mean proportion of micro-level sequential behaviours as a function of dependency and experimental condition. Figure 6a. positive tit for tat, Figure 6b. attacks, Figure 6c. appeasements, and Figure 6d. negative tit for tat.
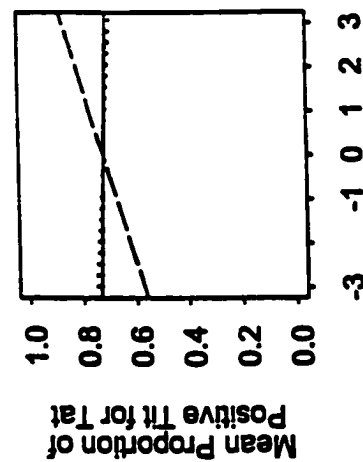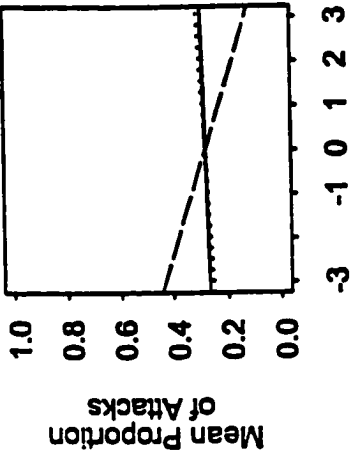
Figure with four panels (a), (b), (c), and (d) plotting Mean Proportion measures against Dependency (Standardized Scores), with a legend indicating Positive Feedback, Negative Feedback, and No-Feedback conditions.

Figure Caption

Figure 7. Study 1, mean proportion of micro-level sequential behaviours as a function of self-criticism and experimental condition. Figure 7a. positive tit for tat, Figure 7b. attacks, Figure 7c. appeasements, and Figure 7d. negative tit for tat.
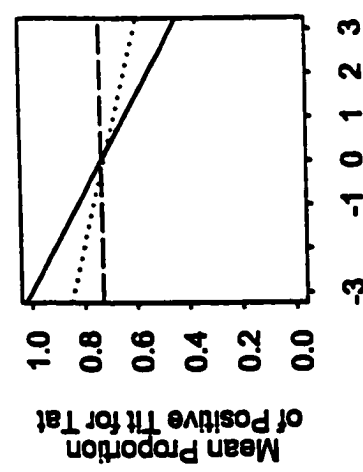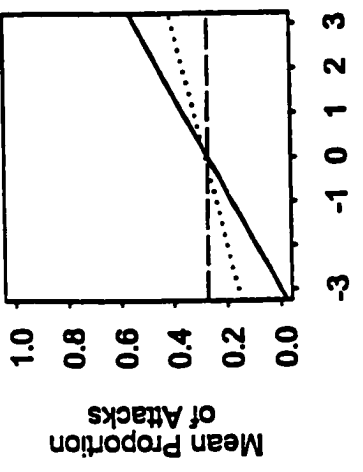
Positive Feedback
Negative Feedback
No-Feedback

Self-Criticism
(a)
(Standardized Scores)

Self-Criticism
(b)
(Standardized Scores)
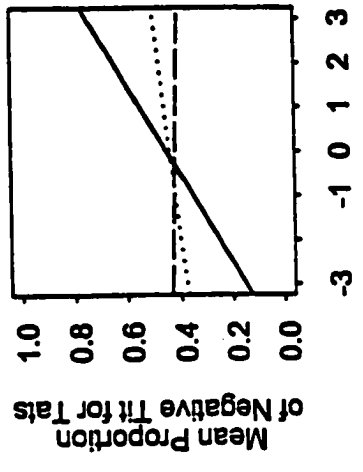
Self-Criticism
(c)

Self-Criticism
(d)

Mean Proportion
of Positive Tit for Tat

Mean Proportion
of Attacks

Mean Proportion
of Appeasements

Mean Proportion
of Negative Tit for Tat

205
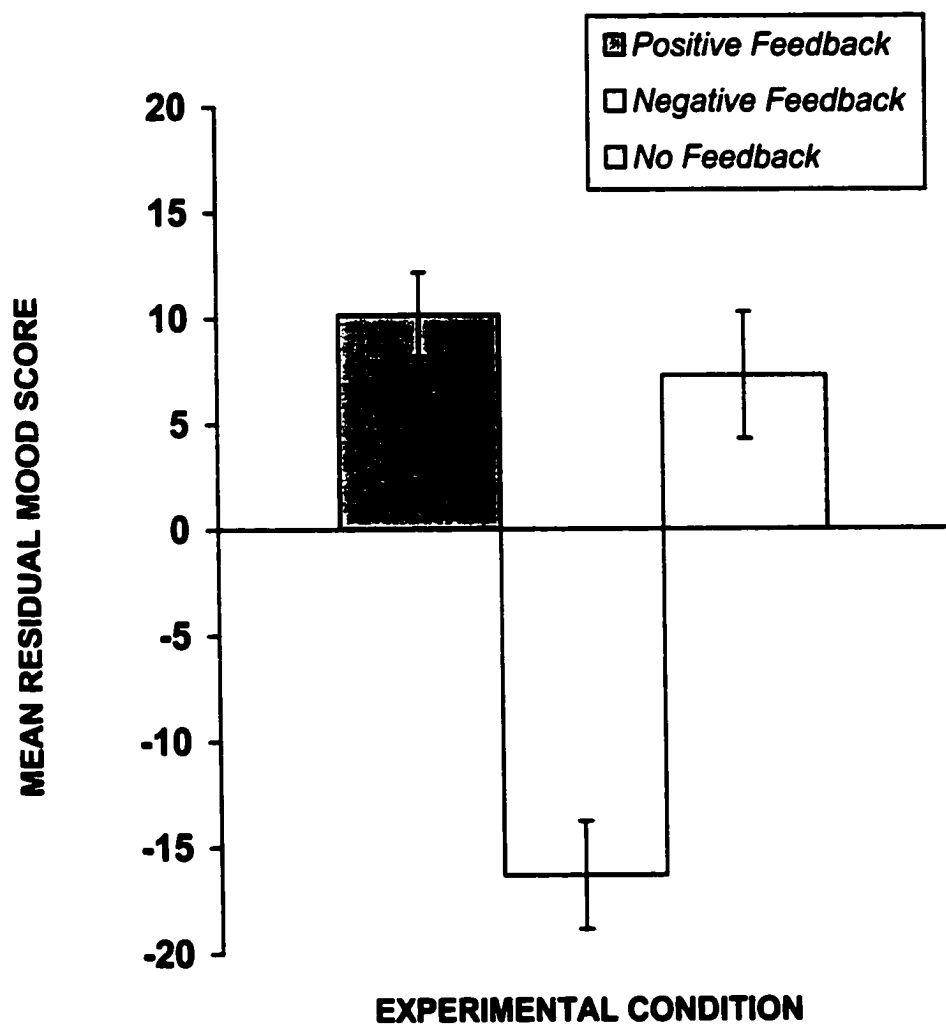
Figure 8. Mean (standard deviation) residual mood scores as a function of experimental condition.
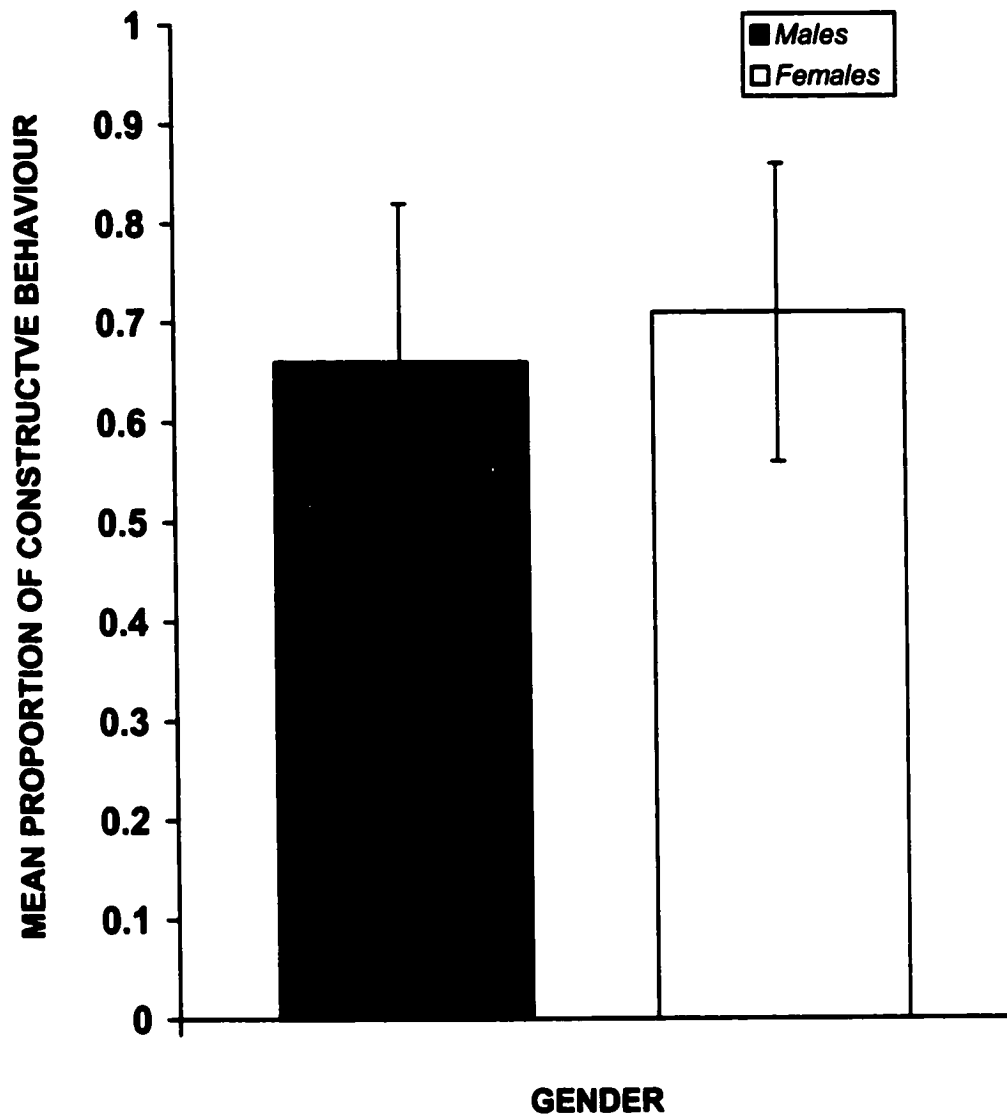
Figure 9. Study 2, mean (standard deviation) proportion of constructive behaviour adopted by participants as a function of gender.
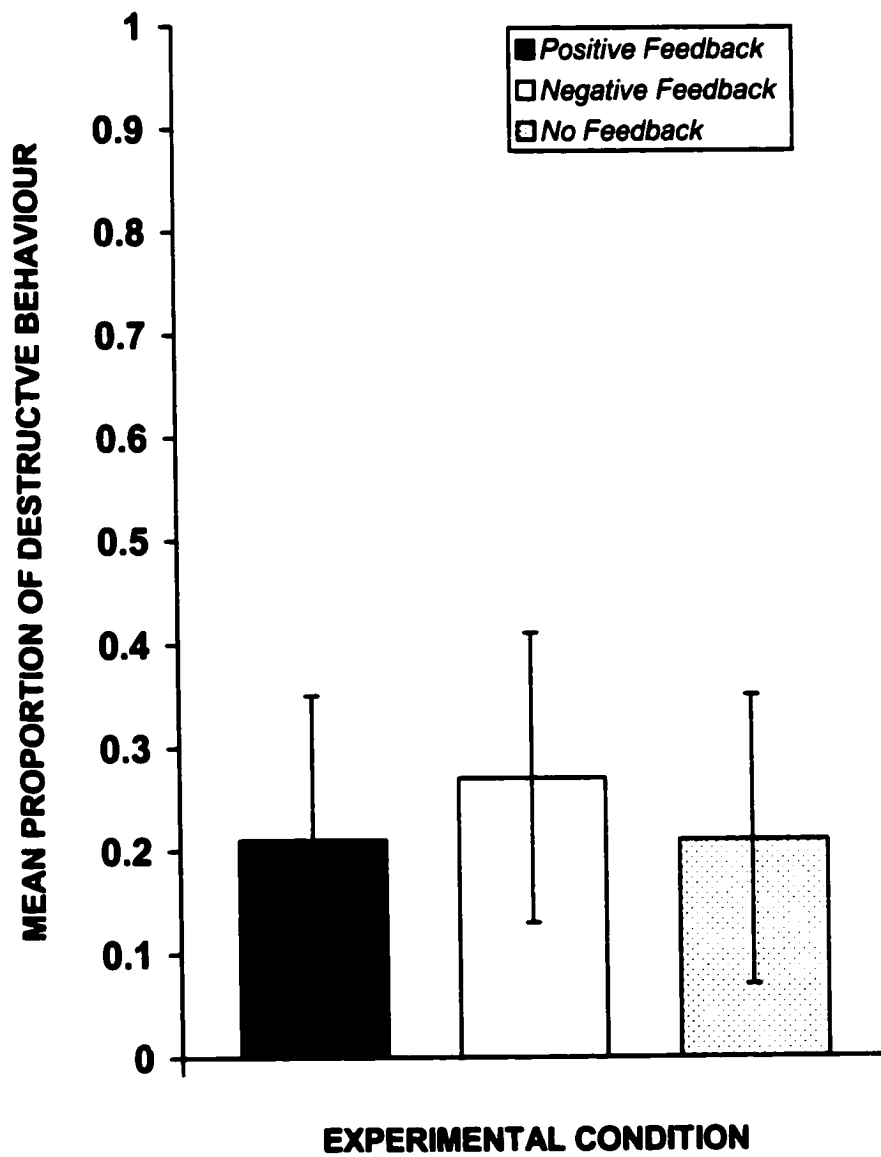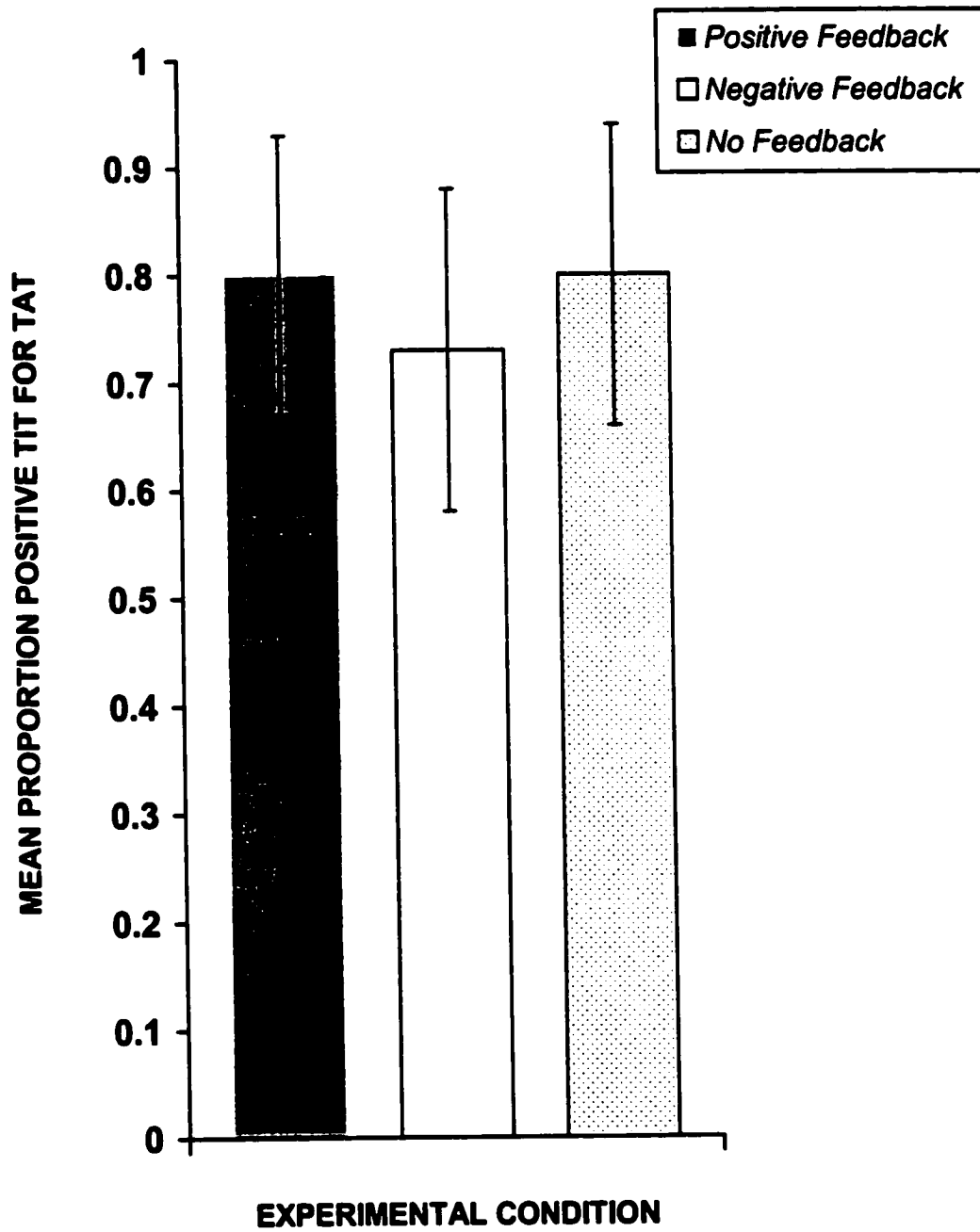
Figure 10. Study 2, mean (standard deviation) proportion of destructive behaviour adopted by participants as a function of experimental condition.
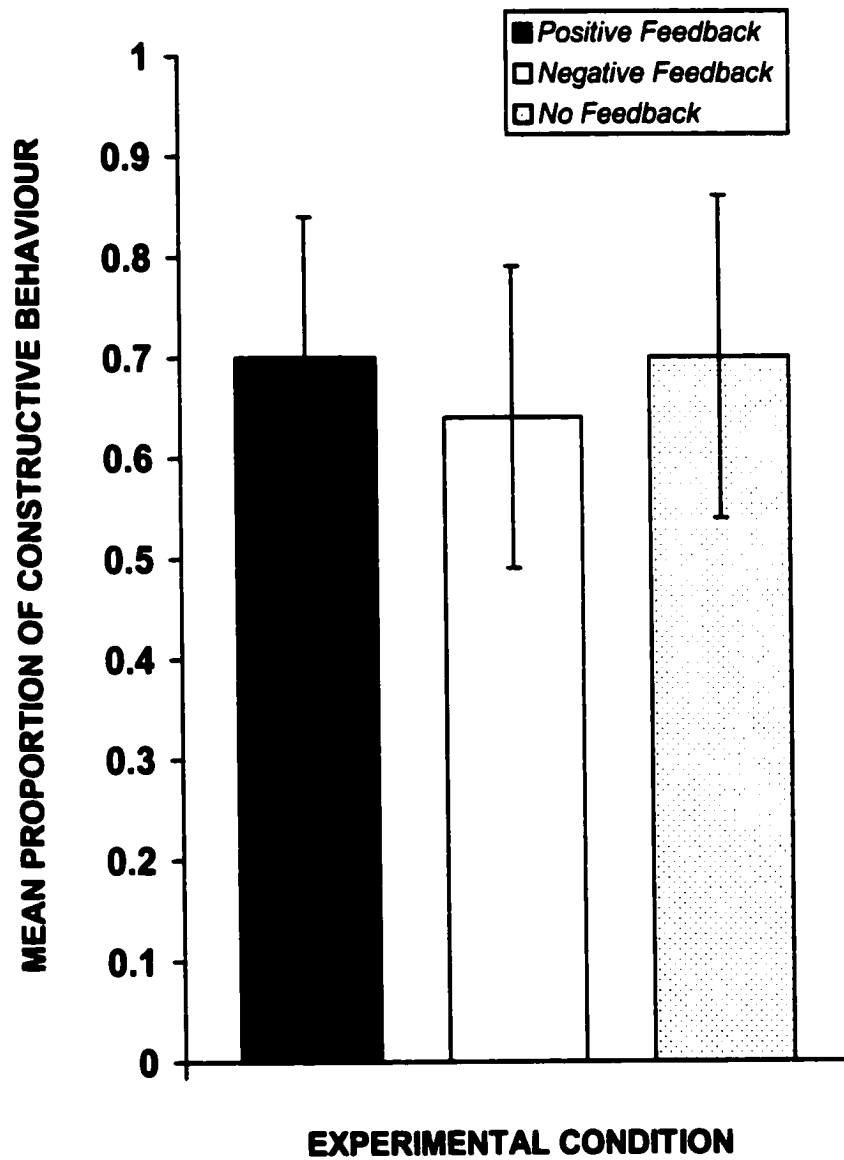
Figure 11. Study 2, mean (standard deviation) proportion of constructive behaviour adopted by participants as a function of experimental condition.
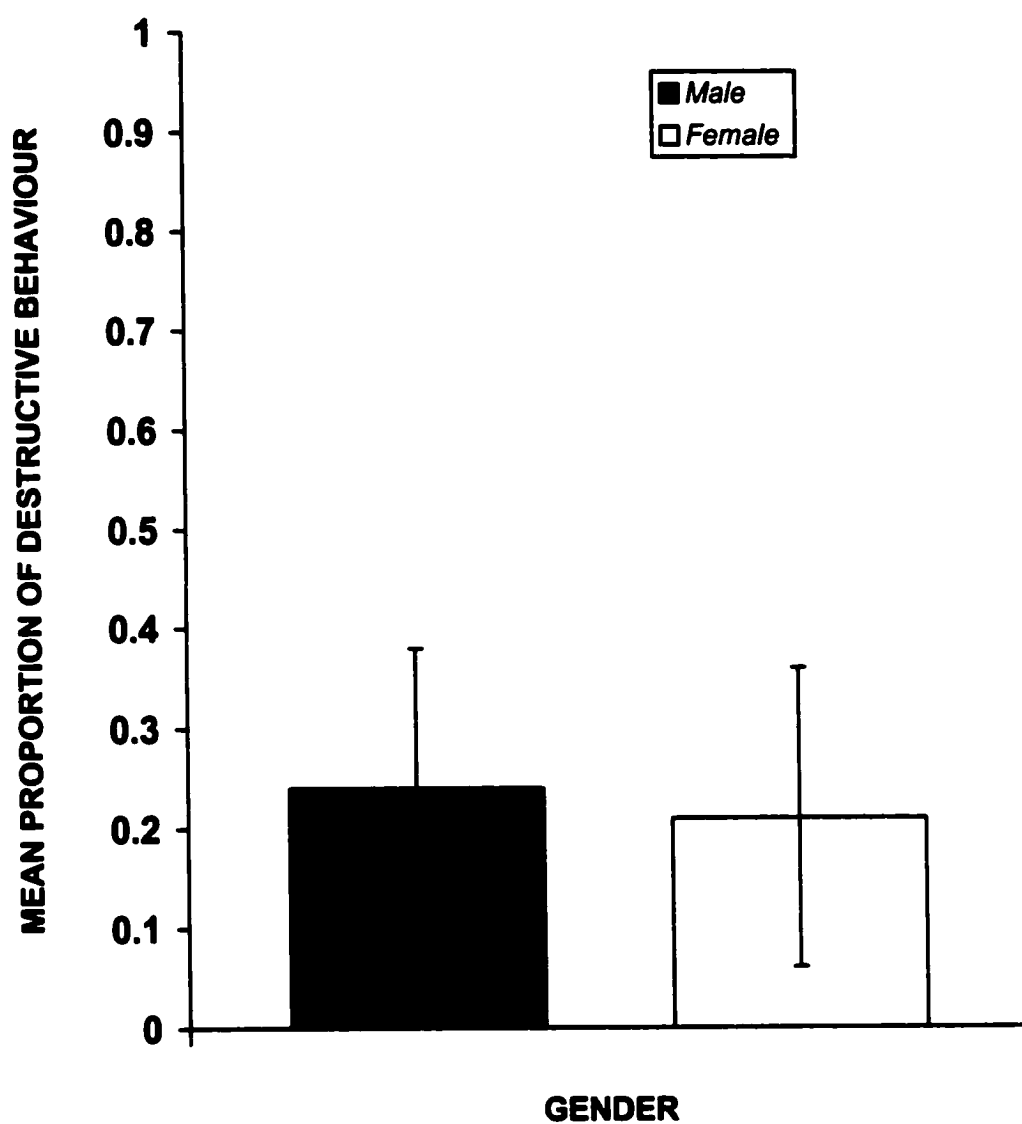
Figure 12. Study 2. mean (standard deviation) proportion of destructive behaviour adopted by participants as a function of gender.

Figure 13. Study 2, mean (standard deviation) proportion of positive tit for tat adopted by participants as a function of experimental condition.
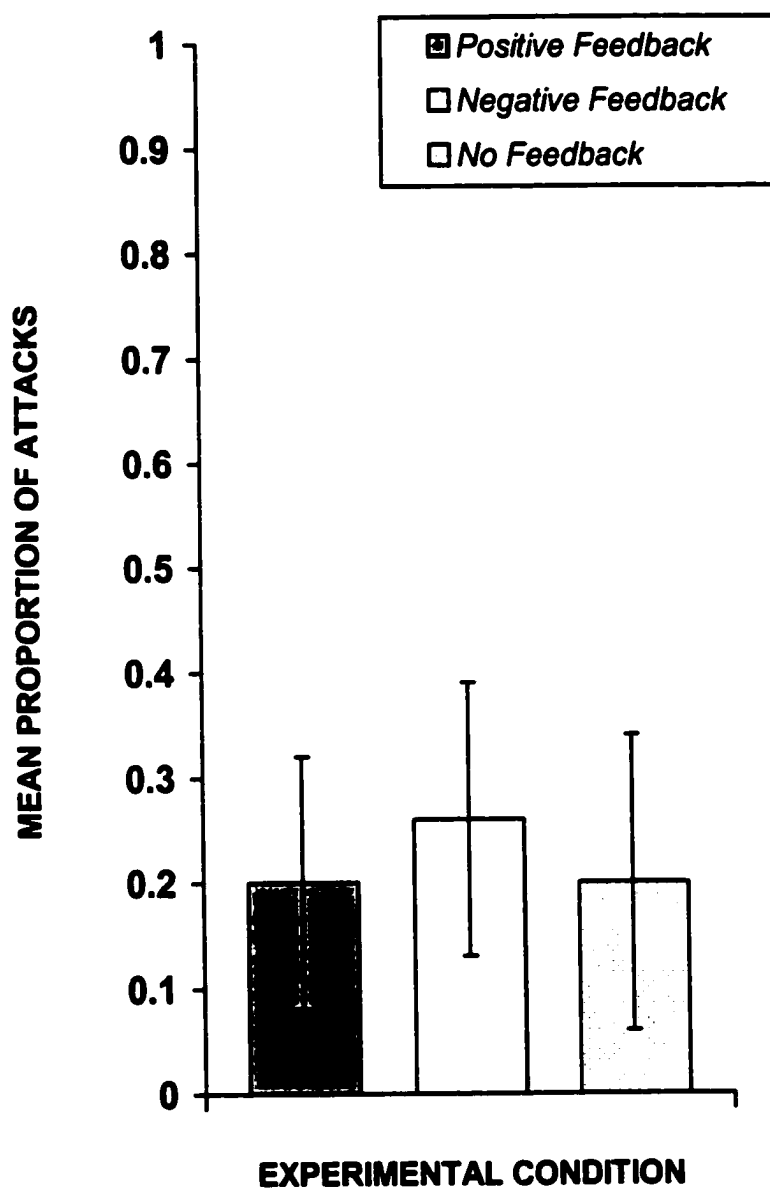
Figure 14. Study 2, mean (standard deviation) proportion of attacks adopted by participants as a function of experimental condition.
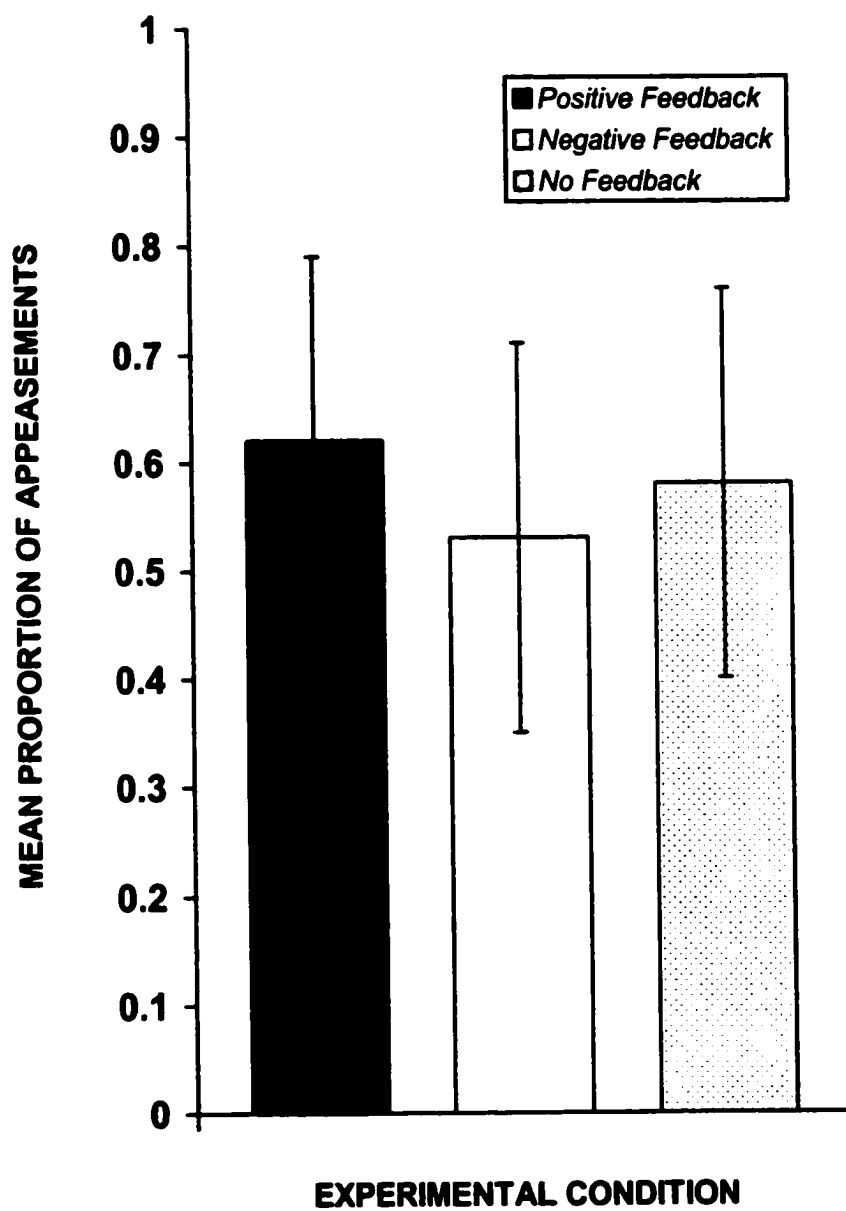
Figure 15. Study 2, mean (standard deviation) proportion of appeasements adopted by participants as a function of experimental condition.
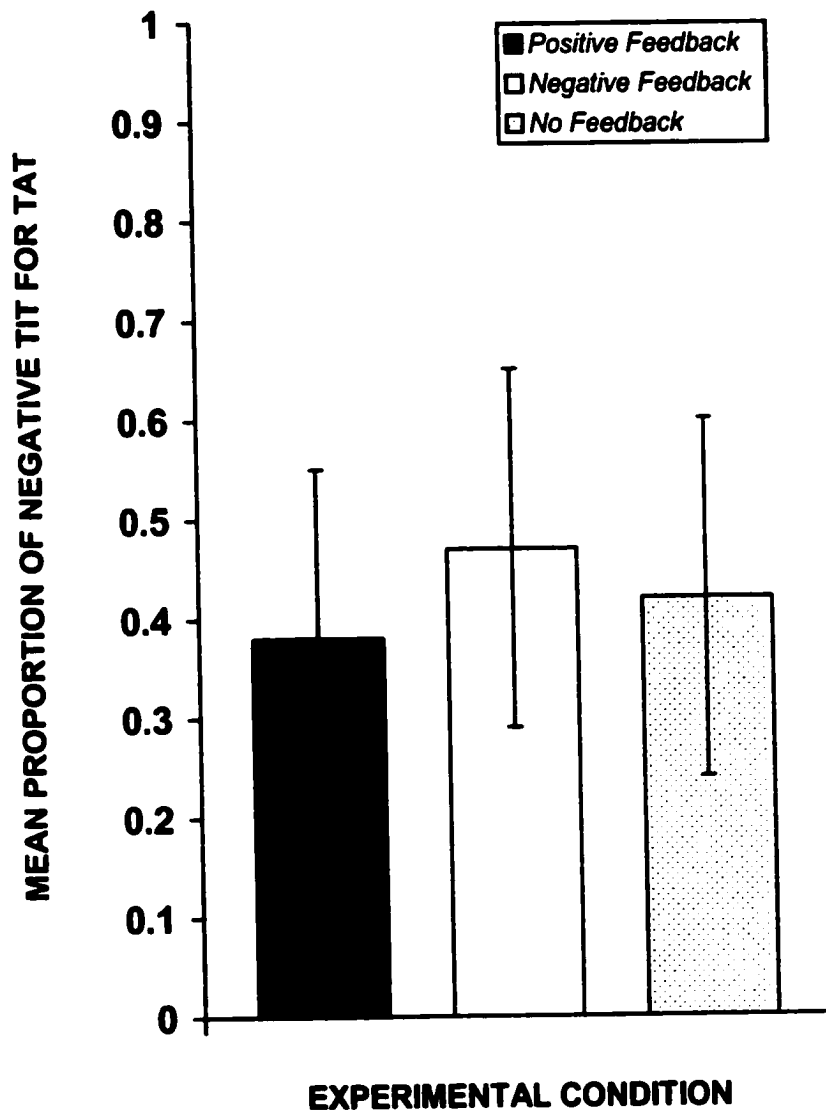
Figure 16. Study 2, mean (standard deviation) proportion of negative tit for tat adopted by participants as a function of experimental condition.