

# **Love Hurts: Predicting Trajectories of Marital Satisfaction from Couples' Behaviour During Discussions of Interpersonal Injuries**

**by**  
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# Approval

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## Ethics Statement

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

- a. human research ethics approval from the Simon Fraser University Office of Research Ethics

or

- b. advance approval of the animal care protocol from the University Animal Care Committee of Simon Fraser University

or has conducted the research

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## Abstract

Interpersonal injuries are inevitable in intimate relationships (cf. Fincham, 2000) and addressing the emotional fallout from these experiences is challenging. Although interpersonal injuries have important consequences for relationships (Lemay et al., 2012), little is known about the dyadic process that facilitates the resolution of hurt feelings and helps couples to maintain or to strengthen relationship well-being. I examined whether couples' observed behaviour during discussions of interpersonal injuries predicted trajectories of marital satisfaction over two years. Multilevel modelling indicated that marital satisfaction declined over two years, and wives' positive behaviour during discussions of husbands' hurt feelings buffered declines in wives' satisfaction. Specifically, wives who were more emotionally positive had increases in marital satisfaction, whereas wives who were less emotionally positive had decreases in marital satisfaction. Husbands' and wives' negative behaviour during discussions of husbands' hurt feelings hastened declines in marital satisfaction for both spouses. Couples' behaviour during discussions of wives' hurt feelings did not moderate trajectories of marital satisfaction, with one exception. Husbands who asked more questions during the discussion of wives' hurt feelings had increases in marital satisfaction, whereas husbands who asked fewer questions had decreases in marital satisfaction over time. Couples' ability to navigate discussions of hurt feelings following interpersonal injury may be critical for repairing and maintaining relationship well-being.

**Keywords:** couples; marital satisfaction; interpersonal injury; observed behaviour; longitudinal

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# Table of Contents

Approval.....	ii
Ethics Statement.....	iii
Abstract.....	iv
Acknowledgements.....	v
Table of Contents.....	vi
List of Tables.....	vii
List of Figures.....	viii
<b>Introduction.....</b>	<b>1</b>
<b>Method.....</b>	<b>6</b>
<b>Results.....</b>	<b>13</b>
<b>Discussion.....</b>	<b>18</b>
<b>Tables and Figures.....</b>	<b>24</b>
<b>References.....</b>	<b>37</b>
<b>Appendix Transgression Interaction Coding System (TICS).....</b>	<b>44</b>
POSITIVE CODES.....	46
NEGATIVE CODES.....	51
NEUTRAL CODE (Bradbury & Pasch, 1998).....	54
OFF-TASK CODE (Bradbury & Pasch, 1998).....	54

## List of Tables

Table 1.	Correlations Among T3 Marital Satisfaction and Spouses' Behavioural Codes During Discussions of Husbands' Topic .....	24
Table 2.	Correlations Among T3 Marital Satisfaction and Spouses' Behavioural Codes During Discussions of Wives' Topic .....	25
Table 3.	Factor Analyses of Spouses' Behavioural Codes During Discussions of Interpersonal Injuries.....	26
Table 4.	Means and Standard Deviations for Study Variables.....	27
Table 5.	Correlations Among Time 3 Marital Satisfaction and Spouses' Behavioural Codes.....	28
Table 6.	Positive Emotion Composite as a Moderator of Marital Satisfaction Trajectories .....	29
Table 7.	Self-Disclosure as a Moderator of Marital Satisfaction Trajectories .....	30
Table 8.	Asking Questions as a Moderator of Marital Satisfaction Trajectories ....	31
Table 9.	Negative Emotion Composite as a Moderator of Marital Satisfaction Trajectories .....	32

## List of Figures

Figure 1.	Listener wives' positive emotion strategies moderate trajectories of marital satisfaction over two years .....	33
Figure 2.	Listener husbands' asking questions behaviour moderates trajectories of marital satisfaction over two years .....	34
Figure 3.	Speaker husbands' negative emotion strategies moderate trajectories of marital satisfaction over two years .....	35
Figure 4.	Listener wives' negative emotion strategies moderate trajectories of marital satisfaction over two years .....	36



# Introduction

People seek affiliation with others, and those who are successful in establishing a network of relationships, particularly close relationships, live happier, longer lives (Baumeister & Leary, 1995; Kiecolt-Glaser & Newton, 2001; Vaillant, 2012). Despite the physical and psychological benefits of connecting with others, relationships open the door to substantial risk, including the possibility of hurt, neglect, and betrayal. As relationships become more intimate and interdependent, and partners interact more frequently, the chance that one or both partners will be hurt may increase. Interpersonal injuries occur when relationship partners behave in ways that signal partner rejection or devaluation, or violate relationship rules and expectations (Feeney, 2004; Leary, Springer, Negel, Ansell, & Evans, 1998; Vangelisti, Young, Carpenter-Theune, & Alexander, 2005). These negative relationship experiences can trigger a combination of distressing emotions commonly referred to as 'hurt feelings' (Feeney, 2005; Vangelisti, 2007). Given the likelihood of interpersonal injuries and the consequences for individuals and relationships (Lemay, Overall, & Clark, 2012; Vangelisti & Young, 2000), how people regulate difficult emotions following interpersonal injury is of growing empirical and clinical interest.

Addressing the emotional fallout that can result from interpersonal injuries is challenging (Gordon & Baucom, 1998). Some partners emotionally distance themselves from each other, harbour feelings of ill-will, or terminate the relationship, whereas other partners find ways to forgive each other and to maintain or to strengthen their relationship (Abrahamson, Hussain, Khan, & Schofield, 2012; Heintzelman, Murdock, Krycak, & Seay, 2014). Current literature provides insights regarding individual and relationship characteristics that contribute to the resolution of interpersonal injuries (see Fincham, Hall, & Beach, 2006 for review), but there is a dearth of observational data on this dyadic process. Examining the processes that couples engage in when hurt could enhance our understanding of why some relationships deteriorate over time and illuminate potential avenues to promote relationship well-being.

## **Coping with Interpersonal Injury in Intimate Relationships**

Successfully negotiating the relationship repair process following interpersonal injury is difficult. Among individuals faced with partner infidelity, 75% terminate their

relationship (Hall & Fincham, 2006), and only 10% of those who remain together report being able to put the event behind them (Vaughn, 2002). One reason couples may struggle to resolve interpersonal injuries is the emotional complexity of hurt feelings. Rather than describing a distinct feeling of hurt following interpersonal injury, people often report a mixture of discrete emotions combined with a diffuse feeling of distress or upset. When Feeney (2005) asked people to describe how they felt after their partner did or said something that hurt their feelings, she garnered 57 different emotion terms that clustered into four broad categories: sadness, hurt, anger, and shame. Many of the feelings that participants identified were also associated with more than one category (e.g., feeling heartbroken was associated with hurt and sadness; feeling humiliated was associated with hurt and shame). Although hurt feelings appear neurologically similar to physical pain (Eisenberger, Lieberman, & Williams, 2003), most forms of physical pain subside after an initial period of intensity. In contrast, hurt feelings can resurface long after the experience by memories of the event (Leary et al, 1998).

In addition to the complex emotional effects, couples may struggle to resolve interpersonal injuries because of the effect these experiences have on their evaluations of themselves, their partner, and their relationship (e.g., Feeney, 2005). Hurtful partner behaviour can call into question positive views of the partner and of prior relationship experiences. Injured partners may subsequently doubt their ability to accurately evaluate their partner and their relationship, which may hamper restoration of positive relationship views. Individuals must also let go of any desire to re-establish their sense of self via retaliation (Fincham, 2000), which may further degrade one's self-image and cause added relationship injury.

One process by which individuals restore personal and relationship well-being following interpersonal injury is through forgiveness (Fincham et al., 2006). Although definitions of forgiveness have varied in the literature, Fincham and colleagues consider forgiveness to be an intra- and interpersonal process involving changes in cognitive, emotional, and behavioural motives. In addition to a decreased motivation to think, feel, and behave negatively towards injuring partners, forgiveness involves an increased motivation to think, feel, and behave positively towards injuring partners. Although there are some contexts in which forgiveness is detrimental to individuals and relationships (e.g., Luchies, Finkel, McNulty, & Kumashiro, 2010; McNulty, 2008; McNulty, 2011), individuals who demonstrate a greater capacity to seek and to provide forgiveness are

generally happier, healthier, and more satisfied with their lives and their relationships (e.g., Bono, McCullough, & Root, 2008; Fenell, 1993; Riek & Mania, 2012).

General factors that predict forgiveness divide into four categories: personality factors, social-cognitive factors, relationship factors, and offense-specific factors (McCullough et al., 1998). Individuals' personality traits can affect the forgiveness process by predisposing individuals towards or away from a forgiving attitude. For example, lower neuroticism and greater agreeableness predict greater forgiveness (Balliet, 2010; Mullet, Neto, & Rivire, 2005), whereas higher trait anger predicts less forgiveness (Berry, Worthington, O'Connor, Parrott, & Wade, 2005). Empathy, a key social-cognitive factor, predicts benevolent partner attributions (Tsang & Stanford, 2007) and decreased avoidance and revenge motivations (McCullough et al., 1998). Regarding the relationship between injured and injuring partners, greater intimacy, commitment, or satisfaction predict greater willingness to forgive interpersonal injuries (see Fincham et al., 2006 for review).

Situational or offense-specific factors, which include the behaviours that couples engage in following interpersonal injuries, are also important to forgiveness. For example, offering sincere amends, conveying remorse, and accepting responsibility predicts greater partner forgiveness (Bono et al., 2008; Riek & Mania, 2012; Zechmeister, Garcia, Romero, & Vas, 2004). Pansera and La Guardia (2012) argue that by admitting responsibility and offering sincere apology, injuring partners signal their understanding and validation of the negative effects of their behaviour, thus aiding forgiveness. The capacity for relationship partners to communicate constructively following an interpersonal injury is essential as it creates the opportunity for relationship repair (Fincham & Beach, 2002). Although there has been a call for research that examines the process of forgiveness as it occurs in dyadic interactions (e.g., Gordon, Baucom, & Snyder, 2000), previous studies have relied almost exclusively on self-report measures of behaviour.

Behavioural self-report contributes to our understanding of relationship repair, and ultimately marital satisfaction, but may be limited by perceptual biases including self-serving biases or sentiment override. For example, self-serving biases are evident in injured partners' tendency to minimize details that would facilitate forgiveness and to describe injuries as unresolved (Cameron, Ross, & Holmes, 2002; Kearns & Fincham,

2005; Zechmeister & Romero, 2002), and injuring partners' tendency to judge their actions as less serious, less intentional, and more justifiable than injured partners (Mikula, Athenstaedt, Heschgl, & Heimgartner, 1998). As a result, partners may view their own behaviour more positively when compared to observer ratings. Individuals' global feelings about their relationship and their partner may also serve as a perceptual filter through which they view partner behaviour (Hawkins, Carrère, & Gottman, 2002). For example, positive sentiment override, which may be salient among highly satisfied newlywed couples, leads individuals to view partner behaviour more positively regardless of its objective quality (Weiss, 1980). Thus, research examining actual partner behaviour following interpersonal injury may provide a more accurate understanding of the relationship repair process.

Despite the inherently dyadic nature of interpersonal injury and relationship repair, observational data from couples is lacking. Compared to individual self-report, dyadic data allows for examination of actor-partner effects, which may provide a more nuanced understanding of the reparative process. To date, only two published studies have examined couples' observed behaviour in the context of interpersonal injury. In a series of four studies that included one dyadic observation study, Lemay and colleagues (2012) asked 180 couples to take turns discussing with each other the most important feature they wanted to improve about their partner. Partners then viewed their recorded discussions and rated their feelings of hurt and anger. When injured partners (i.e., participants whose attributes their partner wanted to change) reported greater feelings of hurt, injuring partners engaged in more constructive behaviours, such as expressions of affection, humour, and validation. In contrast, when injured partners reported greater feelings of anger, injured and injuring partners engaged in more destructive behaviours, such as rejecting, derogating, or blaming the partner, or being hostile, demanding, or invalidating. These findings highlight the dyadic nature of interpersonal injury discussions, but do not directly examine links between partner behaviour and relationship outcomes. Mitchell and colleagues (2008) examined associations between 102 couples' observed behaviour during discussions of interpersonal injury and post-discussion ratings of intimacy. Men's disclosure and empathic responding predicted greater intimacy for both partners.

Although these studies expand our understanding of the dyadic process, their cross-sectional nature limits our understanding of how partner behaviour might serve to

repair and protect relationships over time. Longitudinal research exploring the effect of partner behaviour on marital outcomes has largely focused on communication in the context of conflict (e.g., Clements, Stanley, & Markman, 2004; Keicolt-Glaser, Bane, Glaser, & Malarkey, 2003; Lavner & Bradbury, 2012; Pasch & Bradbury, 1998). Although cross-sectional associations between conflict behaviours and marital satisfaction are robust, conflict behaviours account for a small portion of the variability in marital outcomes over time (Fincham, 2003). Thus, examining other factors, such as how couples communicate with each other following interpersonal injuries, could provide a more complete understanding of the factors that contribute to marital trajectories.

### **Current Study**

Although the extant literature provides valuable insights into the process of relationship repair following interpersonal injury, longitudinal observational research from couples is lacking. I addressed this gap by examining whether newlywed couples' behaviour during discussions of interpersonal injuries moderated trajectories of marital satisfaction over two years. Given the self-report literature and the limited behavioural research on interpersonal injury, I predicted that couples who engaged in more empathy, validation, and positive emotional disclosure, and who displayed more humour and affection towards their partners during discussions of interpersonal injuries would have slower rates of decline in marital satisfaction. In contrast, I predicted that couples who engaged in more criticism and invalidation, and who displayed more anger, defensiveness, and contempt during discussions of interpersonal injuries would have faster rates of decline in marital satisfaction.

# Method

## Participants

Participants ( $N = 153$  couples) were a subset of 201 mixed sex couples who participated in a two-year study of newlywed marriage. Eligible couples were 19-45 years old, fluent in English, without children, entering their first marriage within six months of starting the study, and living in the Metro Vancouver area. These criteria increased the likelihood that couples were at similar developmental stages in their relationships. Couples who enter marriage with children or who are starting second marriages face a host of issues associated with marital trajectories and are at an increased risk of divorce (Knox & Zusman, 2001; Sweeney, 2010; White & Booth, 1985). Limiting sample heterogeneity helps to ensure that any relationship distress that emerges over time is likely a result of relationship experiences, such as resolving interpersonal injuries, rather than because of pre-existing marital distress (see Rogge et al., 2006 for a discussion of similar sampling strategies).

At the start of the study, relationship length averaged 3.90 years ( $SD = 2.65$ ) and 91 couples (59.5%) were cohabiting. At Time 1 (T1), husbands averaged 28.97 years of age ( $SD = 4.37$ ) and 16.69 years of education ( $SD = 2.91$ ), and had an average annual income that ranged from \$30,000 - \$39,999. At T1, wives averaged 27.21 years of age ( $SD = 3.95$ ) and 16.76 years of education ( $SD = 2.25$ ), and had an average annual income that ranged from \$20,000 - \$29,999. Of the husbands, 77% were Caucasian, 14% were Asian, 4% were Indo-Canadian, 1% were Middle-Eastern, and 4% identified as "other." Of the wives, 71% were Caucasian, 19% were Asian, 6% were Indo-Canadian, 1% were First Nations, and 3% identified as "other." Most spouses were either Christian (45% of husbands and 47% of wives) or had no religious affiliation (46% of husbands and 37% of wives).

## Procedures

The Simon Fraser University Research Ethics board approved all procedures. Couples were recruited through (a) articles and advertising in electronic and print media, (b) posters placed in bridal shops and marriage licensing offices, (c) announcements mailed to local religious organizations, (d) information booths at local bridal shows, (e)

emails to bridal show mail lists, and (f) word of mouth. Interested individuals ( $N = 617$ ) contacted the lab in response to recruitment efforts and one member of each couple ( $n = 493$ ) completed a 15-minute screening interview to determine eligibility. Of the 237 eligible couples, 221 agreed to participate and were sent an electronic copy of the consent form and a hypertext link to T1 questionnaires. When participants logged on to the first survey using their ID number and password, they were required to read the consent form and to indicate their consent by clicking a radio button, which then permitted access to the online questionnaires. Participants were asked to complete their questionnaires in private and not to discuss their responses with their partners. Couples completed T1 questionnaires approximately three months prior to marriage and then every three months thereafter (Times 2 – 9). Couples also visited the laboratory twice, once at Time 3 (T3), which was approximately three months after their wedding date, and again at the final phase of data collection (T9), which was approximately 18 months after their wedding date. Couples received \$425 for their participation as follows: \$75 at T1, \$100 at T3, \$50 at T5 and at T7, and \$150 at T9. For more details about the sample and procedures, see Poyner-Del Vento and Cobb, 2011. Demographic data collected at T1, marital satisfaction collected at T1 to T9, and observational data collected during the interpersonal injury interactions at the T3 lab session are the focus of this study.

Of the 201 couples who completed some part of the T1 questionnaires, 161 dyads attended the T3 lab session. Due to technical (e.g., poor audio) or human error (e.g., participants misunderstood instructions), recordings of interpersonal injury discussions from eight dyads were lost, resulting in a sample of 153 dyads who were included in the analyses. Independent samples  $t$ -tests indicated no significant differences between couples who were included in analyses ( $n = 153$ ) and couples who were not ( $n = 48$ ) on most demographics (i.e., race, nationality, religiosity, relationship length) and T1 marital satisfaction, but there were some exceptions. Included wives were younger ( $M = 27.73$  years;  $SD = 3.99$ ) than excluded wives ( $M = 29.45$  years;  $SD = 4.81$ ),  $t(188) = -2.26$ ,  $p = .03$ ,  $d = .39$ . Included husbands ( $M = 16.69$  years;  $SD = 2.91$ ) and wives ( $M = 16.76$  years;  $SD = 2.25$ ) were more educated than excluded husbands ( $M = 15.00$  years;  $SD = 2.41$ ),  $t(196) = 3.54$ ,  $p < .00$ ,  $d = .63$ , and wives ( $M = 15.87$  years;  $SD = 2.96$ ),  $t(198) = 2.20$ ,  $p = .03$ ,  $d = .34$ . Of the 153 couples included in analyses, four couples dropped out and one couple separated or divorced over the course of the two-year study. Analyses examining whether there were significant

differences between couples who remained in the study ( $n = 148$ ) and couples who dropped out of the study ( $n = 5$ ) were not conducted because of the small number of dropouts.

During the T3 lab session, trained research assistants obtained verbal and written consent for a series of tasks including questionnaires, individual and conjoint interviews, physical data collection, and two sets of marital interactions (two support discussions and two interpersonal injury discussions). The order of the support and interpersonal injury discussions and the order of wife and husband topics was determined by a coin toss. Prior to the interpersonal injury discussion, a research assistant asked spouses to think of a time when their partner hurt their feelings; participants were told not to share the details of these events with the research assistant. Once spouses selected their topics, they independently completed questionnaires in which they described the event, and rated the degree of hurt they experienced and their cognitive, emotional, and behavioural response to the event (e.g., I thought about how I could get even; I withdrew from my partner; I took steps towards reconciliation with my partner) (cf. Mitchell et al., 2008). Couples were told that they would have seven minutes to discuss the topic chosen by the spouse who was selected to go first; spouses were instructed to tell their partner about the event, and partners were told to respond however they wished. Couples were also informed that the research assistant and camera operator would not listen to their discussions as they occurred, but that research assistants would view their recorded discussions later. Following their discussion, each spouse completed separate questionnaires rating their experiences during the discussion (pre- and post-discussion questionnaires are not included in this study) and then they switched roles and discussed the second spouse's topic, for which the same procedures were followed.

## **Measures**

**Marital satisfaction.** The Quality of Marriage Index (QMI; Norton, 1983) is a widely used 6-item global measure of marital satisfaction. Five items (e.g., "Our relationship is strong") are rated on a 7-point Likert-scale from "*Very Strong Disagreement*" to "*Very Strong Agreement*," and one item ("All things considered, how happy are you in your relationship?") is rated on a 10-point scale from "*Very Unhappy*" to "*Perfectly Happy*." A total score is derived by summing responses and can range from 6



to 45; higher values represent greater marital satisfaction. The QMI has good psychometric properties and reliably differentiates between distressed and non-distressed couples (Heyman, Sayers, & Bellack, 1994). Over nine waves of data, coefficient alphas met or exceeded .91 and averaged .94 for husbands and .94 for wives.

**Observed injury discussion behaviour.** The Transgression Interaction Coding System (TICS; Cobb, Watt, & Logan, 2011) was developed to code speaker and listener behaviour and affect during interpersonal injury discussions (see Appendix). To capture a diverse range of behavioural and emotional expressions, the coding system was adapted in part from the Couples Intimate Behaviour coding system (for rating interpersonal injury discussions; Mitchell et al., 2008), the Social Support Interaction Coding System (Pasch & Bradbury, 1998), and the Behavioural Affect Rating System (for coding conflict discussions; Johnson, 2002). The TICS was refined through an iterative process involving a pilot group of four undergraduate students, two graduate students, and Dr. Rebecca Cobb, who coded a subset of the interpersonal injury discussions using the TICS. Based on coder feedback and group discussion, the TICS underwent several revisions; codes were added, dropped, or modified until coders were satisfied that the system adequately captured the observed behaviours and emotions. In addition to assisting with the development of the TICS, I was trained to administer the coding system; training included reading relevant research articles and meeting weekly with Dr. Cobb until we achieved a high degree of consistency with our codes.

Once the TICS was finalized, I trained 15 undergraduate psychology students in the coding system in two separate 12-14 week groups. Trainees read the coding manual and articles on forgiveness and microanalytic coding of dyadic communication, then they independently watched and coded three to four videotaped interpersonal injury discussions per week over three months; the same 43 videos were coded by both training groups. Each speaking turn was coded in the husband topic (husbands as speakers and wives as listeners) and in the wife topic (wives as speakers and husbands as listeners) thereby yielding behavioural codes for husband speaker and listener, and behavioural codes for wife speaker and listener. During training, coders and I met weekly as a group to review our codes. Discrepancies among coders were resolved through video review, group discussion, and reference to the TICS manual. On rare

occasions when these methods did not clarify discrepancies, I consulted with Dr. Cobb who reviewed the videos in question and provided feedback.

Given the number of codes and the low frequency of occurrence for some behaviours, no coder had intraclass correlations of at least .70 on every code. Only coding from coders with average reliability over .70 ( $n = 10$ ) were used in the main analyses and to calculate reliability; data from coders ( $n = 4$ ) with average reliability below .70 were excluded from analyses. Upon completion of training, reliable coders were assigned three to four new videos each week over approximately nine months or until coding was complete. To maintain consistency among coders and to prevent coder drift, coders reviewed and coded the same subset of 23 videos, which were discussed in bi-weekly group meetings over the coding period.

TICS codes are separated into four broad categories: *positive*, *negative*, *neutral* (i.e., statements that do not meet criteria for another code or are too ambiguous or brief to be coded), and *off-task* (i.e., statements about matters not relevant to the issue under discussion). The positive category includes positive emotion-focused strategies and positive cognitive-focused strategies. Emotion-focused strategies include four separate codes: *emotional support/ reassurance*, *expressing emotions*, *empathy/validation*, and *humour*. Cognitive-focused strategies include three separate codes: *self-disclosure*, *asking questions*, and *problem-solving/ offering advice*. A *positive other* code is also included in the positive category to capture any positive behaviour not captured by the emotion-focused or cognitive-focused codes. The negative category includes six codes: *defensiveness*, *minimizing/self-blame*, *invalidation*, *criticism*, *anger/contempt*, and a *negative other* code. Multiple codes per speaking turn are permitted for positive or negative codes, but if a speaking turn contains positive and negative content, only negative codes are assigned. Neutral or off-task codes are assigned when the speaking turn does not meet criteria for any positive or negative code.

TICS codes were examined for conceptual and empirical overlap to determine whether any codes could be combined for parsimony. Due to low base rates and restricted variability, three positive codes (i.e., humour, problem solving/offering advice, positive other) and one negative code (i.e., minimization/self-blame) demonstrated limited associations with other category codes (e.g., associations among negative codes) and with marital satisfaction; thus, these codes were dropped from analyses.

Associations between retained codes in the same category (e.g., codes within the positive emotion-focused strategies), and between each code (e.g., expressing emotions, self-disclosure, defensiveness) and T3 marital satisfaction are in Table 1 and Table 2. Positive emotion-focused codes (i.e., emotional support/reassurance, expressing emotions, empathy/validation) were positively associated with each other, but were not consistently associated with marital satisfaction. The positive cognitive-focused codes (i.e., self-disclosure and asking questions) were not associated with each other or with marital satisfaction in a consistent or predictable way (i.e., negative associations were observed between cognitive codes and marital satisfaction). In contrast, the negative codes (i.e., defensiveness, invalidation, criticism, anger/contempt, negative other) were positively associated with each other and negatively associated with marital satisfaction as expected.

Next, I conducted a series of factor analyses using a varimax rotation to explore the underlying factor structure. Consistent with recommendations by Hair and colleagues (2009), I considered factor loadings of .45 or greater to be significant. As shown in Table 3, emotional support/reassurance, expressing emotions, empathy/validation tended to load together on a factor that appears to represent positive emotional strategies. Expressing emotions and empathy/validation also loaded on other factors with self-disclosure and asking questions. The positive cognitive-focused codes did not demonstrate consistent loading patterns. For example, self-disclosure and asking questions positively loaded with expressing emotions or with empathy/validation during discussions of wives' topics, but negatively loaded with empathy/validation during discussions of husbands' topics. Codes relating to defensiveness, invalidation, criticism, anger/contempt, and negative other loaded together on two separate but overlapping factors that appear to represent negative emotional strategies; invalidation also negatively loaded on a factor with expressing emotions and emotional support/reassurance.

Positive emotional (PE) codes were positively associated with each other and tended to load on a single factor, and negative emotional (NG) codes were positively associated with each other and demonstrated an overlapping loading pattern, which supported computing a PE composite score and a NG composite score. Thus, the retained PE codes (i.e., emotional support/reassurance, expressing emotions, empathy/validation) were combined to yield a composite PE strategies score, and the

retained NG codes (i.e., defensiveness, invalidation, criticism, anger/contempt, negative other) were combined to yield a composite NG strategies score. The composite scores were calculated by summing the occurrence of relevant codes and dividing by the total number of codes given during each interaction (i.e., positive, negative, neutral and off-task) to yield a score that reflected the proportion of each type of behaviour by total behaviours exhibited during the interaction. Given that the positive cognitive-focused (PC) codes were not associated with each other and had an inconsistent loading pattern, a PC composite score was not calculated and the codes of self-disclosure and asking questions were retained as separate codes in the analyses.

Interrater reliability coefficients for the PE composite were .92 for husband speaker, .82 for wife speaker, .80 for husband listener, and .78 for wife listener. For self-disclosure, coefficients were .87 for husband speaker, .79 for wife speaker, .79 for husband listener, and .84 for wife listener. For asking questions, coefficients were .93 for husband speaker, .88 for wife speaker, .65 for husband listener, and .71 for wife listener. For the NG composite, coefficients were .88 for husband speaker, .80 for wife speaker, .79 for husband listener, and .95 for wife listener.

# Results

## Descriptive Analyses

Means and standard deviations for the main study variables are in Table 4. Couples were generally satisfied with their marriages (e.g., spouses who score above 30.5 on the QMI when scored as a 6- to 45-point scale are considered non-distressed; Funk & Rogge, 2007). Paired samples *t*-tests indicated that husbands and wives engaged in more self-disclosure than PE behaviour and NG emotion behaviour ( $ps < .001$ ), and husbands and wives engaged in more PE behaviour than NG behaviour ( $ps < .001$ ). Participant demographics (i.e., race, nationality, age, education, religiosity, relationship length) were not associated with main study variables, with the exception of gender. Listener husbands were more self-disclosing ( $M = .31$ ;  $SD = .17$ ) than listener wives ( $M = .27$ ;  $SD = .15$ ),  $t(152) = 2.29$ ,  $p = .02$ ,  $d = 0.25$ . Speaker wives asked more questions ( $M = .04$ ;  $SD = .06$ ) than speaker husbands ( $M = .03$ ;  $SD = .05$ ),  $t(152) = 2.08$ ,  $p = .04$ ,  $d = 0.18$ , and listener wives asked more questions ( $M = .05$ ;  $SD = .06$ ) than listener husbands ( $M = .03$ ;  $SD = .04$ ),  $t(152) = 4.48$ ,  $p < .001$ ,  $d = 0.39$ . Listener wives were more negative ( $M = .05$ ;  $SD = .12$ ) than listener husbands ( $M = .03$ ;  $SD = .07$ ),  $t(152) = 2.10$ ,  $p = .04$ ,  $d = 0.20$ . Correlations among study variables are in Table 5. In general, PE composite scores and self-disclosure were negatively associated with NG composite scores; PE composite scores were also positively associated with self-disclosure during discussions of wives' hurt feelings. Spouses' asking questions behaviour and wives' self-disclosure and negative emotion behaviour during discussions of wives' hurt feelings were negatively associated with marital satisfaction.

## Trajectories of Marital Satisfaction Over Time

Given the nested structure of the data (repeated measures within individuals), hypotheses were tested using multilevel modelling and the Hierarchical Linear Modeling software program (HLM 6.06; Raudenbush, Bryk, & Congdon, 2009). I used a two-level model that included husband and wife given dependent data (Atkins, 2005) with repeated measures of marital satisfaction modeled at Level 1 and observed discussion behaviours modeled at Level 2. Time was coded as zero for the lab session (Time 3) and then number of days from this time point to each previous and subsequent time point (i.e., T1 and T2 and some of T3 were negative days; most of T3 and all subsequent

time points were positive days). Continuous Level 2 predictors were entered as grand mean centered and coefficients were modeled as random (Nezlek, 2001).

To determine whether there was sufficient variability in slopes to predict change in marital satisfaction over time, I examined an unconditional model with marital satisfaction as the outcome. Analyses indicated sufficient between and within person variability in marital satisfaction slopes. I then examined whether there was linear or quadratic change in marital satisfaction using the following equation:

$$\text{Level 1 } Y_{ij}(\text{Satisfaction}_T) = \beta_{01}(\text{Husband}) + \beta_{02}(\text{Wife}) + \beta_{11}(\text{Husband Linear Time}_T) + \beta_{12}(\text{Wife Linear Time}_T) + \beta_{21}(\text{Husband Quadratic Time}_T) + \beta_{22}(\text{Wife Quadratic Time}_T) + r_{ij} \quad (1)$$

$$\text{Level 2 } \beta_{01}(\text{Husband Intercept}) = \gamma_{010} + \mu_{01j} \quad (2)$$

$$\beta_{02}(\text{Wife Intercept}) = \gamma_{020} + \mu_{02j} \quad (3)$$

$$\beta_{11}(\text{Husband Linear Time Slope}) = \gamma_{110} + \mu_{11j} \quad (4)$$

$$\beta_{12}(\text{Wife Linear Time Slope}) = \gamma_{122} + \mu_{12j} \quad (5)$$

$$\beta_{21}(\text{Husband Quadratic Time Slope}) = \gamma_{210} + \mu_{21j} \quad (6)$$

$$\beta_{22}(\text{Wife Quadratic Time Slope}) = \gamma_{222} + \mu_{22j} \quad (7)$$

where  $Y_{ij}$  is marital satisfaction for each spouse  $j$  at Time  $i$ ;  $\beta_{01}$  and  $\beta_{02}$  represent the intercept of marital satisfaction at Time 3;  $\beta_{11}$  and  $\beta_{12}$  represent the rates of linear change over time in marital satisfaction for husband and wife respectively;  $\beta_{21}$  and  $\beta_{22}$  represent the rates of quadratic change over time in marital satisfaction for husband and wife respectively; and  $r_{ij}$  is the residual variance in repeated measurements for spouse  $j$ , which is assumed to be independent and normally distributed. Consistent with previous research (e.g., Lavner & Bradbury, 2010), marital satisfaction declined linearly over two years. Specifically, husbands' marital satisfaction declined approximately 1.01 points per year,  $t(152) = -5.76, p < .001$ , and wives' marital satisfaction declined approximately 1.10 points per year,  $t(152) = -5.32, p < .001$ . Marital satisfaction did not demonstrate quadratic change over time; thus, quadratic terms were dropped from subsequent analyses.

## Predicting Trajectories of Marital Satisfaction from Observed Injury Discussion Behaviour

Next, I conducted a series of eight analyses to examine whether observed behaviour during discussions of husbands' and wives' hurt feelings entered at Level 2 moderated slopes of marital satisfaction over time<sup>1</sup>. The following is an example of the equation used to test the cross-level moderating hypotheses:

$$\text{Level 1 } Y_{ij}(\text{Marital Satisfaction}_T) = \beta_{01}(\text{Husband}) + \beta_{02}(\text{Wife}) + \beta_{11}(\text{Husband Time}_T) + \beta_{12}(\text{Wife Time}_T) + r_{ij} \quad (8)$$

$$\text{Level 2 } \beta_{01} = \gamma_{010} + \gamma_{011}(\text{Husband Behaviour}) + \mu_{01j} \quad (9)$$

$$\beta_{02} = \gamma_{020} + \gamma_{021}(\text{Wife Behaviour}) + \mu_{02j} \quad (10)$$

$$\beta_{11} = \gamma_{110} + \gamma_{111}(\text{Husband Behaviour}) + \mu_{11j} \quad (11)$$

$$\beta_{12} = \gamma_{120} + \gamma_{121}(\text{Wife Behaviour}) + \mu_{12j} \quad (12)$$

At Level 2,  $\gamma_{010}$  and  $\gamma_{020}$  represent the intercept of marital satisfaction for husband and wife at low levels of the moderator (i.e., observed behaviour),  $\gamma_{011}$  and  $\gamma_{021}$  represent the difference between the intercept for husband and wives at high levels versus low levels of the moderator, and  $\mu_{01j}$  and  $\mu_{02j}$  represent residual variance across  $j$  participants. Coefficients in Equations 11 and 12 may be interpreted the same way; for example,  $\gamma_{110}$  represents the slope of marital satisfaction for husbands at low levels of the coded behaviour and  $\gamma_{111}$  is the difference between the slope of marital satisfaction for husbands at high levels versus low levels of the coded behaviour.

**Positive Emotion Strategies.** Results of the analyses of whether positive emotion strategies moderated trajectories of marital satisfaction are in Table 6. On the left side of the table are results of how spouses' behaviour during discussions of husbands' topic moderated their own marital satisfaction trajectories. On the right side of the table are results of how spouses' behaviour during discussions of wives' topic moderated their own marital satisfaction trajectories. As shown in the bottom two rows

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<sup>1</sup> I also re-ran all analyses including cross-partner variables in the equations. Cross-partner analyses were non-significant and they did not change the pattern of results; thus, the analyses are presented without cross-partner variables included for simplicity.

in the left panel, listener wives' positive emotion behaviour moderated their own marital satisfaction trajectories. Following the procedures outlined by Bauer and Curran (2005), I conducted simple slopes analyses using online software developed by Preacher (2003) and graphed the slopes at high and low levels of the moderator (i.e., positive emotion strategies) in Figure 1. Results indicated that listener wives who were more emotionally positive experienced a significant increase in marital satisfaction over time, whereas listener wives who were less emotionally positive experienced a significant decline in marital satisfaction over time. As shown on the right side of Table 6, listener husbands who were more satisfied at Time 3 engaged in more positive emotion behaviour during discussions of wives' hurt feelings than listener husbands who were less satisfied at Time 3. Spouses' emotionally positive behaviour during discussions of wives' hurt feelings did not moderate trajectories of marital satisfaction.

**Self-Disclosure.** Results of the analyses of whether self-disclosure moderated trajectories of marital satisfaction are in Table 7. As shown on the right side of the table, speaker wives who were less satisfied at Time 3 engaged in more self-disclosure during discussions of wives' hurt feelings than speaker wives who were more satisfied at Time 3. Spouses' self-disclosure during discussions of husbands' and wives' hurt feelings did not moderate trajectories of marital satisfaction.

**Asking Questions.** Results of the analyses of whether asking questions moderated trajectories of marital satisfaction are in Table 8. As shown on the right side of the table, speaker wives who were less satisfied at Time 3 asked more questions than speaker wives who were more satisfied at Time 3. Spouses' asking questions behaviour during discussions of husbands' and wives' hurt feelings did not moderate trajectories of marital satisfaction, with one exception. As shown on the right side of the table, listener husbands' asking questions behaviour moderated their own marital satisfaction trajectories. As illustrated in Figure 2, simple slope analyses indicated that listener husbands who asked more questions experienced a significant increase in marital satisfaction over time, whereas listener husbands who asked fewer questions experienced a significant decrease in marital satisfaction over time.

**Negative Emotion Strategies.** Results of the analyses of whether negative emotion strategies moderated trajectories of marital satisfaction are in Table 9. As shown on the left side of the table, speaker husbands' and listener wives' emotionally



negative behaviour moderated their own marital satisfaction trajectories. As illustrated in Figure 3, simple slope analyses indicated that speaker husbands who were more emotionally negative experienced a significantly steeper decline in marital satisfaction over time compared to speaker husbands who were less emotionally negative. Likewise, as shown in Figure 4, listener wives who were more emotionally negative experienced a significantly steeper decline in marital satisfaction over time compared to less emotionally negative listener wives. As shown on the right side of the table, speaker wives who were less satisfied at Time 3 engaged in more negative behaviour than speaker wives who were more satisfied at Time 3. Spouses' emotionally negative behaviour during discussions of wives' hurt feelings did not moderate marital satisfaction trajectories<sup>2</sup>.

To summarize, husbands' and wives' observed behaviour during discussions of hurt feelings moderated changes in their marital satisfaction over two years. During discussions of husbands' hurt feelings, wives who were more emotionally positive had increases in marital satisfaction over time, whereas wives who were less emotionally positive had decreases in marital satisfaction over time. Further, husbands and wives who were more emotionally negative reported steeper declines in marital satisfaction over time compared to spouses who were less emotionally negative. During discussions of wives' hurt feelings, husbands who asked more questions had increases in marital satisfaction over time, whereas husbands who asked fewer questions had decreases in marital satisfaction over time.

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<sup>2</sup> I re-ran all analyses with participant demographics (i.e., age, years of education, race (Caucasian vs. non-Caucasian), nationality (Canadian vs. non-Canadian), religiosity (Sullivan, 2001), relationship length), individual characteristics (i.e., neuroticism (Eysenck Personality Questionnaire – Neuroticism Subscale; Eysenck & Eysenck, 1978), attachment security (Experiences in Close Relationships - Revised; Fraley et al., 2000), chronic stress (Chronic Stress Questionnaire; Hammen et al., 1987), and depression (Beck Depression Inventory; Beck et al., 1996)), and interaction and speaker order entered separately at Level 2 as moderators of husband and wife slopes and intercepts. Results were not significantly different with these variables included; therefore, analyses without these variables are presented.

## Discussion

The resolution of interpersonal injuries is a common challenge in intimate relationships, and couples' failure to constructively mend hurt feelings has implications for individuals and their relationships (see Fincham et al., 2006 for review). Although several studies link the successful resolution of interpersonal injuries to positive marital outcomes, little is known about the specific behaviours that help couples to repair and to strengthen their relationship, or the behaviours that might exacerbate declines in satisfaction. Using multilevel modelling, I examined whether newlywed couples' observed behaviour during discussions of interpersonal injuries predicted trajectories of marital satisfaction over two years.

Consistent with previous research (e.g., Lavner & Bradbury, 2010), marital satisfaction declined on average over two years. As expected, couples' behaviour during discussions of interpersonal injuries moderated trajectories of marital satisfaction. Specifically, more positive emotional engagement by wives and less negative emotional engagement by husbands and wives during discussions of husbands' hurt feelings buffered declines in marital satisfaction over time. Wives who provided more support and reassurance, who engaged in more positive emotional disclosures, and who validated and empathized with their husbands had increasing satisfaction in their marriages. In contrast, wives who were less supportive, empathic, and validating, and who engaged in fewer positive emotional disclosures had declining satisfaction in their marriages. Empathic and validating statements communicate a degree of acceptance of the partner and of their thoughts and feelings, and supportive and reassuring statements may signal compassionate concern for the partner. Thus, wives' positive emotional engagement may serve to promote feelings of connection and intimacy thereby enhancing their overall satisfaction. In comparison, husbands and wives who were more defensive, critical, contemptuous, or hostile during discussions of husbands' hurt feelings reported more rapid declines in marital satisfaction over two years than husband and wives who were less defensive, critical, contemptuous, or hostile. Negative behaviours during discussions of hurt feelings may not only fail to repair interpersonal injury, they could lead to additional hurt feelings thereby exacerbating declines in marital satisfaction.

These findings are consistent with observational research on couples' behavioural and affective communication during problem-solving interactions. Specifically, expressions of negative affect (e.g., anger and contempt) and negative behaviours (e.g., criticism, denial of responsibility, devaluation of partners) during conflict discussions predict faster declines in marital satisfaction, and expressions of positive affect (e.g., humour and affection) and positive behaviours (e.g., interested questions, understanding the partner, direct expression of feelings, attitude, and opinions) during conflict discussions predict slower declines in marital satisfaction (Johnson et al., 2005). The current findings are also consistent with the theoretical and empirical understanding of the forgiveness process. Similar to the view that increased benevolent motivations and decreased negative motivations towards injuring partners predicts greater forgiveness (e.g., Fincham et al., 2006), this study found that greater positive behaviours and fewer negative behaviours predicted more positive marital outcomes.

Couples' behaviours during discussions of wives' hurt feelings were not associated with changes in marital satisfaction over two years, with one exception. Husbands' marital satisfaction increased when they asked more questions during discussions of their wives' hurt feelings and decreased when they asked fewer questions. It may be that husbands who ask more questions feel more connected to and engaged with their wives and thereby experience more marital satisfaction over time. Given that asking questions was counterintuitively associated with cross-sectional marital satisfaction and this is one significant interaction of 16 tested, I interpret this finding with caution.

The absence of significant findings during discussions of wives' hurt feelings is inconsistent with evidence that wives', but not husbands', tendency to forgive predicts later marital satisfaction (Fincham & Beach, 2007). This raises the question of why behaviour during discussions of wives' hurt feelings generally does not moderate spouses' marital satisfaction trajectories. One explanation may be that wives process interpersonal injuries occurring in their marriages outside of their intimate relationship. Compared to men, women are more likely to discuss personal and domestic issues with friends and family (Aries & Johnson, 1983; Aukett, Ritchie, & Mill, 1988) and may therefore turn to these relationships to express their hurt and to gain understanding of their partner and their partners' behaviour. Thus, the quality of discussions about wives'

hurt feelings may have fewer implications for their own and their spouses' relationship satisfaction than the quality of discussions about husbands' hurt feelings.

It is also worth noting that cognitive self-disclosure was not associated with trajectories of marital satisfaction. According to Reis and Shaver's (1988) interpersonal process model of intimacy, self-disclosure contributes to greater intimacy within close relationships, and intimacy is associated with greater relationship satisfaction (Laurenceau, Feldman Barrett, & Rovine, 2005). Nevertheless, empirical research regarding associations between self-disclosure and relationship outcomes is mixed. Some research suggests that emotional and factual disclosure predicts greater intimacy (e.g., Lippert & Prager, 2001), whereas other research suggests that emotional disclosure is a more important predictor of intimacy than factual disclosure (e.g., Laurenceau, Barrett, & Pietromonaco, 1998). In the context of interpersonal injury, emotional disclosure predicts greater intimacy for men, and cognitive and emotional disclosure predicts greater intimacy for women (Mitchell et al., 2008). Current results indicate that spouses' cognitive self-disclosure does not predict trajectories of marital satisfaction, whereas wives' emotional disclosure, which was included in the positive emotion composite, predicts more positive trajectories of marital satisfaction. Compared to emotional disclosure, cognitive disclosure may lack the meaningful depth that could promote lasting feelings of closeness and satisfaction within relationships.

Finally, all significant findings were within partner and there were no significant partner effects. In other words, husbands' and wives' behaviour during discussions of interpersonal injuries predicted trajectories of their own marital satisfaction, but did not predict trajectories of their partners' marital satisfaction. The lack of partner effects is somewhat surprising given the dyadic nature of interpersonal injuries and relationship repair. However, it may be that potential partner effects during these discussions become more likely or more salient depending on the type of injuries or the stage of the relationship. For example, partner responses following injuries that highlight dyadic issues or threaten the security of the relationship (e.g., making an important decision without consulting spouse; rejecting sexual advances) may be more critical to spouses' marital satisfaction than for injuries related to personal characteristics or behaviour (e.g., commenting on spouse's ability to cook, criticising how spouse handled disagreement with a co-worker). Regarding the stage of the relationship, compared to newlywed couples, longer married couples may have a more extensive history of injury and

relationship repair attempts; thus, partner responses may become increasingly important to spouses' marital satisfaction over time. It may also be that couples' injury experiences are more interdependent as relationships progress. Couples may begin to face issues related to parenting or mutual finances, which can have implications for both members of the couple and may arouse mutual feelings of hurt. Spouses' ability to negotiate relationship repair may have greater implications for within- and cross-partner marital satisfaction when they are trying to simultaneously manage their own and their spouses' feelings of hurt.

### **Limitations & Future Research**

Results should be interpreted considering several limitations. First, consideration should be given to the Type I error rate (i.e., the possibility of falsely rejecting the null hypothesis) as findings are based on four hypotheses that were examined in eight separate multilevel equations. Although a number of post-hoc strategies exist to control the Type I error rate, multilevel modelling is considered more robust to Type I errors than other analytic approaches (Aarts, Verhage, Veenvliet, Dolan, & van der Sluis, 2014; Gelman, Hill, & Yajima, 2012); thus, I presented the results of theoretically and empirically-informed planned comparisons without controlling for Type I error. Although traditional procedures for controlling for Type I error (e.g., Bonferroni correction) are considered overly conservative for multilevel modelling, caution is still warranted when interpreting the findings. Results are consistent with observational research examining dyadic conflict (Johnson et al., 2005), but future research replicating these results would increase confidence that these findings do not include Type I errors.

Second, couples were not randomly selected from the local population of engaged couples and thus, may not represent the average newlywed couple. Although the sample is reasonably diverse, non-Caucasian, lower income, and less educated participants are underrepresented (Statistics Canada, 2007) and eligibility restrictions on the sample (i.e., no children, beginning first marriages, fluent in English) may have rendered the results less generalizable to a broader population of couples. Additional research exploring interpersonal injury processes in couples at different levels of distress or at different relationship stages would be worthwhile. Longer married or distressed couples may have more opportunities for injury and their discussions may be linked to a history of hurtful experiences. Not only could the behaviours that partners display when

discussing recurrent interpersonal injury have different implications for relationship evaluations, these discussions could trigger more intense emotional responses thereby increasing the difficulty of adaptively navigating these discussions. Discussions of interpersonal injury may also be more critical to couples who have recently transitioned to parenthood. In this situation, the acute or chronic stressors associated with caring for an infant may increase the relevance and complexity of couples' discussions.

Third, the semi-structured format of these interactions may have constrained couples' natural behaviour, thus failing to capture the ways couples interact in their everyday lives. Although interpersonal injuries might appear to create clearly delineated roles of injured partner and injuring partner, the distinction between roles may be more ambiguous. The dyadic context in which hurt feelings arise may mean that spouses are simultaneously injured and injuring partners. Not only may discussions of one partner's hurt feelings fail to reflect couples' typical experiences, discussions of reciprocal hurt feelings may be more complex as both parties manage dual roles.

Fourth, I used a microanalytic coding approach that focused on spouses' behaviour during their respective speaking turns rather than their behaviour during speaking and listening turns. Given that spouses are participating non-verbally in discussions even when they are not actively speaking, I may have missed valuable information about how couples communicate during discussions of interpersonal injury. I also considered speech content and affect simultaneously. Behavioural skill and affective expression during problem-solving discussions uniquely predict trajectories of marital satisfaction (Johnson et al., 2005); thus, measuring speech content and affect separately may have yielded more nuanced results.

## **Implications and Conclusion**

Ineffective communication is one of the most common reasons why couples seek therapy (Doss, Simpson, & Christensen, 2004). Not surprisingly, improving couples' communication skills is a primary focus in many models of prevention (e.g., Markman, Stanley, & Blumberg, 2001) and intervention (e.g., Benson, McGinn, & Christensen, 2012). Existing models have tended to focus on communication in the context of conflict and support, but these findings highlight the importance of dyadic communication following interpersonal injury. Compared to spouses who are more critical, hostile, or defensive, spouses who positively disclose emotions and who validate and support their

partners during discussions of husbands' hurt feelings, have relationships that are more satisfying over time. Thus, understanding how couples successfully negotiate the repair process following interpersonal injury can contribute to the refinement and development of more effective prevention and intervention strategies for couples. Tailored clinical interventions may be relevant to couples seeking treatment for issues related to interpersonal injury (e.g., infidelity), whereas prevention programs may assist couples in developing skills to manage day-to-day injuries, thereby improving relationship quality and outcomes.

Although these findings highlight a process of repair in intimate relationships, the potential for interpersonal injury exists across relationship types (cf. Fincham, 2000). Thus, individuals' ability to successfully negotiate relationship repair may have applications to other dyads. For example, the alliance between client and therapist is a central predictor of treatment outcomes (Martin, Garske, & Davis, 2000); thus, the ability for individuals to process therapeutic ruptures may have implications for client outcomes beyond satisfaction with their therapist. In the context of family relationships, sibling and parent-child dyads that are more emotionally open, validating, and supportive, and less critical, hostile, and defensive when discussing interpersonal injuries may result in closer, happier relationships. Individuals who are able to mend hurt feelings may be more likely to develop enduring relationships that flourish in the face of interpersonal injury, thereby maximizing the benefits derived from establishing relationships with others.

## Tables and Figures

**Table 1. Correlations Among T3 Marital Satisfaction and Spouses' Behavioural Codes During Discussions of Husbands' Topic**

	1	2	3	4	5	6	7	8	9	10	11
1. T3 Marital Satisfaction	-	.102	.071	-.037	.019	.001	-.018	-.110	-.042	-.083	.022
Positive Emotion Strategies											
2. Support/Reassurance	-.041	-	.171*	.194*	-.169*	-.121	.025	-.091	-.121	-.097	-.101
3. Expressing Emotions	.063	.225**	-	.285**	.199*	-.030	-.044	-.113	-.188*	-.180*	-.066
4. Empathy/Validation	-.046	.111	.109	-	.025	-.138	-.065	-.078	-.110	-.101	-.050
Cognitive Strategies											
5. Self-Disclosure	-.033	-.022	.216**	.016	-	.080	-.128	-.058	-.192*	-.167*	-.123
6. Asking Questions	.007	-.109	-.105	-.060	-.044	-	-.064	.003	-.044	-.031	.027
Negative Emotion Strategies											
7. Defensiveness	-.061	-.054	-.172*	-.138	-.260**	-.007	-	.038	.154	.120	.295**
8. Invalidation	-.192*	-.149	-.025	-.102	-.073	-.012	.181*	-	.220**	.379**	.193*
9. Anger/Contempt	-.146	.028	-.158	-.136	-.241**	-.053	.475**	-.017	-	.838**	.152
10. Criticism	-.077	-.080	-.069	-.079	-.169*	-.082	.369**	.098	.655**	-	.152
11. Negative Other	.003	-.109	-.121	-.028	-.050	.047	.140	-.010	.368**	.258**	-

Note. Within-spouse correlations for husbands appear above each diagonal and within-spouse correlations for wives appear below each diagonal.

\*p < .05; \*\*p < .01



**Table 2. Correlations Among T3 Marital Satisfaction and Spouses' Behavioural Codes During Discussions of Wives' Topic**

	1	2	3	4	5	6	7	8	9	10	11
1. T3 Marital Satisfaction	-	.016	.096	.144	-.065	-.179*	-.177*	-.064	-.046	.002	.014
Positive Emotion Strategies											
2. Support/Reassurance	.093	-	.211**	.138	.042	-.032	-.108	-.069	-.067	.040	-.016
3. Expressing Emotions	-.022	.027	-	.072	.227**	-.046	-.133	-.115	-.082	.000	-.125
4. Empathy/Validation	.024	.008	.201*	-	.084	.135	-.046	-.069	-.063	.076	-.067
Cognitive Strategies											
5. Self-Disclosure	-.223**	.100	.227**	.131	-	-.147	-.095	-.068	-.181*	-.104	-.089
6. Asking Questions	-.197*	-.153	-.034	-.037	.073	-	.002	-.061	.001	-.037	.031
Negative Emotion Strategies											
7. Defensiveness	-.067	-.092	-.029	-.097	-.128	-.082	-	.010	.150	.179*	.189*
8. Invalidation	-.203*	-.041	-.065	-.029	-.100	.006	.132	-	.082	-.039	.544**
9. Anger/Contempt	-.159*	-.174*	-.127	-.145	-.125	-.057	.204*	.097	-	.257**	.086
10. Criticism	-.232**	-.132	-.198*	-.136	-.217**	.012	.316**	.167*	.454**	-	-.040
11. Negative Other	-.020	-.125	-.067	-.100	-.173*	.005	-.020	.081	.417**	.320**	-

Note. Within-spouse correlations for husbands appear above each diagonal and within-spouse correlations for wives appear below each diagonal.

\*p < .05; \*\*p < .01

**Table 3. Factor Analyses of Spouses' Behavioural Codes During Discussions of Interpersonal Injuries**

	Husband Topic						Wife Topic				
	Husband Speaker			Wife Listener			Wife Speaker		Husband Listener		
	1	2	3	1	2	3	4	1	2	3	4
Support/Reassurance	.551			.585				.690			
Expressing Emotions	.726			.587				.729			
Empathy/Validation	.632								.642		
Self-Disclosure		.794							.578		
Asking Questions		.642							.669		
Defensiveness			.669							.653	
Invalidation			.575								.835
Criticism			.824							.820	
Anger/Contempt			.860							.718	
Negative Other			.587								.858

Note. N = 153. Factor loadings greater than .45 are presented.

**Table 4. Means and Standard Deviations for Study Variables**

	<b>Husband Topic</b>				<b>Wife Topic</b>			
	<b>Speaker Husband</b>		<b>Listener Wife</b>		<b>Speaker Wife</b>		<b>Listener Husband</b>	
	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>
Positive Emotion Composite	.139	.120	.139	.107	.154	.098	.125	.104
Self-Disclosure	.330	.159	.271	.151	.342	.148	.308	.171
Asking Questions	.026	.048	.053	.062	.038	.057	.027	.044
Negative Emotion Composite	.031	.086	.053	.115	.033	.090	.032	.075
	<b>Husband Satisfaction</b>			<b>Wife Satisfaction</b>				
	<b>M</b>	<b>SD</b>	<b>N</b>	<b>M</b>	<b>SD</b>	<b>N</b>		
Time 1	41.393	4.570	151	42.083	3.833	152		
Time 2	41.090	4.622	153	42.212	4.395	153		
Time 3	41.678	4.329	153	41.971	4.083	153		
Time 4	41.078	4.307	145	41.214	4.811	146		
Time 5	40.886	4.861	145	41.733	4.929	146		
Time 6	40.219	5.930	129	41.439	4.310	133		
Time 7	39.571	6.767	140	40.353	6.830	143		
Time 8	40.260	5.518	106	40.445	6.203	115		
Time 9	39.747	5.879	142	40.140	6.687	145		

**Table 5. Correlations Among Time 3 Marital Satisfaction and Spouses' Behavioural Codes**

	T3 Marital Satisfaction	Positive Emotion Composite	Self-Disclosure	Asking Questions	Negative Emotion Composite
	<b>Husband Topic</b>				
T3 Marital Satisfaction	<b>.543**</b>	.078	.019	.001	-.103
Positive Emotion Composite	.002	<b>.537**</b>	.037	-.128	-.241**
Self-Disclosure	-.033	.125	<b>.668**</b>	.080	-.198*
Asks Questions	.007	-.137	-.044	<b>-.044</b>	-.023
Negative Emotion Composite	-.127	-.232**	-.271**	-.025	<b>.532**</b>
	<b>Wife Topic</b>				
T3 Marital Satisfaction	<b>.543**</b>	.135	-.065	-.179*	-.151
Positive Emotion Composite	.048	<b>.461**</b>	.193*	.025	-.197*
Self-Disclosure	-.223**	.253**	<b>.572**</b>	-.147	-.158
Asks Questions	-.197*	-.122	.073	<b>.033</b>	-.021
Negative Emotion Composite	-.227**	-.289**	-.235**	-.036	<b>.644**</b>

*Note.* Within-spouse correlations for husbands appear above each diagonal and within-spouse correlations for wives appear below each diagonal within the panels for husband and wife topic. Cross-partner correlations for husbands and wives appear bolded on each diagonal.

\* $p < .05$ ; \*\* $p < .01$

**Table 6. Positive Emotion Composite as a Moderator of Marital Satisfaction Trajectories**

	<u>Marital Satisfaction</u>					
	Husband Topic			Wife Topic		
	Coefficient	SE	<i>t-ratio</i>	Coefficient	SE	<i>t-ratio</i>
Husband Intercept						
Low H PE Composite	41.055	0.301	136.311***	41.057	0.302	136.573***
High H PE Composite	2.123	2.257	0.940	6.068	2.187	2.774**
Wife Intercept						
Low W PE Composite	41.715	0.289	144.448***	41.719	0.288	144.883***
High W PE Composite	-0.394	2.091	-0.188	2.800	2.479	1.129
Husband Time						
Low H PE Composite	-0.003	0.001	-5.845***	-0.003	0.001	-5.755***
High H PE Composite	0.007	0.004	1.828	0.003	0.004	0.593
Wife Time						
Low W PE Composite	-0.003	0.001	-5.438***	-0.003	0.001	-5.337***
High W PE Composite	0.012	0.004	3.234**	0.005	0.005	1.155

Note. H = husband, W = wife, PE = positive emotion. Analyses of spouses' PE behaviour moderating their own marital satisfaction during discussions of husbands' topics are on the left side of the table. Analyses of spouses' PE behaviour moderating their own marital satisfaction during discussions of wives' topics are on the right side of the table.

*df* = 151. \**p* < .05; \*\**p* < .01; \*\*\**p* < .001

**Table 7. Self-Disclosure as a Moderator of Marital Satisfaction Trajectories**

	<u>Marital Satisfaction</u>					
	Husband Topic			Wife Topic		
	Coefficient	SE	<i>t-ratio</i>	Coefficient	SE	<i>t-ratio</i>
Husband Intercept						
Low H Self-Disclosure	41.057	0.299	137.219***	41.058	0.302	135.741***
High H Self-Disclosure	3.116	1.605	1.941	-0.905	1.691	-0.535
Wife Intercept						
Low W Self-Disclosure	41.720	0.289	144.438***	41.722	0.282	148.184***
High W Self-Disclosure	0.130	1.458	0.089	-5.696	1.609	-3.541**
Husband Time						
Low H Self-Disclosure	-0.003	0.001	-5.760***	-0.003	0.001	-5.759***
High H Self-Disclosure	0.002	0.003	0.747	0.001	0.003	0.189
Wife Time						
Low W Self-Disclosure	-0.003	0.001	-5.346***	-0.003	0.001	-5.357***
High W Self-Disclosure	0.002	0.004	0.523	-0.001	0.004	-0.393

Note. H = husband, W = wife. Analyses of spouses' self-disclosure moderating their own marital satisfaction during discussions of husbands' topics are on the left side of the table. Analyses of spouses' self-disclosure moderating their own marital satisfaction during discussions of wives' topics are on the right side of the table.

*df* = 151. \**p* < .05; \*\**p* < .01; \*\*\**p* < .001

**Table 8. Asking Questions as a Moderator of Marital Satisfaction Trajectories**

	<u>Marital Satisfaction</u>					
	Husband Topic			Wife Topic		
	Coefficient	SE	<i>t-ratio</i>	Coefficient	SE	<i>t-ratio</i>
Husband Intercept						
Low H Asking Questions	41.059	0.302	136.117***	41.061	0.302	136.166***
High H Asking Questions	4.633	3.645	1.271	-1.912	4.747	-0.403
Wife Intercept						
Low W Asking Questions	41.719	0.288	144.648***	41.720	0.278	149.986***
High W Asking Questions	2.567	3.518	0.730	-13.471	5.492	-2.453*
Husband Time						
Low H Asking Questions	-0.003	0.001	-5.763***	-0.003	0.001	-5.794***
High H Asking Questions	-0.008	0.007	-1.092	0.018	0.008	2.284*
Wife Time						
Low W Asking Questions	-0.003	0.001	-5.364***	-0.003	0.001	-5.359***
High W Asking Questions	0.012	0.008	1.531	-0.007	0.008	-0.852

Note. H = husband, W = wife. Analyses of spouses' asking questions moderating their own marital satisfaction during discussions of husbands' topics are on the left side of the table. Analyses of spouses' asking questions moderating their own marital satisfaction during discussions of wives' topics are on the right side of the table.

*df* = 151. \**p* < .05; \*\**p* < .01; \*\*\**p* < .001

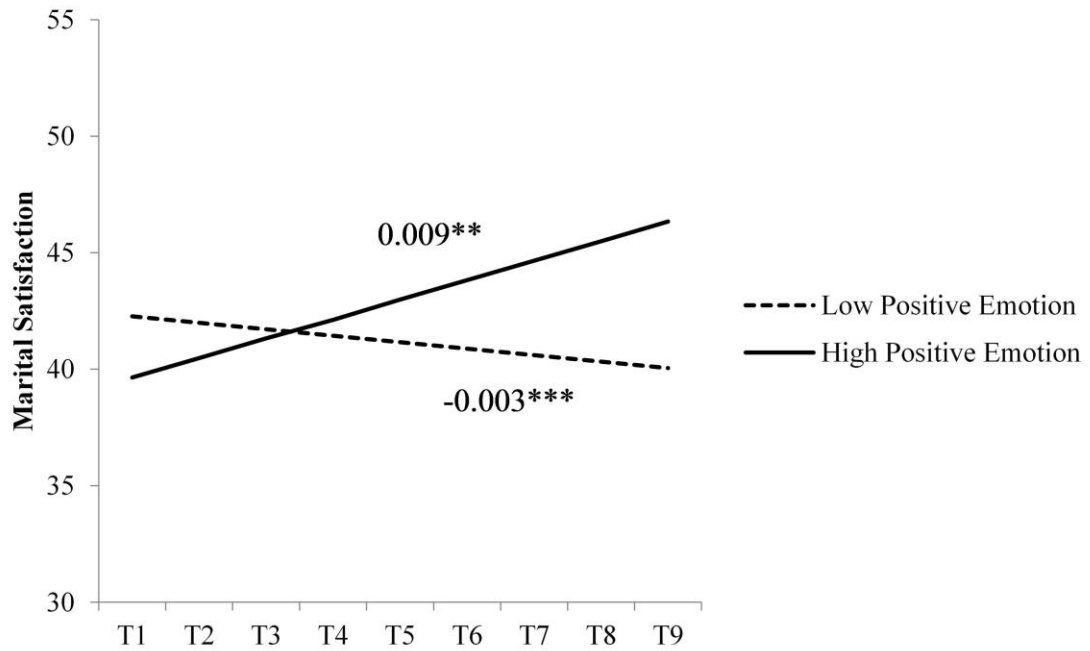
**Table 9. Negative Emotion Composite as a Moderator of Marital Satisfaction Trajectories**

	Marital Satisfaction					
	Husband Topic			Wife Topic		
	Coefficient	SE	<i>t-ratio</i>	Coefficient	SE	<i>t-ratio</i>
Husband Intercept						
Low H NG Composite	41.055	0.299	137.393***	41.059	0.299	137.192***
High H NG Composite	-4.865	3.328	-1.462	-3.857	4.673	-0.825
Wife Intercept						
Low W NG Composite	41.717	0.284	146.715***	41.719	0.280	148.856***
High W NG Composite	-4.115	2.632	-1.564	-7.117	2.929	-2.430*
Husband Time						
Low H NG Composite	-0.003	0.001	-5.891***	-0.003	0.001	-5.770***
High H NG Composite	-0.011	0.004	-2.652**	0.001	0.005	0.254
Wife Time						
Low W NG Composite	-0.003	0.001	-5.492***	-0.003	0.001	-5.312***
High W NG Composite	-0.015	0.004	-3.991***	-0.005	0.006	-0.925

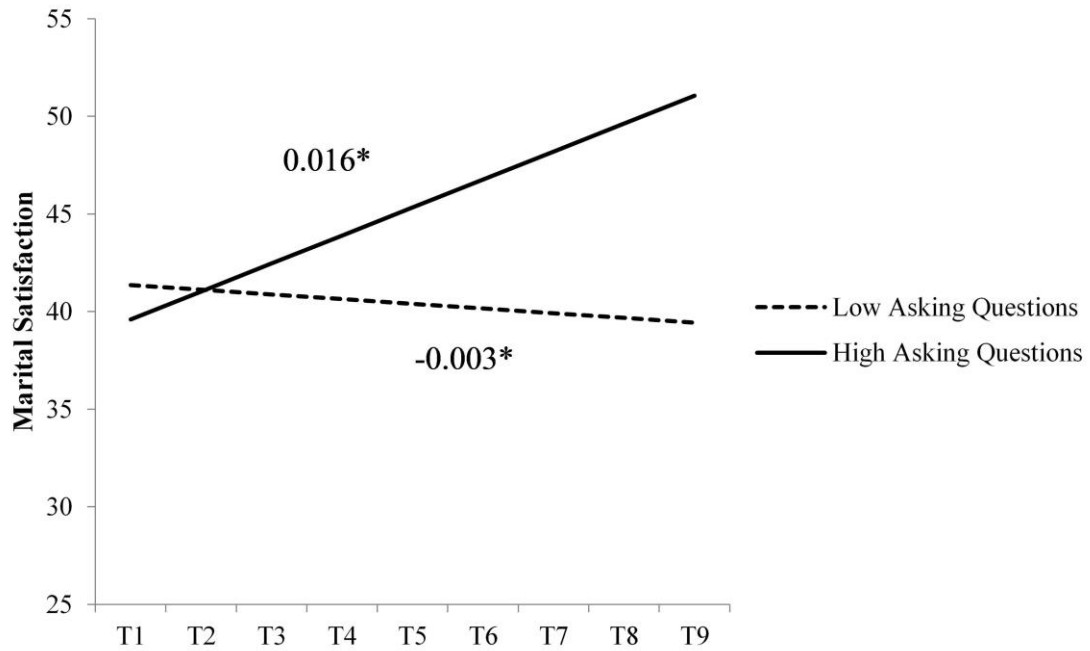
Note. H = husband, W = wife, NG = negative emotion. Analyses of spouses' NG behaviour moderating their own marital satisfaction during discussions of husbands' topics are on the left side of the table. Analyses of spouses' NG behaviour moderating their own marital satisfaction during discussions of wives' topics are on the right side of the table.

*df* = 151. \**p* < .05; \*\**p* < .01; \*\*\**p* < .001

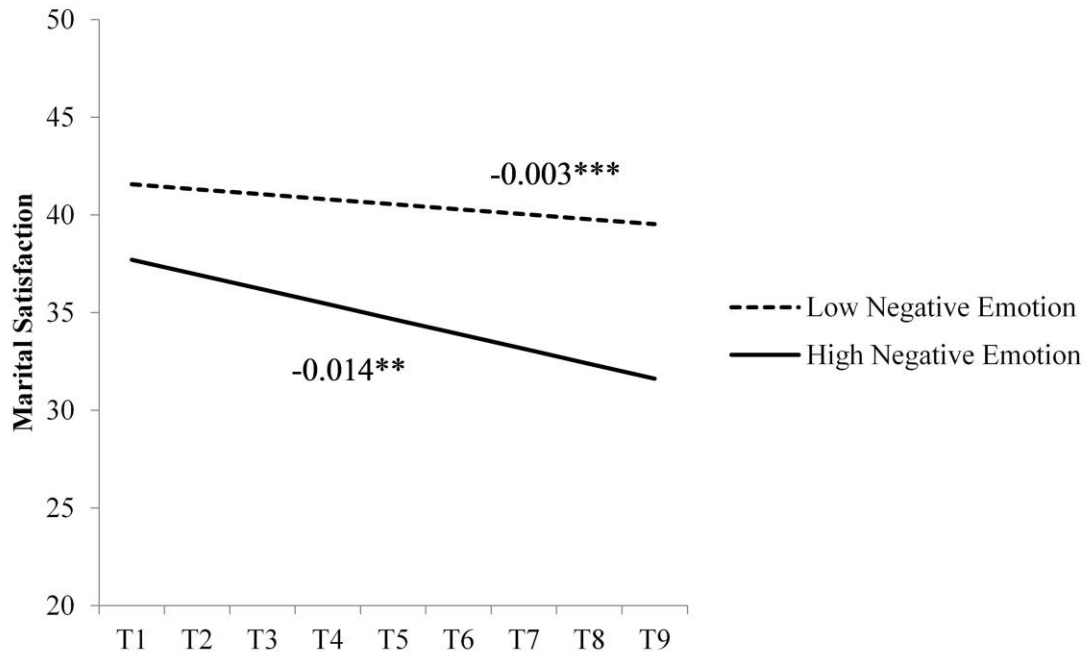




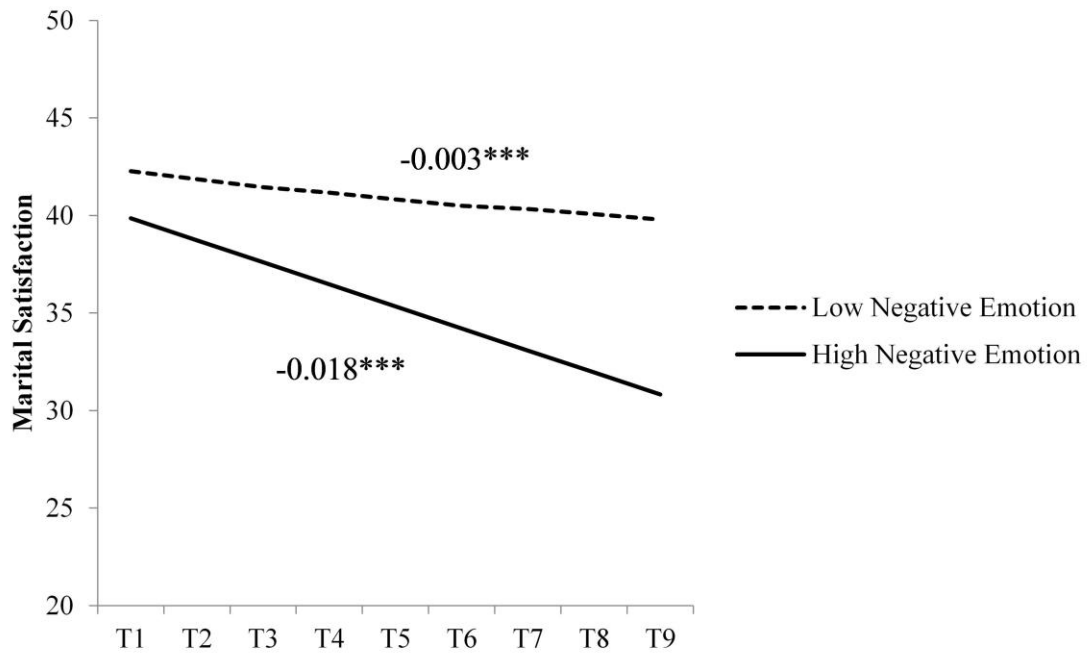
**Figure 1. Listener wives' positive emotion strategies moderate trajectories of marital satisfaction over two years**



**Figure 2. Listener husbands' asking questions behaviour moderates trajectories of marital satisfaction over two years**



**Figure 3. Speaker husbands' negative emotion strategies moderate trajectories of marital satisfaction over two years**



**Figure 4. Listener wives' negative emotion strategies moderate trajectories of marital satisfaction over two years**

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# Appendix

## Transgression Interaction Coding System (TICS)

Transgression Interaction Coding System (TICS)

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Draft: May 2, 2011

- Included in this manual are descriptions and examples of the various emotions, cognitions, and behaviours we expect to observe as spouses discuss an interpersonal transgression.

### Laboratory Procedure for Interpersonal Transgression Discussions

- The laboratory procedure used was adapted from similar paradigms used to examine conflict and support behaviours (e.g., Pasch & Bradbury, 1998; Sullivan et al., 2010). Spouses were asked to think of a time when their partner hurt their feelings. They were encouraged to choose something that was at least moderately hurtful and relatively recent. When this was not possible, spouses were asked to think of something that was more remote in time or was less hurtful.
- After spouses indicated that they had a specific incident in mind, they provided a brief written description of the event, rated how hurtful the event was on a 10-point scale, and completed the Offence-Specific Forgiveness Scale (Fincham, Beach, & Davila, 2004).
- Once the rating scales were complete, the order in which spouses discussed their topic was randomly determined. Digitally recorded discussions lasted 7 minutes. The person who is describing their hurt feelings is designated the “Speaker,” and the person who is the ostensible offender is the “Listener.” The speaker/listener role refers to who brought up the topic and who is the presumed offender; it does not refer to who is speaking and listening in the interaction itself. We chose not to use terms such as victim and offender/transgressor because they implied that there was a clear victim and perpetrator in the situation being described and that is seldom the case. At the end of the first discussion, spouses completed a short questionnaire assessing their perceptions of the discussion. Couples then engaged in a second 7-minute discussion focusing on the other partner’s event.

### Coding Procedure

- Before beginning any coding, watch the entire video once to establish a context for the analysis. Do not code any behaviour at this time.

- Then restart the video and begin to code each participant's speaking turn. **Consider each speaking turn as neutral unless it meets criteria for another code.**
- Pause the video after each speaking turn to make the appropriate ratings and note the onset time of the speaking turn. When coding, ***consider what is said, how it is said, and the context of the comments.*** The same literal statement can have distinctly different meanings depending on the context and the tone in which it was conveyed.
- The coding is organized around current definitions of forgiveness and the interpersonal stage process of forgiveness that is described above. We assume that spouses arrive at a state of forgiveness by processing emotions and cognitions, making meaning, and coming to a new understanding (emotionally and cognitively) of the event, their partner, themselves, and the relationship. Thus, we have organized the coding system into positive codes that reflect a) emotion-focused strategies, b) cognitive strategies, and c) other strategies (perhaps behavioural – though we do not expect to see a lot of behaviour reflecting forgiveness strategies in the context of the lab procedure). Since we do not expect that interpersonal transgression discussions will always go smoothly, we have also created a set of negative, off-task, and neutral codes. Within each positive and negative code, there are multiple ways that spouses can meet criteria. Your first decision will be whether the speaker turn is something other than neutral (i.e., off-task, positive, or negative). If positive or negative, your next decision is which of the lower level code(s) apply.
- Although we explicitly assign the role of Speaker (the person with hurt feelings) and Listener (the person who hurt the partner's feelings) to the spouses, in our experience the kinds of behaviour displayed by spouses in each role is more similar than different. For example, a spouse in either role might reassure the partner about feelings of love, trust, and support. Thus, we have not created codes that are unique to each role. Rather, any code can be applied to a spouse in the speaker or the listener role. Throughout the manual, we have attempted to provide examples of how particular codes may manifest differently depending on the role of the spouse. Speaker examples are denoted by SP and listener examples are denoted by LS.
- The first decision is whether the speaking turn fits any category other than neutral. The turn can be assigned either positive code(s) or negative code(s). Unlike other coding systems, it is possible to assign more than one code within the positive or negative category to each speaking turn. In other words, codes within the positive category and within the negative category are not mutually exclusive. However, if the speaking turn contains both positive and negative content, only code the negative content codes.
- Once you are finished coding all speaking turns, make the final global ratings based on the information observed throughout the entire video. Consider not only the speaking turns but also the listening behaviour of each spouse.

## POSITIVE CODES

### A. EMOTION FOCUSED STRATEGIES

#### 1. EMOTIONAL SUPPORT/REASSURANCE (Bradbury & Pasch, 1998; Mitchell, 2008)

- Provides **genuine and appropriate** encouragement (e.g., SP: I know you are trying hard not to say those kinds of things anymore; LS: I'm really glad you told me that you were so hurt, I never want to make you feel that way).
- Reassures or consoles partner (e.g., SP: I know you were just trying to help, I'm not mad at you anymore; LS: I said those things because I was mad, I really love the way you look; LS: It's okay to tell me when you're upset with me).
- Statements that help to bolster partners' self-esteem or make them feel better (e.g., SP: You are a good person, everyone makes mistakes; LS: Your trust in me is a good thing and that doesn't make you naïve).
- Asks questions to help partner express or clarify feelings about the problem (e.g., LS: How did you feel when I forgot we made plans for Saturday? It seems like you might still be worried that we haven't fixed the underlying problem, do you think that's true? Were you more frustrated or hurt by my comments?). *Note:* If questions are designed to show emotional understanding versus clarification (e.g., Spouse says: "I'm not sure what was going through my mind, I think I felt..." and partner responds with "...hurt?"), then code empathy/validation. However, if questions are asked to genuinely explore or elicit an emotional discussion, then code emotional support/reassurance.
- Commenting on the value or strength of the relationship (e.g., I think this has helped us realize how important we are to each other; I'm glad we can be open with each other and that we feel comfortable talking about this issue together). *Note:* This code is distinguished from PC1 (self-disclosure), because it is a statement about the strength or positive qualities of the relationship that is said in a way that communicates support or reassurance. Code PC1 if the speaking turn appears to be more of a reflection about the process or quality of the relationship that deepens partners' understanding of themselves or their relationship (e.g., We've always been able to talk about these issues.).
- Statements that reveal either partners' own experience in a helpful way (e.g., I've said thoughtless things before and have really hurt other people's feelings. I felt so bad about it and that sometimes the guilt made me avoid the person I hurt).
- Consider verbal statements that request physical contact or intimacy from a partner as a way to attain emotional support or reassurance (e.g., Can I have a hug? Come give me a kiss). If it is unclear whether the underlying goal of

the request is emotional support/reassurance, then code such statements as PO.

- **Code emotional support/reassurance and empathy/validation if the speaking turn meets criteria for both codes.** However, if you code emotional support/ reassurance, do not code empathy/validation *unless it is also present in other parts of the speaking turn.*

## **2. EXPRESSING EMOTIONS (Johnson et al., 1998; Mitchell, 2008)**

- Verbal expressions of feeling; feelings may be positive or negative and may be about the problem, the partner, the self, or the situation (e.g., SP: I was hurt when you teased me in front of our friends; LS: I felt really awful when I saw how much I hurt you; SP: It bothers me when you shut down after I've upset you).
- Statements reflecting genuine feelings of caring, warmth, or love for the partner (e.g., I love you; I care about how you feel).
- Apologies or expressions of remorse indicated by verbal expressions that suggest the individual wishes they had not done the hurtful action and recognizes that what they did was wrong (e.g., SP: I'm sorry I got so upset with you. I could have handled the situation better; LS: I am sorry I hurt you; I apologize).
- Overt expressions or statements of forgiveness that suggest that the individual no longer harbours ill-feelings towards their partner. (e.g., I forgive you; I trust you now, my trust is restored). *Note:* Sometimes an individual will express forgiveness in a manner that provides reassurance to the partner. In this case, code both expressing emotions and support/reassurance (e.g., Don't worry. I'm not angry with you anymore. I've forgiven you).
- Do not code cognitive statements that may be worded in emotional terms (e.g., I feel like you don't listen to me; I feel like I put more effort into organizing social events with friends). However, be mindful of words that seem cognitive but actually have emotional content (e.g., I feel like you don't appreciate the effort I put into organizing social events with friends).

## **3. EMPATHY/VALIDATION (Mitchell, 2008)**

- Acknowledges, accepts, and appreciates the appropriateness of the partner's beliefs, interpretations, feelings, or thoughts (e.g., SP: You are right. I might have done the same thing if the roles were reversed; SP: I understand how badly you must have felt; LS: I can see why you were so embarrassed by what I did).
- Asks questions that reflect a spouse's attempt to offer a valid hypothesis regarding their understanding of their partner's feelings or experience (e.g., I was wondering, were hurt that I said those things? Or spouse says: "I'm not sure what was going through my mind, I think I felt..." and partner responds with "...hurt?" In this case, you would code "hurt?" as empathy). If the

questions are asked to help spouses understand or clarify the emotional effects of the event, then code emotional support/reassurance.

- Validating statements usually reflect an **understanding or appreciation** of the partner's concerns or difficulties (e.g., SP: I know it was really hard for you to apologize, and I really appreciate it; LS: I can see why you felt frustrated that I was late meeting you; LS: I see what you mean; I was not being considerate of your feelings; LS: You almost seem embarrassed by my comments...).
- Empathy involves an understanding of partners' views and feelings, even if partners do not agree or share the same sentiments. Thus, agreement is not necessary for empathy/validation (e.g., SP: You've had a rough time at work lately. I can appreciate why you felt frustrated when I complain as soon as you get home. LS: It sounds like it hurt you that I didn't like my birthday gift, but you also seem hurt because I was rude about it; When I made those teasing comments, I could see how angry and upset it made you). *Note:* The listener does not agree to having teased the spouse with malicious intent or to purposely upset him/her, rather it is a statement of understanding and compassion.
- Consider the function and context of a statement when determining how to code. For example, some listeners say "right" to mean "go on" or "continue," whereas others say "right" to mean "I agree." The first statement is positive engagement, and the second statement *might be* validation. We expect that **a certain threshold must be met** for any statement to be considered validation. Therefore, if someone were to say "right" and it clearly implied agreement/understanding and the partner clearly interpreted it that way, then you could code empathy/validation.
- Empathy and validation are a type emotional support, but they are special in that they soften negative or blaming interactions. If you code empathy/validation, do not code emotional support/reassurance *unless it is also present in other parts of the speaking turn.*

#### 4. HUMOUR (Johnson et al., 1998)

- Joking, good-natured teasing, or exaggeration such that *both* partners think the joke is funny enough to laugh.
- Statements that build on or respond to humorous statements by a partner that show shared humour. *Shared* humour or laughter is important in distinguishing this as positive affect versus derisive teasing or contempt.
- Genuine smile or laughter in a positive situation with no ill intention on the part of either member of the couple (e.g., making fun, mean teasing, contempt are NOT humour). If the attempt at humour is sarcastic or has a sarcastic tone or edge, then it will be coded as NG.
- If the humour is positive, genuine, and seems to be an authentic effort on the part of the spouse to ease tension or to poke fun at the problem (not the



partner), code this as positive even if the partner doesn't share in the humour. In this case, it is a positive and prosocial attempt to resolve tension and even though the partner doesn't reciprocate, we want to code the constructive behaviour of the spouse. However, if the humour is not reciprocated and the spouse persists in building on the humorous statements, consider shifting to a negative code.

- Be careful about failed attempts at humour. If the humour seems like it could be positive initially, but it fails miserably (more than ignoring) then you might consider a negative code. For example, if there is some indication that the recipient of the humour has heard this before and indicates a lack of appreciation for this type of humour, or the partner lashes out specifically about the humour (e.g., That is a mean thing to say; You are just trying to avoid the problem by making jokes and you know I hate that). At times this may be hard to distinguish from genuine attempts at humour by the spouse; use your best judgement about the authenticity and the partner's response to guide your coding.
- Do not code nervous or tense laughter as humour. Be sure to distinguish between smiles indicating humour and smiles indicating warmth and affection; the latter are not coded as humour and should be considered when coding positive engagement.

## **B. COGNITIVE STRATEGIES**

### **1. SELF-DISCLOSURE (Mitchell, 2008)**

- Statements that function to disclose the thoughts, opinions, expectations, or beliefs of the speaker in a *meaningful* way (e.g., I think that in a marriage there should be mutual respect and trust; I think it's important that we discuss important decisions together). Statements must add to or further the conversation in a meaningful direction.
- Sometimes spouses may repeat themselves because they are trying to make a point or they may think the partner does not yet understand – continue to code those statements as self-disclosure.
- If the repetition becomes more of a demand for understanding or a way to keep the focus on the self in a way to promote an agenda or to force the partner to submit, then consider shifting to a negative code.
- If the repetition is just a restatement of what has already been said multiple times as way to summarize and recap, still code self-disclosure. Only shift to neutral if the repetitive statements no longer seem required by either partner and are only said as a “place marker” in the conversation.
- Disclosures may be about the event, the partner, the self, the relationship, friends/family, or the past or future (e.g., I've always been shy; it's hard for me to express my feelings).

- Consider process-type statements that have a meta-cognitive quality or that help partners make meaning of their relationship or the event (e.g., I think we are good at finding ways to compromise in our relationship).
- Disclosures containing both *positive and negative content* are coded in this category, but statements that are intended to criticize, invalidate, or hurt the partner are not. For example, SP: “I think it was insensitive of you to bring up that topic in front of your parents” is coded in this category, but “I think you can be so stupid sometimes” is not.
- Statements that criticize or express contempt for individuals other than the partner are coded in this category (e.g., “I think Jim is a jerk”; “I hate Susan”).

## **2. ASKING QUESTIONS**

- Asks questions to clarify situations or thoughts (e.g., SP: Why did you say that? How can I tell when you are being serious? Did I do something to make it worse? Why do you think you try to correct my cooking technique?; LS: Can you explain that more?; What were you thinking when I left the party early?).
- If questions are asked to explicitly suggest an understanding of emotional experiences (e.g., “It seems like maybe you were upset, am I right?”), then code empathy/validation. If questions are asked to clarify emotional experiences (e.g., “What were you feeling when I did that?”), the code emotional support/ reassurance.

## **3. PROBLEM-SOLVING/OFFERING ADVICE**

- ***Clear and specific*** statements that gently suggest a new way of handling the problem or propose a specific plan of action (e.g., SP: Next time you are mad at me, maybe you could say something instead of just keeping it to yourself and giving me the silent treatment; LS: Rush hour traffic makes me crazy. I think I need a few minutes to myself to decompress when I get home so I don’t get so moody).
- Asks questions that help the partner or the spouse come up with a plan about how to handle the issue. (e.g., What can I do if this happens again? How will I know when you are getting upset? Can you tell me when I say something that upsets you? SP: It would make me feel more trusting if you would call me when you are going to be late)
- Asks partner to do something to help facilitate recovery from the injury or asks what can be done to repair the relationship (e.g., LS: What can I do to make this up to you? How can I prove that I trust you?)
- Offers to assist partner in some specific way or makes a specific and sincere statement regarding behavioural changes he/she will make (e.g., SP: If something is important to me, I’ll try and let you know ahead of time so that you aren’t late meeting me; LS: I’ll try to remember to call if I know I’m going to be late).

- If the partner orders, demands, or instructs their partner to make a desired change, then consider a NG code depending on the context and tone (e.g., “You really need to get it together; Just stop being friends with her and problem solved.”).

### **C. POSITIVE OTHER**

- Only use this code if no other positive content code fits the behaviour (e.g., “Thank you for saying that”). If applied to a speaking turn, this will be the only code for that turn.
- Consider statements that move the conversation back on task. However, if a partner directs the conversation back to the topic at hand and then provides additional statements that can be coded as another positive or negative code, do not code PO.

### **NEGATIVE CODES**

#### **1. DEFENSIVENESS (*Johnson et al., 1998*)**

- Partner denies or refuses to take responsibility for their role in the transgression (if appropriate); this also includes self-justification (e.g., SP: None of this was my fault; I was reacting to what you said/did; LS: I don’t see why you are so upset, I didn’t do anything wrong; There is no excuse for what you said – I never said anything to make you upset).
- Defensiveness usually includes an innocent victim stance (e.g., SP: I did nothing to provoke you, how can you even say that your comments were a reaction to something I said? LS: You think I’m yelling at you and I’m not; LS: It’s not my fault you were worried. I didn’t know you wanted me to call), a righteous indignation stance (e.g., I don’t think it’s my job to tell you what I’m thinking or feeling – you should just know!), or both.
- Defensiveness can take the form of excuses, “yes-but” statements, or counter criticisms (e.g., LS: Sure, I was being a jerk, but you deserved it),
- Defensiveness may include disagreeing with the partner’s interpretations of the event or aggressively defensive statements (e.g., No, I did *NOT* do that).
- Watch for non-verbal cues displayed by an individual during their speaking turn that reflect signs of defensiveness (e.g., shaking head, defensive hand gestures that are often reflected inward). Non-verbals displayed during the other partner’s speaking turn should be considered in the global codes.

#### **2. MINIMIZING/SELF-BLAME**

- Occurs when the speaker (or for the listener when talking about their own feelings/reactions) downplays the impact or severity of the event (e.g., SP: It really didn’t bother me; It wasn’t a big deal) or makes concerns appear small and/or insignificant (e.g., SP: I got over it really quickly; It’s so trivial). Code minimizing if you think the statements are designed to avoid talking about the

situation because it is too hard or scary, or the speaker wants to avoid making the partner mad or rejecting.

- Consider statements that are incongruous with previous comments about the importance of the event. For example, if an individual starts by saying, “I was really hurt when you commented about my weight in front of our friends” and then later says, “You know, it’s really not a big deal. I’m over it,” consider minimizing. However, if the person initially says, “I had a really hard time coming up with a topic. So, the one I came up with is not really a big deal”, then minimizing may not be present.
- Only code minimization if it seems inappropriate and/or derails a positive repair process. In some cases, it may be true that the event was a small thing or something that the person is over.
- The individual may also engage in self-blame (e.g., SP: I was probably just being oversensitive), but be careful to distinguish between minimizing self-blame and self-blame that is appropriate and takes responsibility for their role in the transgression.
- If the listener is downplaying the importance, consider either defensiveness or invalidation.
- Don’t code minimizing if the statements were designed to reassure or console a partner and help the couple move towards a softer, non-blaming stance so that they can more adaptively discuss the situation – instead, code as positive emotional behaviours.

### **3. INVALIDATION**

- Either partner can be invalidating in the interaction by denying the other partner’s feelings or making it seem as though the partner’s experience/emotions are wrong or unwarranted (e.g., You didn’t really feel that way; You shouldn’t get so worked up about things; Let’s not blow this out of proportion)
- Includes brushing off the partner’s concerns or downplaying the importance of the event (e.g., LS: I don’t know why you made such a big deal, it was really nothing; I wouldn’t have been upset by that so I don’t know why you are).
- Invalidation is distinct from minimizing, because it is “other” directed – in minimizing, it is about downplaying one’s own emotional reactions (or self-invalidation), but invalidation of the partner is clearly directed towards the partner either by making the partner’s position untenable or denying the partner’s experience.

### **4. CRITICISM (Johnson et al., 1998)**

- Negative critiques of the partner, their behaviour, and their approach to or way of dealing with the situation (e.g., SP: You’ve never been good at keeping your

mean thoughts to yourself; You act like I'm a parasite on our relationship; LS: Well, your hair really does look that bad sometimes).

- The criticism reflected by this category goes beyond a simple complaint in that it involves global statements that attack the partner's personality or character rather than a specific behaviour. It usually involves blame or the insinuation of blame (e.g., SP: You are always flirting with other women just to make me jealous; LS: You are way too sensitive).
- There may be some instances where the partner is criticized with neutral or even positive affect allowing the couple to gain new understanding about the situation; this would be coded as positive behaviour (e.g., You have a hard time talking about your feelings, and so sometimes I make assumptions that aren't right, and that make me feel bad).

#### **5. ANGER, CONTEMPT (Johnson et al., 1998)**

- Statements that reflect anger or hostility as indicated by the person's tone of voice, facial expression, body language, or content of speech turn (i.e., what the person says). This would be negative emotions directed towards the partner.
- Include any statement that is insulting, condescending, sarcastic, or contemptuous, and is intended to insult or mock the other person (e.g., LS: Aww, you poor baby; LS: If I didn't leave explicit instructions, you'd never get it right).
- Contemptuous statements tend to have a demeaning or icy quality that indicates a sense of superiority or disgust with the partner (e.g., Yep, you're perfect. We should all model ourselves after you; LS: I've already said you were right. What else am I supposed to say?!).
- Watch for non-verbal cues displayed by an individual *during the speaking turn* that reflect signs of contempt or hostility (e.g., smirks, eye rolls, or sneers).
- Frustration is evident when the person expresses a loss of patience because they feel they are not getting anywhere in the discussion (e.g., SP: As usual, you're not listening to me; LS: Will you give me a chance to explain myself?).
- Consider statements that reflect revenge seeking. These statements will imply that the individual will get back at his/her partner, (e.g., SP: I'll make you pay for this), that the partner will "get what is coming" to them (e.g., SP: Someday this is going to come back at you), or that individual hopes the partner could experience the same degree of hurt (e.g., SP: I wish you could experience how much this hurt me).

#### **6. OTHER**

- Only use this code if no other negative content code fits the behaviour. If applied to a speaking turn, this will be the only code for that turn.

- Partner bickering may fall in this category, but be sure that no other negative codes (e.g., anger/contempt, criticism, defensiveness) can account for the partners' speaking turn. In other words, if they seem to be going back and forth in a rapid fire way without really listening or gaining understanding, even if there is no overtly critical or hostile content, then you might consider NG other.

### ***NEUTRAL CODE (Bradbury & Pasch, 1998)***

- Use for speech that is difficult to understand, ambiguous, or too brief to be coded as positive, negative, or off-task.
- Include descriptive information that does not meet criteria for a positive, negative, or off-task code (e.g., repetitive material or echoing in one or two words what the partner has said in ways that don't add meaning).
- Speech turns containing positive or negative elements, but that do not meet threshold criteria.
- Providing factual information about the topic (e.g., It happened over Easter weekend) or asking questions to elicit factual information to orient oneself or the partner to the hurt feelings topic/event (usually only applies if these are very short statements; e.g., What party are you talking about?)

### ***OFF-TASK CODE (Bradbury & Pasch, 1998)***

- Couple talks about matters not relevant to the issue under discussion or continues to talk about irrelevant material regardless of who originally took the discussion off-task. For example, if they begin talking about how the wife is hurt when her husband is late meeting her and they move on to talking about dinner plans with another couple, this would be coded as off task.
- Off-task may also be coded if the couple sits in silence as long as the silence is not related to or resulting from the topic at hand. Because you are only coding speaking turns, you will only code one off-task speaking turn even if they sit in silence for 3 minutes.
- The off-task code is reserved for situation in which the discussion has clearly deviated from the topic at hand. Speech that strays from the topic but seems to follow the interaction is coded based on content (e.g., Talking about this reminds me what a great wife you are. I'm so glad I married you, aren't you glad?)