

Chapter 1

Infidelity as a romantic betrayal

Close relationships are a source of companionship, security and happiness, enhancing our health and well-being. However, although they can provide great joy, close relationships also cause emotional pain. Relationship partners do not always behave as we would wish and when their actions violate our expectations we feel at best disappointed, and at worst betrayed (Jones, Moore, Schratte, & Negel, 2001). Betrayal has been defined as an act committed by one relational partner that violates the other partner's trust and expectations, causing painful feelings (Jones et al., 2001). Narratives that describe betrayal refer to feelings of devastation, anger, depression, hopelessness, disorientation and anxiety as well as loss of self-esteem. In particular, betrayal involves a painful realization that the relationship is not as valuable to the relational partner as it is to the victim. This may be construed as a complete rejection by someone loved very deeply (Fitness, 2001; Leary, Koch, & Hechenbleikner, 2001). Sometimes betrayals last as painful memories for 30 to 40 years (Jones & Burdette, 1994; Jones et al., 2001).

In research that collected people's accounts of betrayal experiences spouses were most often cited as both the victims and the perpetrators of betrayal. The most frequently reported betrayals involve sexual affairs, lying, leaving a partner, revealing a confidence or secret and not providing needed emotional support (Jones & Burdette, 1994). More broadly, however, for a particular act to be perceived as a betrayal it is typically held to have broken an important relationship rule (Fitness, 2001; Jones et al., 2001). Many relationship rules are implicit in that they are commonly expected and culturally supported; e.g. sexual fidelity in romantic relationships, and keeping secrets within friendships (Argyle & Henderson, 1985). Within the context of a particular relationship, relationship partners may also negotiate more explicit rules. For example, the explicit rules of an 'open

marriage' might allow extra-dyadic sex based on certain conditions such as full disclosure, or in particular contexts such as when travelling for work. In addition to implicit and explicit relationship rules, individuals bring to any relationship their own particular expectations based on relationship beliefs or 'schemas' that may have developed from infancy (Baldwin, 1995).

Within the context of romantic relationships the most frequently reported form of betrayal from the perspective of both victim and perpetrator is infidelity (Buss & Shackelford, 1997b; Jones & Burdette, 1994; Jones et al., 2001). The current chapter reviews the literature on infidelity, including what is known about emotional responses to infidelity and how it is understood within three key theoretical frameworks, evolutionary psychology, attachment theory and interdependence theory. The chapter concludes with an overview of this thesis.

The nature of infidelity

A number of difficulties associated with understanding infidelity are derived from a lack of consistency in how researchers define it, as well as a lack of specificity in the behaviours involved. The Australian Concise Oxford Dictionary (1987) defines infidelity very broadly as "disloyalty, unfaithfulness, esp. to husband or wife" (p. 548). Presumably in an attempt to use colloquial language, relationship researchers have used a variety of terms to describe infidelity including 'affair', 'cheating' and 'unfaithful' (Allen et al., 2005; Blow & Hartnett, 2005a; Thompson, 1983). In relation to infidelity behaviours, most of the empirical and clinical research has targeted extra-marital sex, although this too is rarely defined in any detail. Some researchers have investigated a continuum of extra-marital involvement including physical behaviours not limited to sexual intercourse, with attempts to clarify frequency of behaviours and the number of partners (Thompson, 1983, 1984). Lack of behavioural definitions is an important point, considering the extent to

which sexual relationships may differ and are open to idiosyncratic interpretation (Allen et al., 2005; Blow & Hartnett, 2005a). This was highlighted by the former US president Bill Clinton's famous remark, "I did not have sexual relations with that woman".

In his review of the research literature on extra-marital sex, Thompson (1983) argued that definitional ambiguity complicated research interpretation and made comparisons among studies difficult. He called for a more systematic and precise terminology, suggesting that three conditions should be specified; the consensual or secretive nature of the behaviours, the nature of the primary relationship, and a description of the behaviours. Despite this recommendation, a review of the infidelity literature published after 1980 found that definitional ambiguity was still an issue, and that most studies used a definition of infidelity that was limited to heterosexual, extra-marital intercourse (Blow & Hartnett, 2005a). The authors of this later review recommended the following broader definition: "Infidelity is a sexual and/or emotional act engaged by one person within a committed relationship, where such an act occurs outside the primary relationship and constitutes a breach of trust and/or violation of agreed-upon norms (overt and covert) by one or both individuals in that relation to romantic/emotional or sexual exclusivity" (Blow & Hartnett, 2005a, p. 191). This definition acknowledges that relationship betrayals are a function of overt and covert relationship expectations about exclusivity and may be particular to the relationship or relationship partners. This definition is also useful in clinical settings when therapists need to assess idiosyncratic exclusivity expectations for couples attempting to repair their relationships following the discovery of an infidelity (Whisman & Wagers, 2005).

It is particularly important to note that extra-marital involvements can also be defined by the type of emotional connection experienced with the other person. Some researchers have explored so called 'emotional infidelity' or the emotional, compared to the sexual, aspects of infidelity. Others have used the words 'love' or 'deep emotional attachment'

when they refer to infidelities that are emotional (Glass & Wright, 1992; Harris, 2002; Shackelford, Buss, & Bennett, 2002; Shackelford et al., 2004; Thompson, 1984). Allen et al (2005) suggest that in emotional infidelity, “emotional intimacy and sexual attraction to another person are combined with secrecy from the spouse” (p.101). As is the case with sexual infidelity there is a need for a consistent and more specific definition of emotional infidelity and the behaviours involved.

How common is infidelity?

Ground breaking research by Kinsey and his colleagues in 1948 surveyed 3088 married men of all ages and 2000 married women up to the age of 40, finding that 50% of men and 26% of women reported having had ‘extra-marital sexual intercourse’. A more recent study in America using data from a nationally representative sample of 884 men and 1288 women who had ever been married, found the lifetime prevalence of extra-marital sex was 22.7% and 11.6%, respectively. The reported prevalence of extra-marital sex in the past year was 4.1% and 1.7% for men and women respectively (Wiederman, 1997). These estimates are consistent with other large surveys in America (for reviews see Allen et al., 2005; Thompson, 1983). Thompson (1983) argued that survey figures are likely to be conservative for reasons including socially desirable responding and a focus on extra-marital sex. He also suggested that another way to think about the incidence of extra-marital sex is at the level of the couple rather than the individual given that this is the context within which the behaviour is defined, and it is more meaningful for clinicians who deal with the issue of infidelity in couple therapy. To illustrate this point he suggested that based on a survey of 8000 married men and women where 40% of the men and 36% of the women reported some experience of extra-marital sex, the probability of at least one partner in a marriage having been involved in extra-marital sex might be between 40% and 76%.

Broader definitions of infidelity behaviours and the inclusion of other forms of committed relationships such as de-facto, committed dating or homosexual relationships lead to higher estimates for the incidence of infidelity. In a sample of 354 female and 264 male college students who reported having ever experienced a serious dating relationship, Weiderman and Hurd (1999) found that roughly equal proportions of men (44.7%) and women (39.5%) had engaged in extra-dyadic sex while dating. In another study using representative national data, the relationship between sexual exclusivity and relationship status was analysed for a subset of female respondents ($n = 1669$) aged between 20 and 37 years who were currently in a committed relationship. At the time of the interview, 10% of these women reported having a second sexual partner; however, the frequency varied significantly between those women who were married (4%) and those who were either cohabiting or dating (20% and 18%, respectively) suggesting that the commitment of marriage may be a protective factor against extra-dyadic involvement (Forste & Tanfer, 1996).

It is important to note that most of the available data are based on U.S. samples. Studies conducted elsewhere suggest that the incidence of infidelity varies greatly. For example, in one cross cultural study referred to by Buunk and Dijkstra (2000), the reported incidence of extra-dyadic sex in Guinea Bissau over the previous year was 38% for men and 19% for women compared to 8% for men and 1% for women in Hong Kong. Incidence data will vary as a function of how infidelity is defined and the populations of interest. It is reasonable to assume that with broader definitions of infidelity behaviours and the committed relationships impacted by these, the incidence rates will be higher.

Attitudes to infidelity

Although infidelity is not uncommon, societal attitudes are mostly disapproving, especially when it threatens the institution of marriage. This widespread disapproval

appears to be relatively stable over time despite several decades of increasingly more relaxed attitudes toward sex in general. Using a consistent sampling technique across 24 industrialised countries ($N = 33,590$), Widmer, Treas and Newcomb (1998) investigated attitudes to premarital sex, teenage sex, extra-marital sex and homosexual sex, finding that disapproval of extra-marital sex was universal. Overall, extra-marital sex was regarded as 'always wrong' or 'almost always wrong' by 87% of respondents, compared to 24% for sex before marriage, 79% for sex before the age of 16 years, and 68% for homosexual sex. Lieberman (1988) argued that despite widespread acceptance of premarital sex, particularly between couples bonded by feelings of affection and expectations of exclusivity, little attention had been directed toward understanding attitudes to what he referred to as 'extra-premarital intercourse'. In his study of 131 university students he found that, while a majority (78%) agreed with the statement 'extra-marital relations are worse than extra-premarital relations', a majority (66%) also agreed with the statement 'extra-premarital relations are wrong'.

While most people report disapproval of infidelity, historically there has been widespread acknowledgement of a 'double standard' which is more approving, or at least more forgiving, of male compared to female extra-dyadic involvement. In a study of sexuality in 62 cultures, anthropologist Frayser (1985) found that in 26 of 58 societies, husbands but not wives were allowed to have extra-dyadic sex and in half of these, husbands were legally protected if they killed an unfaithful wife. Even today in many non-western cultures the outcomes for wives who engage in extra-dyadic sex range from social ostracism and abandonment by their families, to death by stoning (cited in Scheinkman, 2005). While the risks associated with infidelity are not as great for women living in western cultures, female infidelity is more likely than male infidelity to lead to divorce (Laumann, Gagnon, Michael, & Michaels, 1994) and indeed, much has been written in

relation to male sexual jealousy and its implications for violence toward women (Buss & Shackelford, 1997a; Shackelford, Goetz, Buss, Euler, & Hoier, 2005).

Although most people report a global disapproval of extra-dyadic involvement, a number of studies have demonstrated that opinions can be differentiated based on the perceived nature of the extra-marital involvement, and that individuals can also readily identify circumstances that might justify it. For example, Thompson (1984) found that attitudes were most negative toward extra-marital involvement that was both sexual and emotional as this was seen to be more threatening to the primary relationship, and sexual relationships that were not emotional were rated as worse than emotional relationships that were not sexual. Glass and Wright (1992) hypothesised that people would distinguish between types of justifications for extra-marital involvement, and that men and women would differ in their approval of these. Based on both empirical and clinical literature they developed a list of 17 justifications for extra-marital involvement and asked respondents to report the extent to which these reasons would, for them, justify a sexual or emotional extra-marital relationship. Four distinct justification factors emerged accounting for 74% of the total variance in response. These were, in order of importance for combined male and female data, sexual needs (e.g., sexual excitement, novelty or dissatisfaction), emotional intimacy (e.g., intellectual sharing, companionship, self-esteem), extrinsic motivation (e.g., career advancement, revenge against partner), and love (e.g., receiving love or falling in love). While the same justification factors emerged for both males and females, the first factor to emerge for men comprised sexual need items and the first factor to emerge for women comprised emotional intimacy items. For both sexes there was a positive association between sexual justifications and more sexual extra-marital involvements, while love justifications were positively associated with more emotional extra-marital involvements for men but not for women. The authors concluded that compared to women, men are more likely to differentiate between love and sex; compared

to men, however, women tend to believe that they go together, such that love justifies sex. These attitudinal differences are consistent with an earlier study by the same authors that found women were more likely than men to fall in love with their extra-marital sex partners, while men were more likely than women to describe extra-marital sex partners as close friends (Glass & Wright, 1985). Although both studies relied on middle to upper-class samples, they support the existence of an interaction between gender, infidelity attitudes and infidelity behaviours. Importantly for the understanding of infidelity, while in general attitudes to extra-dyadic involvement are mostly negative, people can find justifications for it.

Infidelity outcomes

Non-involved partner outcomes

The short-term reactions of non-involved betrayed partners, i.e. the betrayed partners, are typically overwhelmingly negative and include rage, sadness, fear, jealousy and confusion (Cano, O'Leary, & Heinz, 2004; Shackelford, LeBlanc, & Drass, 2000). Charny and Parness (1995) found that following the discovery of infidelity, the majority of betrayed spouses suffered significant damage to their self-esteem and confidence. Eighteen percent of husbands and 21% of wives also felt abandonment and a lost sense of belonging. Disclosed or discovered infidelity constitutes an interpersonal trauma that can shatter basic assumptions such as 'partners can be trusted' and 'relationships are safe', triggering beliefs of lost control and an unpredictable future (Baucom, Gordon, Snyder, Atkins, & Christensen, 2006). The clinical literature describes responses to infidelity as similar to those of trauma in general, observing intense emotional reactions that waver between rage toward the offending partner and personal feelings of shame, humiliation, depression, rejection, and abandonment. Emotional instability is usually accompanied by confusion (Cano et al., 2004; Gordon, Baucom, & Snyder, 2005; Thompson, 1984). The extent to

which betrayed partners experience these negative outcomes will be influenced by individual characteristics such as expectations of relationship exclusivity and previous experiences of relationship betrayal or rejection (Ayduk, Downey, & Kim, 2001; Feeney, 2004).

The degree to which a betrayed partner perceives he or she has been deceived is also an important factor influencing infidelity responses. Although a betraying partner might be motivated to avoid or postpone his or her partner's inevitable emotional pain, deception in itself is often understood to be a serious, if not more serious threat to the relationship (Fitness, 2001). As both infidelity and deception are commonly identified sources of relationship betrayal (Jones & Burdette, 1994; Jones et al., 2001) infidelity with deception can be construed as a double betrayal and may also be associated with a sense of humiliation such that a betrayed partner may ask 'am I the last person to know?', and find it more difficult to understand or forgive the act of infidelity.

Interestingly, the clinical literature is somewhat divided on the subject of disclosure. Some authors are adamant that couple therapy should not proceed unless there has been full disclosure and a cessation of extra-dyadic involvement, except when there is a risk of domestic violence (Baucom et al., 2006; Lawson, 1988; Whisman & Wagers, 2005). Others argue that this viewpoint is value-laden, and suggest that a more sensitive understanding of both partners and their interconnected dilemmas calls for less prescriptive thinking and a more flexible approach to each case (Hirsch, 2007; Scheinkman, 2005). One study on the attitudes of marriage and family therapists ($N = 332$) toward spousal disclosure of extra-marital involvement found that while a majority (76%) agreed with disclosure, agreement declined when there were small children involved (72%); for past and terminated extra-marital involvement (43%); extra-marital involvement likely to result in divorce (51%); and where domestic violence is involved (21%) (Softas-Nall, Beadle, Newell, & Helm, 2008).

Primary relationship outcomes

Although many couples who experience infidelity are able to repair and improve their relationship, infidelity is a major cause of relationship distress, dissolution and divorce (Amato & Previti, 2003; Amato & Rogers, 1997; Betzig, 1989; Cano et al., 2004; Charny & Parness, 1995; Hall & Fincham, 2006). Even when couples stay together, infidelity is correlated with long-term relationship processes “that are characterised by negativity, dysphoria, and uncertainty” (Charny & Parness, 1995, p. 111). Marriage therapists nominate extra-marital involvement as one of the major reasons for couples seeking therapy, one of the most damaging relationship events and very difficult to treat (Whisman, Dixon, & Johnson, 1997; Whisman & Wagers, 2005). Consistent with these clinical observations, compared to other distressed couples in marital therapy, those trying to cope with extra-marital involvement are more likely to separate and divorce (Glass, 2003).

Relationship factors affecting infidelity outcomes for primary relationships include relationship quality, commitment and how the extra-dyadic involvement is discussed. For example, in some circumstances disclosure of intimate details about an extra-dyadic involvement may help a betrayed partner understand the transgression and facilitate relationship recovery. However, it may also exacerbate the trauma (Allen et al., 2005). When relationship partners are committed to each other and invested in the relationship they tend to act in ways that promote relationship stability, such as accommodating rather than retaliating, when a partner has violated their expectations (Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991; Wieselquist, Rusbult, Foster, & Agnew, 1999). Another relationship factor that might influence relationship outcomes following an infidelity is the extent to which the relationship is perceived to satisfy important needs; that is, the degree of relationship dependence felt by both partners (Drigotas & Rusbult, 1992).

An important contextual factor influencing individual and relationship responses to betrayal is the type of extra-dyadic involvement and the extent to which it is perceived by

both partners as emotionally important. In her marital therapy sample, Glass (2003) found that infidelities described as both sexual and emotional were more threatening than those described as mostly sexual. In a study exploring emotional reactions to infidelity Shackelford et al, (2000) found main effects for infidelity type for 12 out of 15 emotional reaction components. For example, respondents were more likely to endorse humiliation as a reaction to sexual infidelity and depression as a reaction to emotional infidelity.

Consistent with the framework of infidelity as a trauma, the extent to which a betrayed partner perceives a continuing threat from the other relationship partner for example where there is still contact at work, may prolong the traumatic reactions and prevent relationship recovery (Baucom et al., 2006). Relationship stability and the preparedness of betrayed partners to forgive infidelities also decline with repeated transgressions (Fincham, 2000; Lawson, 1988).

Involved partner outcomes

While the consequences of infidelity for non-involved partners and primary relationships have been well researched, less is known about outcomes for involved partners or how characteristics and behaviours of involved partners influence infidelity outcomes. Gender of the involved partner appears to be important in that involved women report more guilt, depression and negative self perceptions than involved men (Beach, Jouriles, & O'Leary, 1985; Glass, 2003; Spanier & Margolis, 1983). The extra-marital involvements of women are also more likely to end in divorce (Betzig, 1989; Glass, 2003; Laumann et al., 1994). This reflects more forgiving societal attitudes toward male infidelity but it could also be a function of the types of extra-marital involvement engaged in by men and women. Compared to men, women report being more emotionally involved in their extra-marital relationships (Glass & Wright, 1985).

Emotional responses to infidelity

Understanding the dynamics of betrayal in general and infidelity in particular requires consideration of the ways in which people think and feel about close relationships. Humans have evolved to need and care about relationships because throughout evolutionary history having others to depend on, particularly when resources were scarce or the environment was dangerous, has been critical for human survival and well-being. Considered in this light it is not surprising that people are so concerned about being accepted and loved and that so much of their attention is directed to monitoring threats to personal acceptance or signs of rejection. Interactions with others that reinforce a sense of belongingness can elicit emotions of joy and happiness, while those that threaten belongingness trigger intense and distressing emotions such as guilt, anger, fear and jealousy. These emotions in turn motivate behaviours that function to restore felt relationship security or, as in the case of hurt or sadness, withdraw from the source of emotional pain (Baumeister & Leary, 1995; Leary, Springer, Negel, Ansell, & Evans, 1998; Leary, Twenge, & Quinlivan, 2006; Reis, Collins, & Bersheid, 2000; Vangelisti, 2001). For most people, the discovery of a relationship betrayal involves an intense experience of these distressing emotions, one that demands an appraisal of what has happened and implications for the relationship (Fitness, 2001).

Importantly for understanding the outcomes of relationship events like betrayals, intense emotions motivate behavioural responses and different types of emotional experience are associated with different types of actions (or inactions). These 'states of action readiness' are part of the emotional experience itself and have been described generally as impulses to move toward, away from, or against the environmental stimuli that triggered them (Frijda, Kuipers, & ter Schure, 1989). For example, anger is associated with action tendencies to confront or move against another held to be responsible for a

perceived wrong. The emotion of anxiety may motivate protective behaviours such as increased partner surveillance and monitoring to deal with a perceived relationship threat.

The role of appraisal

Different types of emotions are elicited as a function of how a personally relevant stimulus is appraised. For example, the discovery of a sexually explicit letter between a romantic partner and another person may be automatically appraised as relevant and not in line with personal needs and wants, eliciting anger and a felt tendency toward partner confrontation. However, if the explicit sexual letter was, in fact, similar to other discoveries within the context of that particular relationship, it might be appraised as somewhat expected, a sign that the romantic partner had found someone else and something that cannot be changed, triggering sadness rather than anger, and a felt tendency to withdraw from the relationship (Fitness & Fletcher, 1993). According to Lazarus (1991a, 1991b, 1995) initial or 'primary' appraisals may be automatic and outside of conscious awareness, eliciting emotional reactions such as shock, surprise or upset. However, following these immediate reactions 'secondary' appraisals take on a more deliberate, more consciously accessible form and have the potential to trigger various different emotions depending on the aspects of the stimulus being considered. In this way cognitive appraisals shape the unfolding emotional experience such that different kinds of emotions are experienced sequentially.

Both automatic and more considered appraisals will be influenced by strongly held relationship beliefs or 'schemas' and expectations acquired over a lifetime, including experiences in childhood as well as in both previous and current relationships (Baldwin, 1995; Fitness, 2006; Fletcher, Rosanowski, & Fitness, 1994; Holmes, 2002). For example, attributions of blame and responsibility for hurtful events involve judgements about individual accountability, including the extent to which the act was intentional, selfish,

voluntary, and enacted with an awareness of the possible consequences and an appreciation of wrongfulness. These judgements influence emotions and actions in ways that can contribute to relationship happiness or maintain relationship distress (Bradbury & Fincham, 1990; Fincham, 2000).

Just as appraisals influence emotions, emotions also shape ongoing appraisals (Fitness, 2001; Planalp & Fitness, 1999). For example, in the case of a suspected partner infidelity, one partner may notice and appraise that their significant other has become emotionally close to a colleague at work, eliciting personal feelings of anxiety, which in turn prompt concerns about the extent to which the work relationship is fulfilling for that partner, eliciting increased anxiety and hyper-vigilant behaviours such as ringing work after hours and checking the content of personal emails. In this way cognitive appraisals and emotions interact to create what might become a roller coaster of intense emotional experience and confusion, as information about a real or imagined partner infidelity unfolds.

People also hold beliefs and theories about the functions, features and expression of emotions in different relationship contexts. These emotion 'scripts' comprise expectations for the way emotions unfold (or perhaps unravel) between relationship partners, and they contribute to ongoing relationship events (Fehr & Harasymchuk, 2005; Fitness, 2001; Shaver, Schwartz, Kirson, & O'Connor, 1987). For example, a belief that the expression of jealousy is unacceptable might lead a partner to withdraw or stifle communication about a perceived rival, which could elicit ongoing anxiety and behaviours that may cause further relationship difficulties.

While individual differences in factors such as beliefs about relationships and emotions, as well as the ability or willingness to take the partner's perspective may influence causal attributions for relationship events (Arriaga & Rusbult, 1998; Fincham & Bradbury, 1989), when it comes to infidelity, the type of extra-dyadic involvement may also influence attributions about partner responsibility. For example, Becker et al (2004) found that in a

study of undergraduates a hypothetical sexual infidelity (defined as ‘sexual intercourse’) elicited greater anger and disgust, and less hurt than a hypothetical emotional infidelity (defined as ‘a deep emotional attachment’) for both women and men. The authors suggest that sexual infidelity may invoke greater anger than emotional infidelity because it is believed to involve a more conscious decision to act in a relationship threatening way.

Specific emotions

Research on emotion in the context of close relationships has become increasingly focused on the study of specific emotions, the types of appraisals that might elicit those emotions as well as the motivations and behaviours they invoke (Sanford, 2007). For example, the emotion of hurt has been distinguished from other emotions that may be triggered by a relationship transgression (e.g. anger) by a sense of vulnerability. When people feel hurt it is related to a belief that they are victims, motivating relational distancing as a way to avoid further pain (Vangelisti, 2001). The emotion of sadness is most often related to loss, particularly the loss of a valued relationship or at least some aspect of a valued relationship. In accounts of the types of events that cause sadness, Shaver et al (1987) found that 63% of respondents wrote about the loss of a relationship or separation from a loved one and 28% wrote specifically about rejection. Sadness motivates withdrawal from the source of pain, an action tendency of inaction (Frijda et al., 1989; Lazarus, 1991b; Shaver et al., 1987), which although on the face of it can make relationship restoration or replacement problematic, may be adaptive if it allows the individual time to reflect or wait for more promising social conditions, and the possibility of debilitating sadness for the self and others may serve as an incentive for people to care for relational partners and to nurture their relationships (Leary et al., 2001).

One way this research has been approached is to analyse the structure of people’s knowledge and implicit beliefs about different emotions, including the typical conditions

that elicit them and what follows. This 'prototype' emotion research has been applied to the emotions of love, jealousy, anger, hurt and hate as well as relationship relevant constructs such as commitment and forgiveness (Aron & Westbay, 1996; Feeney, 2004; Fehr, 1988; Fitness & Fletcher, 1993; Kearns & Fincham, 2004; Leary et al., 1998; Shaver et al., 1987). For example, research into implicit beliefs about love suggest that, at least in the early stages of a romantic relationship, both emotional intimacy, which includes behaviours of support, sharing and acceptance, and sexual passion are central dimensions of the construct (Aron & Westbay, 1996; Hendrick & Hendrick, 1987; Sternberg, 1986).

More recently Sbarra and his colleagues (2006; 2005; 2006), have contributed to our understanding of emotional experience in romantic relationships by investigating the role of discrete emotions in the process of adjustment following relationship dissolution. For example, using a daily diary method with a sample of undergraduates who had ended a close dating relationship within two weeks of participation in the study, Sbarra and Ferrer (2006) were able distinguish sadness, anger and love or longing as separate but correlated affective states, and to explore the dynamics of these, i.e. emotional persistence, simultaneous experience of different mood states or how the experience of one emotion increases or decreases the likelihood of a different emotional experience over time. Feelings of love declined more slowly than feelings of sadness, and feelings of sadness declined more slowly than feelings of anger. However, these emotional trajectories were observed to differ as a function of participant's attachment styles with attachment security associated with less anger and more relief as well as a faster decline in sadness. This approach opens the possibility for greater understanding about how people adjust and recover (or not) from relationship betrayals and loss, as well as individual differences in these emotional processes.

In relation to infidelity, researchers have been particularly interested in the emotion of jealousy. Jealousy has been defined as an emotional reaction to the real or imagined threat

of loss of a valued relationship, to a real or imagined rival (DeSteno & Salovey, 1994). Most researchers have argued that jealousy is a blend of negative emotions such as sadness or hurt, anger and fear. Some people may react with anger directed at a partner or a rival, and others may react with fear about the potential for relationship loss. However, jealousy can also include emotions such as pride in relation to a romantic partner's desirability (Ekman, 1982 cited in Bringle & Buunk, 1985; Guerrero, Trost, & Yoshimura, 2005; Pfeiffer & Wong, 1989; Sabini & Silver, 2005a). Researchers have also differentiated reactive jealousy, which occurs in response to actual relationship threats, from suspicious jealousy which involves anxious detective behaviours in response to imagined relationship threats or abandonment (Buunk & Dijkstra, 2000).

In their multi-dimensional theory of jealousy, Pfeiffer and Wong (1989) argue that the experience of jealousy is best conceptualised in terms of cognitions, emotions and behaviours occurring simultaneously and interacting with each other. Each component may encompass pathological as well as normal jealousy. However, by far the greatest body of research on jealousy has been conducted by evolutionary researchers who are interested in the possibility that romantic jealousy may have evolved differently for males and females as a consequence of different evolutionary challenges. A review of this body of research follows as part of the overview of important theoretical perspectives for understanding individual responses to infidelity.

Theoretical perspectives for understanding individual responses to infidelity

While numerous theoretical frameworks have been applied to the study of intimate relationships, evolutionary psychology, attachment theory and interdependence theory are amongst the best developed and researched perspectives in the field. Together they offer different and complementary levels of explanation for relationship phenomena (Buunk & Dijkstra, 2000; Fitness, Fletcher, & Overall, 2007). Evolutionary theory is concerned with

ultimate causation or why human psychological processes (e.g. feelings and behaviours) evolved in response to the ancestral challenges of survival and reproductive success. In particular, evolutionary psychologists are interested in the origins of emotions, preferences and behaviours related to human mating and parenting, including mate selection, competition and mate protection. Attachment and interdependence theories consider individual and relationship differences and offer frameworks for more proximate explanation of relationship processes and events. Attachment theory is a developmental theory of how early childhood experiences in close relationships, particularly with primary carers, can shape relationship expectations and experience across the life-span (Hazan & Diamond, 2000). Interdependence theory is concerned with reciprocity and dependency in the relationship itself. An overview of each of these theoretical frameworks and how they have been applied to research on infidelity is presented in the following sections.

Evolutionary psychology

Evolutionary psychology seeks to explain the origins of human psychological mechanisms or adaptations in terms of the ancestral challenges that selected for these and what they were designed to do (Buss, 1995; DeKay & Buss, 1992). These psychological mechanisms enable interpretation of sensory information and events in the environment including the actions of others (DeSteno, Bartlett, Braverman, & Salovey, 2002; DeSteno & Salovey, 1996; Wiederman & Allgeier, 1993). Our emotions, for example, are evolved mechanisms that help us solve problems. They signal when an event needs our attention and they motivate potentially adaptive behaviours (Fitness, 2001). Some emotions such as hurt, shame, guilt and loneliness are elicited in response to real, anticipated, or remembered interactions with other people, and signal threats to belongingness and relationship devaluation by others. Even small interruptions to relationship expectations such as a friend forgetting to invite you to a party, or the realization that a partner doesn't

say 'I love you' as much as they used to, might be enough to trigger appraisals, emotions and motivate behaviours directed to protecting or restoring the relationship (Leary et al., 2001).

According to evolutionary theory, context is central and is considered on multiple levels including our ancestral past (the challenges faced over thousands of generations), developmental experiences including the influence of culture and socialization, sex-differentiated socialization, and cues from the immediate situation (Buss, 1995). Emotional and behavioural responses follow from an assessment of, and interaction with, relevant factors in any particular context; a process which is not necessarily conscious and not generalised across domains. Humans therefore have access to countless potential responses in any context (Buss, 1995; Dekay & Buss, 1992; Wiederman & Allgeier, 1993).

Sex similarities and differences

Evolutionary psychology provides a framework for predicting sex similarities and differences in response to any particular context. Men and women are only expected to differ where they have faced different adaptive challenges over the course of evolutionary history. In most domains men and women have faced similar adaptive challenges and depend on each other for survival and reproductive success. For example, the need to find a suitable long-term partner helps to explain why both sexes value kindness in a mate very highly (Buss & Barnes, 1986; Buss & Schmitt, 1993; Dekay & Buss, 1992). However, males and females have also faced different adaptive challenges in the process of sexual selection (Buss, 1995; Dekay & Buss, 1992; Symons, 1979). Sexual selection differs from natural selection in that it is not about individual survival per se, but about individual reproductive success which is determined by the number of an individual's offspring that survive to the next generation. An individual's overall reproductive effort is a combination of mating efforts such as searching for, attracting and retaining suitable mates, and

parenting efforts including investments of time, energy and scarce resources toward the survival of offspring. Sex differences in the relative costs and benefits associated with reproductive efforts are critical to the understanding of sex differences in reproductive strategies (Geary, 2000).

Perhaps the most frequently discussed reproductive differences are the challenges of paternity uncertainty for men and the need to find an investing mate for women. Internal fertilization in human females ensures a degree of male paternity uncertainty and a risk to male fitness, or the probability that his genes will be carried forward to future generations (Buss, 1996, 2000; DeSteno & Salovey, 1996). It has been argued that psychological clues to the importance of paternity certainty include male vigilance for female sexual fidelity and male sexual jealousy which may lead to violence towards women (Buss, 1995, 2000; Buss & Shackelford, 1997a; Shackelford et al., 2005). Females face a different set of reproductive challenges. While they have maternity certainty they also have a significantly greater minimum parental investment of nine months gestation and lactation compared to the energy expended in one sexual encounter for males. A female also needs to find a mate who is willing and able to invest time and resources to protect her and to help raise her offspring. Females who could find and retain investing mates would have a reproductive advantage over those who were less discerning, particularly when resources such as food were scarce (Buss, 1995, 2000; Dekay & Buss, 1992).

Although the minimum parental investment required by females is significantly greater than that required by males, both sexes have a genetic interest in the survival of offspring which is enhanced with the involvement of both parents (Geary, 2000). Over evolutionary history the formation of pair-bonds that facilitated parenting effort by both mothers and fathers should have translated into reproductive success. Indeed, many theorists have posited that the emotion of love may have evolved to facilitate pair-bonding by allowing the development of commitment and trust, while at the same time reducing the appeal of

alternative mates (Buss, 2000; Campbell & Ellis, 2005). Gangestad and Simpson (2000) argued that given the importance of bi-parental care during human evolutionary history both sexes were selected to use long-term mating tactics and to invest in offspring although, they were also selected to use short-term and extra-pair mating strategies under particular conditions.

Evolutionary theory and infidelity

If pair-bonding is important for reproductive success it not surprising that extra-dyadic involvement is construed as threatening for those in committed romantic relationships and that this is so for both sexes. According to sexual selection theory extra-dyadic involvement for both men and women is a short-term mating strategy, and the role of extra-dyadic involvement for each sex differs as a function of differences in minimum parental investment and the potential reproductive costs and benefits of extra-dyadic involvement. It is argued that this accounts for an evolved tendency for men to be more open to short-term mating than women, independent of their marital status, because such involvements may actually increase their reproductive success. Theoretically, compared to women, men have evolved a greater desire for sexual variety and a greater tendency to pursue short-term mating particularly in contexts where the benefits outweigh the costs (Buss & Schmitt, 1993; Symons, 1979). Empirical data support this predicted sex difference in the desire for sexual variety. For example, compared to women men express a desire for more than four times as many sex partners in the course of their lifetimes and seek sexual intercourse more frequently (Buss & Schmitt, 1993). They are also willing to lower their minimum standards for short-term compared to long-term mating partners (Kenrick, Sadalla, Groth, & Trost, 1990).

Despite the potentially higher costs associated with short-term mating for women, including the risk of pregnancy without an investing partner and the potential for

reputation damage that may make it more difficult to find an investing long-term mate, women across all cultures do engage in short-term and non-monogamous mating (Greiling & Buss, 2000). Indeed evolutionary psychologists argue that if ancestral women had never engaged in short-term mating men would not have evolved to desire sexual variety or to feel sexually jealous. A number of potential benefits have been hypothesised to motivate female short-term mating including; access to good genes, additional resources in the form of gifts and food, the opportunity to sample alternative partners and to clarify preferences before choosing a long-term partner, a way of leaving a current partner, creating paternity confusion in order to elicit support from more than one male, partner revenge that might deter future partner extra-dyadic sex and as a way to practise skills of seduction and mating or increase self-esteem (Buss & Schmitt, 1993; Gangestad & Simpson, 2000; Greiling & Buss, 2000; Symons, 1979). As an example, the good genes hypothesis predicts that during ovulation women should indicate a relative preference for partners who show indicators of good genes (muscularity, physical attractiveness and dominance) compared with indicators of parental investment. Indeed, researchers have found that women's patterns of sexual attraction do shift across the cycle such that when ovulating they are more attracted to masculine physical traits and report greater attraction to men other than their partners (Gangestad, Garver-Apgar, Simpson, & Cousins, 2007; Gangestad & Simpson, 2000).

Infidelity responses: Romantic jealousy

In the context of adult romantic relationships, jealousy provides one of the best examples of a psychological mechanism that may have evolved differently for men and women in response to sex specific challenges. Early evolutionary researchers described jealousy as a 'cheater-detection module' that can serve to alert us to the possibility of a relationship violation and threats to our reproductive investments (Cosmides & Tooby, 1992). They argued that sex specific cognitive jealousy modules may have evolved to

solve sex specific adaptive problems. It was posited that the threat of cuckoldry explained male concern about sexual infidelity, while women are more concerned by emotional infidelity because it signalled the potential diversion of important resources required for survival and raising offspring (Buss, 2000; Dekay & Buss, 1992).

In support of this theory of sex specific jealousy modules, researchers have consistently found sex differences in what is more likely to trigger the emotion of jealousy; thoughts of a partner's sexual infidelity or thoughts of a partner's emotional infidelity. Both types of infidelity cause distress and trigger the emotion of jealousy in men and women, but when asked to select which type of infidelity would cause greater 'distress' or 'upset', women have been much more likely than men to choose a partner's emotional infidelity than a partner's sexual infidelity, and men have been more likely than women to choose a partner's sexual infidelity than a partner's emotional infidelity (Buss, Larson, Westen, & Semmelroth, 1992; Pietrzak, Laird, Stevens, & Thompson, 2002; Shackelford et al., 2004).

These sex differences in jealousy have been demonstrated using forced choice questions, continuous rating scales and physiological measures (Buss et al., 1992; DeSteno & Salovey, 1996; Harris & Christenfeld, 1996a; Murphy, Vallacher, Shackelford, Bjorklund, & Yunger, 2006; Pietrzak et al., 2002; Schützwohl & Koch, 2004; Shackelford et al., 2004; Wiederman & Allgeier, 1993). Support for sex differentiated responses to thoughts of sexual or emotional infidelities have been found in older samples (Shackelford et al., 2004) and in different cultures including the US, Korea, Japan, the Netherlands, Germany and Sweden (Buss et al., 1999; Buunk, Angleitner, Oubaid, & Buss, 1996; Wiederman & Kendall, 1999). Consistent with these findings, men report finding it more difficult to forgive a sexual infidelity than an emotional infidelity, are more relieved about the disconfirmation of sexual infidelity than an emotional infidelity and report being more likely to end the relationship following a sexual infidelity, compared to an emotional infidelity (Schützwohl, 2008; Shackelford et al., 2002).

There are, however, divergent viewpoints about the extent to which sex differences in response to questions about hypothetical infidelities should be used as evidence of evolved sex differences in the emotion of jealousy. For example, Harris and Christenfeld (2000; 1996b) question this conclusion on a number of fronts. They highlight cross cultural data gathered by Buss et al (1992) that found that a majority of both sexes were more concerned by emotional than sexual infidelity, and when continuous rating measures are used, both sexes are upset by both types of infidelity. They argue that the forced choice methodology uncovers differences in the way people reason and interpret evidence of emotional infidelity and the potential for relationship loss. That is, if men are more likely to believe that women generally do not have extra-dyadic sex unless they are also emotionally involved, and women are more likely to believe that men can have extra-dyadic sex without necessarily being emotionally involved, then sexual infidelity and emotional infidelity may be more upsetting for men and women, respectively.

DeSteno and Salovey (1996) take a similar view to Harris (2003a), arguing that the sex differences reported by Buss et al (1992) could be better explained by a sex difference in beliefs about the extent to which each type of infidelity occurred independently. As well as asking respondents to select the most distressing type of infidelity, they also asked respondents to rate the likelihood that a typical member of the opposite sex is, or would soon be, having sex together after developing an emotional attachment or, developing an emotional attachment after having sex together, finding that most men and women selected the type of infidelity that they believed more implied the subsequent occurrence of the other type of infidelity as well. This they referred to as the 'double-shot' hypothesis.

Some researchers have also questioned the idea that jealousy evolved as a specific innate module. For example, in her review of sex differences in jealousy research, Harris (2003b) argued that as infidelities of any kind rarely happen suddenly and that cues to either sexual or emotional infidelity can be ambiguous, therefore evolution might have

shaped a more general, less content specific jealousy mechanism capable of responding to the complexity of cues that might signal a relationship threat. Others have argued that as both sexual and emotional infidelities pose threats to the reproductive investments of both sexes, specific sexual jealousy and emotional jealousy mechanisms may have evolved for both sexes and that these are better evaluated separately (Green & Sabini, 2006; Penke & Asendorpf, 2008a). Consistent with this argument a number of researchers have argued that it is female sensitivity to emotional infidelity that drives the sex by infidelity type interaction found in forced choice jealousy research. Indeed, in most studies the proportion of men who found each type of infidelity more distressing has been roughly equal, while a clear majority of women choose emotional infidelity as more distressing. (For a review of jealousy research using both forced choice and continuous measures, see Harris, 2003b).

Other responses to infidelity

Evolutionary researchers have been very interested in the emotion of jealousy as an evolved response to infidelity. However, compared to this significant body of work there has been much less research exploring other emotional or behavioural reactions to infidelity and when researchers have moved beyond the emotion of jealousy, support for sex differences in response to infidelity has been inconclusive. For example, Becker, Sagarin, Guadagno, Millevoi, and Nicastle (2004) investigated sex differences in the emotions of jealousy, anger, hurt and disgust in response to a partner infidelity that was explicitly both sexual and emotional, the only emotion that was experienced differently by the men and women in that sample, was jealousy. For both men and women sexual infidelity was associated with greater anger and disgust, and less hurt than for emotional infidelity. In a study by Sabini and Green (2004) both men and women were more likely to feel anger and hurt in response to infidelities that were either sexual or emotional

respectively, and they were also more likely to blame partners when an infidelity was sexual compared to when it was emotional.

Evolutionary psychologists suggest that any sex differences observed for particular psychological mechanisms should be viewed in the context of the many similarities between males and females and that men and women should behave similarly in close relationships except when particular styles of behaviour would allow better access to suitable mates, increase paternity certainty, or increase the survival chances of offspring (Barnes & Buss, 1985; Buss, 1995; Dekay & Buss, 1992). Indeed, it is also possible that sex differences reported by evolutionary psychologists in the domain of mating have been exaggerated. For example, while some evolutionary theorists argue that men are more open to short-term mating than women, as evidenced by reported desired number of life time sexual partners, 64 for men and two for women (Buss & Schmitt, 1993), Hazan and Diamond (2000) point out that in the same data set the median ideal number of desired life-time sexual partners was one for both men and women, suggesting that men and women are more similar than different and that the ideal for both sexes is a life-time partner.

Hazan and Diamond (2000) argued that attachment theory has as much, if not more, to contribute to our understanding of human mating than the standard evolutionary model of biologically based sex differences that may have evolved due to sex differences in minimum parental investment (Buss & Schmitt, 1993). In Hazan and Diamond's view this model is overly focused on sex differences when the typical pattern of human mating is one of pair-bonding and shared parental care, a mating strategy that must have been selected for because it improves reproductive 'fitness' for both sexes. They point out that pair-bonding enhances survival and well-being for mates and their offspring which is consistent with the large body of research confirming the health and well-being benefits of committed romantic relationships. Adults as well as infants and children benefit from having someone looking out for them and while in certain local environments,

characterised by uncertain conditions, short-term mating and low parental effort might be adaptive, this does not mean it is the best reproductive strategy. They argue that emotional bonds belong at the centre of human reproductive strategy, and that attachment is the evolved mechanism that facilitates both pair-bonding and care of offspring for both sexes.

Attachment theory

Attachment theory was initially proposed by John Bowlby (1969) to describe how infants and young children become emotionally attached to their primary care givers and emotionally distressed when separated from them. These attachment behaviours evolved because they improve the chances of infant survival by keeping infants close to parents in dangerous situations. Bowlby acknowledged that a child usually becomes attached to more than one person but argued that the primary care giver (usually the mother) is preferred as a safe haven. Separation anxiety or grief following the loss of an attachment figure is considered to be a normal adaptive response for an attached infant.

Central to attachment theory is the idea that humans have evolved attachment systems that motivate proximity seeking behaviours and allow us to form close relationships that can provide support and protection in stressful situations. Adults, for example, grieve separation from a long-term partner in similar ways to infants who are separated from their attachment figures, with initial panic and anxiety followed by lethargy and depression, and eventually emotional detachment and recovery. Bowlby explained individual differences in attachment behaviours as the cumulative result of differences in parental care. A child who receives consistent sensitive and responsive care giving is more likely to develop a secure attachment to their care giver. A child who experiences inconsistent and or insensitive care giving, e.g., ignored crying or intrusive affection, will display more protest behaviours such as crying and explore less than secure children, developing an 'anxious/ambivalent' attachment style. A child who experiences distant or rejecting care giving will learn to

avoid contact with attachment figures, exhibit more detachment behaviours and develop an 'avoidant' attachment style (Shaver & Hazan, 1994). Throughout childhood and adolescence individuals gradually acquire expectations about the responsiveness of attachment figures. Memories, beliefs and expectations become part of 'internal working models' of attachment that shape relationship behaviours not only in childhood, but across the life-span (Feeney, Noller, & Roberts, 2000).

Adult attachment styles

In adulthood, most people form attachment relationships with romantic partners. However, unlike infant-parent attachment bonds adult romantic attachments involve reciprocal care-giving, such that each partner becomes a secure base for the other. Early researchers in adult attachment proposed that it is the process of falling in love that integrates attachment, caring and sexuality, the three systems that ensure species survival. As the attachment system develops first, it influences development of the others linking the experience of love and sexuality to early experiences in close relationships. This conceptualisation of romantic love helps to explain romantic relationships that are caring and supportive as well as those that are abusive, neglectful and damaging to one or both partners (Feeney et al., 2000; Hazan & Shaver, 1987; Shaver & Hazan, 1988).

Adult attachment theorists argue that the process of becoming involved and attached in romantic relationships is experienced differently and associated with different emotions for different people and that these experiences are influenced by our first attachment relationships with primary caregivers. The nature of these relationships can shape unconscious beliefs or 'internal working models' about how much we are valued, loved and the extent to which others can be relied on (Fitness, 2006; Shaver & Hazan, 1994). For example, a child with a 'secure' attachment style is more likely to grow to believe that others can be trusted and that they are themselves worthy of love. Thus attachment style is

an example of how the individual characteristics of relationship partners might shape relationship expectations (Couch, Jones, & Moore, 1999).

Attachment insecurity in romantic relationships can be conceptualised along two dimensions, anxiety about abandonment and avoidance of closeness (Brennan, Clark, & Shaver, 1998). Those who experience anxiety in close relationships tend to desire very high levels of closeness and rely on romantic partners for a sense of self-worth. In comparison those who are uncomfortable with closeness are concerned with maintaining adequate independence in relationships.

Attachment styles are relatively stable over time because individual internal working models of attachment can lead people to create new relationships that reinforce existing expectations. These expectations influence interpretations, emotions and behavioural responses to close relationship events, provoking partner reactions that may in turn reinforce relationship beliefs (Feeney, 2005; Fitness, 2006; Morgan & Shaver, 1999; Shaver & Hazan, 1994). While attachment styles are relatively stable they may shift with life experience, for example as a consequence of a loving adult relationship a formally avoidant person may learn to feel more comfortable with closeness and a bad breakup may make a formerly secure person less so (Kirkpatrick & Hazan, 1994).

A significant body of research has found that adult attachment style is associated with the functioning of adult romantic relationships. For example, secure attachment has been associated with marital satisfaction across all stages of married life. In contrast marital dissatisfaction is more likely in relationships where wives are anxious and husbands avoidant (Feeney, Noller, & Hanrahan, 1994). It is not hard to imagine how wives who need constant reassurance might be dissatisfied if they are partnered with husbands who are uncomfortable with closeness. Secure individuals are more likely to get married and to have happy, committed, trusting relationships that last for longer (Hazan & Shaver, 1987; Kirkpatrick & Hazan, 1994; Mikulincer & Shaver, 2007). Secure romantic attachment has

also been linked with more constructive partner communication processes including better emotion regulation and problem solving as well as independent reports of marital adjustment (Kobak, Rogers, & Hazan, 1991). For more thorough reviews of the research on attachment processes and couple functioning see Mikulincer and Shaver (2007) and Feeney et al. (2000).

Adult attachment and infidelity

Despite widespread interest in the subject of adult attachment style and its association with phenomena such as relationship satisfaction, stability and commitment, as well as its importance in couple therapy (Johnson & Greenman, 2006; Morgan & Shaver, 1999; Naaman, Pappas, Makinen, Zuccarini, & Johnson-Douglas, 2005) there has been surprisingly little investigation into the relationship between adult attachment style and infidelity, although some researchers have found an association between adult attachment style and the reported frequency of extra-dyadic involvement. For men, avoidant and dismissing attachment styles have been associated with higher levels of reported promiscuity and sexual relationships characterised by low intimacy (Brennan et al., 1998). Interestingly, for women avoidant attachment may be negatively associated with the number of extra-dyadic partners (Gangestad & Thornhill, 1997 cited in Allen & Baucom, 2004). Consistent with a high need for intimate contact with others, anxious women report more extra-dyadic partners (Bogaert & Sadava, 2002).

In the clinical literature, particularly in relation to Emotion Focused Therapy, infidelity (along with other relationship events perceived as betrayals), has been conceptualised as an attachment injury that threatens the attachment bond and may force a reorganisation of the attachment system. Attachment injuries are particularly difficult to tolerate because the attachment figure is both the source of and the potential solution to the resulting emotional pain (Makinen & Johnson, 2006; Naaman et al., 2005). Indeed, remembering that the

attachment system and attachment behaviours are activated in times of stress or insecurity, the utility of attachment theory in understanding responses to partner infidelities is obvious.

Interdependence theory

While Attachment theory is a developmental theory of individual differences or how early childhood experiences with primary carers, shape relationship expectations and experience across the life-span (Hazan & Diamond, 2000), Interdependence theory is concerned with reciprocity and dependency in the relationship itself (Buunk & Dijkstra, 2000; Kelley, 1979). Interdependence theory posits that individuals start and continue relationships based on reciprocity and relationship rewards and costs. It provides a useful model for understanding relationships and commitment based on the degree to which relationship partners depend on one another and the relationship to satisfy their needs. Interdependence provides relationship partners with the chance to see pro-relationship motivation and behaviour in each other that can be construed as evidence of commitment to a long-term relationship. Over time relationship partners make choices that enhance relationship rather than individual outcomes. This in turn increases trust and willingness to commit, creating a mutual cycle where relationship partners come to depend on one another to care for each other's well-being and to meet important needs.

Relationship commitment and interdependence theory

Commitment is a concept understood by most people in relation to a variety of domains including close relationships, work, organisations and communities. However, a concise definition of commitment and how it works to maintain relationships is more elusive. For example, in the domain of relationship research, commitment has been conceptualised by relationship duration (longer equating to stronger) and relationship status, (married

stronger than dating). One of the problems of such simple measures is that they may confound the construct of commitment with one of its outcomes, and if commitment is about the desire to stay in a relationship then it is not difficult to imagine how those in new, exciting dating relationships might feel as much commitment as those in long-term marriages. There are also different types of commitment that may be associated with very different motivations. Wanting a relationship to continue because it is personally rewarding is different to staying in a relationship because it is believed to be the morally correct thing to do or because there appears to be no choice but to stay (Adams, 1999). An example of the latter would include the choice to stay in an unhappy marriage for reasons related to children or the financial costs of separating.

Perhaps one of the most admired conceptual models of commitment is Rusbult's Investment Model, (1998; 1999). It explains relationship commitment as the intention to remain in a relationship, attachment to a partner and a long-term orientation toward the partner and the relationship. Based directly on Interdependence theory, it argues that commitment is strengthened by high levels of relationship satisfaction and weakened by the perceived availability of attractive relationship alternatives. In addition, Rusbult introduced the concept of relationship investments which include the tangible and intangible resources that would be lost if the relationship ended. Intrinsic relationship investments include time, effort, experienced emotions, self-disclosure and how the relationship supports identity. Extrinsic relationship investments include shared social networks and material possessions. Like satisfaction, investment size contributes positively to commitment. In the Investment Model satisfaction level, quality of alternatives and investment size are individually and together the antecedents of commitment, although not all need to be present to experience commitment. On this last point Le and Agnew (2003) offer the example of women who stay with abusive partners for whom relationship

satisfaction is presumably very low, the availability of alternatives unknown or perceived to be low and yet investments such as time and children are high.

Since its initial development the Investment Model has been used extensively to predict relationship phenomena such as partner perspective taking and constructive or destructive reactions to relationship disappointments (Arriaga & Rusbult, 1998; Rusbult, Johnson, & Morrow, 1986). Importantly the Investment Model predicts commitment in a variety of relational contexts, for people of different cultural backgrounds and different sexual orientations (Le & Agnew, 2003). In a meta-analysis across 52 studies, 60 samples and 11,582 participants including interpersonal and workplace domains, Le and Agnew (2003) found that satisfaction with, perceived quality of alternatives and relationship were each significantly correlated with commitment to that relationship ($r = .68, -.48$ and $.46$, respectively) and that together they accounted for 61% of the variance in reported commitment. Based on a sub-set of 12 studies the average correlation between commitment and stay-leave relationship behaviour was $r = .42$.

Interdependence theory and infidelity

High levels of relationship dependency and commitment must play a role when individuals contemplate extra-dyadic involvement and when they are confronted by the infidelity of partners. Interdependence theory would predict extra-dyadic involvement is more likely in relationships that are low in dependency and commitment (Buunk & Dijkstra, 2000). While there is significant research indicating that relationship dissatisfaction is often an ingredient in, or justification for, extra-dyadic involvement (e.g. Glass & Wright, 1992; Spanier & Margolis, 1983), it may be through its effect on commitment that low satisfaction increases the likelihood of extra-dyadic involvement (Rusbult & Buunk, 1993). In two studies with heterosexual dating undergraduates, relationship commitment at time one predicted dating infidelity over a two month

university semester and over a university spring break. In the second study relationship commitment at time one was significantly and negatively correlated with the emotional and physical intimacy of participants' interactions with opposite-sex people other than their partners, demonstrating that lower levels of relationship commitment may be related to a greater openness to intimacy with people other than partners therefore increasing the possibility of extra-dyadic involvement (Drigotas, Safstrom, & Gentilia, 1999b). In her review of social exchange theories and sexuality Sprecher (1998) suggests that relationship partners who feel unfairly treated by their partners, may seek to restore a sense of relationship equity via an extra-dyadic involvement. Indeed revenge and hostility are justifications for extra-dyadic involvement that have been noted by both researchers and clinicians (Glass & Wright, 1992).

Interdependence theory distinguishes 'given preferences', that are instinctive and self oriented such as the impulse to reciprocate negativity, from 'effective preferences' that consider broader, long-term relationship goals, partner well-being and the likely impact of particular responses for relationship maintenance (Rusbult et al., 1991). When partners behave in disappointing or hurtful ways, a move from given to effective preferences requires a 'transformation of motivation' (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Rusbult et al., 1991) from immediate self interests to those that take into account the relationship as well. Transformation of motivation might be a conscious or automatic process and can trigger pro-relationship mechanisms such as looking for causes external to the relationship, making less blameworthy appraisals, discounting the value of alternative relationship partners, accommodation (the willingness to inhibit self oriented, potentially destructive reactions and behave constructively), a willingness to sacrifice, and forgiveness for a perceived betrayal (Finkel et al., 2002; Rusbult et al., 1999). In regards to infidelity and its outcomes, relationship commitment and associated pro-relationship behaviours,

may be protective in two important ways, by minimising the chances of extra-dyadic involvement and facilitating partner forgiveness when it happens.

In summary, evolutionary psychology, attachment theory and interdependence theory offer complementary perspectives for understanding close relationships. Evolutionary theory provides a framework for understanding some of the distal causes for relationship phenomena such as mate attraction and mate poaching as well as the emotions that are triggered by interpersonal interactions and relationship threats. Attachment theory and interdependence theory offer more proximate explanations for the expectations, emotions and behaviours of individuals in close relationships. Although attachment theory is a theory of how humans evolved to love and care for offspring and mates in ways that increase both the chances of survival and reproductive success, it also helps to explain individual differences in close relationship behaviours. Specifically, attachment theory proposes that individuals learn from infancy the extent to which others can be relied on to provide love and care and these expectations shape relationship behaviours over the life-span. Of course, adult attachment style is only one way to understand how people behave in close relationships. However, given that our attachment systems have theoretically evolved to help us cope with separation from those who are supposed to care for us, it is a particularly relevant theory for understanding reactions to relationship threats such as infidelity. At the specific relationship level, interdependence theory provides a useful way of understanding felt commitment for particular relationships and relationship partners. The degree to which an individual is committed to a particular relationship will influence reactions to relationship threats.

The current research

This research was designed to further understand the expectations of exclusivity that individuals bring to romantic relationships. If, as Blow and Hartnett suggest (2005a)

infidelity is an “act engaged by one person within a committed relationship, where such an act occurs outside the primary relationship and constitutes a breach of trust and/or a violation of agreed-upon norms (overt and covert) by one or both individuals in relation to romantic/emotional or sexual exclusivity” (p.191), this research asks what kinds of extra-dyadic behaviours would breach romantic relationship trust; whether different types of extra-dyadic involvements elicit different types of emotions; and the extent to which these breaches and emotional reactions might be associated with respondents’ sex and individual difference characteristics including adult attachment style, trait jealousy, past experience of infidelity and current romantic relationship commitment.

This thesis comprises two studies. The first study is largely exploratory and seeks to identify the norms (overt and covert) and expectations held by individuals about romantic exclusivity. Specifically, people were asked to describe what type of involvement between their romantic partner and another person would constitute a breach of trust. They were also asked to rate the extent to which a variety of specific partner extra-dyadic actions and events would constitute a breach of trust. Trust is a particularly important construct in romantic relationships which typically involve increasing levels of self disclosure, intimacy and therefore personal vulnerability, and it is central to the constructs of relationship dependence and commitment. Simpson (2007) suggests that individuals develop trust for their partners by observing how partners transform motivation in ‘trust-diagnostic’ situations. In these situations romantic partners must choose between self interest and what is best for the relationship. It is difficult to think of a situation that is likely to test romantic relationship trust more than a partner’s interactions with a potential relationship rival. Depending on existing levels of relationship trust based on both relationship and individual histories, different people are likely to have very different thresholds for what it might take to breach relationship trust.

Based on the findings of Study One, Study Two investigated the construct of ‘emotional infidelity’ as a type of infidelity that does not necessarily involve romantic love.

Hypotheses were developed in relation to sex differences and similarities in reported distress for ‘emotionally close’ extra-dyadic partner involvements such as forming a close friendship, seeking emotional support from, or confiding in another person of the opposite sex compared to extra-dyadic sex or love. Respondents also rated the extent to which they would feel the emotions of anger, sadness, anxiety or jealousy in response to extra-dyadic partner involvements that were sexual, emotionally close or involved romantic love.

The next chapter introduces Study One which, as mentioned above, took an exploratory approach to investigate the types of extra-dyadic partner behaviours and involvements that would breach relationship trust. The method, results and a discussion of the findings of Study One, with comments on research strengths and limitations are presented in the following chapters. Chapter 6 introduces Study Two and the subsequent chapters follow the same structure as for Study One. The thesis concludes in Chapter 10 with a summary of the research findings and their relevance for clinical practice.

Chapter 2

Exploring expectations for romantic exclusivity

Infidelity is one of the most threatening events that can happen in the context of a romantic relationship. Like all forms of betrayal, it violates relationship trust and commitment with the potential to cause significant stress for the relationship and distress for relationship partners. However, perhaps what distinguishes infidelity from other relationship betrayals is that betrayed partners must acknowledge that their partner is in some way attracted to another person, with the possibility that this attraction will be powerful enough to end the relationship. For non-involved partners, infidelity can be experienced as an interpersonal trauma dominated by a sense of abandonment and rejection, and triggering intense negative emotions, including shock, rage, sadness, fear, shame, humiliation and jealousy. At least in the short-term, the experience can cause confusion, as well as low self-esteem and a lack of confidence (Baucom et al., 2006).

Given these adverse psychological outcomes and the relatively high risk that infidelity will cause relationship dissolution, it is not surprising that infidelity features so frequently in clinical settings and continues to attract the interest of psychology researchers (Amato & Rogers, 1997; Betzig, 1989; Gordon, Baucom, & Snyder, 2008; Snyder, 2005; Whisman & Wagers, 2005). However, despite evidence that extra-dyadic relationships can involve emotional closeness without sex, sex with limited emotional closeness, and both sexual and emotional closeness (Glass & Wright, 1985; Thompson, 1983, 1984), the focus of infidelity research to date has been on extra-marital sex (Blow & Hartnett, 2005a, 2005b).

The outstanding exception to this research bias is the extensive body of research that hypothesises sex differences in response to 'sexual' or 'emotional' infidelities as a function of the evolutionary challenges of paternity uncertainty for men and the need to find an investing mate for women (Becker et al., 2004; Bjorklund & Shackelford, 1999; Buunk et

al., 1996; Harris, 2003b). Typically in this research, respondents are asked to select which type of hypothetical partner infidelity would 'upset or distress' them more, a 'sexual' or an 'emotional' relationship with another person. In most studies the emotional infidelity option is described as 'falling in love' or 'forming a deep emotional attachment' (Berman & Frazier, 2005; Buss et al., 1992; Cann, Mangum, & Wells, 2001; Peitzak, Laird, Stevens, & Thompson, 2002; Sagarin, Becker, Guadagno, Nicastle, & Millevoi, 2003; Shackelford et al., 2004)

It should be noted, however, that these terms are not necessarily describing the same types of relationship and may have very different meanings for different people. Some people may consider that they have a 'deep emotional attachment' to their closest friends or to an ex-partner, and if the literature on love is any guide, it would be difficult for most people to imagine their partner 'falling in love' with someone else without expecting them to be having sex with or at least feeling sexual desire for that person. For example, in their work investigating the relationship between attitudes to sex and love Hendrick and Hendrick (1987) concluded that 'love and sex are inextricably linked, with love as the basis for much of our sexual interaction, and sex as the medium of expression for much of our loving' (p.159). As argued by Harris (2003a), to many people, particularly women, 'falling in love' will also imply a sexual relationship.

Beyond the exploration of people's responses to hypothetical infidelities that are exclusively sexual or emotional, there has been little research into the actual behaviours (e.g. kissing, confiding personal information or expressing romantic interest) that individuals would regard as infidelities (Blow & Hartnett, 2005a). Further, social changes such as increasing equality of opportunity for women create more frequent opportunities for the development of cross-sex friendships and bring more focus to the issue of romantic relationship exclusivity (Boekhout, Hendrick, & Hendrick, 2003). For example, an emerging area of research involves consideration of the types of infidelities

that happen over the internet. Although internet involvements may not involve physical contact or face to face intimate relationships, they have the potential to be both sexualised and emotionally meaningful in ways that present a threat to primary relationships. Based on a factor analysis of both online and offline behaviours that might be considered to be sexual or emotional involvements with other people, Whitty (2003) found that online acts of betrayal did not fall into a separate category of their own, suggesting that people perceive online infidelities to be as authentic as offline infidelities.

Clearly, sex is just one aspect of the much larger issue of relationship exclusivity. People in committed romantic relationships of all types, including dating and de-facto relationships as well as marriage, often expect to have most of their physical and emotional needs fulfilled almost exclusively by their romantic partner. When these expectations are vague or ambiguous, romantic partners are at greater risk for both conflict and the emotional pain associated with nonexclusive behaviours construed as infidelities.

Aims of the current study

Taking inspiration from Blow and Hartnett's (2005a) recommended definition of infidelity as an 'act' that "constitutes a breach of trust and/or violation of agreed-upon norms (overt and covert) by one or both individuals in that relation to romantic/emotional or sexual exclusivity" (p. 191), the primary aim of this study was to explore the norms (overt and covert) and expectations held by individuals about romantic exclusivity. Specifically, people were asked to describe what type of involvement between their romantic partner and another person would constitute a breach of trust. They were also asked to rate the extent to which a variety of specific partner extra-dyadic actions and events would constitute a breach of trust.

A secondary aim of this study was to explore the extent to which norms and expectations about romantic relationship exclusivity might be associated with particular

demographic, relationship or individual difference characteristics. Accordingly, data were collected on a variety of characteristics, not all of which have been explored previously in infidelity research. A brief overview of the variables included in this study follows.

Exploring variables that potentially influence expectations about romantic exclusivity

Participant's sex

An extensive body of research has found differences in how men and women respond to hypothetical infidelities that are described as either 'sexual' or 'emotional' (Becker et al., 2004; Buss et al., 1999; Buunk et al., 1996; Harris, 2003b; Shackelford et al., 2002). Similarly, research that has investigated the types of infidelities engaged in by men and women and their reported motivations and justifications for these has also found sex differences (Barta & Kiene, 2005; Glass & Wright, 1985, 1992).

Research that defines infidelity in terms of extra-marital sex suggests that compared to women, men report a greater desire for, have more permissive attitudes toward, and are more active in seeking and more likely to engage in extra-marital sex. They also have more extra-marital partners (Allen et al., 2005; Allen & Baucom, 2004; Prins, Buunk, & Van Yperen, 1993; Spanier & Margolis, 1983; Thompson, 1984). However, despite this apparent sex difference in attitudes toward extra-marital involvement, research also suggests that men and women do not differ in extra-marital sexual behaviour, particularly among younger cohorts (Atkins, Baucom, & Jacobson, 2001; Prins et al., 1993; Wiederman, 1997).

Glass and Wright (1992) found that men were more likely than women to support sexual justifications and women more likely than men to support love justifications for extra-marital involvements. For both men and women there was congruence between sexual justification and sexual involvement, and love justification and emotional involvement for men. The authors observed that for men, sex and love were more easily

separated, while for women love justified sexual involvement. In a study with college students, Barta and Kiene (2005) found that men were more likely than women to endorse sex as a motivation for infidelity, although in this study the sex difference was partially mediated by unrestricted socio-sexual orientation. These findings suggest that men and women may also differ in the extent to which they expect sexual and emotional exclusivity in romantic relationships, with men relatively more aware of the possibility of a sexual betrayal and women relatively more aware of the possibility that a partner might become emotionally close or attached to another person.

Consideration of the evolutionary research on sex differences in triggers for the emotion of jealousy leads to a similar prediction. Compared to women, men are more likely to report more distress in response to sexual infidelities than emotional infidelities, and compared to men women are more likely to report more distress in response to emotional infidelities than sexual infidelities (Buss et al., 1992; Buss et al., 1999; Pietrzak et al., 2002). This finding has been extended to other infidelity responses including the likelihood of guilt, forgiveness, or relationship breakup (Fisher, Voraccek, Rekkas, & Cox, 2008), as well as the processing and recall of infidelity cues (Schützwohl, 2004, 2005). Generally, it is argued that these findings support the theory that the men and women have evolved differently in response to the evolutionary challenges of paternity certainty for men and the need to find a committed and investing mate for women. However, even if these observed sex differences are better explained by the extent to which evidence of one type of infidelity suggests the presence of the other (that is women tend to believe men are able to have sex without love, while men tend to believe women do not have sex without love) as argued by Harris and Christenfield (1996a), it is reasonable to expect that sex will feature more prominently in the descriptions of romantic betrayal offered by men, while emotional closeness and love will feature more prominently in those offered by women.

Based on these findings, it was expected in the current study that compared to women, men would be more likely to consider romantic relationship exclusivity to be linked to sexual fidelity, whereas compared to men, women would be more aware of and sensitised to the possibility of emotional closeness or love in an extra-dyadic relationship. Therefore the following hypotheses were proposed: That when asked to describe what type of involvement between your romantic partner and another person would be a breach of your trust men would be more likely than women to report sex and sexual involvements (H1), and women would be more likely than men to report emotionally close involvements (H2).

Attachment style

Another potential influence on the types of partner involvements that would breach trust is attachment style. As discussed in the literature review, there is a significant body of research supporting the importance of adult attachment style in the functioning of relationships. For example, secure attachment styles have been associated with higher levels of self-reported sensitivity to romantic partners, and with more appropriate and flexible patterns of self-disclosure. Secure romantic partners are more likely to handle conflict with expression and negotiation whereas anxious-ambivalent romantic partners are more likely to follow the demand-withdrawal conflict pattern often associated with relationship distress. Those with avoidant attachment styles are prone to avoiding both discussion and attempts to understand partners (Feeney et al., 2000).

Attachment researchers argue that, based on repeated interactions with primary caregivers, infants learn the extent to which their needs for comfort and security will be met by their attachment figures and that these 'internal working models' guide thoughts, emotions and behaviours in close relationships across the life span. In the course of normal development, parents are gradually relinquished as primary attachment figures and attachment behaviours (proximity maintenance, safe haven and secure base) are redirected

to peers such that in adulthood, romantic partners and spouses become primary attachment figures (Hazan & Shaver, 1994).

Theoretically, the attachment system and attachment behaviours are activated in times of stress. The source of stress could be a threat to personal safety, a threat to an attachment relationship, or a challenging situation that motivates seeking of a secure base. Typically, individuals react to such threats by attempting to alleviate distress in ways characteristic of their attachment styles. The stronger the activation of the attachment system the more extreme these characteristic behaviours are likely to be. For example, in a large internet survey investigating the relationships between attachment style and coping strategies used following a romantic relationship breakup, Davis and colleagues (2003) found that secure attachment (low scores on the dimensions of anxiety and avoidance) was associated with social coping strategies such as seeking support from friends and family. Anxious attachment was associated with greater relationship and partner preoccupation, more extreme physical and emotional distress, angry and vengeful behaviour, exaggerated attempts to re-establish the relationship and other dysfunctional coping strategies. Avoidant attachment was positively associated with self-reliant coping. Buunk (1997) found that those with an anxious attachment style were more jealous than avoidant or secure respondents, with secure individuals being the least jealous and these effects remained when controlling for personality dimensions.

Because attachment style appears to be relevant to emotion regulation in the context of threats to attachment relationships (Feeney, 1995, 1999a; Mikulincer, Shaver, & Pereg, 2003), it is plausible that attachment style might also influence expectations for romantic exclusivity. For example, more anxiously attached individuals might demand more exclusive attention from partners and be more sensitive to partner interactions with others, whereas individuals with more avoidant attachment styles might actually prefer that

romantic partners seek emotional support and closeness outside of the relationship thereby allowing them more autonomy.

Based on this line of reasoning, the following hypotheses were proposed: That more anxiously attached individuals, who are generally more sensitive to the threat of partner abandonment, would report a greater number of extra-dyadic partner involvement types that would breach trust, and allocate higher ratings for the extent to which all types of extra-dyadic partner actions and events would breach trust (H3), and that individuals with more avoidant attachment styles, who are generally uncomfortable with closeness, would report fewer extra-dyadic partner involvement types that would breach trust, and allocate lower ratings for the extent to which all types of extra-dyadic partner actions and events would breach trust (H4).

Attitudes toward sex

Another individual difference characteristic that may be relevant to expectations about romantic exclusivity involves attitudes toward sex. Research suggests that individuals with unrestricted attitudes toward sex may be more open to extra-dyadic involvement, with sexual satisfaction as the most likely motivation for that (Allen et al., 2005; Barta & Kiene, 2005). Cann and colleagues (2001) found that rejection of an ‘instrumental’ view of sex (i.e., that sex is primarily for personal pleasure), was associated with higher distress ratings for emotional infidelity, whereas stronger endorsement of sex as an act of communion (close and meaningful communication) between two people was associated with higher distress ratings for sexual infidelity. Based on these findings, the following hypothesis was proposed about the association between attitudes to sex and expectations for romantic relationship exclusivity in the current study: That compared to individuals with more restricted attitudes toward sex, individuals with permissive attitudes toward sex would be less likely to report that extra-dyadic sexual involvements would breach trust, and would

allocate lower ratings for the extent to which extra-dyadic partner actions and events of a sexual nature would breach relationship trust (H5).

Relationship commitment

While this study was primarily an exploration of individual expectations about romantic exclusivity, for those in current romantic relationships these expectations may become more salient. Indeed, individuals may have different expectations in the context of different relationships or within the same relationship with the passing of time. For example, Lawson (1988) found that over 90% of women and 80% of men expected sexual exclusivity at the time of their first marriage. However, with time and experience in marriage they became less insistent on sexual fidelity. Other researchers have demonstrated changes in important aspects of relationship functioning such as becoming more securely attached, or adopting different styles of attribution for making sense of partner behaviours (Davila, Karney, & Bradbury, 1999; Karney & Bradbury, 2000), all of which have the potential to shape and change expectations about partner interactions with others.

In the current study, the extent to which individuals were committed to a current relationship was expected to influence reported expectations for relationship exclusivity. When relationship partners are committed to each other and have invested in their relationship they tend to act in ways that promote relationship stability, such as accommodating rather than retaliating when a partner has violated their expectations (Rusbult et al., 1991; Wieselquist et al., 1999). While committed relationship partners may be more accommodating in the face of disappointing partner behaviours, they may also have higher expectations for romantic exclusivity.

As the current study was open to all people over 18 years of age, regardless of current romantic relationship status, data were collected on current relationship status, duration

and commitment. Commitment was conceptualised in line with Rusbult's Investment Model, (1998) which argues that commitment is strengthened by high levels of relationship satisfaction and high levels of relationship investments (e.g. time, shared social networks and material possession, children), and weakened by the perceived availability of attractive relationship alternatives. Using the Investment Model, relationship commitment has been associated with phenomena such as partner perspective taking, constructive or destructive reactions to relationship disappointments and decisions to stay or leave a relationship (Arriaga & Rusbult, 1998; Le & Agnew, 2003; Rusbult et al., 1986).

The following hypothesis was proposed in relation to the influence of relationship commitment on expectations about romantic exclusivity: That higher levels of relationship commitment, measured in terms of duration (longer equals higher), status (married or engaged more committed than dating) and subjective commitment (high satisfaction and high investment combined with low quality of alternatives) would be positively associated with the number of reported expectations for relationship exclusivity, and with higher ratings for the extent to which all types of extra-dyadic partner involvements would breach trust (H6).

Other individual characteristics

Sex, attachment style, attitudes toward sex, and relationship commitment are only some of the individual characteristics that might influence expectations about romantic exclusivity. For example, those who have experienced an infidelity may differ in their expectations for romantic exclusivity. In one study using the standard evolutionary forced-choice question about imagined distress in response to infidelities that are 'sexual' or 'emotional', sex differences were found only among those who had no actual experience of infidelity (Berman & Frazier, 2005). No sex differences were found among those in the

sample who had been victims of infidelity, suggesting that experience matters in how relationship phenomena are understood.

In another study investigating the relationship between jealousy, personality, attachment styles and birth order, Buunk (1997) found lower levels of jealousy in those who were first born compared to those later born, and only children were less jealous than first born children. The author suggested that the experience of exclusive love and attention in childhood might lead to lower jealousy among first born and only children. Extending this thinking, birth order might influence felt security such that those who are first born or only children have fewer demands or expectations for romantic exclusivity. Religiosity, defined in a number of ways has also been investigated in relation to extra-marital involvement. For example, greater religiosity has been associated with lower reported levels of extra-marital involvement (Whisman, Gordon, & Chatav, 2007) and religious couples report that their religious vows and involvement fortify marital commitment to fidelity (Dollahite & Lambert, 2007). Strong religious beliefs may be associated with more stringent explicit and implicit norms about exclusivity. However, they may also protect against suspicion of partner betrayal in interactions with others.

Other individual difference variables such as age, education level and ethnicity have been considered as part of large surveys investigating the prevalence of infidelity. For example, researchers have found that lifetime prevalence of extra-marital involvement increases with age and presumably cumulative opportunity, although lifetime rates are lower in older cohorts (Atkins et al., 2001; Wiederman, 1997). In the current study a number of variables were included to further explore how individual differences might influence expectations about romantic exclusivity. In addition to adult attachment style, attitudes toward sex and relationship commitment, data were collected on age, education, ethnicity, siblings and birth order, number and age of children, important current life roles, religious strength and actual experience of romantic betrayal. The following research

question was asked: What individual difference factors (e.g. age, experience of romantic infidelity, siblings, birth order and children) might be associated with particular expectations about romantic exclusivity?

An overview of the study

The primary aims of this study were to explore the norms (overt and covert) and expectations held by individuals about romantic relationship exclusivity, and the extent to which these might be predicted by individual difference factors. To this end, this study was open to people over the age of 18 regardless of their current relationship status. An open response question format was used for the exploration of exclusivity expectations. Respondents were also asked to rate the extent to which a variety of specific partner extra-dyadic actions and events would be a breach of relationship trust. The following hypotheses were tested in the current study:

(H1) That when asked to describe what type of involvement between your romantic partner and another person would be a breach of your trust men would be more likely than women to report sex and sexual involvements;

(H2) that when asked to describe what type of involvement between your romantic partner and another person would be a breach of your trust women would be more likely than men to report emotionally close involvements;

(H3) that more anxiously attached individuals who are generally more sensitive to the threat of partner abandonment, would report a greater number of extra-dyadic partner involvement types that would breach trust, and allocate higher ratings for the extent to which all types of extra-dyadic partner actions and events would breach relationship trust;

(H4) that individuals with more avoidant attachment styles, who are generally uncomfortable with closeness, would report fewer extra-dyadic partner

involvement types that would breach trust and allocate lower ratings for the extent to which all types of extra-dyadic partner actions and events would breach relationship trust;

(H5) that compared to individuals with more restricted attitudes toward sex, individuals with more permissive attitudes toward sex would be less likely to report that extra-dyadic sexual involvements would breach relationship trust, and would allocate lower ratings for the extent to which extra-dyadic partner actions and events of a sexual nature would breach relationship trust;

(H6) that higher levels of relationship commitment, measured in terms of duration (longer equals higher), status (married or engaged more committed than dating) and subjective commitment (high satisfaction and high investment combined with low quality of alternatives) would be positively associated with the number of reported expectations for relationship exclusivity, and with higher ratings for the extent to which all types of extra-dyadic partner involvements would breach relationship trust.

In addition to these hypotheses, the following research question was asked: What individual difference factors (e.g. age, experience of romantic infidelity, siblings, birth order and children) might be associated with particular expectations about romantic exclusivity?

Chapter 3

Study One: Method

Respondents

Two hundred and seventy-seven people participated in this study. Data from those who did not answer at least one of the two questions exploring perceptions of romantic betrayal were omitted leaving, 275 respondents; 203 (74%) women and 72 (26%) men. One hundred and ninety-seven (72 %) respondents were recruited via email from the community and 78 (28%) were first year psychology students at Macquarie University who received course credit for participation. Community participants were offered the opportunity to enter in a draw for a \$50 prize. As a chi square analysis found no significant differences between the community and university samples for the key dependent variable, relationship breach of trust categories, data from both samples were combined.

The age of respondents ranged from 17 to 63 years with a mean of 31.4 years ($SD = 11.1$); 29.9 years for females ($SD = 10.2$) and 35.7 years for males ($SD = 12.3$). Two hundred and eight respondents (76 %) were of Caucasian background, 44 (16 %) were Asian and 23 (8 %) were from 'other' ethnic backgrounds. Sixty two respondents (23%) were single, 77 (27%) in a boyfriend or girlfriend relationship, 40 (14%) were in a de-facto relationship, 88 (32%) were engaged or married, and 10 (4%) were separated or divorced. The duration of current romantic relationships ranged from one month to 35 years, $M = 6.39$ ($SD = 7.3$, $N = 203$), one month to 33.5 years, $M = 6.0$ ($SD = 6.85$, $N = 150$) for females and one month to 35 years, $M = 7.4$ ($SD = 8.25$, $N = 53$) for males.

Materials and measures

Information sheet and questionnaire

All respondents who completed the questionnaire also received an information sheet which gave a broad description of the study's aims, explained how anonymity would be

assured, and stated clearly that respondents could decide not to proceed at any point during completion of the questionnaire. A decision not to proceed would not involve the loss of course credit for student respondents. Importantly, respondents were warned about the possibility that some of the questions might raise painful memories, and contact details for Macquarie University and community counselling services were provided. A stamped envelope addressed to the researcher was attached to paper questionnaires distributed to community respondents. A separate form allowed these respondents to send back their details for entry into the monthly \$50 prize draw offered to all respondents who completed on-line questionnaires for Macquarie University psychology research.

Part one of the questionnaire asked for personal details including sex, age, education, ethnicity, number of siblings, place in family, important roles at current life stage, number, sex and age of children, current relationship status, duration and commitment. Part two of the questionnaire was designed to explore the types of extra-dyadic partner behaviours that would breach romantic relationship trust and part three of the questionnaire included measures of attachment style, attitudes toward sex and strength of religious faith. The questionnaire and information sheet are presented in Appendix 1.

Breach of romantic relationship trust

Part two of the questionnaire opened with the following instructions and open-ended question: 'In this section we are interested in common romantic expectations and what it takes to breach romantic relationship trust. Please think about your current romantic partner and answer the following questions with your current romantic partner in mind. If you are not currently in a romantic relationship, answer the questions with your most recent partner in mind. If you have never had a romantic relationship, answer in terms of what you think your responses would most likely be'.

Imagine that your romantic partner has been spending time with another person, and you believe he or she has betrayed you. What would he or she have done (e.g. actions, events, thoughts and feelings) with that other person for you to believe that there had been a breach of your trust? Please use the space below to describe your thoughts about what type of involvement between your romantic partner and another person would be a breach of your trust.

Care was taken to avoid the word ‘infidelity’ as this may have biased respondents’ thinking toward extra-dyadic sex. Respondents were asked ‘*Have you ever experienced a serious breach of trust on the part of a romantic partner involving another person external to your relationship?*’; ‘*How many times has this happened to you in your current relationship?*’ and; ‘*How many times has this happened to you in previous committed relationships?*’

Respondents were also asked to rate the extent to which 17 specific partner extra-dyadic actions or events would constitute a breach of relationship trust, using 9-point likert type scales where 1 = *No breach of trust*, and 9 = *A complete breach of trust*. Based on previous research exploring relationship non-exclusivity (e.g. Boekhout et al., 2003; Whitty, 2005), these items were developed by the researcher to represent partner betrayals that could be understood as ‘sexual’, ‘emotional’ or both. They also varied in the extent to which they might be interpreted as distinct events or ongoing relationships for example, ‘*a sexual encounter after drinking*’ and, ‘*having an ongoing sexual relationship with limited emotional involvement*’. The 17 items are listed below.

Passionate kissing

Affectionate cuddling

Having a sexual experience together that did not include intercourse.

Spending the night together without sex

A sexual encounter after drinking

Flirting

An ongoing sexual relationship limited emotional involvement

Developing an intimate non-sexual relationship

Casual one-off sexual intercourse

Developing a very close friendship

Developing an emotional connection beyond friendship

Doing things together such as a activity or shared interest

Paying for sex or an escort

Communication of a sexual nature, without physical contact

Falling in love without sex

An ongoing relationship that is both sexually and emotionally involved

Falling in love after a passionate sexual relationship

The Experiences in Close Relationships Scale

The Experiences in Close Relationships-Revised scale (ECR-R: Fraley, Waller & Brennan, 2000) was used to assess individual differences in adult attachment style. The ECR-R is a revised version of the Experiences in Close Relationships (ECR) questionnaire (Brennan et al., 1998). It has 36 items and like the ECR, produces scores on two subscales, Anxiety (fear of abandonment and rejection) and Avoidance (discomfort with closeness and depending on others). The items were derived from an item response theory analysis of pre-existing self-report measures of adult attachment (see Brennan et al., 1998).

Respondents indicate the extent to which they agree with statements such as *'I'm afraid I will lose my partner's love.'* and *'I prefer not to show a partner how I feel deep down'* on 9-point likert type scales where 1 = *Strongly Disagree*, and 9 = *Strongly Agree*. Fourteen items must be reverse keyed before calculating mean scale scores for Anxiety and

Avoidance. In the current study scale reliabilities were high: Cronbach's alpha = .93 for Anxious Attachment and .92 for Avoidant Attachment. A high average score on either subscale indicates a stronger disposition towards anxiety or avoidance in romantic relationships. To better measure individual predispositions respondents were asked to think about '*how you generally experience relationships, not just in what is happening in a current relationship*'.

The Brief Sexual Attitudes Scale

The Brief Sexual Attitudes Scale (BSAS: Hendrick, Hendrick, & Reich, 2006) was used to measure respondent's attitudes toward sex. The BSAS is a shorter version of the original Sexual Attitudes Scale which was developed to assess sexual attitudes in a multi-dimensional way. The original scale had 43 items and measured four aspects of sexual attitudes: Permissiveness (casual sexuality), Sexual Practices (responsible, tolerant sexuality), Communion (idealistic sexuality), and Instrumentality (biological, utilitarian sexuality). The briefer version has 23 items that represent the same subscales, although the Sexual Practices Scale has been renamed as Birth Control because it has been reduced effectively to three items that assess responsibility for birth control. Each item is a statement for example, '*Sex is the closest form of communication between two people*', answered on a 5-point likert type scale where 1 = *strongly agree with the statement*, and 5 = *strongly disagree with the statement*. In this study scores were reverse coded so that higher scores represented higher levels of sexual permissiveness along with beliefs in birth control, sex as communion, and sexual instrumentality. The subscales have adequate internal reliabilities with Cronbach's alphas in previous research ranging from .93 - .95 for Permissiveness, .84 - .87 for Birth Control, .71 - .77 for Communion, and .77 - .80 for Instrumentality. Subscale inter-correlations and correlations with other measures have been found to be good and consistent for both versions of the scale (Hendrick et al., 2006). In

the current study the BSAS subscale reliabilities were good: Cronbach's alpha = .90 for Sexual Permissiveness; .85 for Birth Control; .79 for Sexual Communion and .70 for Sexual Instrumentality.

The Investment Model Scale

Relationship commitment was measured with the Investment Model Scale (IMS: Rusbult et al., 1998). The IMS was designed to measure four constructs, including level of commitment and three bases of relationship dependence: 1) satisfaction level, which is influenced by the extent to which a partner fulfils the individual's needs; 2) quality of alternatives, which refers to the perceived desirability of available alternatives to the relationship including not only alternative partners but family, friends or being alone; and 3) investment, which refers to the size and importance of the resources attached to a relationship that would be at risk if the relationship were to end (Rusbult et al., 1998). The IMS uses two types of items to measure satisfaction, alternatives, and investments: 1) facet items, which measure concrete exemplars of each construct, and 2) global items, which are general measures of each construct. Facet items use concrete illustrations of the constructs and are designed to activate the respondent's thinking in a way that prepares them to answer global items such as *'Compared to other people I know I have invested a great deal in my relationship with my partner.'* The facet items are included solely to obtain more reliable and valid measures of the global constructs. Only the global items are used in hypothesis-testing using the IMS. Facet items ask respondents to rate the extent to which they agree with a statement such as *'My needs for companionship (doing things together, enjoying each other's company, et) could be fulfilled in alternative relationships'* on a 4-point scale where 1 = *Don't agree at all*, and 4 = *Agree completely*. Global items use a 9-point likert scale where 1 = *Do not agree at all*, 5 = *Agree somewhat*, and 9 = *Agree completely*. In total there are 37 items in the IMS, five facet items and five global items for

relationship satisfaction, quality of alternatives and relationship investment and seven global items for relationship commitment. The IMS is internally consistent, has a coherent factor structure and moderate correlations with other measures of couple functioning including the Dyadic Adjustment Scale (Rusbult et al., 1998). Scale reliabilities in the current study were good; Cronbach's alpha = .95 for Global Satisfaction, .81 for Global Investment, .82 for Global Quality of Alternatives, and .91 for Commitment. Consistent with this model of relationship commitment, moderate positive correlations were found between Commitment and Global Satisfaction ($N = 206, r = .591, p < .0005$), and Global Investment ($N = 206, r = .488, p < .0005$), and a moderate negative correlation was found between Commitment and Global Quality of Alternatives, ($N = 206, r = -.487, p < .0005$).

The Santa Clara Strength of Religious Faith Questionnaire- Short Form

A measure of individual religious strength was included because of the potential for religious beliefs to influence romantic relationship expectations. The Santa Clara Strength of Religious Faith Questionnaire - Short Form (SCSRFQ-SF: Storch, Roberti, Bravata, & Storch, 2004) is a 5 item abbreviated version of the 10-item SCSRFQ. Each item is a statement, e.g. *'I consider myself active in my faith or church'* and is answered on a 4-point scale where 1 = *Strongly disagree*, and 4 = *Strongly agree*. All items are summed to give a total score where high scores indicate greater religious strength. The SCSRFQ-SF correlates highly with the SCSRFQ ($r = .95$) and has good internal reliability; Cronbach's alpha = .95 (Storch et al., 2004). Scale reliability in the current study was good; Cronbach's alpha = .94.

Procedure

A draft questionnaire was pilot tested with 10 people allowing for some minor adjustments to expression in some of the open-ended questions. Respondents were

recruited via the university research website and an email was sent to friends and acquaintances requesting volunteers and directing them to the online questionnaire. The copy used in that email is also presented in Appendix A. Student respondents completed the questionnaire in a university classroom with the researcher present while members of the community completed the questionnaire privately. The questionnaire took between 20 and 40 minutes to complete. All data collected via the paper questionnaire was entered into the on-line data file by the researcher.

Chapter 4

Study One: Results

Data analysis

The Statistical Package for the Social Sciences (SPSS) version 13 was used for all data analyses and an alpha level of .05 was used for statistical tests. All variables were approximately normally distributed with no obvious outliers. Hypotheses tests of coded open-ended answers were conducted using chi square analysis and logistic regression as is appropriate for binary response variables (Agresti & Finlay, 1997). The research findings are presented in the following order; data description, hypothesis testing, research question and further analysis. In this chapter, the word 'sex' in relation to biological sex differences has been replaced by the word 'gender' to aid reader comprehension in the context of frequent references to sexual extra-dyadic involvement. The researcher is aware that gender refers to an individual's identity rather than their biological sex.

Data description

Adult attachment style: Experiences in Close Relationships (ECR-R)

Fourteen of the 39 ECR-R items were reverse keyed before calculating a mean anxiety and avoidance score for each respondent. The means and standard deviations for ECR-R anxious and avoidant attachment subscales are presented in Table 1. There were no significant gender differences in the mean scores for anxious attachment or avoidant attachment. As found by other researchers (Sibley, Fischer, & Liu, 2005) the ECR-R measures of adult attachment anxiety and avoidance were positively correlated ($r = .490, p < .0005, N = 266$).

Table 1: Means and Standard Deviations for Anxious and Avoidant Attachment

ECR-R Subscales	Total ($N = 266$)		Females ($N = 198$)		Males ($N = 68$)	
	M	SD	M	SD	M	SD
Anxious Attachment	2.90	1.2	2.93	1.14	2.8	1.1
Avoidant Attachment	2.33	.89	2.36	.82	2.25	.70

Attitudes to sex: Brief Sexual Attitudes Scale (BSAS)

The means and standard deviations for BSAS subscale scores are presented in Table 2.

There were no significant gender differences in mean BSAS scores for Sexual Communion, or Birth Control. However, compared to females, males in this study reported higher scores for sexually permissiveness, $F(1,263) = 9.945, p = .002$.

Table 2: Means and Standard Deviations for the Brief Sexual Attitudes Scale

BSAS Subscales	Total ($N = 264$)		Females ($N = 196$)		Males ($N = 68$)	
	M	SD	M	SD	M	SD
Sexual Permissiveness	2.51	.99	2.40	.93	2.83	1.1
Birth Control	4.57	.78	4.62	.72	4.42	.90
Sexual Communion	3.67	.87	3.70	.83	3.58	.97
Sexual Instrumentality	2.59	.78	2.64	.75	2.42	.87

* 265 people completed Sexual Permissiveness items

Relationship commitment: Investment Model Scale (IMS)

Participants who were in a current romantic relationship were asked to complete the IMS (Rusbult et al., 1998). Means and standard deviations for each of the IMS subscales are presented in Table 3. In this study there were no significant gender differences in mean scores for Global Satisfaction, Global Quality of Alternatives, Global Investment or Commitment.

Table 3: Means and Standard Deviations for the Investment Model Scale

IMS subscale	Total (<i>N</i> = 206)		Females (<i>N</i> =151)		Males (<i>N</i> = 55)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Global Satisfaction	7.20	1.70	7.22	1.7	7.13	1.72
Global Quality of Alternatives	4.25	1.76	4.26	1.87	4.19	1.46
Global Investment	5.87	1.77	5.74	1.79	6.23	1.66
Commitment	8.01	1.34	7.80	1.02	8.04	1.02

Dependent variables

Breach of romantic relationship trust

The researcher listed each type of involvement or behaviour reported in response to the question, “*What type of involvement between your romantic partner and another person would be a breach of your trust?*” From these the following eight response categories were derived: 1) showing interest or intention, e.g. flirting (labelled ‘Interest’), 2) any physical intimacy (but not intercourse), e.g. kissing, holding hands (labelled ‘Physical’), 3) sex or a sexual involvement (labelled ‘Sexual’), 4) emotional sharing, e.g. confiding, disclosure of details about self or relationship (labelled ‘Sharing’), 5) romantic involvement, e.g. feelings of love or romantic involvement (labelled ‘Romantic’), 6) deception about extent or type of involvement with other (labelled ‘Deception’), 7) spending more time with other (labelled ‘Time’), and 8) ‘Other’ (e.g. investing money without telling me, discussing our children). The researcher and one other coder, who was unaware of the research aims, then coded each response into these categories. Inter-coder reliabilities for each category were moderate to high; Cohen’s Kappa = .98 (Interest), .98 (Physical), .94 (Sexual), .81(Sharing), .60 (Romantic), .90 (Deception), .89 (Time), .58 (Other). Disagreements were discussed until consensus was reached. Each answer could be coded into multiple categories. The number of coded categories for each answer ranged from one to six (*M* =

2.3, $SD = 1.03$, $N = 271$). Category frequencies in descending order are presented in Table 4 for the total sample and for males and females.

Table 4: Frequencies for Eight Relationship Trust Categories

	Total ($N = 271$)		Female ($N = 201$)		Male ($N = 69$)	
	Frequency	%	Frequency	%	Frequency	%
1. Physical	136	50	115	56	21	30
2. Sexual	106	39	78	38	28	39
3. Sharing	98	36	74	36	24	34
4. Time	84	31	60	29	24	34
5. Deception	81	30	56	28	25	35
6. Interest	51	19	41	20	10	14
7. Romantic	36	13	24	12	12	17
8. Other	34	12	23	11	11	16

There were few typical response patterns. The most frequent combination of reported categories was, in descending order: Physical and Sharing, 26 (9.4%); Physical, 12 (4.3%); Physical and Sexual 12(4.3%); Other 11 (3.6%); Deception, 10 (3.6%); Interest, 10 (3.6%); Sexual 9 (3.2%). Together these combined frequencies accounted for 32.4 % of responses.¹

¹ In an attempt to look for relationships between categories multiple correspondence analysis otherwise known as homogeneity analysis (HOMALS), was applied to category data. As in principal components analysis for numerical data, homogeneity analysis aims to reduce or summarise categorical data on the basis of proximity and distance between objects. A number of HOMALS analyses were performed, based on different criteria for eliminating items which did not adequately discriminate between subjects. No stable solution was found, so the results of the analyses are not reported here.

Type of betrayal: Principal components analysis.

While a content analysis of the open-ended responses was intended to provide insight into the types of extra-dyadic behaviours that would breach romantic trust, 17 scaled items were included to explore the extent to which different partner extra-dyadic actions or events would be perceived as a betrayal. A principal components analysis with an Oblimin and Kaiser Normalisation rotation found three components with eigen values greater than one. Together these components accounted for a cumulative response variance of 66 %.

The first component to emerge was labelled ‘Sexual Intimacy’ and accounted for 42 % of the response variance. This component included almost all items that referred to sexual and physical intimacy; passionate kissing, affectionate cuddling, a sexual experience that did not include intercourse, a sexual encounter after drinking, a sexual relationship with limited emotional involvement, casual one off sexual intercourse, paying for sex and communication of a sexual nature. The second component to emerge was labelled ‘Emotional Intimacy’ and accounted for 13% of the total variance. This component was defined by items describing emotionally close, but not sexual involvements; developing a very close friendship, developing an emotional connection beyond friendship and doing things together such as a specific activity or shared interest. The third component to emerge was labelled ‘Love’ and accounted for 11% of the total variance. The three items that defined the Love component were; an ongoing relationship that is both sexual and emotional, love without sex, and falling in love after a passionate sexual relationship. The pattern matrix for the final principal components analysis is presented in Table 5.

Table 5: Pattern Matrix for Principal Component Analysis of Betrayal Ratings

Items	Components		
	1	2	3
Passionate kissing	.868	.052	-.068
Affectionate cuddling	.539	.378	-.046
A sexual experience that did not include intercourse	.932	-.073	.012
Spending the night together without sex	.544	.405	-.098
A sexual encounter after drinking	.900	-.063	.033
Flirting	.423	.402	-.012
An ongoing sexual relationship limited emotional involvement	.665	.072	.018
Developing an intimate non-sexual relationship	.040	.782	.009
Casual one-off sexual intercourse	.931	-.152	.003
Developing a very close friendship	-.049	.867	-.006
Developing an emotional connection beyond friendship	.064	.720	.112
Doing things together such as a activity or shared interest	-.100	.811	.050
Paying for sex or an escort.	.836	-.154	.129
Communication of a sexual nature, without physical contact	.665	.094	.070
Falling in love without sex	.044	.228	.647
An ongoing relationship that is both sexually and emotionally involved	.030	-.072	.902
Falling in love after a passionate sexual relationship	-.013	-.025	.896

To facilitate comparisons between betrayal components, ‘coarse’ component scores were calculated for each respondent by averaging the betrayal ratings of all ratings for items with component loading contributions over 0.4 (Grice, 2001). Two items ‘*spending the night together without sex*’ and ‘*flirting*’ were included in mean betrayal scores for both Sexual Intimacy and Emotional Intimacy. The coarse component scores were significantly and positively correlated with each other. These correlations are presented in Table 6.

Table 6: Correlation Matrix for Mean Type of Betrayal Component Scores.

Components (<i>N</i> = 266)	1	2	3
1. Sexual Intimacy	1		
2. Emotional Intimacy	.643**	1	
3. Love	.309**	.298**	1

**Correlation is significant at the 0.01 level (2-tailed)

Other individual variables

In this sample there were only two significant gender differences in individual difference variables: The average age of male respondents ($M = 35.7$, $SD = 12.3$, $N = 72$) was significantly higher than the average age of female respondents ($M = 29.9$, $SD = 10.2$, $N = 202$), $F(1,272) = 14.86$, $p < .0005$, and the mean strength of religion score for females ($M = 2.04$, $SD = .86$, $N = 197$) was significantly higher than the mean score for males ($M = 1.66$, $SD = .86$, $N = 68$), $F(1,263) = 8.36$, $p = .004$.

Hypothesis testing

Associations with gender

It was hypothesised that, when asked to describe what type of involvement between your romantic partner and another person would be a breach of trust, men would be more likely than women to report sexual involvements (H1) and women would be more likely than men to report emotionally close involvements (H2). Figure 1 illustrates the percentage of total respondents ($N = 271$) as well as males ($N = 69$) and females ($N = 202$) whose answers were coded into each breach of trust category. As reference to a partner deception was almost always reported in relation to a particular behaviour, for example, '*spending*

time together and not telling me about it' the category of deception has not been included in Figure 1.

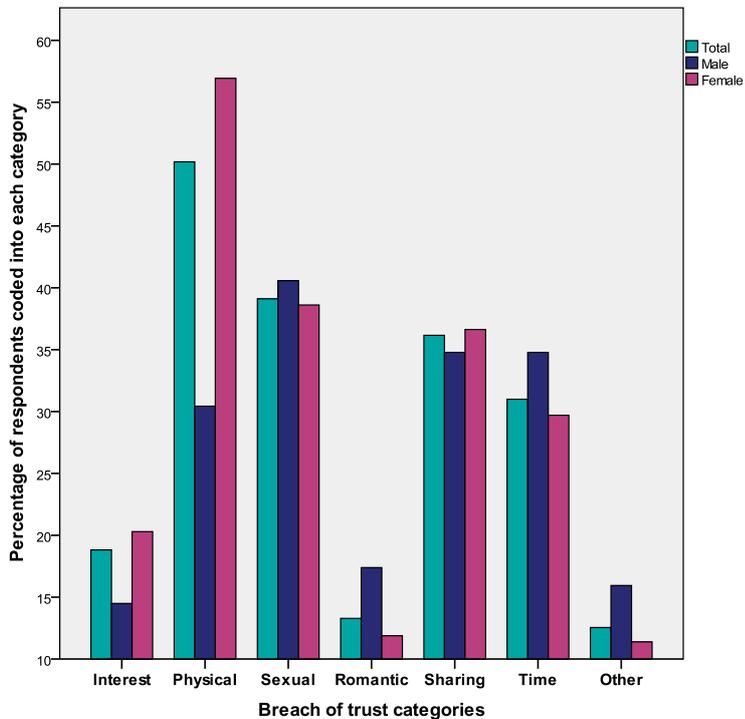


Figure 1: Percentage of total, males and females who reported each breach of relationship trust category

Only one significant gender difference was found in frequencies for reported breach of trust categories: The odds of women in this sample reporting that intimate physical contact (Physical) would constitute a breach of trust were three times that of the men, $\chi^2 (df 1, N = 271) = 14.15, p < .0005$; O.R. = 2.99. However, given the age difference between men and women in the sample, this finding was followed up with a logistic regression with Physical as the dependent variable (mentioned or not) and gender and age as the correlated independent variables. Gender remained a significant predictor of the category Physical, $Wald (df 1, N = 271) = 8.28, p = .004$, O.R. = 2.44. Controlling for age, the odds of women

in this sample reporting that partner extra-dyadic physical intimacy would breach relationship trust were almost 2.5 times more than for men.

As there was also a significant gender difference in this sample in relation to the strength of religious faith (measured by mean scores on the Santa Clara Strength of Religious Faith scale: SCSRF), with women reporting stronger religious faith than the men, it was considered important to investigate the relationship between religious strength and concern for extra-dyadic physical interactions. In a logistic regression with Physical as the dependent variable (mentioned or not), and gender and mean scores for the SCSRF as the correlated independent variables, gender remained a significant predictor of the category Physical, $Wald (df 1, N = 262) = 12.7, p < .0005, O.R. = 3.0$. Controlling for mean SCSRF (which was not significant) the odds of women in this sample reporting that partner extra-dyadic physical intimacy would breach relationship trust were still three times more than for men.

In summary, based on the coded open-ended responses, there was no support for Hypotheses 1 or 2. Men and women in this sample were more similar than different in terms of the non-exclusive partner behaviours that they believed would breach relationship trust. The only gender difference was found for the category of Physical (e.g. kissing, holding hands) which was more likely to be reported by women than by men.

Associations between gender and mean betrayal ratings for types of betrayal components

Male and female data were also compared in terms of mean betrayal scores for each type of betrayal component derived from the principal component analysis, 'Sexual Intimacy', 'Emotional Intimacy' and 'Love'. Figure 2 presents the mean scores for each betrayal component for all respondents ($N = 266$) and for all females ($N = 198$) and males ($N = 68$) who answered the question.

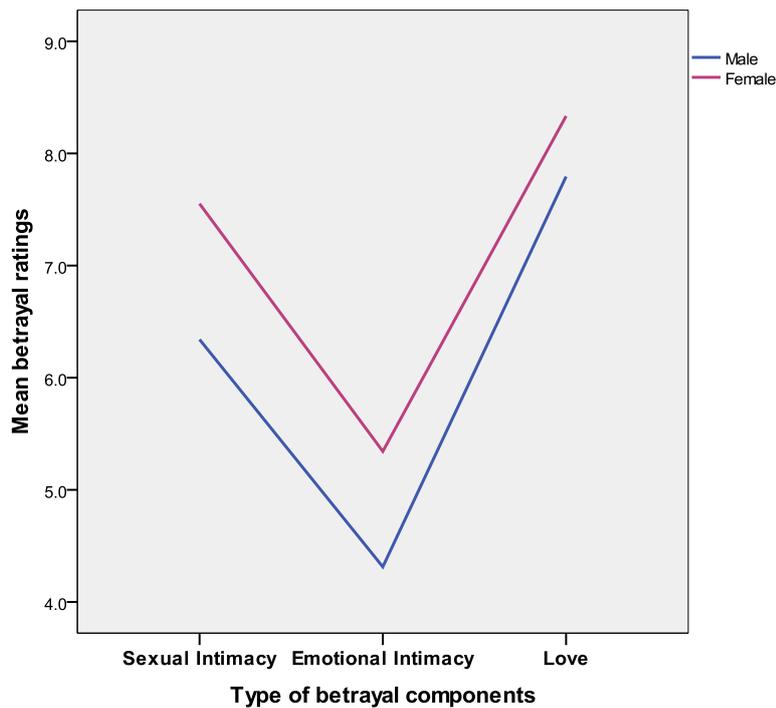


Figure 2: Mean male and female betrayal ratings for three types of betrayal

A repeated measures analysis with type of betrayal as the within-subjects factor with 3 levels, and gender as the between-subjects factor, found a strong effect of type of betrayal (Wilks' Lambda = .271, $F(2,263) = 354.1$, $p < .0005$, $\eta_p^2 = .73$). There was a significant overall gender difference in betrayal ratings averaged over type of betrayal ($F(1,263) = 29.68$, $p < .0005$, $\eta_p^2 = .102$), with females rating all types of betrayal as higher in terms of the extent to which they would breach romantic trust. There was also a significant, although not very strong, interaction between gender and type of betrayal (Wilks' Lambda = .945, $F(2,263) = 7.68$, $p = .001$, $\eta_p^2 = .055$). Bonferroni-adjusted follow-up tests of the simple effects of gender showed a significant difference between males and females for mean betrayal ratings of Sexual Intimacy ($t(263) = 5.85$, $p < .0005$) and Emotional Intimacy ($t(263) = 4.25$, $p < .0005$) with female ratings higher than male ratings for each. The gender difference in mean ratings for the betrayal type 'Love' did not reach significance ($t(263) = 2.53$, $p = .039$). Similar tests for type of betrayal showed that the

differences between all three pairs of betrayal type were highly significant for both males and females ($p < .0005$ in each case). Overall, 'Love' was rated as the most serious form of betrayal ($M = 8.53$, $SD = .99$), followed by Sexual Intimacy ($M = 7.5$, $SD = 1.5$), and Emotional Intimacy ($M = 5.53$, $SD = 1.76$).

Again, given the significant difference in age between males and females in this sample, it was considered important to check that these observed gender differences on mean betrayal component scores were not explained by age. Small to moderate negative correlations were found between age and mean betrayal scores for Sexual Intimacy ($r = -.303$, $p < .0005$, $N = 264$) and Emotional Intimacy ($r = -.218$, $p < .0005$, $N = 264$) but not for Love ($r = -.056$, $p = .364$, $N = 264$). A further repeated measures analysis was conducted with type of betrayal as the within-subjects factor with 3 levels, gender as the between-subjects factor, and age as a numeric covariate. There was a strong, significant effect for type of betrayal (Wilks' Lambda = .297, $F(2,259) = 306.7$, $p < .0005$, $\eta_p^2 = .70$) and significant, although weaker, effects for gender ($F(1,260) = 18.0$, $p < .0005$, $\eta_p^2 = .065$) and age ($F(1,260) = 13.27$, $p < .0005$, $\eta_p^2 = .049$). The interaction between type of betrayal and gender remained significant, although weaker (Wilks' Lambda = .976, $F(2,259) = 3.14$, $p = .045$, $\eta_p^2 = .024$). There were significant, although weak, interactions between type of betrayal and age (Wilks' Lambda = .934, $F(2,259) = 9.16$, $p < .0005$, $\eta_p^2 = .066$), and type of betrayal, gender and age (Wilks' Lambda = .977, $F(2,259) = 3.11$, $p = .046$, $\eta_p^2 = .023$). Thus, while the overall effects for betrayal type remained, they were slightly weakened by the effects of age. Age also had a weak moderating effect on the type of betrayal by gender interaction. Interaction contrasts were tested by comparing the magnitude of the difference in betrayal ratings for Love Vs Sexual Intimacy and Love Vs Emotional Intimacy over age for males and females. The question was whether the way the relative importance of the different betrayal situations varied with age differed for males and females. The interaction contrast was significant for Love Vs Sexual Intimacy F

(1,260) = 6.17, $p = .014$. Tests of simple effects showed that there was a significant positive relationship between age and the magnitude of difference (Love minus Sexual Intimacy) in mean betrayal ratings for Love and Sexual Intimacy for males $t(df\ 260) = 4.19, p < .0005$, but not for females $t(df\ 260) = 1.53, p = .127$. The interaction contrast was not significant for Love Vs Emotional Intimacy $F(1,260) = 2.02, p = .156$. However the same pattern as that for Love Vs Sexual Intimacy was observed for Love Vs Emotional Intimacy. That is, that the relative emphasis on Love type betrayals increased with age for males ($t(df\ 260) = 2.66, p = .008$) but not for females ($t(df\ 260) = 1.23, p = .218$). For men, age was positively associated with increasing concern for types of betrayals defined as Love relative to those defined as Sexual Intimacy or Emotional Intimacy.

A similar analysis was conducted to check that the observed gender differences on mean betrayal component scores were not better explained by strength of religious faith measured by mean scores on the Santa Clara Strength of Religious Faith scale (SCSRF). Small to moderate positive correlations were found between mean scores for the SCSRF and mean betrayal scores for Sexual Intimacy ($r = .244, p < .0005, N = 265$) and Emotional Intimacy ($r = .246, p < .0005, N = 265$) but not for Love ($r = .054, p = .385, N = 265$). A repeated measures analysis was conducted with type of betrayal as the within-subjects factor with 3 levels, gender as the between-subjects factor, and mean SCSRF as a numeric covariate. There was a strong, significant effect for type of betrayal (Wilks' Lambda = .3, $F(2,259) = 333.7, p < .0005, \eta_p^2 = .72$) and significant, although weaker, effects for gender ($F(1,260) = 30.7, p < .0005, \eta_p^2 = .106$) and SCSRF ($F(1, 260) = 14.67, p < .0005, \eta_p^2 = .053$). The interaction between type of betrayal and gender was significant (Wilks' Lambda = .963, $F(2,260) = 5, p = .008, \eta_p^2 = .037$) and there was a significant, although weak, interaction between type of betrayal and SCSRF (Wilks' Lambda = .956, $F(2,260) = 6, p = .003, \eta_p^2 = .044$). As strength of religious faith increased so did betrayal ratings for sexual and emotionally close extra-dyadic involvements, although there was no

relationship between strength of religious faith and betrayal rating for extra-dyadic love. There was no interaction between type of betrayal, gender and religion. Thus, the overall effects for betrayal type and gender remained.

Associations with attachment style

It was expected that anxiously attached individuals, who are generally sensitive to the threat of partner abandonment, would report a greater number of extra-dyadic partner involvement types that would breach trust, and allocate higher ratings for the extent to which all types of extra-dyadic partner actions and events would breach relationship trust (H3). However, no significant correlations were found between anxious attachment and the total number (or any particular category) of partner behaviours that would breach romantic relationship trust and no correlations were found between anxious attachment and mean ratings for type of betrayal components. Therefore no support was found for hypothesis 3 in this study.

It was also expected that people with more avoidant attachment styles, who are generally uncomfortable with closeness, would report fewer extra-dyadic partner involvement types that would breach trust, and allocate lower ratings for the extent to which all types of extra-dyadic partner actions and events would breach trust. A small negative correlation was found between avoidant attachment and the total number of breach of trust categories reported ($r = -.170, p = .006, N = 262$). There were no significant correlations between avoidant attachment and mean betrayal ratings for type of betrayal components. In this sample, having an avoidant attachment style was associated with fewer reported extra-dyadic partner involvement types that would breach trust, providing partial support for Hypothesis 4. However, avoidant attachment was not associated with lower ratings for the extent to which all types of extra-dyadic partner actions and events would breach trust.

Associations with attitudes toward sex

It was expected that compared to individuals with more restricted attitudes toward sex, individuals with more permissive attitudes toward sex would be less likely to report that extra-dyadic sexual involvements would breach relationship trust, and would give lower ratings for the extent to which extra-dyadic partner actions and events of a sexual nature would breach relationship trust (H5). A moderate negative correlation was found between the breach of trust category 'Physical' and Sexual Permissiveness ($r = -.188, p = .002, N = 261$) suggesting that those with more sexually permissive attitudes were less likely to report that any partner, extra-dyadic physical intimacy would breach trust. However, in a logistic regression of Physical on gender, age and Sexual Permissiveness, only gender (Wald ($df 1, N = 261$) = 7.372, $p = .007$, O.R = 2.30) and age (Wald ($df 1, N = 261$) = 10.31, $p = .001$, O.R = .960) remained significant, suggesting that a reported concern for any partner extra-dyadic physical contact was better predicted by being female and young, than having less permissive sexual attitudes.

Table 7 presents the correlations between the mean scores for BSAS subscales and each type of betrayal component score. Small to moderate positive correlations were found between mean betrayal scores for each type of betrayal and Sexual Permissiveness. In a multivariate analysis with the types of betrayal component scores as the dependent variables and gender, age and Sexual Permissiveness as the correlated independent variables, there was a significant main effect for Sexual Permissiveness (Wilks' Lambda = .907, $F(2,257) = 8.8, p < .0005$). High scores on Sexual Permissiveness were associated with lower mean betrayal ratings for Sexual Intimacy ($F(3, N = 261) = 23.59, p < .0005$) and Emotional Intimacy ($F(3, N = 261) = 19.74, p < .0005$) but not for Love ($F(3, N = 261) = 2.76, p = .098$) providing partial support for Hypothesis 5. Although not related specifically to the hypothesis, it is interesting to note that Sexual Communion scores were positively correlated with mean betrayal scores for extra-dyadic love.

Table 7: Correlation Matrix for Type of Betrayal Scores and BSAS Subscales

Type of Betrayal	Sexual Permissiveness	Birth Control	Sexual Communion	Sexual Instrumentality
Sexual Intimacy	-.374**	.038	.054	-.028
Emotional Intimacy	-.335**	-.022	.063	-.008
Love	-.133*	.092	.142*	.029

($N = 264$)

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Associations with relationship commitment

It was expected that relationship commitment, measured in terms of relationship duration (longer equals higher), status (married or engaged more committed than dating) and subjective commitment (high satisfaction and high investment combined with low quality of alternatives) would be positively associated with the number of reported expectations for relationship exclusivity, and with ratings for the extent to which all types of extra-dyadic partner involvements would breach trust (H6). There were no significant correlations between the total number of breach of trust categories reported and any measure of relationship commitment. However, there were small negative associations between the category Physical (1 = mentioned, 0 = not mentioned) and relationship duration ($r = -.209$, $p = .003$, $N = 200$) and Physical and IMS Global Investment ($r = -.225$, $p = .001$, $N = 203$). In a logistic regression with Physical as the dependent variable and relationship duration and Investment as correlated independent variables, only Investment remained significant ($Wald (df 1, N = 200) = 5.93$, $p = .015$, $OR = .799$). People more highly invested in a current romantic relationship were less likely to report that any form of physical intimacy would breach relationship trust. A small positive association was also found between the category Sexual and Commitment ($r = .139$, $p = .047$, $N = 203$).

Those people in the sample who were more committed to their current romantic relationship were more likely to report that partner extra-dyadic sex would breach relationship trust.

Small positive correlations were found between Global Satisfaction and mean betrayal ratings for the Sexual Intimacy ($r = .162, p = .022, N = 199$) and Emotional Intimacy ($r = .151, p = .033, N = 199$) types of betrayal. Relationship satisfaction was positively associated with the extent to which partner extra-dyadic involvements of a sexually or emotionally intimate nature would constitute a breach of trust. In this sample, support for Hypothesis 6 was inconclusive.

Associations with other individual characteristics

The only other individual difference variables that were associated with reported breach of trust categories or mean betrayal ratings for type of betrayal components were age (reported previously), and education. Respondents with university or post graduate degrees were less likely than others to report that partner extra-dyadic 'Interest' would breach romantic trust, $\chi^2 (df 2, N = 271) = 6.61, p = .037$. A university education was also associated with lower mean rating for each type of betrayal component; Sexual Intimacy $F (1,260) = 13.15, p < .0005$, Emotional Intimacy $F (1,260) = 10.21, p = .002$ and Love $F (1,260) = 4.19, p = .042$.

Further analysis of a combined 'sexual contact' breach of trust category

In light of the reasonable assumption that most of the responses coded as Physical may well have intended this to be inclusive of sexual intercourse, which was coded separately as Sexual, the Physical and Sexual breach of trust categories were combined into the variable Sexual Contact for further analysis. Support for this categorisation was provided by the principal components analysis in which items loading on the Sexual Intimacy type

of betrayal component were concerned with any type of physical or sexual contact (including passionate kissing, affectionate cuddling, and sex after drinking). Only one significant relationship was found between the breach of trust category Sexual Contact and all independent variables. In this study, increasing age reduced the likelihood that respondents would report that any form of sexual contact would be a breach of trust, (Wald (df 1, N = 269) = 3.88, p = .049, $O.R$ = 9.98).

Chapter 5

Study One: Discussion

This study explored the nature of infidelity from the perspective of individual norms and expectations about romantic exclusivity. Respondents in this study were asked to imagine that a romantic partner had been spending time with another person and to write about the types of interaction with that person that would lead to feelings of betrayal and a belief that their partner had breached relationship trust. They were also asked to rate the extent to which a variety of specific partner extra-dyadic actions and events would be a breach of relationship trust and cause feelings of betrayal.

Review of findings

Partner interactions with another person that breach romantic relationship trust

As might be expected, given the societal norms that support sexual fidelity in the context of committed relationships (Widmer et al., 1998) extra-dyadic sex was frequently reported as a partner behaviour that would breach relationship trust. Almost 40% of respondents in this study reported that they would feel betrayed if their partner had sex or a sexual relationship with someone else. What is perhaps more interesting is that for 50% of respondents, any form of physically intimate contact, including interactions seemingly less threatening than sex such as holding hands or kissing, was considered to breach romantic relationship trust. In total, 67% of respondents in this study reported that any extra-dyadic physical and/or sexual intimacy would breach romantic relationship trust.

Thirty six percent of respondents reported that partner extra-dyadic behaviours categorised as ‘sharing’ would breach relationship trust and for 31% of respondents, time spent with another person without good reason, and particularly if not disclosed, would be a breach of trust. Together, these emotionally close partner behaviours (e.g. sharing,

confiding, spending time) were reported by 55% of respondents, suggesting that expectations for emotional exclusivity are almost as widespread as those for physical and or sexual intimacy.

Clearly, emotional connections with others may be threatening. Indeed, an individual can do a lot less than actually fall in love with, or have a romantic interest in, another person before triggering feelings of betrayal in their partner. In this study a reference to partner extra-dyadic love or romance as a breach of trust was reported by only 13% of respondents. This raises an interesting question in relation to why extra-dyadic romance or love was reported so infrequently compared to partner involvements that were categorised as any interest, physical, sexual, sharing or spending time. This is particularly so in light of the different story told by the mean betrayal ratings for specific types of extra-dyadic involvements. For both men and women in this sample extra-dyadic partner 'love' involvements were rated as a greater breach of relationship trust than those of a sexually intimate or emotionally intimate nature. To some extent these divergent findings are a reflection of the different question techniques used. The open-ended question about partner behaviours that would breach trust captures more spontaneous thoughts about unfaithful partner behaviours than closed-ended questions prompting specific considerations and responses.

One possibility is that partner romantic interest in, or love for, another person is a sign that the time for vigilance about partner interactions with others has passed and that there is little that can be done to protect the relationship. Indeed, 19% of respondents in this study reported that any form of interest in another person would cause a breach of relationship trust. Many of the answers coded into this category stated clearly that 'any interest' a romantic partner might show in another person would be a breach of trust, and a minority went as far as to state that a partner's thoughts about another person would breach trust. Although discovery of these 'mental' forms of 'infidelity' is far less likely than

intimate extra-dyadic partner behaviours, it is interesting to reflect on the extent to which some people expect their partners to be exclusive. Consistent with this finding, Yarab et al. (1999) found that it was not just extra-dyadic sexual and romantic involvement that was regarded as unfaithful behaviour. Sexual fantasies about, and spending time alone with, another person were also regarded as unfaithful.

In the current study the Interest category included all references to flirting. Flirting has been defined as behaviours that increase the likelihood of attention from the opposite sex (Moore, 1985, 2002). From the receiver's perspective, Abrahams (1994) defined flirting as behaviours that are interpreted as indicating an "affiliative desire" (p. 283) or goal. Although flirting can be sexually motivated, flirting can also be motivated by a desire for friendship, to have fun, enhance self-esteem or for purposes of persuasion making flirtation behaviours very ambiguous for both receivers and observers, particularly given that they often involve subtle non-verbal communications including laughing, touch and eye-contact (Henningesen, 2004; Henningesen, Braz, & Davies, 2008). The ambiguity of flirting was to some extent illustrated in this study where the flirting item in Question 24 loaded almost equally onto both the Sexual Intimacy and the Emotional Intimacy type of betrayal components. It was also interesting to find that it was younger, rather than older, respondents who were more likely to report that any sign of interest or flirting would breach trust. Perhaps with increasing experience in the work place and with a wider variety of social contexts, flirting is regarded as a more acceptable, less meaningful form of communication, such that romantic partners can flirt with others without it being automatically construed as a betrayal.

In this study, there were few typical response patterns for the types of extra-dyadic partner interactions that were considered to breach trust, and while the most frequent combination of reported categories was any form of physical contact (Physical) and confiding (Sharing) at just over nine percent of all responses, it was hardly prototypical.

Only eight percent of respondents reported that a breach of trust would be related to partner extra-dyadic sexual and or physical intimacy, suggesting that, as noted by Blow and Harnett (2005a, 2005b), there is much scope to broaden infidelity research from the relatively narrow focus of extra-dyadic sex. Indeed, as reported in the clinical literature, expectations for romantic exclusivity vary greatly among individuals, setting up the potential for relationship conflict and unpredictable feelings of betrayal, in response to a variety of partner behaviours. These findings reinforce the need for therapists to carefully assess individual expectations when working with couples attempting to repair relationships after infidelities, and in the clinical treatment of jealousy (De Silva & Marks, 1994; Dupree, White, Olsen, & Lafleur, 2007; Gordon et al., 2005, 2008).

Are extra-dyadic partner involvements best classified as 'sexual' or 'emotional'?

As discussed previously, infidelity researchers have typically worked with a narrow definition of extra-dyadic sex. The obvious exception to this bias has been the evolutionary research into emotional and behavioural reactions to hypothetical infidelities defined as 'sexual' or 'emotional' with emotional infidelity referred to as 'emotional attachment' or 'love' (Harris, 2002; Sabini & Green, 2004; Shackelford et al., 2002; Shackelford et al., 2004; Thompson, 1984). Inherent in this research design is the assumption that people can imagine infidelities that involve sex with little or no emotion, or emotion without sex. Importantly, it is also assumed that emotional attachment is the same as love. The current study provides little support for either approach. People have no difficulty in thinking of forms of extra-dyadic partner betrayal beyond sex, and evolutionary researchers might benefit from a reconsideration of the notion that emotional attachment is the same thing as love.

For both men and women in this sample extra-dyadic partner 'love' involvements were rated as a greater breach of relationship trust than those of a sexually intimate or

emotionally close nature. Evidently, for both sexes these types of infidelities pose the greatest threat and can be differentiated from those that might be predominantly sexual or just involve sharing of time, confidences or interests. The items included in the 'love' type of betrayal component were *'falling in love without sex'*, *'an ongoing relationship that is both sexually and emotionally involved'* and *'falling in love after a passionate sexual relationship'*. These items were explicit about the involvement of sex and emotion, leaving little room for assumptions. They also describe different ways in which people might fall in love. While some people may fall in love before or without ever becoming sexually intimate, sex can also be an important part of the process and or the outcomes of falling in love (Aron & Westbay, 1996; Fehr, 1988; Gillath, Mikulincer, Birnbaum, & Shaver, 2008). Research into implicit beliefs about love suggests that both emotional closeness, which includes behaviours of support, sharing and acceptance, and sexual passion, are central dimensions of the construct (Aron & Westbay, 1996; Hendrick & Hendrick, 1987; Sternberg, 1986). It might also be argued that it is even more difficult to separate love and sex in the early stages of a romantic relationship. Based on the impression that love changes over time with higher levels of passion in the early stages, it would be difficult for most people to believe that a partner's romantic love for someone else did not involve passion and sexual desire. This raises the question of whether it is reasonable for respondents to adequately imagine their differential responses to sexual or love infidelities when for most, new love would also imply sex.

As suggested by the type of betrayal components that emerged in this study, partner extra-dyadic involvements that breach trust might be better categorised as emotionally close, physically intimate or love. A three type model of infidelity offers interesting opportunities for future research. For relationship researchers in general, the prevalence of, and reactions to extra-dyadic partner relationships that are emotionally close, without involving sex or love, presents an interesting area for further understanding. This is

particularly so in the context of social change that sees women and men pursuing similar occupations and interests with greatly increased opportunities for meeting and developing close cross-sex friendships. While there is an extensive and growing body of research into cross-sex friendship (Afifi & Faulkner, 2000; Bleske-Rechek & Buss, 2001; Reeder, 2000; Schneider & Kenny, 2000) there is little research into how close emotional extra-dyadic relationships impact on romantic partners and primary relationships.

In evolutionary research a three type model of infidelity might lead to more clarity about evolved responses to emotional infidelities and whether love can be so easily separated from and compared to sex. In particular, an opportunity exists for evolutionary researchers to determine the types of emotionally close extra-dyadic relationships that trigger distress, and if the sexes differ in distress for emotionally close extra-dyadic partner relationships when they are compared to sex or love.

Expectations for romantic exclusivity: Men and women more similar than different

Contrary to expectations, when asked to describe ‘*what type of involvement between your romantic partner and another person would be a breach of trust ?*’, men were not more likely than women to report sexual involvements, and women were not more likely than men to report emotionally close or love involvements. Indeed, the only sex difference found in this sample was that women were more likely than the men to report that any form of physical intimacy between a partner and another person would trigger feelings of betrayal and breach romantic trust.

Findings that men and women are more similar than different in the context of romantic relationships are not unusual. For example, when Becker et al. (2004) investigated sex differences in the emotions of jealousy, anger, hurt and disgust in response to a hypothetical partner infidelity that was explicitly both sexual and emotional, the only emotion that was experienced differently by men and women in that sample, was jealousy.

In another study investigating imagined and actual aggressive responses to sexual betrayals in romantic relationships and same-sex friendships, no sex differences were found in aggressive behaviours toward betraying relational partners (Haden & Hojjat, 2006).

It must be acknowledged that open-ended responses coded on the basis of language content are a blunt measurement instrument. By converting qualitative responses to quantitative dichotomous variables information richness is lost and the resulting categories may be too inclusive for the investigation of relatively subtle sex differences. It must also be noted that another researcher might have coded responses using different assumptions and decision rules. For example, in a threshold approach to coding, some reported extra-dyadic partner interactions that would breach trust would have been assumed to be inclusive of others. Thus, any 'physical' contact could have also been coded as 'sexual' even if sexual contact were not mentioned explicitly. There were, no doubt, other ways to categorise answers. However, in defence of the coding system used, further analysis using combined categories did not yield more interesting relationships with other variables.

Where men and women did demonstrate difference in this study was in mean betrayal ratings for all types of extra-dyadic partner involvements. Significant sex differences were found in the mean betrayal ratings for partner involvements that could be described as Sexual Intimacy or Emotional Intimacy, with female ratings higher than male ratings for each. While female ratings for the extent to which 'love' type betrayals would breach of relationship trust were higher than those of males, the difference was not significant. A number of studies have found that women tend to give higher ratings for imagined emotional distress following hypothetical partner infidelities that are either sexual or emotional (DeSteno & Salovey, 1996; Geary, Rumsey, Bow-Thomas, & Hoard, 1995; Nannini & Meyers, 2000; Penke & Asendorpf, 2008a; Shackelford et al., 2000). Geary et al (1995) speculated that women may be more willing than men to report intense emotions. In one of the few jealousy studies that took care to ensure that respondents did not make

assumptions about one type of infidelity also involving another, Nannini and Meyers (2000) presented three infidelity scenarios; sex without any common interests, time spent exploring common interests without any sex, and sex after time spent exploring common interests. They found that women reported more emotional upset than men for all three infidelity conditions, and that both men and women were more upset by the sexual and combined type infidelity scenarios compared to the scenario that involved sharing of interests without sex.

It may be that men and women are more similar in their responses to an extra-dyadic partner involvement when there is clarity about the extent to which the involvement involves both sex and emotion, and based on the implicit theories of love mentioned previously, a 'sexual and emotional connection' is close to what most perceive to be romantic love. In comparison, the notion of emotional closeness is more ambiguous because it might involve a very close friendship or it might be the beginning of something that could evolve into love. Women, who tend to place more value than men on emotional closeness in both romantic relationships and friendships (Caldwell & Peplau, 1982; Reis, Senchak, & Solomon, 1985; Wiederman & Allgeier, 1993) are perhaps more sensitive to the possibility that an emotionally close relationship between a romantic partner and another woman could become sexual and/or develop into love. Indeed, some researchers have argued that it is a specific female sensitivity to emotional infidelity that drives the consistent sex differences found in evolutionary studies of jealousy (Harris & Christenfeld, 1996a; Penke & Asendorpf, 2008a).

In this study where the male respondents were significantly older than the females, age had a moderating effect on the relationship between sex and reports that any form of physical partner contact with another person would breach trust. Although women were more likely than men to cast this relatively wide definition of betrayal, as age increased reports coded into this category were less likely. Consistent with this finding, concern for

types of betrayals defined as Love increased relative to those defined as Sexual Intimacy or Emotional Intimacy, suggesting that with increasing age the threat of a romantic partner becoming both emotionally and sexually involved with another person is a more relevant relationship threat. Keeping in mind the possibility for cohort effects, expectations for romantic exclusivity and/ or relative tolerance for extra-dyadic partner interactions might change with age, life stages or particular experiences. For example, in the current study higher levels of education were associated with lower mean ratings for each type of betrayal component.

Insecure attachment was not associated with expectations for romantic exclusivity

In this study, contrary to expectations, insecure attachment styles were not associated with the number of reported categories of partner extra-dyadic interactions that would breach trust, or the extent to which specific types of interactions would constitute a breach of romantic trust. Based on the current study it cannot be concluded that those with an anxious attachment style hold more expectations for romantic exclusivity than secure individuals; and similarly although those with more avoidant attachment styles did report fewer expectations, the association was small.

One possible interpretation is that, compared to those with secure or anxious attachment styles, those with an avoidant attachment style have fewer expectations for relationships in general because they are reluctant to depend on or trust others (Feeney, 1999b; Feeney & Noller, 1990). In a recent study with Canadian students, attachment avoidance was associated with expectations that romantic relationships would fail and with an aversion to commitment. Importantly commitment aversion was associated with expected relationship failure, and mediated the relationship between avoidance and expected relationship failure, demonstrating how internal working models of relationships become self-fulfilling prophecies (Birnie, McClure, Lydon, & Holmberg, 2009). In light of this finding it would

not be hard to imagine how an individual with an avoidant attachment style and an aversion to commitment might hold relatively fewer expectations for partner exclusivity, particularly in the domain of emotional closeness. The relationship between attachment style and expectations for romantic exclusivity remains an interesting question for future research using a more precise measure of romantic exclusivity expectations.

Attitudes to sex and expectations for sexual exclusivity

Although it was expected that more sexually permissive attitudes, i.e. being open to casual sex, would predict less frequent reporting of extra-dyadic sex as a breach of relationship trust, this was not found in the current study. There was, however, partial support for the influence of sexual permissiveness on relationship exclusivity norms. Specifically, sexual permissiveness was associated with lower mean betrayal ratings for each type of betrayal component, Sexual Intimacy, Emotional Intimacy and Love, suggesting that an open view toward casual sexual involvements might be a protective factor against feelings of betrayal when romantic partners become sexually involved and/or emotionally close to other people, including involvements that might be understood as love. As discussed in the introduction to this study, Cann et al. (2001) found that sexual attitudes predicted ratings for the intensity of distress reported for hypothetical partner infidelities that were explicitly emotional (not sexual) or sexual (not emotional). Specifically, Sexual Instrumentality was related to higher distress ratings for emotional infidelity and Sexual Communion to higher distress ratings for sexual fidelity.

Findings that support the role of sexual attitudes in predicting reactions to different types of infidelities or the chances of becoming involved a infidelity are also a reminder of the importance of learning and experience over and above any evolved biological determinants of emotion and behaviour. It might also be argued that in the context of romantic relationship research, direct reports of expectations for relationship exclusivity,

distress ratings for different types of hypothetical infidelities and attitudes toward sex, are all measuring different aspects of the same construct.

Relationship commitment and expectations for sexual exclusivity

As the current study was open to people in all types of romantic relationship as well as people who were single, separated or divorced at the time, opportunities for the investigation of how expectations for romantic exclusivity might be influenced by different relationship contexts was maximised. However, despite collecting data for relationship duration, status and psychological commitment using the Investment Model Scale (Rusbult et al., 1998), few associations were found between current relationship commitment measures and the dependent variables. Relationship commitment was not associated with a greater number of reported types of partner involvements that would breach trust, or higher ratings for the extent to which different types of extra-dyadic involvements would constitute a breach of trust. The results did suggest that those who were more highly committed to their current romantic relationships would be less likely to report that any physical contact such as holding hands or kissing would breach relationship trust, and more likely to report that sex would breach relationship trust, although these associations were weak and as discussed previously, it is difficult to differentiate these breach of trust categories. Higher levels of relationship satisfaction were positively associated with mean betrayal ratings for types of extra-dyadic relationship that involve sexual intimacy and emotional closeness. Again, these associations were weak and few if any conclusions could be drawn from them.

It is possible that the current study failed to find a substantive influence of current relationship commitment because it tapped into implicit exclusivity norms rather than current relationship agreements. In future research into expectations for relationship exclusivity, it would be informative to ask respondents if they have explicit agreements

with current partners, if they think such agreements are necessary, what they are or based on their implicit expectations what they would be.

Research strengths and limitations

This study had a number of methodological strengths and limitations. Possibly the most important strength is that by asking respondents to write about nonexclusive partner behaviours that would cause feelings of betrayal and breach relationship trust, it allowed for an exploration of infidelity that was not limited to sexual infidelity and not artificially defined as ‘sexual’, ‘emotional’ or both. However, this research approach is not without its problems. Data derived from content analysis of open-ended responses pose numerous analytical challenges. The ambiguity of language is an obvious problem, although it could be argued that all survey questions assume unreasonably that respondents will attribute the same meaning to words, in the case of open-ended answers the researcher has to interpret and code written answers with greatly varying levels of detail and explanation. The highest level of information richness would come from leaving the answers in their original form, thereby maintaining the nuance that comes with tone of voice and the combination of things reported. However, in order to analyse the data in relation to other variables answers must be reduced to a manageable number of categories with all the associated loss in information richness.

Equally problematic are decisions about how content is coded. In this study the open-ended responses were coded based on language content without assumptions or projections about what might have been omitted. For example, respondents who reported that any form of interest in another person would represent a betrayal of trust would presumably, if asked directly, also endorse sharing and confiding, intimate physical contact, sex and romantic feelings as betrayals of trust. In this sense, the Interest category may represent the lowest threshold of tolerance for partner non-exclusivity and based on previous definitions of

'emotional' betrayals (for example, Shackelford et al., 2000) a diversion of time toward another might represent a low threshold for feelings of romantic love. However, time spent with another may also signal the threat of a sexual involvement.

Although the idea that some answers reflected different thresholds of concern about extra-dyadic behaviours might have made intuitive sense, the aim in this study was to be objective and the fact that inter-coder reliabilities were moderate to high is indicative of that. Additionally, the principal component analysis of items describing more specific types of extra-dyadic partner involvements allowed for further clarification of three categories of extra-dyadic betrayal, those that are emotionally close, sexual, or involve feelings of love (with or without sex). Indeed, the mean betrayal scores for each betrayal component were useful for exploring hypotheses in ways that the dichotomous content categories were not.

Another research limitation relates to potential biases in the sample which limit the extent to which these findings reflect the general population. In particular, it would have been preferable to have a greater proportion of male respondents. The subject of this study proved to be very interesting to female university students and not so interesting to male university students which contributed to an over representation of young women in the sample and a significant age difference between men and women. The sample was also very well educated and may have been biased in a number of other ways; for example, volunteer recruitment via personal email networks might have led to an over representation of some socio-economic groups and professions, although it is only possible to speculate about what these biases might have been. Overall, however, the sample was also one of the research strengths because unlike many studies in the relationship literature, it did not rely on university undergraduates. This sample of 275 individuals was representative of the adult life span and varying degrees of romantic relationship experience.

It must be noted that this research method provides correlational data, which does not allow for conclusions about the causal nature of the observed relationships between variables. It is also important to note that although extra-dyadic involvements feature highly on the reasons why couples seek therapy, this was not a clinical sample and indeed, it is possible that the expectations of those who seek assistance in coping with relationship infidelities are different than those reported here. Even so, in this sample no differences were found in the responses of those who had experience of romantic betrayals involving other people and those who did not. More is written about clinical implications in the general discussion.

Conclusions

The current study finds evidence not only for the individuality of romantic exclusivity expectations but varying degrees of sensitivity to extra-dyadic partner interactions. Some people want total partner dedication such that relationship trust would be threatened, not only by physical or emotionally close interactions with another person, but any form of interest such as flirting. Perhaps for these people the time for vigilance is early in the trajectory of extra-dyadic involvement such that by the time a romantic partner feels love for another person the issue of romantic trust is over shadowed by a fear that the relationship will end, along with feelings of hurt and rejection (Leary et al., 2006). In contrast, others are concerned primarily by a diversion of love and the extent to which these types of involvement include physical intimacy, sex, confiding in, or sharing interests or time, is not clear.

Clearly, expectations for romantic partner exclusivity are much wider than sexual intimacy and love. Partner extra-dyadic behaviours that might build emotional closeness are also threatening. Future research investigating emotional and behavioural reactions to infidelities may benefit from a three component view of extra-dyadic involvement that

includes sexual intimacy, emotional closeness and a combination of the two, which may as well be called 'love'. There is also an opportunity to further explore reactions to different types of extra-dyadic emotional closeness, and how threatening these might be compared to extra-dyadic sex or love.

Chapter 6

Expanding the construct of ‘emotional betrayal’

Over the course of a romantic relationship it is almost inevitable that one or both partners will meet other people that they find attractive and enjoy being with. Although romantic commitment appears to lower the appeal of relationship alternatives and encourage pro-relationship behaviours (Drigotas et al., 1999b; 1997), sometimes romantic partners become involved with other people. A discovered or disclosed extra-dyadic partner relationship will in most cases, lead non-involved partners to feel betrayed. Indeed, as described in the literature review, infidelity can be experienced as an interpersonal trauma. In addition to the actual extra-dyadic partner involvement, there is often partner deception which can be experienced as a double betrayal (Jones & Burdette, 1994). Typically, betrayed partners experience a cascade of distressing emotions and loss of self esteem and confidence (Cano et al., 2004; Charny & Parness, 1995; Gordon et al., 2005; Shackelford et al., 2000).

Extra-dyadic sex and/or love are generally construed as romantic infidelities that have the potential to elicit negative emotions including jealousy, hurt, anger, sadness and anxiety, and lead to relationship dissolution (Becker et al., 2004; Betzig, 1989; Cann et al., 2001; Cramer, Abraham, Johnson, & Manning-Ryan, 2001; Harris, 2002, 2003b, 2005; Leary et al., 1998). However, as the results of Study One suggest, there are a number of other partner behaviours and actions that for many people would also constitute a breach of romantic relationship trust and may be construed as infidelity. Although possibly not as threatening to the relationship as extra-dyadic sexual intimacy or love, emotionally close involvements such as spending time, confiding, sharing secrets or having exclusive cross-sex friendships, may be construed by some as betrayals and therefore, have the potential to elicit the same types of distressing emotions as other forms of infidelity.

Aims of the current study

This study aimed to explore imagined emotional reactions to extra-dyadic involvements described as emotionally close, and to compare these responses to extra-dyadic sex or love, in an attempt to expand existing understandings of what has been broadly referred to, particularly by evolutionary researchers, as ‘emotional infidelity’. Following evolutionary thinking and based on previous research findings, hypotheses were proposed concerning sex differences and similarities in imagined emotional responses to hypothetical extra-dyadic partner involvements that involved sex, feelings of love, or emotional closeness.

Unlike previous evolutionary research, this study did not assume that ‘forming a deep emotional attachment’, would be understood to mean ‘love’, or that love could be easily separated from sex. Indeed, based on implicit theories of love, it was expected that for most people falling in love implies sex or at the very least, sexual desire (Aron et al., 2005; Fehr, 1988; Fehr & Russell, 1991; Sternberg & Beall, 1991). Imagined responses to hypothetical ‘infidelities’ that are emotionally close, relative to those that involve love or sex, were explored with forced choice ‘distress’ questions, continuous ratings for different emotion types, and as in Study One, with a principal components analysis of perceived betrayal ratings for a variety of specific extra-dyadic partner involvements.

In an attempt to understand the extent to which emotionally close partner involvements might cause ‘distress’ relative to those involving sex or love, the most commonly reported forms of emotionally close involvements from Study One were compared directly with sex or love, using the standard forced choice distress question favoured by evolutionary researchers (Becker et al., 2004; Berman & Frazier, 2005; Buss et al., 1992; Shackelford et al., 2004). Specifically, these ‘emotionally close’ extra-dyadic involvements were, becoming best friends, forming a deep emotional attachment, preferring to spend leisure time together, seeking each other for emotional support, and confiding.

Of particular interest was the extent to which different types of partner involvements might elicit different types of ‘distressing’ emotions. Continuous rating scales were used to explore the imagined experience of anger, sadness, anxiety and jealousy in response to extra-dyadic relationships involving sex, love or emotional closeness. For example, knowledge that a romantic partner spent time enjoying another person’s company might trigger relatively more anxiety than anger, whereas extra-dyadic partner sex might trigger relatively more anger than jealousy, at least until there is an appreciation of rival characteristics and relationship risk (Buunk & Dijkstra, 2004; Cann & Baucom, 2004; Dijkstra & Buunk, 2001).

This study also sought to replicate findings from Study One in relation to the ‘Sexual Intimacy’, ‘Emotional Intimacy’ and ‘Love’ types of betrayal components. Respondents were asked to rate the extent to which a variety of specific partner extra-dyadic actions and events would constitute a breach of relationship trust. Most of the items from Study One were retained and, based on the findings from the open-ended responses in that study several items were added to more fully explore the notion of emotionally close betrayals that do not involve love or sex.

There were two secondary aims for this study. The first was to explore the extent to which imagined reactions to hypothetical extra-dyadic partner emotional closeness might be influenced by individual differences: Specifically, relationship commitment, the actual experience of infidelity; adult attachment style and trait jealousy. The second aim was to gain further understanding of lay expectations about romantic exclusivity via direct questions about agreements and expectations for romantic exclusivity within current romantic relationships.

The influence of participant's sex on 'distress', for different extra-dyadic involvements

In evolutionary research, sex differences have been the key focus of interest, particularly in relation to the emotion of jealousy. Research has consistently found sex differences in what is more likely to trigger romantic jealousy, thoughts of a partner's 'sexual' infidelity or thoughts of a partner's 'emotional' infidelity (Shackelford et al., 2000). Both types of infidelity trigger jealousy in men and women, but when asked to select which type of infidelity, sexual or emotional, would cause greater 'distress or upset', women have been much more likely than men to choose a partner's emotional infidelity, and men have been more likely than women to choose a partner's sexual infidelity (Buss et al., 1992; DeSteno & Salovey, 1996; Harris, 2000; Harris & Christenfeld, 1996b; Peitrzak et al., 2002; Shackelford et al., 2004).

Early evolutionary theorists described jealousy as a 'cheater-detection module' that can serve to alert us to the possibility of a relationship violation (Cosmides & Tooby, 1992). They argued that sex specific cognitive modules evolved to solve sex specific adaptive problems. The threat of cuckoldry explains male concern about sexual infidelity, while females are more concerned by emotional infidelity because it signals the potential diversion of important resources required for survival and raising offspring (Buss, 2000; Dekay & Buss, 1992). More recently, some researchers have questioned the idea that jealousy evolved as a specific innate module. For example, in her review of sex differences in jealousy research, Harris (2003b) argued that as infidelities of any kind rarely happen suddenly and that cues to either sexual or emotional infidelity can be ambiguous, evolution might have shaped a more general, less content-specific jealousy mechanism capable of responding to the complexity of cues that might signal a relationship threat. Others have argued that since both sexual and emotional infidelities pose threats to the reproductive investments of both sexes, specific sexual jealousy and emotional jealousy mechanisms

may have evolved for both males and females, and that these mechanisms are better evaluated separately (Green & Sabini, 2006; Penke & Asendorpf, 2008a). Consistent with this argument, a number of researchers have argued that it is female sensitivity to emotional infidelity that drives the sex by infidelity type interaction found in jealousy research using forced choice questions (Becker et al., 2004; Penke & Asendorpf, 2008a). Indeed, in most studies the proportion of males who found each type of infidelity more distressing has been roughly equal, while a clear majority of females choose emotional infidelity as more distressing (for a review see Harris, 2003b).

As summarised in the literature review, an extensive body of research has debated and tested both the underlying theory of romantic jealousy as an emotion that has evolved differently for men and women, and the extent to which these observed sex differences are an artefact of the predominant research paradigm, the forced choice distress question (Barrett, Frederick, Haselton, & Kurzban, 2006; Berman & Frazier, 2005; Buss et al., 1999; Buunk & Dijkstra, 2004; DeSteno & Salovey, 1996; Harris, 2003b; Schützwohl, 2004). The purpose of the current study was to introduce a third type of betrayal, 'emotional closeness', for comparison with betrayals involving sex or love. Based on previous findings using hypothetical infidelities and forced choice questions, sex differences were expected in relation to the proportions of men and women that would find emotionally close extra-dyadic partner involvements more distressing than extra-dyadic sex or love.

In previous research investigating sex differences in the more likely trigger for romantic jealousy, 'emotional' or 'sexual' infidelity, researchers have described emotional infidelity in various ways, such as 'falling in love' or forming 'a deep emotional attachment'. Regardless of how it has been described, the finding that females report greater distress for an emotional infidelity has been robust (for a review see Harris, 2003b). If emotionally close extra-dyadic partner behaviours such as confiding or sharing leisure together are

understood as paler versions of ‘forming a deep emotional attachment’, it was expected that compared to males, females will still be relatively more distressed by these extra-dyadic partner involvements when they were compared to sexual infidelity. However, based on the sex similarities found in Study One for relative mean betrayal ratings on breach of trust components labelled as ‘sexually intimate’, ‘emotionally intimate’ or ‘love’ (with or without sex), it was expected that most men and women would report more distress for extra-dyadic partner involvements involving love, than for emotionally close involvements such as close friendship, confiding and preferring to spend time with another person.

Therefore, based on previous research findings for sex differences in reported distress for sexual infidelities compared to those involving ‘falling in love’ or ‘forming a deep emotional attachment’, it was proposed that, when extra-dyadic partner involvements that involve emotional closeness or love are compared to extra-dyadic partner sex, women would report greater distress for emotionally close or love involvements, and men would report greater distress for sexual involvements (H1). No sex differences were expected in relative distress for emotionally close extra-dyadic partner involvements compared to love involvements; rather it was expected that both men and women report more distress for love involvements than for emotionally close involvements (H2).

The influence of participant’s sex on anger, sadness, anxiety and jealousy

While there has been a substantial body of evidence supporting sex differences in relative ‘distress or upset’ in response to hypothetical partner infidelities that are ‘sexual’ or ‘emotional’, when researchers have investigated more specific emotional or behavioural reactions to different types of infidelity the evidence for sex differences has been less consistent (Becker et al., 2004; Haden & Hojjat, 2006; Miller & Maner, 2008; Sabini & Green, 2004). For example, Becker, Sagarin, Guadagno, Millevoi, and Nicastle (2004)

questioned whether ‘distress or upset’ was an adequate representation of the emotion of jealousy. In an undergraduate sample they investigated sex differences for the emotions of jealousy, anger, hurt and disgust in response to the sexual or emotional ‘aspects’ of a partner infidelity that was explicitly both sexual and emotional. The only emotion that was reportedly experienced differently by the men and women in that sample was jealousy, and the main effect for sex was accounted for by significantly higher jealousy ratings by females for the emotional aspect of the infidelity. The only other significant sex difference in this study was that across all the emotions, women reported more intense negative reactions than men. For both men and women the sexual aspects of the infidelity elicited higher ratings for anger and disgust, and the emotional aspects of the infidelity elicited higher ratings for hurt.

Sabini and Green (2004) also argued that the terms ‘distress’ and ‘upset’ were too vague to adequately communicate the emotion of jealousy, and noted that observed sex differences might reflect the presence of different types of distress. Using different measures and both undergraduate and non-student samples, they found that the emotions of anger and hurt were associated with ‘sexual’ and ‘emotional’ infidelities respectively, with no effects for participant’s sex. Another interesting finding was that the ‘jealousy as a specific innate module effect’ (as described by Harris, 2003b) was not replicated in their non-student sample, where both men and women were more distressed by an emotional infidelity than a sexual infidelity. Based on these findings the authors recommended that researchers consider a wider set of reactions when probing for jealousy reactions.

The current study aimed to explore reactions to partner extra-dyadic emotional closeness not only in terms of relative ‘distress’ compared to sexual or love infidelities, but also by looking at the extent to which extra-dyadic emotional closeness, sexual intimacy and love might elicit the specific emotions of anger, sadness, anxiety and jealousy. Anger, anxiety and sadness have been described as central emotions in the experience of romantic

jealousy (Guerrero et al., 2005; Pfeiffer & Wong, 1989; Sharpsteen, 1991; White & Mullen, 1989). Although these are not the only emotions associated with jealousy, which may also involve feelings of envy (especially in regard to attractive rivals), feelings of love toward romantic partners, and even guilt about relationship or partner neglect (Guerrero et al., 2005), as will be discussed below, the emotions of anger, anxiety and sadness are good candidates for a closer look at the nature of ‘distress or upset’ in response to hypothetical partner infidelities.

While anger, sadness and anxiety have been described as components of the blended emotion of jealousy, relationship threats may elicit these emotions regardless of the extent to which there is also a jealous reaction. Lazarus (1991b) argued that all negative emotions fall into a broad category of emotional responses to ‘harms, losses and threats’ (p.827). Negative emotions signal that personal goals and needs are being thwarted. Indeed, the emotions of anger, sadness, anxiety, shame, guilt, loneliness and hurt among others, are all relevant to the experience of romantic betrayal and the perception of relational devaluation and rejection that go with it (Feeney, 2005; Fitness & Warburton, 2009; Leary et al., 2001; Leary et al., 1998; Leary et al., 2006; Richman & Leary, 2009). In a study exploring the appraisals and emotions involved in accounts of hurtful events with romantic partners (e.g. infidelity, deception, dissociation and criticism), six categories of negative emotion were reported in the following order of frequency; surprise, anger, sadness, anxiety/fear, shame/inadequacy, injury (e.g. hurt and cheated), and then less specific emotions such as upset (Feeney, 2005). Drawing on attachment theory, Feeney argued that feelings of personal injury were underpinned by perceptions that important relational rules had been violated, and that these transgressions threatened positive mental models of self as lovable and partners as trustworthy. On the discovery of a romantic partner’s extra-dyadic involvement, it is not difficult to imagine how a non-involved partner might experience anger because their partner had made a decision to be with another person, anxiety about

the personal and relationship consequences of that decision, and sadness in response to the possibility of relational loss (Fitness, 2006).

As discussed above and in the literature review, information about the nature of a partner's extra-dyadic involvement, such as whether it involves sex and/or feelings of love appear to influence the appraisals of threat and the relative experience of emotions such as sadness, hurt, and anger. In the current study respondents were asked to rate expected emotion intensities for anger, sadness, anxiety and jealousy in response to different types of extra-dyadic involvement. Based on the findings described above (Becker et al., 2004; Buunk & Dijkstra, 2004; Sabini & Green, 2004), two sex differences were predicted in the current study. Specifically, it was expected that compared to men, women would report more intense emotion ratings for all types of extra-dyadic partner involvements (H3), and that jealousy would be the only emotion experienced differently for men and women. Specifically, following the findings of Becker et al. (2004), it was expected that compared to men, women would report higher jealousy ratings for extra-dyadic involvements that involve emotional closeness of any type and extra-dyadic love than extra-dyadic sex (with or without an emotional component) (H4).

No sex differences were expected in reported intensities for the emotions of anger, sadness and anxiety in relation to different types of extra-dyadic partner involvements. However, it was expected that different types of extra-dyadic involvement would be associated with different kinds of emotions. Based on previous findings (Becker et al., 2004; Buunk & Dijkstra, 2004; Sabini & Green, 2004; Sabini & Silver, 2005b) it was expected that extra-dyadic sex would elicit relatively more anger than extra-dyadic emotional closeness or love (H5), and that extra-dyadic love would elicit relatively more sadness than extra-dyadic emotional closeness or sex (H6). The expectation that sexual infidelity would be positively associated with ratings for anger was based on an assumption that most individuals expect sexual exclusivity in romantic relationships, and

that knowledge of a partner's sexual infidelity would for most trigger an appraisal of partner responsibility for actively deciding to have sex with the other person, thereby violating an important relationship rule and risking the relationship. Anger is associated with the appraisal of responsibility and blame for harm caused (Baumeister, Stillwell, & Wotman, 1990; Broderick, 1975; Buunk & Dijkstra, 2004; Fitness & Fletcher, 1993; Lazarus, 1991a, 1991b).

In contrast, sadness involves an appraisal of loss, particularly the loss of a valuable relationship or important aspects of it. Sadness also involves an appraisal that the damage has been done and that relatively little can be done to reconcile the loss (Feeney, 2005; Lazarus, 1991a, 1991b; Shaver et al., 1987). Compared to the decision to have sex outside the relationship, falling in love is potentially less blameworthy because unlike sex, love is something that we believe can happen by accident. For most individuals, knowledge that a romantic partner has feelings of romantic attraction or love for another person will signal the end of the current relationship. Even if the partner decides to stay, the relationship will be significantly changed and the uninvolved partner is likely to feel a sense of helplessness as to what can be done to repair or save the relationship.

As far as the researcher was aware, there had been no previous investigations into emotional reactions to emotionally close extra-dyadic involvements that are not necessarily romantic love. However, it was reasoned that these types of partner involvements may be associated with relatively more anxiety than anger or sadness because they are ambiguous, could be construed as the beginning of a more serious involvement and are therefore, potentially threatening. At the very least they could suggest that for the romantic partner, important aspects of being in a couple are no longer satisfying. Therefore, it was expected that extra-dyadic emotional closeness would elicit relatively more anxiety than extra-dyadic sex or love (H7).

Individual sensitivity to extra-dyadic emotional closeness

The overwhelming focus of evolutionary research to date has concerned how men and women may have evolved differently in response to different adaptive challenges for survival and reproduction. This focus has arguably overshadowed the importance of more proximate influences such as context and individual differences, which are also central to evolutionary theory (Buss, 1995). Some people, regardless of sex, are likely to report more jealousy, anger, sadness or anxiety than others. For example, low self-esteem in women has been positively correlated with self-reported jealousy (Buunk, 1997), and strong feelings of love predict more upset in jealousy provoking situations (Pfeiffer & Wong, 1989). Of course, there are many individual difference variables that are potentially important for understanding emotional and behavioural responses to infidelity. Based on the preliminary findings of other researchers, the current study explored four of these; relationship commitment, actual experience of infidelity, adult attachment style and trait jealousy. These variables were investigated for their influence on distress choices, emotion intensity ratings and as potential moderators of sex differences in distress choices and emotion intensity ratings.

Relationship commitment

Although relationship commitment facilitates relationship stability by providing a structure that allows relationship partners to work through disappointments and betrayals (Couch et al., 1999; Rusbult et al., 1991), interdependence theory would also predict that people with high levels of dependency and commitment to current romantic relationships might also experience more distress when partners become involved with other people. In three studies with heterosexual married and cohabiting couples, Barelds and Barelds-Dijkstra (2007) found that relationship quality, measured with three different instruments, was positively associated with both partners' levels of reactive jealousy (jealousy related to

real relationship threats), and negatively associated with anxious (suspicious) jealousy. While it is possible that individuals with similar jealousy traits attract each other, these studies also suggest that the relationship context is important for how individuals would react to emotionally close relationship between partners and other people. Therefore, in the current study, relationship commitment was included as a potentially important individual characteristic that may influence relative distress and emotion intensity in response to different types of partner extra-dyadic involvements.

Actual experience of infidelity

Forced choice questions about relative distress for sexual compared to emotional infidelities have been criticised for their lack of relevance because in real life people do not get to choose between one type of relationship transgression or another. Indeed, when those who have actual experience of romantic infidelity are asked to choose, there is some evidence that sex differences in relative distress for a sexual or emotional infidelities disappear (Berman & Frazier, 2005; Harris, 2003a). There is also some evidence to suggest that when respondents are asked to recall an experience of an infidelity, or to imagine an infidelity in more vivid detail, the expected sex differences are more pronounced (Berman & Frazier, 2005; Landolfi, Geher, & Andrews, 2007; Strout, Laird, Shafer, & Thompson, 2005). In the current study, actual experience of infidelity was investigated for its direct and moderating influence on relative distress choices and intensity ratings for anger, sadness, anxiety and jealousy in response to different types of extra-dyadic partner relationships.

Insecure attachment and trait jealousy

Although most individuals experience concern about relationship threats such as attractive rivals, individuals also vary in their tendency to feel secure in their relationships

and to experience jealousy (Buunk, 1997; Diamond & Hicks, 2005; Pfeiffer & Wong, 1989; Russell & Harton, 2005; Shaver, Schachner, & Mikulincer, 2005; Simpson, Beckes, & Weisberg, 2008). For example, in the Dutch study mentioned previously, individuals with an anxious attachment style were more jealous (across three types of jealousy), than those with an avoidant attachment style, with securely attached individuals experiencing the least jealousy (Buunk, 1997). In two more recent studies, trait jealousy had a moderating effect on sex differences in relative distress for sexual or emotional infidelities, such that the expected sex differences were exaggerated among those high on trait jealousy (Easton, Schipper, & Shackelford, 2007; Miller & Maner, 2009). Although there are many personality characteristics that might influence individual concerns about, and sensitivity to, issues of romantic exclusivity, attachment style and trait jealousy are particularly relevant for an investigation of negative emotional responses, such as jealousy, in response to extra-dyadic partner involvements and were therefore included in the current study as potentially important individual difference variables.

Expectations for romantic exclusivity

When two people in a romantic relationship have different expectations about romantic exclusivity, there also exists the potential for conflict and unpredictable feelings of betrayal. In the interests of furthering our understanding of exclusivity expectations, respondents in the current study were asked directly if in the context of their current romantic relationships they had explicit agreements about relationship exclusivity, and if they believed these should be necessary. They were also asked to nominate one, from six types of romantic exclusivity agreement that best reflects the explicit (agreed), or implicit (expected) exclusivity rules in their current relationship i.e. what types of involvement with other people are allowed.

An overview of the study

This study was designed to expand our understanding of ‘emotional infidelity’. It was argued that a romantic partner may become emotionally close to another person without falling in love and that this type of partner involvement has the potential to be construed as a betrayal, and to trigger jealousy along with other distressing emotions. While forms of emotional closeness such as friendship, confiding, sharing time or interests, and seeking each other for emotional support might lead to feelings of romantic love, love is not inevitable, just as falling in love with a sexual partner is also not inevitable. In this study, emotionally close extra-dyadic partner involvements were explored in terms of their ability to trigger distress and the emotions of anger, anxiety, sadness and jealousy, relative to those that involve sex or love. In line with previous evolutionary research, respondents were asked to make relative distress choices for hypothetical partner betrayals that were sexual, emotionally close, or involved love. They were also asked to rate the extent to which they would experience anger, anxiety, sadness or jealousy in response to different types of extra-dyadic partner involvements.

Based on previous findings, hypotheses were proposed about how the emotional responses of men and women would be both similar and different. Actual experience of infidelity, relationship commitment, attachment style and trait jealousy was explored as potential moderators of these relationships, and for their direct influence on reported emotional responses. Finally, respondents were asked directly about explicit and implicit expectations for exclusivity in current romantic relationships. The following hypotheses were tested in the current study;

(H1) that when partner extra-dyadic involvements that involve emotional closeness, or love, were compared to partner extra-dyadic sex, women would report greater distress for emotionally close or love involvements, and men would report greater distress for sexual involvements;

- (H2) that men and women would report extra-dyadic partner involvements involving love to be more distressing than those involving emotional closeness;*
- (H3) that compared to men, women would report more intense emotion ratings for all types of extra-dyadic partner involvements;*
- (H4) women would report relatively higher jealousy ratings for extra-dyadic involvements that involve emotional closeness or love compared to extra-dyadic sex (with or without an emotional component);*
- (H5) that extra-dyadic sex would elicit relatively more anger than extra-dyadic emotional closeness or love;*
- (H6) that extra-dyadic love would elicit relatively more sadness than extra-dyadic emotional closeness or sex;*
- (H7) that extra-dyadic emotional closeness would elicit relatively more anxiety than extra-dyadic sex or love.*

In addition to these hypotheses, the following research questions were asked;

- (R1) would the three types of betrayal components found in Study One; sexual intimacy, emotional closeness and love be found in the current study and;*
- (R2) what proportion of individuals have negotiated agreements about relationship exclusivity, do they believe such explicit agreements are necessary, and what are their explicit and implicit expectations about relationship exclusivity?*

Chapter 7

Method: Study Two

Respondents

Two hundred and twenty six people participated in this study, 134 (59%) women and 92 (41%) men. One hundred and ninety seven respondents (87%) were recruited from the community via email, and 29 (13%) were first year psychology students at Macquarie University who received course credit for participation. A chi square analysis found no differences between the community and university samples for the dependent 'distress' variables; therefore, the data from both samples were combined. As the online survey program required answers for all questions before submission, there were no missing data.

The age of respondents ranged from 18 to 73 years, $M = 36.75$ ($SD = 10.7$, $N = 226$). The age of female respondents ranged from 18 to 73 years, $M = 35.16$ ($SD = 9.75$, $N = 134$), and the age of male respondents ranged from 18 to 62 years, $M = 39.07$ ($SD = 11.63$, $N = 92$). The mean age of the men in this sample was significantly higher than the mean age of the women ($t = 2.74$, $df = 224$, $p = .007$).

Two hundred and three respondents (90%) were of Caucasian background, 14 (6%) were Asian and 9 (4 %) were from 'other' ethnic backgrounds. The majority of respondents (154, 68%) had at least one university degree, 41 (18%) were currently at university, 26 (12%) had tertiary training and 5 (2%) had completed high school. Chi square analyses found no significant differences between the ethnicity of male and female respondents χ^2 ($df 2$, $N = 226$) = .232, $p = .890$, or their education level χ^2 ($df 3$, $N = 226$) = .327, $p = .352$.

A criterion for research participation was that respondents were in a current romantic relationship. The duration of current romantic relationships ranged from 3 months to 46 years, $M = 8.58$ ($SD = 8.2$, $N = 226$). Three respondents (1%) reported that their current romantic relationship could be best described as casual dating, 51 (23%) were dating

exclusively, 52 (23%) were in a de-facto relationship, 7 (3%) were engaged, and 113 (50%) were married. There were no sex differences in relationship duration, or status. One hundred and nineteen respondents (53%) reported having no children, 73 (32%) reported having young children, 19 (8%) teenage children and 15 (7%) adult children. Women in this sample were more likely than the men to report having young children, $\chi^2 (df 1) = 4.99, p = .03$.

Design and procedure

This study employed an anonymous self-report methodology. A draft questionnaire was pilot tested with 15 people allowing for minor adjustments to question wording. Following clearance by the Macquarie University Human Research Ethics committee, respondents were recruited via the university research website and an email was sent to friends and acquaintances requesting volunteers and directing them to the online questionnaire. Student respondents completed the questionnaire in a university classroom with the researcher present while members of the community completed the questionnaire privately. The questionnaire took between 15 and 20 minutes to complete.

Research materials

All respondents who completed the questionnaire (on-line or on paper) received a covering information sheet which gave a broad description of the research aims, explained how anonymity would be assured, and stated clearly that respondents could decide not to proceed at any point during completion of the questionnaire. A decision not to proceed would not involve the loss of course credit for student respondents. Importantly, respondents were warned about the possibility that some of the questions might raise painful memories and contact details for Macquarie University and community counselling

services were provided. The questionnaire, information sheet and copy used for respondent recruitment via email are presented in Appendix 2.

Measures

The first part of the questionnaire comprised demographic questions for each participant's sex, age, ethnicity, education, romantic relationship duration, romantic relationship status and status as a parent. The measures used for all dependent and independent variables are described in the following sections.

Emotional responses to hypothetical partner extra-dyadic involvements

In Question 10 respondents were asked to imagine six different hypothetical scenarios involving their current romantic partner. Each scenario involved a partner disclosure about a specific type of involvement with someone of the opposite sex. These scenarios involved two examples of 'emotional closeness' (a deep conversation, and time spent enjoying each other's company), two types of sexual involvement (sex, and sex & sharing of personal information), and two romantic involvements (feelings of 'love', and romantic interest). Respondents were asked to imagine the extent to which they would experience four different types of emotion; anger, sadness, anxiety and jealousy. A neutral example question and answer were provided to demonstrate what was required. The exact wording for question 10 a) follows: *All of us have expectations about how our romantic partners should behave when they are with people of the opposite sex. Please read the following scenarios, try to imagine being in this situation with your current partner and as in the example above, imagine to what extent you might feel each of the emotional groups presented. Circle only one number for each statement, where 1 = not at all, 4 = moderate intensity and 7 = extreme intensity.*

Your romantic partner tells you about a deep conversation that they had recently with an attractive person of the opposite sex. It involved confiding about life events.

I would feel.....

Frustration, Anger or Rage

(Not at all) 1 2 3 4 5 6 7 (Extreme)

ii. *Sadness, Hurt or Rejection*

(Not at all) 1 2 3 4 5 6 7 (Extreme)

iii. *Worry, Anxiety or Fear*

(Not at all) 1 2 3 4 5 6 7 (Extreme)

iv. *Jealousy*

(Not at all) 1 2 3 4 5 6 7 (Extreme)

Infidelity distress

In each part of Question 11 a different type of emotionally close or combined type extra-dyadic involvement was compared to either extra-dyadic sex, always described as, '*Knowing that your partner and this person have sex together*' or extra-dyadic love, always described as, '*Knowing that your partner and this person are falling 'in love*'. These questions followed the format favoured in evolutionary research into what is more likely to trigger jealousy, infidelities that are 'sexual' or 'emotional' (Buss, 2000; Shackelford et al., 2002). Respondents were asked to keep '*your current romantic partner in mind*' and to choose '*What would distress or upset you more?*' Two examples follow:

What would distress or upset you more? (Circle only one please)

- i) *Knowing that your partner and this person have sex together.*
- ii) *Knowing that your partner and this person seek each other for emotional support.*

What would distress or upset you more? (Circle only one please)

- i) *Knowing that your partner and this person are falling 'in love'.*
- ii) *Knowing that your partner and this person are becoming best friends.*

A forced question design avoids the possibility of ceiling effects when scaled responses are used for questions involving painful emotions. For example, if asked to rate imagined levels of distress associated with infidelity regardless of whether it involves a sexual relationship or the formation of an emotional bond, both sexes rate distress as high (Shackelford et al., 2002; Shackelford et al., 2004). Forced choice questions ask respondents to make a decision allowing any sex differences if they exist, to be teased apart (Buss, 2000). In the current study the nine distress comparisons were; sex and becoming best friends, sex and forming a deep emotional attachment, sex and preferring to spend leisure time together, sex and falling in 'love', sex and seeking each other for emotional support, sex and confiding in one another, falling in 'love' and becoming best friends, confiding in one another and falling in love, sex and an emotional attachment and falling in love.

Relationship commitment

Relationship commitment was measured using the Global Commitment sub-scale of the Investment Model Scale (IMS: GC Rusbult et al., 1998). The IMS Global Commitment sub-scale consists of nine statements and asks respondents to rate the extent to which they agree with statements such as, *'I feel attached to our relationship and very strongly linked to my partner'* and *'I want our relationship to last forever'*. In this study a 7 point likert-type scale was used where 1 = *Do not agree* and 7 = *Agree completely*. Two items were reverse coded before computing a mean Commitment score for each respondent. Scale reliability was adequate; Cronbach's alpha = .78. By deleting the item *'I would not feel*

very upset if our relationship were to end in the near future' scale reliability improved; Cronbach's alpha = .85. A closer look at individual response patterns suggested that the wording of this item was confusing such that many people interpreted the statement as *'I would feel very upset if our relationship were to end in the near future'*. This amended scale was used in all the analyses.

Actual experience of romantic betrayal

Question 12 explored actual experiences of romantic betrayal in current and past relationships including frequency and type; 'sexual intimacy', 'emotional intimacy', 'sexual and emotional intimacy', 'love' or 'other'. It asked respondents; *'Have you ever experienced a romantic betrayal involving another person of the opposite sex?'* and if yes, *'Did you experience a romantic relationship betrayal in your current relationship?'*

Breach of trust ratings for specific types of extra-dyadic betrayal

In Question 13, respondents were asked to rate the extent to which twenty specific extra-dyadic behaviours would constitute a breach of relationship trust. It included items developed for Study One with additional items added to extend understanding of emotional infidelity. These additional items were based on the types of partner behaviours described in the open-ended responses in Study One, for example, *'discussing conflicted or intimate aspects of your relationship'*. As in Study One, respondents were asked to rate the extent to which each extra-dyadic interaction would constitute a breach of trust using a 9-point likert-type scale where, 1 = *'no breach of trust'*, and 9 = *'serious breach of trust'*. The exact question wording follows: *'Imagine that your partner informs you of an interaction with another person of the opposite sex. Please indicate on the scale provided the extent to which you believe each type of interaction would be a breach of your trust. The specific items were:*

Passionate kissing

Confiding in the other about important personal details of life events

Falling in love after a passionate sexual relationship

A sexual experience that did not include intercourse

Spending the night together in the same bed without sexual contact

Falling in love without sex

A sexual encounter after drinking

Flirting

A casual dinner after work

Spending time together for no particular reason

Discussing conflicted or intimate aspects of your relationship

A sexual relationship with little emotional involvement

A non-sexual relationship characterized by emotional sharing

Developing a very close friendship based on interests or work

Paying for sex or an escort

Getting together to do a specific activity or discuss an interest

Choosing to spend time together when you had nothing to do

Communication of a sexual nature, with no physical contact

Frequent conversations, sharing emotions and ideas

A relationship that is both sexually and emotionally involved

Adult attachment style

In an effort to minimise respondent fatigue a brief measure of adult attachment was selected for this study. Fifteen items from the Attachment Style Questionnaire (ASQ; Feeney et al., 1994) were included to measure the attachment dimensions of Comfort with Closeness and Anxiety over Abandonment. Comfort with Closeness is a bipolar dimension

contrasting avoidant and secure attachment. It includes statements such as '*I feel comfortable depending on other people*' and '*I'm nervous when any one gets too close*'. Anxiety over Abandonment corresponds to anxious/ambivalent attachment with statements such as '*I often worry that my partner won't want to stay with me*'. Respondents rate the extent to which they agree with each statement on 7-point likert-type scale where 1 = *strongly disagree*, and 7 = *strongly agree*. A high average score on either subscale indicates a greater disposition towards anxiety or security in romantic relationships. To better measure individual predispositions respondents were asked to think about '*how you generally experience relationships, not just what is happening in a current relationship*'. The authors report good internal scale reliabilities for Avoidance and Anxiety with Cronbach's alphas of .83 and .85 respectively, and test-retest reliability over a period of approximately 10 weeks of .75 and .80 respectively (Feeney et al., 1994).

In the current study, reliability for the Comfort with Closeness scale was improved by removing the item, '*I find it difficult to depend on others*'. Reliability for the Anxiety over Abandonment scale was improved by removing the item '*I want to merge completely with another person*'. Final scale reliabilities were adequate: Cronbach's alpha = .75 for Comfort with Closeness and .67 for Anxiety over Abandonment. As would be expected, secure attachment was negatively correlated with anxiety over abandonment ($r = -.292, p < .0005, N = 226$).

Trait jealousy

The final measure used in the questionnaire was the Multi-dimensional Jealousy Scale (MJS: Pfeiffer & Wong, 1989). The MJS measures trait jealousy on three dimensions, cognitions, emotions and behaviours and the authors argue that it is useful for assessing both normal and pathological trait jealousy. Jealousy cognitions are measured by asking respondents how often they have particular worries and suspicions about romantic partners

and a rival; e.g. *'I suspect that X is secretly seeing someone of the opposite sex'*. Jealousy emotions are assessed by asking respondents the extent to which they would feel 'upset' in response to various hypothetical jealousy evoking situations; e.g., *'X kisses and hugs someone of the opposite sex'*. The behavioural jealousy questions ask respondents how often they engage in various detective and protective behaviours; e.g. *'I call X unexpectedly, just to see if he or she is there'*, and *'I join in whenever I see X talking to a member of the opposite sex'*. There are 32 items in the MJS, eight for each subscale. Each item is answered on a seven-point rating scale ranging from 1 (*never*) to 7 (*all the time*) for cognitive and behavioural subscales, and 1 (*very pleased*) to 7 (*very upset*) for the emotional subscale. A low score on any subscale indicates normal jealousy while a high score points to pathological jealousy.

The MJS subscales have good internal reliabilities with Cronbach's alphas ranging from .89 - .92 for Cognitive Jealousy, .82 - .85 for Emotional Jealousy and .86 - .90 for Behavioural Jealousy. Subscales are stable across different samples and time and correlate with uni-dimensional measures of jealousy including the Self-Report Jealousy Scale and The White Relationship Jealousy Scale (Pfeiffer & Wong, 1989). Subscale inter-correlations are moderate and positive confirming the authors' argument that jealousy is a combination of interrelated but distinct thoughts, emotions and behaviours, and thus the MJS is useful for exploration of these separate components with other factors. For example, cognitive jealousy was found to be negatively related to love, while emotional jealousy was positively related to love (Pfeiffer & Wong, 1989). In the current study respondents were asked to answer MJS questions with their current partner in mind. The MJS scale reliabilities were good; Cronbach's alphas = .90 for Cognitive Jealousy, .80 for Emotional Jealousy and .85 for Behavioural Jealousy.

Expectations for relationship exclusivity

Question 14 asked respondents if they had discussed and agreed to any rules about relationship exclusivity, how these could be best categorized and what category best reflected their personal expectations; *a) No close friendships or sexual relationships are allowed; b) Close cross-sex friendships are allowed, sexual relationships are not; c) There can be sex but no emotional closeness with others; d) There can be emotional closeness but no sex with others; e) Sex and emotional closeness with others are allowed provided there is no secrecy between the two of you and, f) All types of relationship including 'romantic love' are possible as long as your (the primary) relationship and/or family stays intact.* Finally respondents were asked if they thought it should be necessary to discuss and agree on these types of relationship rules.

Chapter 8

Results: Study Two

Data analysis

The Statistical Package for the Social Sciences (SPSS), version 18 was used for all data analyses and an alpha level of .05 was used for statistical tests. All variables were approximately normally distributed with no obvious outliers. Research findings are presented in the following order; data description for independent variables, hypothesis tests and research questions. The word ‘sex’ in relation to biological sex differences has been replaced by the word ‘gender’ to aid reader comprehension in the context of frequent references to sexual extra-dyadic involvement. The researcher is aware that gender refers to an individual’s identity rather than their biological sex.

Data description

Relationship commitment

Commitment to current romantic relationship was measured using the Commitment sub-scale of the Investment Model Scale (IMS: Rusbult et al., 1998). Mean commitment scores ranged from 1.6 to 7, $M = 6.2$ ($SD = 1.11$). For female and male respondents, mean commitment scores were 6.3 ($SD = 1.06$) and 6.1 ($SD = 1.18$) respectively. There was no gender difference in relationship commitment scores, $F(1, 224) = 1.99, p = .159$.

Experience of infidelity

One hundred and thirty six respondents (60%) reported having experienced infidelity by a romantic partner. Among those, 30 (22%) had experienced infidelity in their current romantic relationship. Respondents with experience of infidelity were asked to consider the most recent incident and to select the category that best described what type of betrayal it was. As this was an optional question there were some missing data ($n = 102$). In

descending order of frequency these were; 'sexual' (42%), 'sexual and emotional' (27%), 'emotional' (16%), 'love' (10%) and 'other' (5%).

There were no gender differences in actual experience of infidelity $\chi^2 (df 2, N = 226) = .013, p = .993$, or the experience of infidelity in current relationships $\chi^2 (df 2, N = 226) = 1.18, p = .555$. However, there was a significant gender difference in the type of betrayal reported $\chi^2 (df, N = 226) = 19.31, p < .0005$. Men were more likely to report the experience of 'love' or 'emotional' betrayals, and women were more likely to report the experience of 'sexual' betrayals.

Trait jealousy and adult attachment style

Table 8 displays the means and standard deviations for the measures of trait jealousy and attachment style for the total sample, and for males and females. The Multi-dimensional Jealousy Scale (MJS; Pfeiffer & Wong, 1989) measures trait jealousy on three dimensions, cognitions, emotions and behaviours. In this sample, there was no significant gender difference in mean scores for Cognitive Jealousy. However, there were gender differences for Emotional Jealousy $F (1,224) = 7.92, p < .0005$, and Behavioural Jealousy $F (1,224) = 5.0, p = .027$. Compared to men, women reported higher levels of Emotional and Behavioural Jealousy.

The Attachment Style Questionnaire (ASQ; Feeney et al., 1994) has two subscales, Comfort with Closeness and Anxiety over Abandonment. There were no significant gender differences in mean scores for Comfort with Closeness $F (1,224) = .02, p = .900$, or Anxiety over Abandonment $F (1,224) = .16, p = .693$.

Table 8: Means and Standard Deviations for the Multi-dimensional Jealousy Scale and the Attachment Style Questionnaire

	Total ($N = 226$)		Females ($N = 134$)		Males ($N = 92$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
MJS Subscales						
Cognitive Jealousy	2.03	1.02	2.08	1.06	1.94	.94
Emotional Jealousy	4.55	.80	4.67	.77	4.38	.80
Behavioural Jealousy	1.84	.91	1.95	.97	1.68	.77
ASQ Subscales						
Comfort with Closeness	4.72	.81	4.73	.80	4.71	.83
Anxiety over Abandonment	2.62	1.12	2.65	1.20	2.59	1.01

Hypothesis testing

Associations between gender and greater distress for 'emotional' vs. 'sexual' infidelities

Respondents answered six forced-choice questions about distress in response to sexual or emotionally close extra-dyadic partner involvements, and three forced-choice questions about distress in response to emotionally close or love extra-dyadic partner involvements. Table 9 displays cell counts and percentages for distress choices for the total sample, and for females and males. The majority of respondents selected extra-dyadic partner sex as more distressing than extra-dyadic partner emotional involvements not described as 'love', i.e. becoming best friends (73%), confiding (60%), forming a close emotional attachment (53%), preferring to spend leisure time together (52%) or seeking each other for emotional support (52%). The majority of respondents reported more distress about a partner falling in love than having sex (82%), becoming best friends (91%), and confiding in (85%) another person of the opposite sex. When 'falling in love' was compared to a relationship

that involved 'sex and an emotional attachment' the majority of respondents (55%) selected the latter as likely to trigger more distress.

Table 9: Total, Female and Male Distress Choices

Distress Choice	Total (%) (<i>N</i> = 226)	Female (%) (<i>N</i> = 134)	Male (%) (<i>N</i> = 92)
1. Best Friends	62 (27)	46 (34)	16 (17)
Sex	164 (73)	88 (66)	76 (83)
2. Close emotional attachment	106 (47)	74 (55)	32 (35)
Sex	120 (53)	60 (45)	60 (65)
3. Prefer to spend leisure time	109 (48)	84 (63)	25 (27)
Sex	117 (52)	50 (37)	67 (73)
4. Falling in love	185 (82)	121 (90)	64 (70)
Sex	41 (18)	13 (10)	28 (30)
5. Emotional support	108 (48)	77 (57)	31 (34)
Sex	118 (52)	57 (43)	61 (66)
6. Confide	90 (40)	66 (50)	24 (26)
Sex	136 (60)	68 (50)	68 (74)
7. In love	203 (91)	116 (87)	87 (95)
Best friends	23 (9)	18 (13)	5 (5)
8. In love	192 (85)	111 (83)	81 (88)
Confide	34 (15)	23 (17)	11 (12)
9. In love	101 (45)	57 (43)	44 (48)
Sex and emotional attachment	125 (55)	77 (57)	48 (52)

Analysis of gender differences and similarities in distress choices for infidelities that were sexual, emotionally close or involved love, were conducted using generalised estimating equations (GEEs). Unlike simple linear regression or chi-square tests of association, GEE analysis does not assume that each response in a data set is independent of all the others (Burton, Gurrin, & Sly, 1998). This form of analysis allowed the

consideration of participants' response to more than one item at a time i.e. allowed for within subject correlations.

Distress for 'sexual' vs. 'love' and 'emotionally close' extra-dyadic partner involvements

Hypothesis 1 predicted that when extra-dyadic partner involvements that involve emotional closeness or love were compared to extra-dyadic partner sex, women would report greater distress for emotionally close or love involvements, and men would report greater distress for sexual involvements. This hypothesis was supported by the data. Figure 3 illustrates the pattern of relative distress reported by men and women in the sample when different types of emotionally close and love extra-dyadic partner involvements were compared to extra-dyadic partner sex. Females were more likely than males to report greater distress for every type of emotionally close or love partner extra-dyadic involvement (becoming best friends, developing a close attachment, preferring to spend leisure time, feelings of love, seeking each other for emotional support, and confiding), than for extra-dyadic partner sex.

In a GEE analysis with distress as the binary dependent variable and involvement type and gender as factorial independent variables, there was a significant main effect for gender (Wald $\chi^2 (df 1) = 23.94, p < .0005$). Follow up tests comparing males and females for each type of involvement were all significant ($p = .005 - .006$). There was no interaction between gender and involvement type (Wald $\chi^2 (df 5) = 6.33, p = .275$), suggesting that the profile of distress choices for men and women in this sample were more similar than different. The odds ratio (OR) for gender was 2.96 (95% CI, 1.89 - 4.65), and the largest OR for pair-wise comparisons of involvement types was 13.9 (95% CI, 9.15 - 21.21), when love was compared to best friendship. Controlling for gender, individuals in the sample were 13.9 times more likely to select extra-dyadic love as more distressing than extra-dyadic best friendship

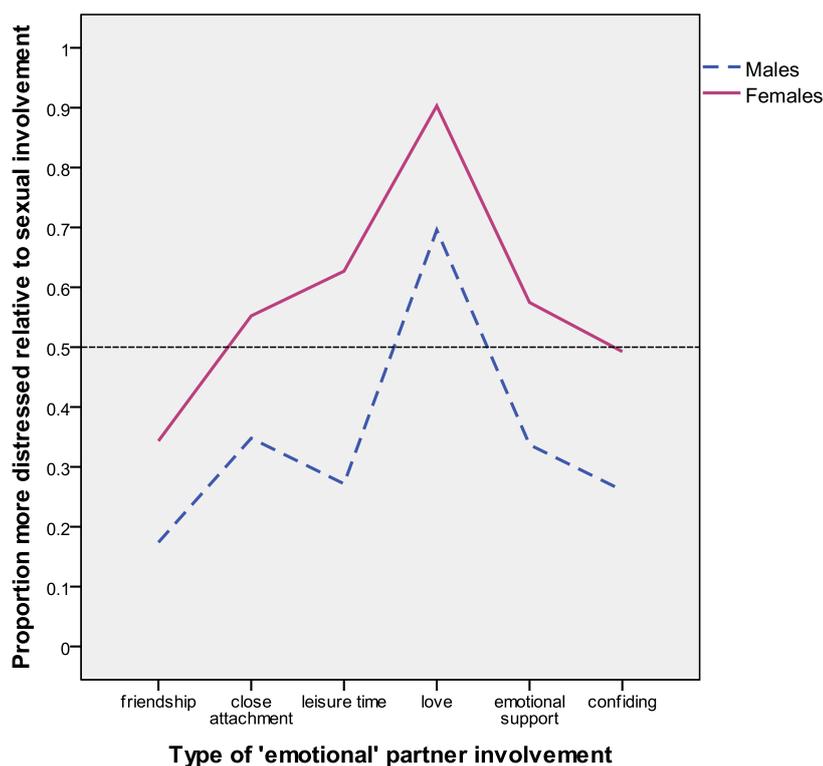


Figure 3: The proportion of males and females more distressed by ‘emotionally close’ and ‘love’ extra-dyadic partner involvements when compared to extra-dyadic sex

There was also a significant main effect for involvement type (Wald $\chi^2 (df 5) = 147.96$, $p < .0005$), confirming that when compared to sexual involvements, levels of relative distress were not uniform across each type of emotionally close or love involvement. In follow up Bonferroni-adjusted pair-wise comparisons, relative distress for partner extra-dyadic best friendship, compared to extra-dyadic sex, was significantly lower than all other types of emotionally close extra-dyadic partner involvements ($p < .0005$), and relative distress for partner extra-dyadic love compared to extra-dyadic sex, was higher than all other types of emotionally close extra-dyadic partner involvements ($p < .0005$). Compared to extra-dyadic sex, emotionally close partner involvements described as close attachment, spending leisure time together, and seeking each other for emotional support were reported as significantly more distressing than best friendship, and less distressing than love, but not significantly different from each other ($p = 1.0$). Extra-dyadic confiding was marginally less distressing than seeking each other for emotional support ($p = .033$), and close

attachment ($p = .048$), but not significantly different from spending leisure time together ($p = .131$).

As the men in this sample were significantly older than the women, it was considered important to check that the main effect for gender was not explained by age. In a repeat of the GEE analysis which also included age, there was no significant effect for age (Wald χ^2 (df 1) = 1.91, $p = .167$) and there were no significant interactions. The effects of gender and type of involvement were unchanged by the inclusion of age.

Further GEE analyses were conducted to investigate the effects of relationship commitment, actual experience of infidelity, adult attachment and trait jealousy, on distress. There were no significant main effects and no significant interactions for Comfort with Closeness, Anxiety about Abandonment, Emotional Jealousy, Behavioural Jealousy, Cognitive Jealousy, Commitment, or infidelity experience. The effects of gender and type of involvement were not moderated by these individual differences.

Distress for 'love' vs. 'emotionally close' extra-dyadic partner involvements

Hypothesis 2 predicted that men and women would report partner extra-dyadic love to be more distressing than partner extra-dyadic emotional closeness. This hypothesis was supported by the data. Figure 4 illustrates the pattern of relative distress reported by men and women in the sample when extra-dyadic partner involvements that involved becoming best friends, confiding, and sex + an emotional attachment respectively, were compared to partner extra-dyadic love. In a GEE analysis with distress as the binary dependent variable and involvement type and gender as factorial independent variables, there was no effect for gender (Wald χ^2 (df 1) = 2.24, $p = .135$), and there was no significant interaction (Wald χ^2 (df 2) = 1.85, $p = .397$) indicating that the profile of distress choices for men and women in this sample were similar.

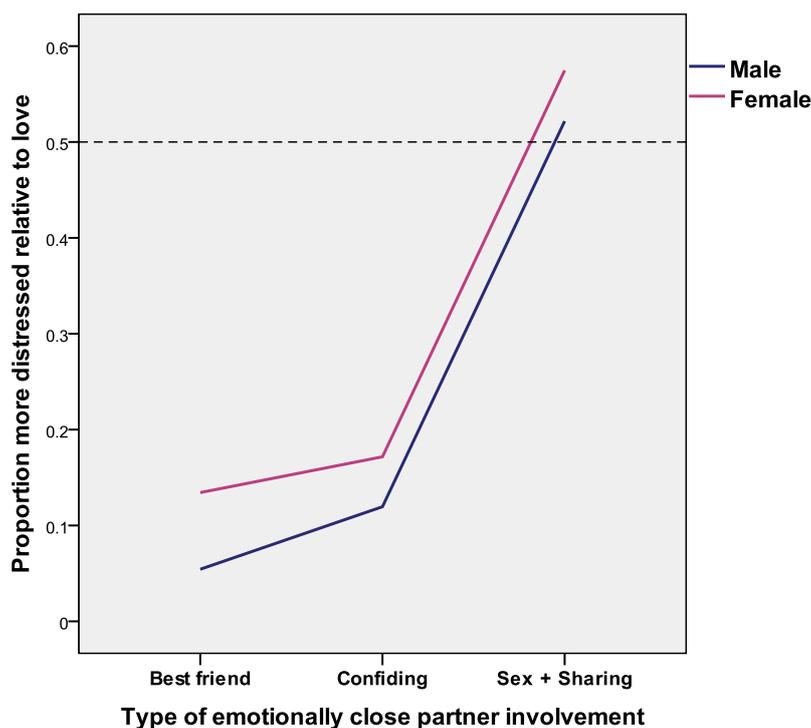


Figure 4: The proportion of males and females more distressed by ‘emotionally close’ extra-dyadic partner involvements when compared to extra-dyadic love.

There was a significant main effect for involvement type (Wald $\chi^2 (df 2) = 129.77, p < .0005$) confirming that the levels of relative distress were not uniform across each type of involvement. In follow up, Bonferroni-adjusted, pair-wise comparisons, relative distress for extra-dyadic close friendship and confiding were lower than for extra-dyadic sex with an emotional attachment ($p < .0005$). Relative distress for best friendship was lower than that for confiding ($p = .024$).

As the majority of males (52%) and females (57%) in the sample reported that an extra-dyadic partner relationship that involved both sex and an emotional attachment would elicit more distress than partner extra-dyadic love, a one-sample chi square test for male and female data was conducted to test if the proportion favouring either distress option differed from 0.5. There was clearly no difference for males, $\chi^2 (df 1, N = 92) = .174, p = .677$, and the difference for females was marginal but not significant, $\chi^2 (df 1, N = 134) = 2.99, p =$

.084. For both males and females in the sample, extra-dyadic sex with an emotional attachment was as distressing as extra-dyadic love.

Further GEE analyses were conducted to investigate the effects of adult attachment, trait jealousy, relationship commitment and experience of infidelity on relative distress. A significant interaction was found between involvement type and Emotional Jealousy (Wald $\chi^2 (df 2) = 8.85, p = .012$), and a marginally significant interaction was found between involvement type and Behavioural Jealousy (Wald $\chi^2 (df 2) = 5.44, p = .066$). As Emotional Jealousy scores increased, respondents were less likely to report that a partner becoming best friends with another person of the opposite sex would be more distressing than them falling in love (Wald $\chi^2 (df 1) = 3.39, p = .066, OR: .942$).

No interactions were found between involvement type or gender and Anxiety over Abandonment or Comfort with Closeness. However, there was a main effect for Comfort with Closeness. As Comfort with Closeness scores increased (i.e. increasing attachment security), respondents were less likely to select emotionally close extra-dyadic involvements as more distressing than extra-dyadic love (Wald $\chi^2 (df 1) = 6.29, p = .012, OR: .725$). There were no significant effects for relationship commitment or experience of infidelity.

Emotion intensity for different types of extra-dyadic partner involvements

Respondents rated the extent to which they would feel anger, sadness, anxiety and jealousy in response to six different types of extra-dyadic partner involvement. Mean intensity ratings for each emotion, in response to each type of extra-dyadic partner involvement are presented in Appendix 3. Table 10 presents average emotion intensities for the six different partner involvement types for the total sample and for males and females.

Table 10: Mean Emotion Intensity for Six Types of Extra-dyadic Partner Involvement

Partner disclosure	Total ($N = 226$)		Female ($N = 134$)		Male ($N = 92$)	
	M	SD	M	SD	M	SD
Sex and sharing	6.1	1.23	6.2	1.07	5.7	1.37
Feelings of love	5.6	1.43	6.0	1.09	5.0	1.65
Sex and sexual attraction	5.4	1.46	6.3	1.07	5.1	1.56
Romantic attraction	5.3	1.47	5.7	1.26	4.8	1.6
Enjoyed company	3.4	1.74	3.9	1.67	2.7	1.57
Conversation and confiding	3.1	1.49	3.3	1.46	2.7	1.46

Gender differences in emotion intensity ratings

Hypothesis 3 predicted that, compared to men, women would report more intense emotion for all types of extra-dyadic partner involvements. This hypothesis was supported by the data. A general linear model (GLM) was carried out with Involvement Type and Emotion as within subjects factors and Gender as a between subjects factor. There was significant main effect of Gender, $F(1,224) = 30.19, p < .0005, \eta_p^2 = .119$. There was also an Involvement Type x Gender interaction (Wilks Lambda = .90, $F(5,220) = 4.95, p < .0005, \eta_p^2 = .101$), indicating that the difference in emotion intensity between males and females varied over involvement type. However, pair-wise tests showed that all these differences were significant ($p = .002 - < .0005$). Females reported higher emotion intensity ratings than males for every type of partner extra-dyadic involvement; confiding, sex, romantic, sex and sharing, enjoying company and love. The Emotion x Gender interaction was not significant (Wilks Lambda = .90, $F(15,210) = 1.56, p = .086$).² Figure 5 illustrates the estimated marginal means for anger, sadness, anxiety and jealousy intensity ratings reported by males and females, for the six extra-dyadic involvement types.

² There was a significant Involvement Type x Emotion interaction (Wilks Lambda = .41, $F(15,210) = 20.4, p < .0005$) but as this was not different for males and females, and it did not bear on the hypotheses, it is not discussed here.

Although females reported higher emotion intensity, the pattern for males and females over different extra-dyadic involvements was more similar than different.

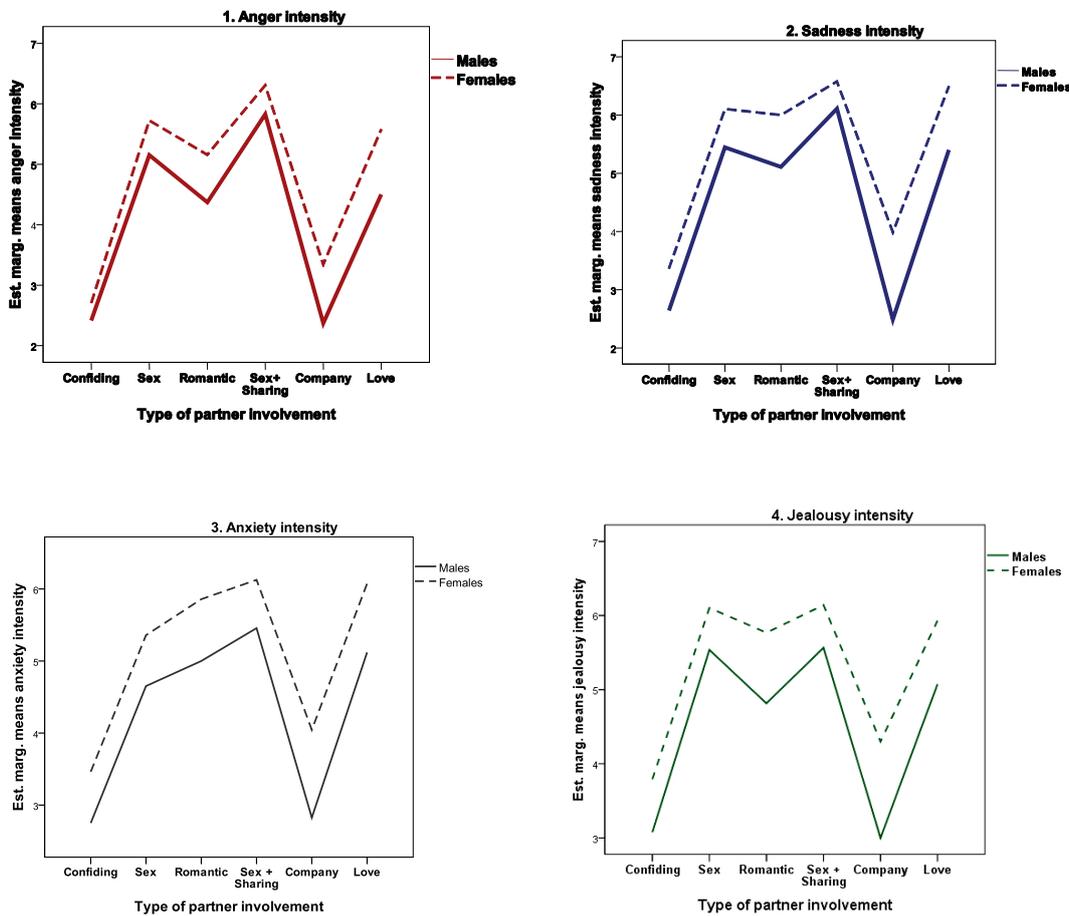


Figure 5: Estimated marginal means for the intensity of; 1) anger, 2) sadness, 3) anxiety, and 4) jealousy in response to extra-dyadic partner confiding, sex, romantic interest, enjoying each others' company and love, for males and females.

Again it was considered important to check that the main effect for gender was not explained by age. In a GLM with Involvement Type and Emotion as within subjects factors and Gender as a between subjects factor and Age as a covariate, there was a significant between subjects effect for age $F(1,223) = 13.2, p < .0005, \eta_p^2 = .056$, but the difference between males and females remained, $F(1,223) = 24.0, p < .0005, \eta_p^2 = .097$.

Gender differences in jealousy intensity ratings

To facilitate the interpretation of jealousy, anger, sadness and anxiety intensity ratings, the six partner extra-dyadic involvements were grouped into three categories of involvement: Sexual (sex and sex with an emotional attachment), Emotionally Close (confiding and enjoying each other company), and Romantic Love (romantic interest and love). These groupings helped to average out potential confounds such as levels of involvement e.g. sex could be a one-off event, whereas an ongoing sexual relationship would inevitably involve some sharing of personal information, and arguably 'romantic interest' might represent an early stage of romantic love.

Hypothesis 4 predicted a gender difference in the reported intensity of jealousy ratings for emotionally close or love involvements, compared to sexual involvements. Specifically, compared to men, women were predicted to report higher jealousy ratings for extra-dyadic involvements that involved emotional closeness of any type or love, than sex (with or without emotional attachment). This hypothesis was partially supported by the data. In a GLM of Involvement Type x Emotion x Gender, there was significant main effect of Gender, $F(1,224) = 20.15, p < .0005, \eta_p^2 = .083$. There was also an Involvement Type x Gender interaction (Wilks Lambda = .95, $F(2,223) = 5.43, p = .005, \eta_p^2 = .046$), indicating that the difference between males and females differed over involvement type. Figure 6 presents average male and female jealousy ratings over romantic partner extra-dyadic involvements that are sexual, emotionally close or involve romantic love.

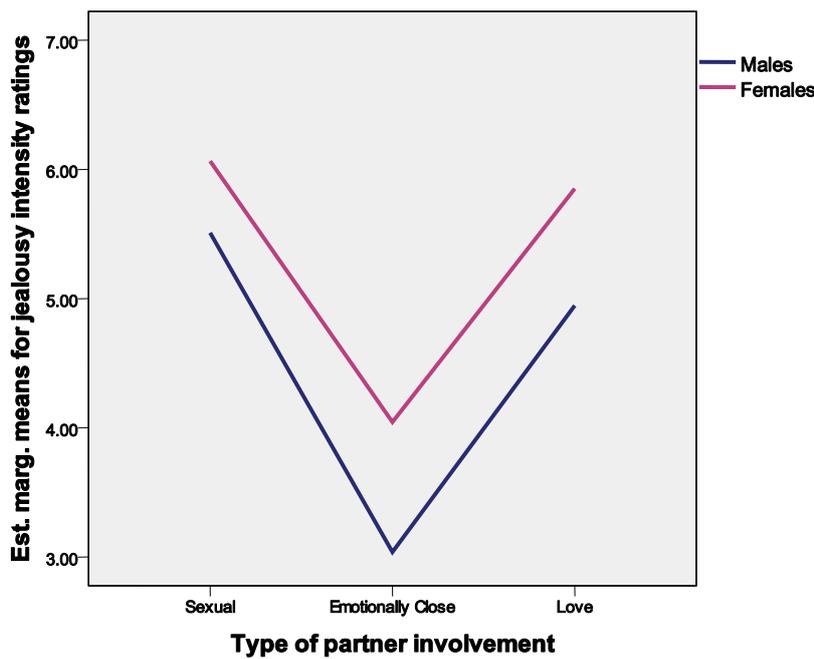


Figure 6: Mean jealousy intensity ratings reported by males and females for extra-dyadic partner involvements that are sexual, emotionally close or involve romantic love.

In follow up, Bonferroni-adjusted comparisons, males and females did not differ on jealousy intensity ratings for partner involvements that were sexual, compared to those that were emotionally close ($p = .042$, $\eta_p^2 = .018$). However, males and females did differ on jealousy intensity ratings for partner involvements involving love compared to those involving sex ($p = .002$, $\eta_p^2 = .041$). It was greater female jealousy for love involvements that explained the Involvement Type x Gender interaction. This pattern of gender differences was also observed for sadness, ($p = .001$, $\eta_p^2 = .05$) and anger ($p = .016$, $\eta_p^2 = .026$) but not for anxiety ($p = .160$, $\eta_p^2 = .009$).

Anger, sadness and anxiety intensity for different extra-dyadic partner involvements

While it was expected that each type of partner extra-dyadic involvement would elicit some level of anger, sadness and anxiety, it was predicted that these emotions would be

relatively more intense for extra-dyadic partner involvements that were ‘sexual’, ‘emotionally close’ or involve romantic ‘love’, respectively. Figure 7 presents the mean emotion intensity ratings for anger, sadness, and anxiety for extra-dyadic partner involvements that are sexual, emotionally close or involve romantic love.

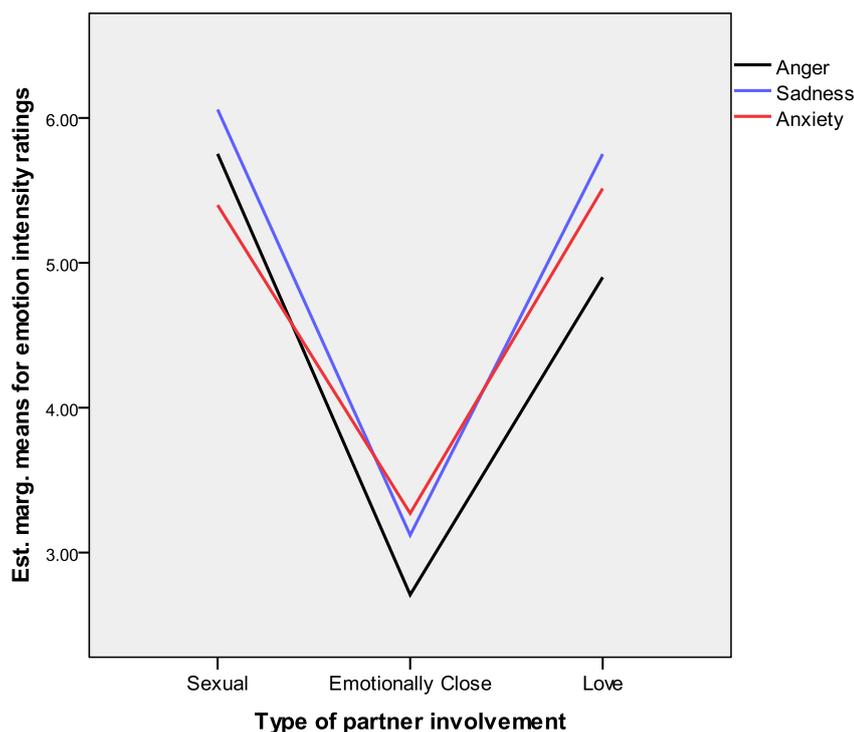


Figure 7: Average intensity ratings for anger, sadness and anxiety in response to extra-dyadic partner involvements that are sexual, emotionally close or involve love.

Hypothesis 5 predicted that extra-dyadic sex would elicit relatively more anger than extra-dyadic emotional closeness or love. This hypothesis was not supported by the data. In a GLM of Involvement Type x Emotion x Gender, there was a significant main effect of Emotion (Wilks Lambda = .21, $F(2,223) = 425.76$, $p < .0005$, $\eta_p^2 = .284$). There was also an Involvement Type x Emotion interaction (Wilks Lambda = .61, $F(4,221) = 34.92$, $p < .0005$, $\eta_p^2 = .39$), indicating that the differences between emotions (intensity ratings) varied for different involvement types. However, in follow up Bonferroni-adjusted comparisons of emotion intensity for sexual involvements, sadness ratings ($M = 6.06$) were significantly

higher than anger ($M = 5.75$; $p < .0005$) and anxiety ($M = 5.40$; $p < .0005$) ratings. In this sample, a partner extra-dyadic sexual involvement elicited more sadness than anger.

Hypothesis 6 predicted that partner extra-dyadic love would elicit relatively more sadness than extra-dyadic emotional closeness or sex. This hypothesis was supported by the results of the same analysis reported for Hypothesis 5. In the follow up, Bonferroni-adjusted comparisons of emotion type intensity for partner love involvements, sadness intensity ratings ($M = 5.75$) were significantly higher than anger ($M = 4.9$) and anxiety ($M = 5.51$), (p varied from $< .0005$ to $.001$), intensity ratings and anxiety ratings were higher than anger ratings ($p < .0005$).

Hypothesis 7 predicted that extra-dyadic emotional closeness would elicit relatively more anxiety than extra-dyadic sex or love. This hypothesis was only partially supported by the data. In the same analysis reported for Hypothesis 5 and 6 above, follow up, Bonferroni-adjusted comparisons of emotion intensity ratings for emotionally close involvements anxiety ratings ($M = 3.27$, $p < .0005$) were higher than anger ($M = 2.71$, $p < .0005$) but the difference between anxiety ($M = 3.27$) and sadness ($M = 3.12$) was not significant ($p = .02$).

Associations between individual difference variables and emotion intensity ratings

Further analyses were conducted to investigate associations between individual difference variables and emotion intensity for different types of extra-dyadic partner involvements. There were no significant effects for the experience of infidelity. There were however, a number of effects observed for the individual difference variables; relationship commitment, adult attachment style and trait jealousy. Correlations between emotion intensity ratings for sexual, emotionally close and love extra-dyadic partner involvements, respectively and the independent numerical variables, Commitment, Comfort with Closeness, Anxiety over Abandonment, Behavioural Jealousy, Cognitive Jealousy and

Emotional Jealousy are presented in Table 11. As these correlations suggested variations in the strength of the associations between individual difference variables and emotion intensity ratings for different types of extra-dyadic partner involvement, further analyses were conducted to clarify these relationships and also to investigate the effects of gender. These analyses had involvement type as the within-subjects factor (3 levels) and gender and the individual difference variables of interest as between-subject factors. One question was whether the differences between involvement type categories differed according to the value of the individual difference variables.

Table 11: Pearson Correlations for Independent Variables and Emotion Intensity Ratings for Sexual, Emotionally Close and Love Extra-dyadic Partner Involvements

Involvement Type	Relationship Commitment	Comfort Closeness	Anxiety Abandon.	Behavioural Jealousy	Cognitive Jealousy	Emotional Jealousy
Sexual	.346**	.076	.069	.111	.047	.333**
Emotional	.038	-.055	.324**	.351**	.292**	.492**
Love	.347**	.073	.110	.186**	.077	.401**

** . Correlation is significant at the 0.01 level (2-tailed).

Relationship commitment

For emotion intensity averaged over type of involvement, there was an interaction between Commitment and Gender $F(1,224) = 4.96, p = .027, \eta_p^2 = .027$. This suggested that the relationship between emotion intensity and commitment was different for males and females. For females there was a significant, positive correlation between relationship commitment and emotion intensity ratings, $t(df 222) = 4.49, p < .0005$ while for males there was no correlation between relationship commitment and emotion intensity ratings, $t(df 222) = 1.110, p = .268$. There was also a significant interaction between Commitment and Involvement Type (Wilks Lambda = .90, $F(2,221) = 13.0, p < .0005, \eta_p^2 = .105$), but

no three-way interaction involving these variables and Gender, indicating that the interaction between commitment and emotion intensity was not different for males and females. Follow up interaction contrasts showed that associations between commitment and emotion intensity were significantly different for both sex and love involvements, compared to emotionally close involvements ($F(1,222) = 20.1, p < .0005, \eta_p^2 = .083$), and ($F(1,222) = 25.6, p < .0005, \eta_p^2 = .103$) respectively, but not significantly different for sex versus love infidelities ($F(1,222) = .16, p = .691, \eta_p^2 = .001$). There were moderate, positive correlations between relationship commitment and average emotion intensity ratings for extra-dyadic partner sex and love, but not for partner interactions that were emotionally close.

Attachment style

There were no significant effects for Comfort with Closeness. However, there was an interaction between Gender and Anxiety over Abandonment, ($F(1,224) = 6.48, p = .012, \eta_p^2 = .028$). For males, higher Anxiety over Abandonment scores were associated with higher average emotion intensity ratings, $t(df, 222) = 3.824, p < .0005$. The same kind of relationship existed for females but it was weaker and not statistically significant, $t(df, 222) = 1.269, p = .206$. There was also a significant interaction between Anxiety over Abandonment and Involvement Type (Wilks Lambda = .93, $F(2,221) = 8.12, p < .0005, \eta_p^2 = .068$). Follow up interaction contrasts showed that the relationships between anxious attachment and emotion intensity were significantly different for both sex and love infidelities, versus emotionally close involvements, ($F(1,222) = 16.92, p < .0005, \eta_p^2 = .068$), and ($F(1,222) = 11.05, p < .0005, \eta_p^2 = .047$) respectively, but not significantly different for sex versus love infidelities ($F(1,222) = .207, p = .152, \eta_p^2 = .009$). There was a moderate, positive correlation between anxious attachment and emotion intensity ratings

for emotionally close partner extra-dyadic interactions but not for extra-dyadic partner sex or love.

Trait jealousy

No interactions were found between Gender and the three trait jealousy subscales, although there were main effects for each type of trait jealousy with respect to emotion intensity; Behavioural Jealousy ($F(1,224) = 8.86, p = .003, \eta_p^2 = .038$), Cognitive Jealousy ($F(1,224) = 5.03, p = .026, \eta_p^2 = .027$), and Emotional Jealousy ($F(1,224) = 52.21, p < .0005, \eta_p^2 = .190$). There was a three way interaction between Gender, Involvement Type and Emotional Jealousy (Wilks Lambda = .972, $F(2,221) = 3.23, p = .04, \eta_p^2 = .028$). The relationships between Emotional Jealousy and emotion intensity were stronger for females than males for emotionally close extra-dyadic involvements and to a lesser extent for extra-dyadic sex, but they were identical for extra-dyadic love.

Significant interactions were found between Involvement Type and each type of trait jealousy: Emotional Jealousy (Wilks Lambda = .96, $F(2,221) = 2.21, p = .015, \eta_p^2 = .038$), Cognitive Jealousy (Wilks Lambda = .94, $F(2,221) = 7.54, p = .001, \eta_p^2 = .064$), and Behavioural Jealousy (Wilks Lambda = .94, $F(2,221) = 7.29, p = .001, \eta_p^2 = .062$). For each of these interactions, there were significant follow up interaction contrasts between extra-dyadic sex and love, respectively, versus extra-dyadic emotional closeness (p values ranged from .012 to $< .0005$), and non-significant interaction contrasts between extra-dyadic sex and love (p values ranged from .018 to .476). These results are consistent with the correlations shown in Table 5, in that it is evident that emotional intensity was most highly correlated with trait jealousy for emotionally close extra-dyadic partner involvement. There was a moderate, positive correlation between Emotional Jealousy and emotion intensity ratings for each type of partner extra-dyadic involvement. Behavioural Jealousy was correlated with emotion intensity for emotionally close extra-dyadic partner

involvement and extra-dyadic partner love. Cognitive Jealousy was only correlated with emotion intensity for emotionally close extra-dyadic partner involvement.

In summary, higher overall emotion intensity ratings were associated with higher relationship commitment in women, an anxious attachment style in men, and higher levels of each type of trait jealousy (emotional, cognitive and behavioural) in men and women. Anxious attachment was associated with higher emotion intensity ratings for extra-dyadic partner emotional closeness but not for extra-dyadic sex or love. Higher emotional jealousy (emotional reactions to observed partner behaviours) was associated with higher emotion intensity ratings in response to each of the three types of partner extra-dyadic involvement. Higher behavioural jealousy (suspicious behaviours, such as checking) was associated with higher emotion intensity ratings for extra-dyadic emotional closeness and extra-dyadic love, whereas higher cognitive jealousy (suspicious thoughts) was only associated with higher emotion intensity ratings for extra-dyadic emotional closeness.

Research Questions

Types of extra-dyadic partner involvements that breach trust: Component analysis

Twenty scaled items were included to explore the extent to which different partner extra-dyadic actions or events would be perceived as a betrayal. A principal components analysis with an Oblimin rotation with Kaiser Normalisation produced three components with eigen values greater than one. Together these components accounted for 69% of the variance in responses. In order of variance accounted for and in keeping with the terminology used in Study One, these type of betrayal components were labelled Emotional Intimacy (42%), Sexual Intimacy (21%) and Love (6%). The pattern matrix for the final principal components analysis is presented in Table 12.

Table 12: Pattern Matrix for Principal Component Analysis on Specific Betrayal Items in Study Two

Specific Betrayal Items	Components		
	1	2	3
Passionate kissing	.118	.738	.131
Confiding in the other about important personal details of life events	.695	-.101	.277
Falling in love after a passionate sexual relationship	-.126	.496	.542
A sexual experience that did not include intercourse	-.001	.912	.026
Spending the night together in the same bed without sexual contact	.412	.446	.220
Falling in love without sex	.132	.174	.759
A sexual encounter after drinking	-.033	.848	.101
Flirting	.555	.394	-.083
A casual dinner after work	.807	.171	-.195
Spending time together for no particular reason	.843	.094	-.078
Discussing conflicted or intimate aspects of your relationship	.640	-.102	.390
A sexual relationship with little emotional involvement	-.028	.934	-.084
A non-sexual relationship characterized by emotional sharing	.750	-.004	.234
Developing a very close friendship based on interests or work	.908	-.085	-.131
Paying for sex or an escort.	-.039	.910	-.224
Getting together to do a specific activity or discuss an interest	.877	.019	-.206
Choosing to spend time together when you had nothing to do	.776	-.020	.006
Communication of a sexual nature, with no physical contact	.262	.647	.049
Frequent conversations, sharing emotions and ideas	.847	-.046	.111
A relationship that is both sexually and emotionally involved	-.137	.641	.359

As in Study One, ‘coarse’ betrayal component scores were calculated for each respondent by averaging the betrayal ratings of all ratings for items with component loading contributions over 0.4 (Grice, 2001). Three items loaded significantly on two components and were therefore included in the calculation of two mean component scores. The item *‘falling in love after a passionate sexual relationship’* was included in the component scores for both Sexual Intimacy and Love, and the item *‘spending the night together in the same bed without sexual contact’*, was included in the component scores for Emotional Intimacy and Sexual Intimacy. The component scores were significantly and positively correlated with each other; Emotional Intimacy and Sexual Intimacy ($r = .454$), Emotional Intimacy and Love ($r = .353$), and Sexual Intimacy and Love ($r = .592$). These correlations reflected the correlations amongst the components, which ranged from $r = .171$ to $r = .272$, but were higher as is generally the case in ‘coarse’ component scores (Grice, 2001). Figure 8 is a graph of the mean betrayal scores for Emotional Intimacy, Sexual Intimacy and Love type of betrayal components for males and females.

A repeated measures analysis with type of betrayal as the within-subjects factor (3 levels) and gender as the between-subjects factor found a strong effect for type of betrayal (Wilks’ Lambda = .138, $F(2,223) = 696.1$, $p < .0005$, $\eta_p^2 = .86$). Bonferroni-adjusted comparisons showed that mean breach of trust ratings for each type of betrayal component were significantly different from each other ($p < .0005$). As can be seen in Figure 8 Sexual Intimacy and Love were rated as more serious betrayals than Emotional Intimacy. However, the differences between mean betrayal ratings for Emotional Intimacy and Sexual Intimacy and Emotional Intimacy and Love, are much larger than the difference between Sexual Intimacy and Love: The η_p^2 values were .83, .85 and .14 respectively.

There was also a significant although weak gender difference in betrayal ratings averaged over type of betrayal ($F(1,224) = 15.8$, $p < .0005$, $\eta_p^2 = .066$), with females

rating all types of betrayal as higher in terms of the extent to which they would breach romantic trust. There was no interaction between gender and type of betrayal.

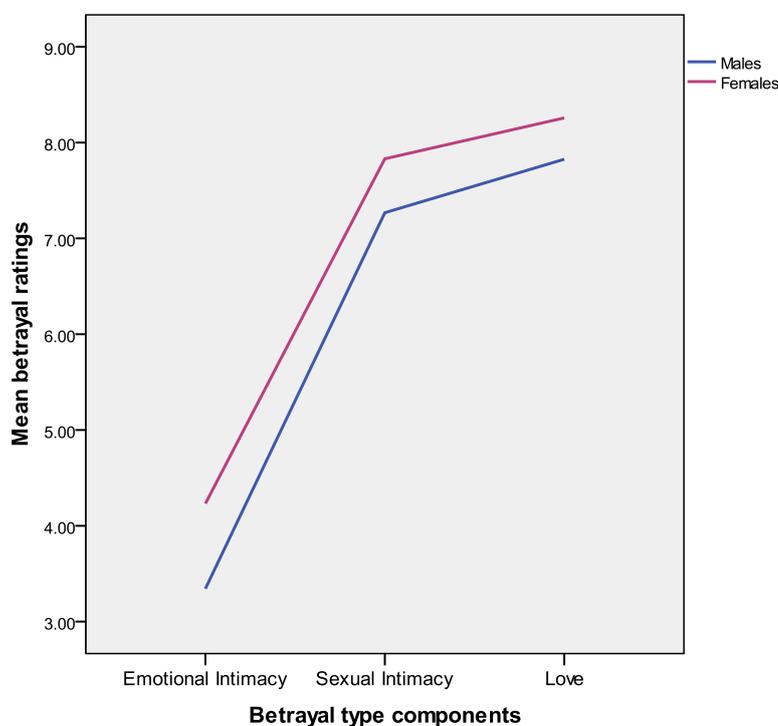


Figure 8: Mean betrayal scores for type of betrayal components, Emotional Intimacy, Sexual Intimacy and Love, for males and females.

Agreements and expectations about romantic relationship exclusivity

One hundred and sixteen respondents (53%) reported that they had discussed and agreed on some rules about relationship exclusivity with their current partners. Seventy eight respondents (35%) reported that they had not discussed and agreed on rules about relationship exclusivity and 32 (14%) were 'not sure'. When asked if it should be necessary to discuss and agree on these types of relationship rules the answers were as follows; 'yes' (55%), 'no' (28%) and 'not sure' (17%). No gender differences were found in terms of agreed rules about relationship exclusivity or opinions about the necessity of these.

The most frequently selected category of explicit romantic exclusivity agreement was 'close friendships are allowed but sexual relationships are not' (66%), followed by 'emotional closeness but no sex' (16%), 'no close friendships or sex allowed (10%), 'sex but no emotional closeness' (4%) and 'sex and emotional closeness provided there is no secrecy' (3%). Only one respondent (1%) reported having agreed to all types of extra-dyadic relationship as long as the primary relationship/ family remained intact. There was a significant gender difference on agreed exclusivity rules $\chi^2 (df 6) = 13.66, p = .031$. An examination of the adjusted standardised residuals showed that females were more likely than males to report explicit agreement about 'no close friendships or sexual relationships' (8% and 1%, respectively), and males were more likely than females to report that 'sex and emotional closeness are allowed as long as there is no secrecy', (4% and 0%, respectively).

All respondents, regardless of explicit agreements with current partners, reported their expectations for romantic exclusivity. Figure 9 displays the proportion of males and females in the sample endorsing each of the six exclusivity expectation categories; no close friendships or sexual relationships, close friendships but no sexual relationships, sex but no emotional closeness, emotional closeness but no sex, sex and emotional closeness but no secrecy, all types of relationship allowed as long as the primary relationship and/or family remain intact.

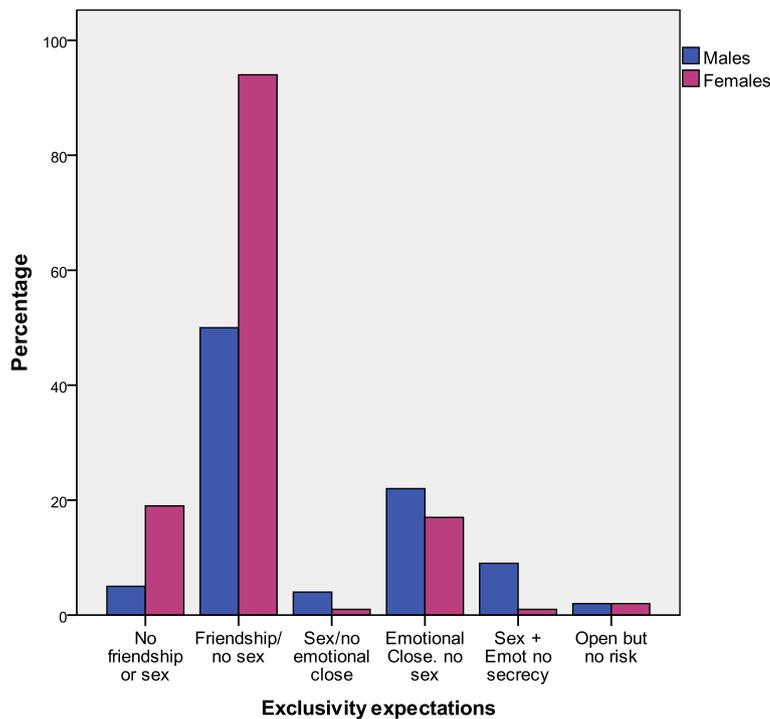


Figure 9: Proportion of males and females endorsing each of the six categories of romantic relationship exclusivity expectations.

There was a significant gender difference for exclusivity expectations $\chi^2 (df 5) = 23.48$, $p < .0005$. An examination of the adjusted standardised residuals showed that females were more likely than males to report the exclusivity expectations ‘close friendships but no sexual relationships’ (70% and 50%, respectively) and ‘no close friendships or sexual relationships’ (14% and 5%, respectively), whereas males were more likely than females to report the exclusivity expectations ‘emotional closeness but no sex’ (24% and 13%, respectively), ‘sex and emotional closeness but no secrecy’ (10% and .7%, respectively), and ‘sex but no emotional closeness’ (4% and .7%, respectively).

Chapter 9

Discussion: Study Two

This study builds on previous findings about the ways in which males and females are similar and different in their emotional responses to different types of partner infidelities. Using forced choice questions and continuous rating scales for the expected intensity of anger, sadness, anxiety and jealousy in response to different types of extra-dyadic partner involvements, it explored a three type/component model of romantic ‘infidelity’; sexual, emotionally close and love. Consistent with the findings in Study One, when respondents were asked to rate the extent to which specific extra-dyadic behaviours would constitute a breach of relationship trust, a principal components analysis found three different types of betrayal: ‘emotional intimacy’, ‘sexual intimacy’ and ‘love’. It also investigated how individual differences might influence emotional distress following these types of romantic betrayal, an important consideration for clinical work with distressed couples trying to repair relationships following extra-dyadic involvements, of any type. Finally, direct questions were asked about explicit agreements and implicit expectations for exclusivity in current romantic relationships. This chapter reviews and interprets the research findings including research strengths and limitations. Clinical relevance is discussed in the final chapter of this thesis.

Review of findings

Participant’s sex and relative ‘distress’ for different partner extra-dyadic involvements

Six different types of ‘emotionally close’ extra-dyadic partner involvement, derived directly from the ‘Sharing’, ‘Time’ and ‘Romantic’ breach of romantic trust categories in Study One (becoming best friends, developing a close attachment, preferring to spend leisure time together, feelings of love, seeking each other for emotional support and

confiding), were compared to partner extra-dyadic sex in forced choice questions regarding which type of partner involvement would cause more distress. As expected, and consistent with previous research findings, women in this sample were more likely than the men to report greater distress for every type of emotionally close or love involvement, than for extra-dyadic sex. These findings provide further support for evolutionary theory that posits greater relative concern about sexual infidelity for males, resulting from the evolved challenge of paternity certainty, and greater concern about the diversion of partner's time and resources for females, in response to the evolved need to find an investing mate (Abraham, Cramer, Fernandez, & Mahler, 2001; Buss, Larson, & Westen, 1996; Buss et al., 1999; Buunk et al., 1996; Cosmides & Tooby, 1992; Symons, 1979). Moreover, it contributes to our understanding about relative female sensitivity to any diversion of a partner's emotional resources and investments. It is not just the diversion of love that is of relatively greater concern for females.

Regardless of explanations, e.g. differently evolved mating strategies or socialization, findings that the sexes differ in reported distress for 'emotional' compared to 'sexual' extra-dyadic involvements appear to be robust (Buss et al., 1992; Buunk et al., 1996; Shackelford et al., 2004). However, a focus on statistically significant sex differences can overshadow the ways in which males and females are similar. Indeed, the lack of interaction between participant's sex and type of involvement on distress, suggests that the women and men in this sample were more similar than different in their relative concern for these types of emotionally close partner involvements, when compared to extra-dyadic sex. For example, while there was a significant sex difference in reported distress in response to extra-dyadic best friendship compared to extra-dyadic sex, the majority of females (66%) and males (83%) reported more distress about extra-dyadic sex than extra-dyadic best friendship. Similarly, although males were more likely than females to report greater distress for extra-dyadic sex, compared to extra-dyadic love, the majority of males

(70%) and females (90%) reported more distress for extra-dyadic love than for extra-dyadic sex.

The finding that 70% of males reported more distress for extra-dyadic love than for extra-dyadic sex is interesting because in most evolutionary studies using the forced choice design, a roughly equal proportion of males choose a 'sexual' or 'emotional' infidelity as more distressing. Indeed, this is why some researchers have argued that it is female sensitivity to emotional infidelity that drives the sex by infidelity type interaction found in jealousy research (Harris, 2003b; Penke & Asendorpf, 2008a). In the current study, there may have been a methodological reason for the much larger proportion of males selecting extra-dyadic love as more distressing than extra-dyadic sex. Perhaps by asking a question about distress for extra-dyadic sex vs. love in the context of other questions describing emotional interactions such as friendship, confiding and spending time together, respondents were prompted to think about the different ways in which a partner might become emotionally close to another person, and in doing so, implications for the word 'love' may have become less ambiguous and more threatening.

Another possibility is that this sample differed in important ways from previous evolutionary studies. As mentioned earlier, with the exception of a few studies (e.g. Barrett et al., 2006; Sagarin & Guadagno, 2004), research finding sex differences in jealousy triggers has relied on undergraduate samples, whereas participants in the current study were older (mean age 37 years) and more experienced in romantic relationships. Importantly, this was a study for people who were in a romantic relationship at the time of participating. Over 50% of respondents were engaged or married and the mean level of reported relationship commitment was high (6.2, on a scale of 1 to 7). Indeed, it may be in the context of low involvement, short-term relationships that sex differences in mating behaviours are more pronounced. In the context of committed long-term relationships, where both partners have made considerable investments (e.g. children, property, family,

friends and time), the mating behaviours of females and males, including reactions to extra-dyadic partner involvements, may be more similar than different (Kenrick, Groth, Trost, & Sadalla, 1993). In support of this viewpoint, Mathes (2005) found that when men and women were instructed to imagine themselves in a short-term (predominantly sexual) relationship, they were more threatened by sexual infidelity, whereas when they were instructed to imagine themselves in a long-term (committed) relationship they were more threatened by an emotional infidelity. Similarly, individuals high in 'mating effort' i.e. effort allocated to gaining access to sexual partners, compared to effort allocated to long-term relationships, reported more upset over sexual infidelity than emotional infidelity, and were more likely to react to any infidelity with punitive behaviours (Jones, Figueredo, Dickey, & Jacobs, 2007). Evolutionary psychologists emphasise the importance of viewing any observed sex difference within the context of the many similarities between males and females, arguing that both sexes should behave similarly in close relationships except when particular behaviours improve access to suitable mates and the survival chances of offspring (Barnes & Buss, 1985; Buss, 1995).

The territory of 'distress' for emotionally close extra-dyadic partner involvements

Although few respondents in Study One spontaneously reported that a partner becoming best friends with someone of the opposite sex would constitute a breach of relationship trust, it was included in this study as a possible lower anchor on a scale of 'emotional' extra-dyadic relationship threats. It is not difficult to imagine less threatening emotionally close extra-dyadic partner interactions. For example, a romantic partner might be observed to share interests or a sense of humour with another person, such that whenever they meet they obviously enjoy each other's company. While this type of connection may not be as close as 'best' friendship, it has the potential to trigger some jealousy in non-involved partners. However, for the purpose of understanding distress in relation to partner extra-

dyadic emotional closeness, best friendship provided a good example of an extra-dyadic partner involvement that would trigger relatively low levels of distress compared to extra-dyadic sex. Extra-dyadic partner involvements described as close attachment, spending leisure time together, seeking each other for emotional support and confiding were significantly more distressing than best friendship and less distressing than love, but not significantly different from each other.

The idea that some emotional connections between a romantic partner and another person are considered to be more serious than others was further supported by reported distress when extra-dyadic best friendship, confiding and sex with an emotional attachment, were compared to extra-dyadic love. As expected, for both males and females, extra-dyadic love was relatively more distressing than best friendship or confiding, with confiding more distressing than best friendship. Intuitively these emotional connections describe an ambiguous middle ground on a map of emotional betrayal that might span from extra-dyadic friendship to extra-dyadic love.

Extra-dyadic sex with an emotional attachment as distressing as extra-dyadic love

Approximately half of the men and women in this study reported that '*sex and an emotional attachment*' would elicit greater distress than love. Perhaps for many respondents these alternative forms of infidelity are for all practical purposes the same, or equally upsetting. For some of the respondents who reported more distress for '*sex and an emotional attachment*' compared to '*feelings of love*', the difference may have been the extent to which a partner's extra-dyadic attraction had already been acted on, i.e. the relationship had started, whereas for whatever reason, and until further information is known, a romantic partner's feelings of love for someone else may not have been consummated. In this regard the findings may have been a function of the way the question was worded, i.e. '*falling in love*' may not be as final as '*sex and an emotional attachment*'.

Another possible reason for the almost equal proportion of males and females reporting distress for 'sex and emotional attachment' and 'feelings of love' is that as suggested by other researchers, the 'distress' experienced for one type of extra-dyadic involvement is functionally different than distress experienced for another type (Becker et al., 2004; Sabini & Green, 2004). For example, the distress associated with 'sex and an emotional attachment' might involve an automatic appraisal of partner blame and more intense anger and disgust, while distress about a romantic partner falling in love with another person may reflect sadness about a relationship event appraised as less controllable or blameworthy (Becker et al., 2004; Lazarus, 1991a; Shackelford et al., 2000; Shaver et al., 1987). Either possibility illustrates the importance of very subtle levels of information about relationship threats. Given the evolutionary importance of close relationships for both survival and reproductive success, humans have evolved to be highly sensitive to all types of cues that signal relationship threat (Baumeister & Leary, 1995; Harris, 2003b; Leary et al., 2001). This sensitivity calls for very careful question wording in relationship research.

The potential for ambiguity in emotionally close extra-dyadic relationships

While an expansion of the construct of 'emotional infidelity' to include extra-dyadic relationships that involve friendship, time and confidences but not necessarily love has some appeal, it is acknowledged that all types of extra-dyadic closeness are potentially ambiguous. For example, a partner becoming best friends with another person of the opposite sex is not risk-free in terms of sexual infidelity. Research on cross-sex friendship finds considerable levels of sexual 'tension' between cross-sex friends, particularly for males (Afifi & Faulkner, 2000; Bleske-Rechek & Buss, 2001; Reeder, 2000; Williams, 2005), and it would seem that in many cases this tension translates to sexual activity. For example, in one study with heterosexual college undergraduates, approximately half of the sample reported having sex with their 'platonic' friends (Afifi & Faulkner, 2000). It is also

worth remembering that sometimes married people, particularly men, consider extramarital sex partners to be close friends (Glass & Wright, 1985). Based on these findings, it is possible to imagine how a new opposite-sex partner friendship could arouse suspicion of sexual attraction or concern that highly valued partner time and energy might be diverted from the primary relationship.

It is possible that any form of emotional closeness already in place at the beginning of a romantic relationship is less threatening than one that might develop during the relationship. In the current study respondents were asked to consider distress in relation to a partner 'becoming best friends' with a person of the opposite sex. Perhaps relative distress ratings would have been different if respondents had been asked to consider an existing best friendship compared to a sexual relationship. Like the beginning of a sexual relationship, the beginning of a friendship raises a number of possibilities about how the relationship might evolve (Allen et al., 2005). Arguably, in the case of previously formed relationships with other people, the relational outcomes are stable, less ambiguous and therefore less anxiety provoking. The temporal aspects of extra-dyadic relationships of all types, is an interesting area for future research on romantic expectations and what might constitute a betrayal.

Women report more intense emotional responses for extra-dyadic partner involvements

As expected, compared to the men, women in this study reported that their experience of jealousy, anger, sadness and anxiety would be more intense for six different types of extra-dyadic partner involvements; confiding, sex and sexual attraction, romantic attraction, sex and sharing personal information, enjoying each other's company and feelings of love. These findings were consistent with previous research when continuous measures have been used to rate expected emotional responses to hypothetical infidelities (Becker et al., 2004; Geary et al., 1995; Nannini & Meyers, 2000; Sagarin et al., 2003). Some authors

have speculated that this pattern of response might reflect a reporting bias, i.e. that women are more willing than men to describe themselves as emotional due to a process of socialisation that generally encourages females (and discourages males) in the expression of emotion (Barrett, Robin, Pietromonaco, & Eysell, 1998; Eagly & Wood, 1991). In a study that compared memory-based self-descriptions of emotionality with averaged moment-by-moment ratings of emotion, women described themselves as more emotional than the men. However, no sex differences were found in momentary emotion intensity ratings for a variety of positive and negative emotions, suggesting that men and women did not differ in their actual experience of emotion (Barrett et al., 1998). The authors proposed a number of reasons why compared to men, women may report more intense emotional experiences, including social roles that specify that it is appropriate for women to be emotional, especially in the context of relationships, and that emotions may have different values to men and women. They also raised the possibility that men and women may have different interpretations of rating scale anchors. For example, in the case of the current study, men and women may have had different ideas of what ‘*not at all*’ or ‘*extreme*’ represent. In support of this idea, Sagarin and Guadagno (2004) found that sex differences in reported jealousy for sexual or emotional infidelities disappeared when the upper anchor of the measure was modified from “extremely jealous” to include more contextual information, “as jealous as you can feel in a romantic relationship”. In the current study, an upper emotion intensity anchor such as this may have influenced findings on sex similarities and differences for each of the emotion groups.

Compared to men, women report more intense jealousy for extra-dyadic love

Consistent with previous findings (Becker et al., 2004) in the current study it was greater female jealousy in response to love involvements that explained the interaction between participant’s sex and involvement type for jealousy intensity ratings. Males and

females did not differ on jealousy intensity ratings for partner involvements that were sexual, compared to those that were emotionally close, providing further support for the idea that not all emotionally close relationships can be grouped together under the heading of emotional infidelity. This pattern of relative jealousy intensity was also observed for the emotion of sadness and anger but not for anxiety.

The importance of sadness in response to each type of extra-dyadic partner involvement

Based on previous findings, it was expected that extra-dyadic sex would elicit greater anger than extra-dyadic emotional closeness or love, and that extra-dyadic love would elicit greater sadness than extra-dyadic emotional closeness or sex (Becker et al., 2004; Buunk & Dijkstra, 2004; Sabini & Green, 2004; Sabini & Silver, 2005b). However, in the current study, greater emotion intensity ratings were reported for sadness, followed by anger and then anxiety for both types of extra-dyadic partner involvement. If sadness is the emotion elicited by appraisals of irreconcilable loss (Feeney, 2005; Lazarus, 1991a, 1991b; Shaver et al., 1987), this finding suggests that in this sample, extra-dyadic sex was appraised similarly to extra-dyadic love in terms of how it might signal relationship damage and/or loss. Perhaps in the context of highly committed relationships, as was the case for the majority of respondents in this study, it is difficult to imagine sexual infidelities that do not involve love or alternatively, that the relationship could survive a sexual betrayal.

Another possibility is that environmental influences for the current sample, such as education levels or personal experiences of extra-dyadic involvements, contribute to partner perspective taking and less judgemental appraisals of all extra-dyadic involvements (Allan & Harrison, 2009; Penke & Asendorpf, 2008b). Indeed, Allan and Harrison (2009) suggest that as a result of significant shifts in the ways modern couples form and dissolve, with greater emphasis on relationships as a source of personal happiness rather than life-

long commitments, exclusivity expectations may also be changing, and “where there is an increasing emphasis on the quality of relationships, different understandings of sexual infidelity may emerge” (p. 201).

It was reasoned that ‘emotionally close’ extra-dyadic interactions such as spending time with, confiding in, or seeking emotional support from another might be construed as the early stages of a more serious extra-dyadic involvement, thereby eliciting more anxiety than anger or sadness. The results of the current study provide only partial support for this prediction. Anxiety intensity ratings in response to the ‘emotionally close’ involvements were higher than those for sadness and anger. However, the difference between anxiety and sadness was not significant. Again, these results may reflect characteristics of the current sample such that when a partner turns to someone else to confide or to seek emotional support in the context of a long-term, highly committed relationship, it is appraised as loss, relationship distancing or an erosion of what Allan and Harrison (2009) refer to as “coupleness”, causing feelings of sadness in as much intensity as feelings of anxiety or fear. Further research with different samples may indeed find that extra-dyadic partner interactions of an emotionally close nature are associated with more anxiety than anger or sadness.

Indeed, for this sample, experienced in romantic relationships and highly committed to current relationships, sadness may have been the most relevant emotion when imagining a current partner infidelity. The emotion of sadness forms a pivotal role in the hurt feelings that result from relationship betrayals and rejection (Fehr & Harasymchuk, 2009; Leary et al., 1998), and increasing levels of relationship commitment may intensify this emotional experience (Bachman & Guerrero, 2006; Couch et al., 1999).

Associations between relationship commitment and distress or emotion intensity

No effects were found for relationship commitment on relative distress. One possible reason for this finding is that forced choice distress questions capture the implicit relationship expectations that individuals bring to romantic relationships, which may have evolved to be different and/or reflect different processes of socialisation for men and women (Buss, 1995; Eagly & Wood, 1999; Harris, 2003b). These expectations may be relatively stable regardless of context variables such as relationship commitment (West, 2006).

Interestingly, in terms of gaining an understanding of romantic jealousy and other negative emotions triggered by different types of partner non-exclusivity, relationship commitment was positively associated with emotional intensity in response to extra-dyadic partner sex and love but not associated with emotion intensity in response to emotionally close partner involvements i.e. confiding and enjoying each other's company. This finding suggests that relationship commitment might be a protective factor that minimises jealousy and other negative emotions when romantic partners become close to others, just as long as that closeness does not involve sex or love. In general, more highly committed individuals trust their romantic partners to interact with other people in pro-relationship ways. This trust develops over time by observing how partners act in 'trust-diagnostic' situations, such as working and socialising with attractive others (Drigotas, Rusbult, & Verette, 1999a; Finkel et al., 2002; Holmes, 2002; Simpson, 2007; Wieselquist et al., 1999). Thus in highly committed relationships characterised by mutual trust, satisfaction and investment, romantic partners may be generally relaxed about emotionally close extra-dyadic interactions involving time, friendship and the sharing of confidences but less so for those that involve sex or love.

Associations between trait jealousy and attachment style and distress or emotion intensity

On the Multi-dimensional Jealousy Scale (Pfeiffer & Wong, 1989), Emotional Jealousy is a measure of expected emotional reactions to actual events that might signal a that a romantic partner is interested in someone else, or that a rival is interested in a romantic partner. It is a reaction to the actions of others and therefore, qualitatively different from cognitive jealousy and behavioural jealousy, which involve suspicions and detective behaviours in relation to real or imagined threats. For example, using Rubin's Love and Liking Scales (Rubin, 1970) they found that these three dimensions of romantic jealousy were differentially related to love. Emotional jealousy was positively related to love, whereas Cognitive jealousy was negatively related to love, and Behavioural jealousy was not related to love, suggesting that the more individuals feel 'in love' with their partners, the less likely they are to engage in suspicious thoughts about partners and rivals. In the current study, the relationship between emotional jealousy and greater distress for extra-dyadic love, compared to extra-dyadic best friendship, is consistent with this view of emotional jealousy as a normal reaction to real relationship threats, such as extra-dyadic love, rather than to ambiguous threats such as extra-dyadic friendship.

Consistent with the idea that emotional jealousy, in response to real relationship threats is relatively normal, while more suspicious forms of trait jealousy including engaging in detective behaviours, may be associated with hyper-vigilance for any sign of partner abandonment, in the current study high levels of Behavioural and Cognitive Jealousy were associated with higher emotion intensity ratings in response to emotionally close partner involvements i.e. confiding in, or seeking another for emotional support, but were not associated with emotion intensity ratings for extra-dyadic sex or love. In previous research individuals with higher levels of suspicious jealousy (i.e. cognitive and behavioural components) also reported lower self-esteem, greater anxious and avoidant attachment

(Rydell, McConnell, & Bringle, 2004), and perceived their relationships to be of lower quality (Barelds & Barelds-Dijkstra, 2007).

Similarly, in the current study an anxious attachment style, especially for males, was positively associated with higher emotion intensity ratings for emotionally close partner interactions but not for extra-dyadic sex or love. These findings are consistent with previous research that finds associations between anxious attachment and higher levels of jealousy (Guerrero, 1998; Sagarin & Guadagno, 2004; Sharpsteen & Kirkpatrick, 1997). They also suggest that when one or both romantic partners hold an anxious attachment style, the risk of jealousy and other negative emotions triggered by any form of relationship non-exclusivity may be higher. Importantly, when compared to securely attached individuals who tend to cope with jealousy by taking constructive action toward improved relationship quality, those with anxious attachment styles tend to cope with jealousy in less functional ways, e.g. with the expression of fierce disapproval and increased surveillance (Buunk, 1997; Gaines et al., 1997; Guerrero, 1998; Guerrero et al., 2005; Sharpsteen & Kirkpatrick, 1997).

There are many other individual characteristics that might shape reactions to romantic non-exclusivity. For example, individuals who are highly sensitive to rejection or low in self esteem may experience more intense emotions in response to any perceived diversion of partner attention (Downey & Feldman, 1996; Nezlek, Kowalski, Leary, Blevins, & Holgate, 1997). When individuals are confronted with an extra-dyadic partner relationship, these individual difference characteristics will interact with contextual variables, such as the perceived attractiveness of rivals, the way in which infidelities are discovered, and the behaviours of involved partners, to shape the resulting emotional experience (Buss, Shackelford, Choe, Buunk, & Dijkstra, 2000; Cann & Baucom, 2004; Dijkstra & Buunk, 2001; Easton et al., 2007; Maner, Miller, Rouby, & Gailliot, 2009; Shackelford et al., 2004). Future research into emotionally close interactions between romantic partners and

others might for example investigate the influence of rival characteristics on expected emotions or their intensity.

Explicit and implicit expectations for romantic exclusivity

Over half of the respondents in this study reported that they had discussed and negotiated explicit agreements regarding relationship exclusivity with current romantic partners. Thirty five percent of respondents reported that these rules had not been discussed and 14% reported that they were 'not sure'. Interestingly, when respondents were asked if it should be necessary to discuss and agree on these types of relationship rules, similar proportions of respondents reported 'yes' (55%), 'no' (28%) and 'not sure' (17%). This suggests that not only do people have implicit beliefs about romantic exclusivity they also have implicit beliefs about the extent to which these need to be spoken about. For some individuals it might be easier to assume shared expectations than to initiate a discussion about exclusivity. Indeed, the most common form of feedback from participants in this study was that the questionnaire alerted them to the possibility that partners might not share exclusivity expectations and that it could be beneficial to have an open discussion about that. Of course, it is not difficult to imagine how some individuals might become upset because a romantic partner raises the issue of negotiated exclusivity rules. In her research on romantic relationship rules, West (2006) discovered an inverse relationship between the importance of particular expectations and the extent to which they were openly discussed.

No sex differences were found in terms of discussed and agreed rules about relationship exclusivity, although there were some sex differences with regard to both exclusivity agreements and implicit expectations. For example, women were more likely than men to report that '*no close friendships or sexual relationships were allowed*' in their current relationship, or that regardless of explicit agreements, this was what they expected which is

interesting in light of the findings for relative distress that suggest greater female sensitivity for partner extra-dyadic friendships, relative to extra-dyadic sex. Overall, these differences point to higher expectations for romantic exclusivity for women than for men, a conclusion consistent with the findings of Boekhout et al (2003). However, it is important to remember that although sex differences were observed, these differences were at either end of a spectrum of exclusivity expectations ranging from relatively high, e.g. no sex or friendship with others allowed (more likely to be reported by women), through to more relaxed, e.g. sex without emotional closeness, or sex and emotional closeness, allowed as long as there is no secrecy (more likely to be reported by men). The majority of men and women reported expectations in one of two similar categories, '*close friendships but no sex*' and '*emotional closeness but no sex*', suggesting that most men and women have similar expectations in regard to relationship exclusivity.

Research strengths and limitations

To date, research investigating sex differences and similarities in emotional responses to extra-dyadic partner relationships has largely compared 'sexual' and 'emotional' infidelities. Little research has investigated the nature of emotional infidelity, except to assume that it involves love. This study confirmed that there are numerous kinds of emotionally close interactions between a romantic partner and someone of the opposite sex that may violate exclusivity expectations and be construed as a betrayal, thereby triggering negative emotions for non-involved partners. However, the current study has several important limitations.

Like most relationship research and particularly research on infidelity, there were methodological constraints that limit the extent to which the findings reflect reality. Just as individuals are wary about reporting on their own extra-dyadic behaviours, they may be just as reluctant to answer questions about hypothetical partner infidelities, particularly if

this raises painful memories or reinforces current relationship concerns. Another problem is the extent to which individuals can reasonably predict how they will feel or act in response to different types of betrayal, or indeed any relationship event.

Further, because the current research relies on hypothetical scenarios, the findings may not reflect actual responses to real extra-dyadic partner involvements (Harris, 2003b). They are at best an indication of predispositions to respond one way or another. Hypothetical scenarios lack highly relevant contextual details which would shape real life emotions and behaviours. For example, they generally lack details about relationship rivals, the history of the relationship and the partners, as well as information about alternative partners. Knowledge that a romantic partner has been confiding with a work colleague may be more threatening if that person is currently single and/or attractive, or if that was in fact the way your own relationship had started. A more promising methodological approach for understanding emotional responses to relationship betrayals and how these might be influenced by personality or relationship variables may be offered by time sampling and diary methods (e.g. Sbarra, 2006; Sbarra & Hazan, 2008). Although this methodology might be more practical for minor relationship disappointments since finding willing participants to fill out diaries while actually experiencing the trauma of a recently discovered infidelity may be more challenging.

In addition to the limitations of hypothetical scenarios for gauging how people will react in real life, forced choice questions are also unrealistic because in real life people do not get to choose between infidelity types and most extra-dyadic partner involvements, at least the relationship threatening variety, involve the risk of sexual and emotional infidelity. A relationship that starts with sex inevitably grows to include some sharing of personal information, and a relationship that starts with the sharing of personal information can evolve to include sex or at least sexual desire. Perhaps at this point in time, the forced choice question has done its job to illustrate statistically significant sex differences in

likely distress for the ‘sexual’ or ‘emotional’ aspects of infidelity. The ongoing challenge for evolutionary researchers is to gain a more fine-grained understanding of how the more distal influence of sex interacts with individual and contextual variables to trigger the many different emotional responses experienced in response to relationship events.

As was the case with Study One, this sample was biased in a number of ways that limit the extent to which findings would generalise to the population. In particular, this sample was very well educated. The majority of respondents (68%) had at least one university degree and a further 18% were enrolled at university. The sample also lacked ethnic diversity with over 90% of respondents from a Caucasian background. Volunteer recruitment via personal email networks might have also led to an over representation of some socio-economic groups and professions. However, the sample was also one of the research strengths. Unlike the majority of evolutionary studies, this study did not rely on university undergraduates. This sample was representative of the adult life span, well experienced in adult romantic relationships and at the time of participation, highly committed to current relationships. From an evolutionary viewpoint, the relationships represented in the current study were reproductively important.

Conclusions

Extra-dyadic behaviours such as confiding in, and seeking support from, another person can trigger jealousy, anger, sadness and anxiety, possibly because they signal that a romantic partner is having emotional needs met outside of the relationship, in much the same way that a sexual infidelity signals that a romantic partner’s sexual needs are being met elsewhere. Although it might be difficult for non-involved partners to accuse involved partners of ‘infidelity’, these emotionally close extra-dyadic involvements may overlap with what Feeney (2009) refers to as “passive disassociation” behaviours e.g. being left out of plans, conversations or disclosures.

Compared to men, women may be more sensitive to, and likely to be more distressed by these forms of extra-dyadic partner emotional closeness. However, individual characteristics may also contribute to how these relationship events are appraised and the intensity of emotions experienced by non-involved partners. People who have high levels of attachment anxiety and trait jealousy are likely to be concerned by partner behaviours such as confiding in and spending time with other people of the opposite sex.

Paradoxically, this sensitivity and associated behaviours such as aggressive communication may reduce relationship satisfaction for partners in ways that increase the likelihood of it happening.

High levels of relationship commitment might be a protective factor against distress when romantic partners are emotionally close to others, as long as that closeness does not involve sex or love. Logically, relationship commitment translates to much higher partner trust in everyday friendships and social interactions, and much greater distress when a partner becomes sexually or romantically involved with someone else. Importantly, as discussed in the final chapter of this thesis, different partner expectations about the extent to which emotional needs should be met exclusively within romantic relationships is something psychologists have to assess and understand when helping distressed couples.

Chapter 10

Summary and Clinical Relevance

It is within the context of our closest relationships that we experience the greatest joy and the most intense emotional pain (Baumeister & Leary, 1995; Leary et al., 2001). When relationship partners act in ways that violate our expectations we can feel betrayed and experience intense emotional distress and confusion. Importantly, feelings of betrayal can signal that a highly valued relationship is less important to one's relational partner, and may be construed as rejection by someone who is loved deeply (Fitness, 2001; Leary et al., 2001).

This thesis explored infidelity, one of the most common and damaging forms of romantic betrayal. The starting point was a review of the literature on infidelity which is dominated by research into extramarital sex and evolutionary research into sex differences for infidelities defined as 'sexual' or 'emotional'. Taking inspiration from Blow and Hartnett's (2005a) definition of infidelity as an act that "constitutes a breach of trust and/or violation of agreed-upon norms (overt and covert) by one or both individuals in that relation to romantic/emotional or sexual exclusivity" (p.191), Study One asked respondents to specify which extra-dyadic behaviours would breach romantic relationship trust. The findings from this study suggested that many individuals have expectations for romantic exclusivity that include more than extra-dyadic sex or love. Indeed, for many individuals, any form of physical or emotional intimacy including confiding in or sharing time with a person of the opposite sex would breach relationship trust. Importantly for this research program, the findings confirmed that a closer investigation of the construct of 'emotional' infidelity would be worthwhile.

Study Two investigated a three component model of extra-dyadic partner involvement; sexual, emotionally close or love. Overall, both males and females reported that

emotionally close extra-dyadic involvements had the potential to elicit distress. Generally, this distress was expected to be lower than that caused by extra-dyadic sex or love, and high levels of relationship commitment appeared to be somewhat protective against emotional distress in response to these types of partner interactions. However, being young, female or having high levels of trait jealousy and/or an anxious attachment style may be risk factors for the experience of emotions such as jealousy, sadness, anger and anxiety, in response to perceived emotional closeness between a romantic partner and someone of the opposite sex. These and other individual characteristics may be important aspects of both clinical assessment and treatment in therapy for couples trying to mend relationships after events construed as betrayals.

Clinical relevance and implications

Understanding the causes, outcomes of and emotional responses to infidelity is critically important for therapists. Indeed, the clinical literature suggests that infidelity is one of the most difficult relationship problems to treat in therapy (Amato & Rogers, 1997; Peluso & Spina, 2008; Spanier & Margolis, 1983; Whisman et al., 1997). However, the current research raises three important issues for clinical practice with individuals and couples in relation to relationship betrayal. First, it underlines the importance of assessing idiosyncratic expectations for romantic exclusivity and how these may have developed, based on developmental and relationship histories. Second, it provides further support for the normalcy of negative emotions such as jealousy, anger, sadness and anxiety in response to all types of unexpected, extra-dyadic partner involvements, not just those that involve sex and romantic love. Third, given the emotional outcomes associated with betrayal and how detrimental these can be for ongoing psychological health, it may be important for psychologists to assess for a history of betrayal in much the same way as they do for trauma. These points are discussed further in the following sections.

Assessing and negotiating expectations for romantic exclusivity

Individuals bring to their romantic relationships very different expectations for exclusivity, and more importantly, they may assume that these expectations are shared by others. Thus when a partner initiates or maintains close connections with other people, such connections may be construed as betrayals and elicit distressing emotions. Clearly, couples would benefit from earlier and more explicit conversations about exclusivity expectations in much the same way that they might discuss topics such as where to live and whether to have children. Approximately half of the respondents in Study Two indicated that within the context of their current romantic relationship, they had not discussed and agreed to rules about relationship exclusivity or they were 'not sure' if they had, suggesting that in a significant number of romantic relationships there is room for more clarity around extra-dyadic relationships.

Certainly, helping relationship partners to identify and make explicit their relationship expectations is one of the ways therapists can assist distressed couples. When partners disagree about what needs should be met exclusively within a romantic relationship, therapists might help them to understand how these expectations were formed and if in the current relationship context they are appropriate. For example, a childhood memory of a mother who left the family to be with a 'friend' might have shaped a particularly biased and unsupportive view of cross-sex friendships. Making expectations explicit, discussing differences and negotiating rules that both partners are prepared to live by minimises the chance of serious betrayals. It also provides an opportunity for couples to practise more open and empathic communication, which contributes to relationship satisfaction and commitment (Givertz, Segrin, & Hanzal, 2009; Gottman & Krokoff, 1989).

The treatment of romantic jealousy and other distressing emotions

Implicit expectations about relationship exclusivity are not the only kinds of beliefs that individuals bring to their relationships; they, also bring beliefs about the function and expression of emotions. These emotion ‘scripts’ include expectations for how emotional experiences will unfold, and how they contribute to ongoing relationship events in more or less constructive ways (Fehr & Harasymchuk, 2005; Fitness, 2001; Fitness & Fletcher, 1993; Guerrero, 1998; Guerrero et al., 2005). For example, jealous individuals may engage in behaviours that are relatively destructive for the relationship such as yelling, making accusations or spying on partners. In contrast, for other individuals, jealousy may encourage pro-relationship behaviours such as spending more time with partners and more open expressions of love.

More generally, individuals and societies tend to judge different types of emotion as more or less appropriate, in different contexts. Distressing emotions, and particularly jealousy, are typically regarded as negative experiences, but they may also be appraised as signs of personal weakness or relationship problems (Guerrero et al., 2005). This type of secondary appraisal has the potential to cause further distress. For example, a belief that jealousy is a ‘bad’ emotion that we should be able to ‘control’ is likely to trigger other emotions such as shame or guilt. Indeed, in some treatment models such as Acceptance and Commitment Therapy, a key therapeutic goal is to change the relationship individuals have with their emotions such that they are noticed, accepted and not judged, thereby reducing the potential for secondary distress (Harris, 2008; Hayes, Strosahl, & Wilson, 1999).

There are a number of ways in which therapists can help when jealousy is causing individual or relationship distress. These include validation of the normalcy of jealousy when individuals perceive that a highly valued relationship or important aspects of it are threatened by a rival. Simply explaining the evolutionary theory of romantic jealousy as a psychological mechanism that evolved to help us protect relationships that were critical for

our survival and reproductive success, could provide relief from secondary distress. It might also be emphasised that because acceptance by others was so critical for survival, humans evolved to be highly sensitive to any cue of relationship devaluation and that emotions such as hurt and jealousy signal that important relationships need our attention (Baumeister & Leary, 1995; Leary & Baumeister, 2000). Relationship partners can be reminded that some romantic jealousy can be constructive because it communicates love and commitment to the relationship. Indeed, sometimes romantic partners do things to deliberately elicit partner jealousy in order to feel loved or secure, while at other times inciting jealousy might be a form of revenge (Fleischmann, Spitzberg, Anderson, & Roesch, 2005). Therapists can help couples to re-evaluate jealousy and the role it plays in a particular relationship.

Another challenge for therapists and their clients is to tease apart what might be normal 'state' jealousy caused by the kinds of partner interactions that may be reasonably perceived as relationship threats, and what might be a function of 'trait' or suspicious jealousy. In the case of jealousy in response to real relationship threats, the therapeutic approach may be very dependent on the nature of the threat. For emotionally close, extra-dyadic partner interactions, more open communication and negotiation of some explicit rules toward increased relationship security may be enough. In contrast, extra-dyadic sex and/or love may call for the types of infidelity treatments recommended in the clinical literature (e.g. Adams & Jones, 1997; Gordon et al., 2005, 2008; Peluso & Spina, 2008; Shaw, 1997; Young, 2006). For example, Gordon et al. (2005) recommend a three-stage couple treatment for infidelity designed to address the cognitive, emotional, and behavioural aspects of the betrayal. Stage one, aims to contain the damage from intense and volatile emotions. The authors argue that overwhelming emotions interfere with attempts to process what has happened and to understand why. They also encourage therapists to conceptualise infidelity as a traumatic event, which helps both partners to

accept volatile and intense emotions as a normal reaction. The therapeutic aims of the next stage are twofold. First, the involved partner is encouraged to take responsibility for the decisions that led to and maintained the extra-dyadic involvement, and second, both partners are supported in efforts to understand the contributing factors, including how the non-involved partner may have contributed to the context for those decisions. Stage three is about re-evaluating the relationship, including whether it will continue and what changes need to be made for both partners to want to be in the relationship. It is at this stage that the process of forgiveness is discussed. The authors stress that forgiveness is difficult in earlier stages of therapy when emotions such as anger and hurt are intense and volatile.

Couple distress in relation to suspicious rather than reactive jealousy i.e. in response to imagined rather than real relationship threats, might reflect an insecure attachment style in one or both partners, indicating a role for treatment interventions such as Emotion Focused Therapy, that aim to build a more secure attachment bond between relationship partners (Johnson, 2003; Johnson & Greenman, 2006). Cognitive behavioural treatment approaches aim to restructure unhelpful implicit beliefs such as 'if my partner confides in any one else but me, he must not love me any more'. These treatment approaches might also involve exposure to mildly threatening partner interactions with the opportunity to practise 'reasonable' jealousy or response prevention (De Silva & Marks, 1994). Thus, educating clients about the role of jealousy, different types of jealousy and how they relate to relationship quality and commitment is a good starting point in treatment where jealousy is a presenting problem. Importantly, therapists can help clients who experience high levels of jealousy act in ways that are more constructive for the relationship.

In the current research, higher levels of relationship commitment were associated with more intense emotional responses to partner extra-dyadic love or sex, but not to extra-dyadic emotional closeness, suggesting that relationship commitment may be protective against distress for partner involvements such as close friendships. This raises the

importance of assessing relative commitment levels in couple therapy. Apparently high suspicious jealousy in one partner may to some extent reflect relationship ambivalence in the other.

Betrayal is a trauma that may be implicated in other psychological problems

Betrayal involves a sense of being harmed by a person who is trusted and assumed to be loyal. Like trauma in general, close relationship betrayals of any kind are typically unexpected events that cause surprise and shock. As the reality of a betrayal sets in, individuals can experience trauma like symptoms including feelings of lost control, intense emotional reactions, instability and confusion that can last over a long period of time (Cano et al., 2004; Gordon et al., 2005). Not only are the bonds of trust underpinning the relationship broken but these bonds may be replaced by psychological barriers that affect not only the relationship in which the betrayal occurred but also future relationships. As mentioned, in some treatment models serious betrayals have been conceptualised as attachment injuries because they call into question the safety of the relationship and relationships in general. These therapeutic approaches attempt to foster or rebuild a secure emotional bond between partners, contributing to psychological well-being and increased resilience (Crawley & Grant, 2005; Makinen & Johnson, 2006; Naaman et al., 2005).

Given the psychological impact of betrayals, it is surprising that assessment for them is not a more prominent feature in psychological assessments for other presenting psychological problems such as anxiety, depression, anger and aggression (Beach et al., 1985; Cano et al., 2004; Shackelford et al., 2000). For example, using a number of case studies Rachman (2010) illustrated how betrayals can feature prominently in the development of obsessive compulsive behaviours and PTSD like symptoms. Perhaps, compared to other distressing and relatively common life events such as the death of a parent, betrayals do not attract enough attention as antecedents to psychological conditions

such as depression. Like trauma and loss, betrayals such as infidelity have the potential to change the way individuals make meaning from their lives and therefore betrayals, regardless of how long ago they occurred, may be a worthy focus of therapy.

Conclusions

The current research program started with the investigation of non-exclusive romantic partner interactions that would breach relationship trust, confirming that romantic betrayals involving perceived rivals extend beyond extra-dyadic sex and/or love. For many individuals relationship trust would be damaged if a partner engaged in emotionally close interactions such as confiding, sharing time and seeking another for emotional support. This is important considering that ever-increasing gender equality, at least in modern western societies, translates into many more opportunities for friendships and emotional closeness between men and women as they interact in a variety of contexts, including education and work. There is more to learn about the rules for these relationships and the potential for misperceptions not only by romantic partners who might construe partner extra-dyadic closeness as relationship threats, and a partner's opposite sex friends as rivals, but for the opposite-sex friends (Reeder, 2000; Weger Jr & Emmett, 2009; Williams, 2005). For example, there is some evidence that men and women differ in their motivations for cross-sex friendship, with men being more open to a sexual involvements than women (Bleske-Rechek & Buss, 2001).

By investigating emotionally close extra-dyadic partner involvements as a third type of 'infidelity' and comparing these to extra-dyadic sex and love, this research expanded the construct of 'emotional infidelity' and began to map the territory of distress represented by different types of extra-dyadic intimacy. Although there is considerable scope for further investigation of the results of this research, these initial findings suggest that being female, young or having an anxious attachment style, and/or high levels of trait jealousy might

increase the risk of emotional distress in response to partner extra-dyadic emotional closeness, while high levels of relationship commitment may be a protective factor.

Importantly for therapists, this research reinforces the idiosyncratic nature of expectations for relationship exclusivity and how when these are transgressed non-involved partners may feel betrayed. Rather than impose societal views about what constitutes infidelity, therapists need to assess this in the context of each relationship, taking care to understand how these expectations might have developed for the individuals involved, before deciding what aspects of the relationship need support and where to focus clinical interventions.

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Appendix 1: Materials Study One

Recruitment Email

Exclusivity in Romantic Relationships

Dear Friends and Colleagues

I am looking for a community sample for my Psychology Research Project, which explores expectations about exclusivity in romantic relationships. I need participation from men and women over the age of 18 years, who may or may not be currently in a committed romantic relationship.

The research is being conducted to meet requirements for the Doctor of Clinical Psychology Degree at Macquarie University.

You will be asked to complete an anonymous questionnaire that will take approximately 20 minutes.

If you would like to participate please go to the following web address <http://laurel.ocs.mq.edu.au/~tmills> All participants will have the chance to win a \$50 prize. If you would prefer to complete the questionnaire on paper, please call 02 93323543 to leave your name and address. The questionnaire, a return stamped addressed envelope and an entry card for the prize draw will be sent to you immediately.

Please forward this email on to your friends and acquaintances I would like to recruit at least, 200 people from the community.

Remember it is completely anonymous.

Thanks

Tracey Mills

Exclusivity and Trust in Romantic Relationships

You are invited to participate in a study exploring expectations about exclusivity in romantic relationships. The purpose of the study is to gain greater understanding about what it takes to breach romantic relationship trust. **This is an anonymous questionnaire.**

The study is being conducted by Tracey Mills (phone 02 93323543) to meet the requirements for the degree of Doctor of Clinical Psychology under supervision of Dr Julie Fitness (phone 02 98508015) of the School of Psychology at Macquarie University, Sydney. This research is supported by a Department of Psychology, Postgraduate Research Grant. If you decide to participate you will need to be proficient in English. You will be asked to complete an anonymous questionnaire that will take between 15 and 30 minutes. No identifying personal details will be collected. The researcher will be unable to match any individual participant with their responses. Tracey Mills (researcher) and Dr Julie Fitness (research Supervisor) will be the only individuals who will have access to the data. The questionnaire may be completed via the web <http://laurel.ocs.mq.edu.au/~tmills> or in a pencil and paper format.

If you decide to participate you are free to withdraw from further participation at any time. Students receiving credit points for participating will not have credit points forfeited in the event that they choose to withdraw from the research. Macquarie University students taking part in the study can read a summary of research findings posted on the Psychology Department Undergraduate notice board after June 2008. This summary will also be available for all other participants by contacting the researcher at tracey.mills@students.mq.edu.au or by phone on 0293323543.

As some of the questions ask you to consider aspects of your current romantic relationship or romantic relationships in general, you may find it easier to complete the questionnaire at a time when you have privacy. You may find that some of the questions raise painful memories or thoughts for example, one question asks you to imagine what a romantic partner would have to do to breach your trust. If this happens and you do not wish to proceed, do not. In the event that you become upset and would like to seek counseling support, the following community services are recommended, The Macquarie University Counselling Service (phone 98507497, Lifeline telephone counseling service (phone 131114) or Relationships Australia (phone 1300 364 277).

First year Psychology students will receive a 30 minutes course credit for participating. Participants who are not able to claim course credits will have the opportunity to go in a draw for a \$50 prize. By entering the prize draw, you cannot be identified with your questionnaire responses.

The ethical aspects of this study have been approved by the Macquarie University Ethics Review Committee (Human Subjects). If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through its Secretary (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Appendix 2: Materials Study Two

Recruitment Email

Expectations of Exclusivity Romantic Relationships

Dear friends and associates

I am looking for a community sample for my Psychology Research Project, which explores expectations about exclusivity in romantic relationships. Respondents need to be in a current heterosexual relationship. This includes all types of romantic relationships e.g. dating, engaged, married, de-facto.

The research is being conducted to meet requirements for the Doctor of Clinical Psychology Degree at Macquarie University.

You will be asked to complete an ANONYMOUS questionnaire that will take approx. 15 minutes. If you would like to participate please go to the following web address:<http://laurel.ocs.mq.edu.au/~tmills>

Or send me your name and address and a survey with stamped addressed return envelope will be sent immediately: email: tracey.mills@students.mq.edu.au

Please forward this email on to your friends and acquaintances I would like to recruit at least 200 people from the community. Data collection will close on March 1st 2010.

Remember it is completely anonymous.

Thanks for your assistance

Tracey Mills

Information Sheet: Exclusivity in Romantic and Sexual Relationships

You are invited to participate in a study exploring perceptions and expectations of exclusivity in romantic relationships. The study is being conducted by Tracey Mills (phone no.02 93323543) to meet the requirements for the degree of Doctor of Clinical Psychology under supervision of Dr Julie Fitness (Phone No 02 98508015) of the School of Psychology at Macquarie University.

To participate, you need to be in a current heterosexual romantic relationship (e.g. a dating, de-facto, engaged or married relationship) and proficient in English. You will be asked to complete an anonymous questionnaire that will take approximately 20 minutes. No identifying personal details will be collected. The researcher will be unable to match any individual with their responses. The researcher, Tracey Mills and her research Supervisor, Dr Julie Fitness will be the only individuals who will have access to the data. The questionnaire may be completed via the web [http:// laurel.ocs.mq.edu.au/~tmills](http://laurel.ocs.mq.edu.au/~tmills) or in pencil and paper format.

If you decide to participate you are free to withdraw from further participation at any time. Students receiving credit points for participating will not have these points forfeited in the event that they choose to withdraw from the research. Macquarie University students taking part in the study can read a summary of research findings posted on the Psychology Department Undergraduate notice board after July 2010. These will also be available for all participants by contacting the researcher at tracey.mills@students.mq.edu.au.

As some questions ask you to consider aspects of your current romantic relationship or romantic relationships in general, you may find it easier to complete the questionnaire at a time when you have privacy. You may find that some questions raise painful memories about relationship betrayal. If this happens and you do not wish to proceed, do not. In the event that you become upset and would like to seek counseling support, the following community services are recommended; The Macquarie University Counselling Service, (phone 98507497), Lifeline telephone counselling service (phone 131114) or Relationships Australia (phone 1300364277).

The ethical aspects of this study have been approved by the Macquarie University Ethics Review Committee (Human Subjects). If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through its Secretary (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome

Appendix 3: Descriptive Data Study Two

Mean Emotion Intensity Ratings by Type of Extra-dyadic Involvement

Situation Emotion	Total	Female	Male	Gender differences
Emotion Category	(<i>N</i> = 226)	(<i>N</i> = 134)	(<i>N</i> = 92)	<i>F</i> (<i>p</i> value)
Deep conversation and confiding				
Frustration, Anger, Rage	2.6	2.7	2.4	1.95 (.164)
Sadness, Hurt, Rejection	3.1	3.4	2.6	10.5 (.001)**
Worry, Anxiety, Fear	3.2	3.5	2.8	9.7 (.002)**
Jealousy	3.5	3.8	3.1	9.1 (.003)**
Sex and sexual attraction				
Frustration, Anger, Rage	5.5	5.7	5.2	5.9 (.016)**
Sadness, Hurt, Rejection	5.8	6.1	5.5	9.9 (.002)**
Worry, Anxiety, Fear	5.1	5.4	4.7	8.5 (.004)**
Jealousy	5.4	5.5	5.1	2.8 (.093)
Romantic attraction				
Frustration, Anger, Rage	4.8	5.2	4.4	10.4 (.001)**
Sadness, Hurt, Rejection	5.6	6.0	5.1	18.0 (<.0005)**
Worry, Anxiety, Fear	5.5	5.9	5.0	16.1 (<.0005)**
Jealousy	5.4	5.8	4.8	18.3 (<.0005)**
Sex and sharing personal details				
Frustration, Anger, Rage	6.1	6.6	5.8	5.9 (.016)**
Sadness, Hurt, Rejection	6.4	6.6	6.1	8.9 (.003)**
Worry, Anxiety, Fear	5.8	6.1	5.6	10.0 (.002)**
Jealousy	5.9	6.1	5.6	7.1 (.008)**
Enjoyed company and spent time				
Frustration, Anger, Rage	3.0	3.3	2.4	18.1 (<.0005)**
Sadness, Hurt, Rejection	3.4	4.0	2.5	38.2 (<.0005)**
Worry, Anxiety, Fear	3.6	4.0	2.8	25.1 (<.0005)**
Jealousy	3.8	4.3	3.0	28.1 (<.0005)**
Feelings of love				
Frustration, Anger, Rage	5.1	5.6	4.5	20.6 (<.0005)**
Sadness, Hurt, Rejection	6.1	6.5	5.4	36.0 (<.0005)**
Worry, Anxiety, Fear	5.7	6.1	5.1	20.0 (<.0005)**
Jealousy	5.6	5.9	5.1	14.3 (<.0005)**

Pearson correlations for independent variables and emotion intensity ratings for jealousy, anger, sadness and anxiety in response to sexual, emotionally close and love betrayal types.

Emotion Type	Relation Commit.	Comfort Close.	Anxiety Abandon	Behave. Jealousy	Cog. Jealousy	Emotion. Jealousy	Age
Sexual betrayal							
Jealousy	.273**	.095	.100	.119	.083	.262**	-.155*
Anger	.262**	-.006	.051	.124	.080	.305**	-.219**
Sadness	.303**	-.007	-.002	.032	-.064	.288**	-.110
Anxiety	.336**	.158*	.071	.089	.042	.274**	-.106
Emotion-close							
Jealousy	.031	-.032	.267**	.357**	.312**	.478**	-.342**
Anger	-.014	-.104	.276**	.340**	.273**	.417**	-.255**
Sadness	.046	-.039	.267**	.276**	.196**	.423**	-.199**
Anxiety	.073	.029	.369**	.314**	.282**	.417**	-.296**
Love betrayal							
Jealousy	.305**	.082	.128	.144*	.076	.343**	-.223**
Anger	.242**	-.002	.133**	.220*	.116	.337**	-.239**
Sadness	.283**	.034	.057	.103	-.006	.380**	-.205**
Anxiety	.400**	.149	.061	.180**	.073	.359**	-.195**

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Thank you for participating!

1. Are you a male or a female? (Please tick one)
 - a. Male
 - b. Female
2. Please write your age in years.....
3. Which category best describes your ethnic background?
 - c. Aboriginal or Torres Strait Islander
 - d. Asian
 - e. White Caucasian
 - f. Other
4. Which category best describes your current level of education?
 - g. High school
 - h. High school and tertiary (non-university training)
 - i. Enrolled in a university degree
 - j. Completed a degree or post graduate degree
5. How long have you been in your current romantic relationship?
Please write an estimate of yearsand/ or months.....
6. Which category best describes the nature of your relationship?
 - k. Casual (not exclusive)
 - l. Dating exclusively
 - m. Co-habiting ('de-facto')
 - n. Engaged
 - o. Married
7. Which category best describes your status as a parent?
 - p. No children
 - q. Young child/children
 - r. Teenage child/ children
 - s. Adult child/children
8. How religious would you say that you are? (Please circle your response on the scale below)

1	2	3	4	5	6	7
Not religious			Moderately			Very religious

9. Thinking about your current romantic relationship please indicate the degree to which you agree to each of the following statements, **where 1= Do not agree and 7 = Agree Completely (Please circle only one number for each statement)**

a. I want our relationship to last for a very long time

(Do not Agree) 1 2 3 4 5 6 7 (Agree Completely)

b. I am committed to maintaining my relationship with my partner.

(Do not Agree) 1 2 3 4 5 6 7 (Agree Completely)

c. I would not feel very upset if our relationship were to end in the near future.

(Do not Agree) 1 2 3 4 5 6 7 (Agree Completely)

d. It is likely that I will date someone other than my partner within the next year.

(Do not Agree) 1 2 3 4 5 6 7 (Agree Completely)

e. I feel much attached to our relationship and very strongly linked to my partner.

(Do not Agree) 1 2 3 4 5 6 7 (Agree Completely)

f. I want our relationship to last forever.

(Do not Agree) 1 2 3 4 5 6 7 (Agree Completely)

g. I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

(Do not Agree) 1 2 3 4 5 6 7 (Agree Completely)

10. In this part of the questionnaire we would like you to consider particular relationship scenarios and imagine **how you would feel in that situation**. For each scenario rate the intensity with which you would experience each of the emotion groups presented on a scale of 1 to 7, **where 1= not at all, 4 = with moderate intensity and 7 = with extreme intensity**. Please don't spend too much time analyzing the situations we are interested in your immediate reactions. (Please circle only one number for each statement).

The following scenario provides an example: Your romantic partner tells you that he or she has to work all weekend when you had both planned to go away together.

I would feel.....

i. Frustration, Anger or Rage

(Not at all) 1 2 3 4 5 6 7 (Extreme)

ii. Sadness, Hurt or Rejection

(Not at all) 1 2 3 4 5 6 7 (Extreme)

iii. Worry, Anxiety or Fear

(Not at all) 1 2 3 4 5 6 7 (Extreme)

All of us have expectations about how our romantic partners should behave when they are with people of the opposite sex. Please read the following scenarios and as in the example above, imagine to what extent you might feel each of the emotional groups presented, **where 1= not at all, 4 = with moderate intensity and 7 = with extreme intensity, (circle only one number for each statement).**

- a) Your romantic partner tells you about a deep conversation that they had with an attractive person of the opposite sex. It was a personal conversation involving confiding about life events.

I would feel.....

- i. Frustration, Anger or Rage

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- ii. Sadness, Hurt or Rejection

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- iii. Worry, Anxiety or Fear

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- b) Your partner tells you about a sexual encounter they had with someone of the opposite sex. The sexual encounter was based on an unexpected sexual attraction.

I would feel...

- i. Frustration, Anger or Rage

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- ii. Sadness, Hurt or Rejection

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- iii. Worry, Anxiety or Fear

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- c) Your partner tells you about a romantic attraction they feel toward someone of the opposite sex. They believe that these feelings might be mutual.

I would feel....

- i. Frustration, Anger or Rage

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- ii. Sadness, Hurt or Rejection

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- iii. Worry, Anxiety or Fear

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- d) Your partner tells you about a relationship that they have been having with someone of the opposite sex that involves sex and the mutual sharing of personal information.

I would feel....

- i. Frustration, Anger or Rage

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- ii. Sadness, Hurt or Rejection

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- iii. Worry, Anxiety or Fear

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- e) Your partner tells you about a day spent with an attractive person of the opposite sex. They did nothing in particular; they just enjoyed each other's company.

I would feel.....

- i. Frustration, Anger or Rage

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- ii. Sadness, Hurt or Rejection

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- iii. Worry, Anxiety or Fear

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- f) Your partner tells you about unexpected feelings of 'love' that they have for someone of the opposite sex.

I would feel.....

- i. Frustration, Anger or Rage

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- ii. Sadness, Hurt or Rejection

(Not at all) 1 2 3 4 5 6 7 (Extreme)

- iii. Worry, Anxiety or Fear

(Not at all) 1 2 3 4 5 6 7 (Extreme)

11. Please answer the following questions with your current romantic partner in mind. Imagine that you discover your romantic partner is involved with another person of the opposite sex.

- a) What would distress or upset you more? (Circle only one please)

- i. Knowing that your partner and this person have sex together, or

- ii. Knowing that your partner and this person spend time together confiding in one another.

- b) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this person have sex together, or
 - ii. Knowing that your partner and this person are forming a close emotional attachment.
- c) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this person have sex together, or
 - ii. Knowing that your partner and this person prefer to spend their leisure time together.
- d) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this other person have sex together, or
 - ii. Knowing that your partner and this person are falling 'in love'
- e) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this other person have sex together, or
 - ii. Knowing that your partner and this person seek each other for emotional support.
- f) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this other person have sex together, or
 - ii. Knowing that your partner and this person are becoming best friends.
- g) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this person are falling 'in love' or
 - ii. Knowing that your partner and this person are becoming best friends.
- h) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this person spend time together confiding in one another, or
 - ii. Knowing that your partner and this person are falling 'in love'
- i) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this person have sex together and have an emotional attachment, or
 - ii. Knowing that your partner and this person are falling 'in love'
- j) What would distress or upset you more? (Circle only one please)
- i. Knowing that your partner and this person have sex together and have an emotional attachment, or
 - ii. Knowing that your partner and this person are falling 'in love'

12. In this question we are interested in your own experience of romantic betrayal.

- a) Have you ever experienced a romantic betrayal involving another person of the opposite sex?
 - i. Yes (once)
 - ii. Yes (more than once)
 - iii. No (please proceed to Question 13)

- b) If **YES**, did you experience a romantic relationship betrayal in your current relationship?
 - i. Yes
 - ii. No

- c) If **YES**, and thinking about your most recent experience of romantic betrayal, to the best of your knowledge which category **BEST** describes the type of relationship that your partner had with the other person?
 - i. Sexual intimacy
 - ii. Emotional intimacy
 - iii. Sexual and emotional intimacy
 - iv. Love
 - v. Other (please describe in this space)

13. Please answer this question with your current romantic partner in mind. Imagine that your partner informs you of an interaction with another person of the opposite sex. Please indicate on the scale provided the extent to which you believe each type of interaction would be a breach of your trust. Where, 1 = no breach of trust, 5 = moderate breach, and 9 = serious breach of trust

a) Passionate kissing.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

b) Confiding in the other about important personal details or life events.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

c) Falling in love after a passionate sexual relationship.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

d) Having a sexual experience together that did not include intercourse.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

e) Spending the night together in the same bed without sexual contact.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

f) Falling 'in love' without any sexual contact.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

g) Sexual intercourse after heavy drinking.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

h) Flirting

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

i) A casual dinner together after work

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

j) Spending time together for no particular reason.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

k) Discussing conflicted or intimate aspects of your relationship.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

l) Having a sexual relationship with little emotional involvement.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

m) Developing a non-sexual relationship characterized by emotional sharing.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

n) Developing a close friendship based around shared interests or work.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

o) Doing things together such as a specific activity or shared interest.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

p) Paying for sex or an escort.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

q) Getting together to do a specific activity e.g. to play tennis, run, discuss an interest.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

r) Choosing to spend time together when you had nothing to do.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

s) Communication of a sexual nature, with no physical contact.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

t) Frequent conversations, sharing emotions and ideas

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

u) An ongoing relationship that is both sexually and emotionally involved.

1	2	3	4	5	6	7	8	9
No breach			Moderate breach					Serious breach

14. In this question we are interested in the rules that you and your partner have discussed and agreed to about involvement with people of the opposite sex, i.e. the extent to which you or your partner are free, or not, to be close with people of the opposite sex. We are also interested in your expectations about this, regardless of any specific agreements you and your partner have made.

a) Have you and your partner discussed and agreed to any rules about relationship exclusivity?

1. Yes
2. Not sure (proceed to Q14c)
3. No (proceed to Q14c)

b) If YES, please tick the category below which BEST reflects your relationship agreement

1. Close cross-sex friendships are allowed, sexual relationships are not.
2. There can be sex but no emotional closeness with others.
3. There can be emotional closeness but no sex with others.
4. Sex and emotional closeness with others are allowed provided there is no secrecy between the two of you.
5. All types of relationship including 'romantic love' are possible as long as your (the primary) relationship and family stays intact.

- c) Please tick the category below which BEST reflects your own expectations about relationship exclusivity.
1. Close cross-sex friendships are allowed, sexual relationships are not.
 2. There can be sex but no emotional closeness with others.
 3. There can be emotional closeness but no sex with others.
 4. Sex and emotional closeness with others are allowed provided there is no secrecy between the two of you.
 5. All types of relationship including 'romantic love' are possible as long as your (the primary) relationship and family stays intact.
- d) Do you think it should be necessary to discuss and agree on these types of relationship rules or expectations? (Tick only one please)
1. Yes
 2. No
 3. Not sure

15. The statements below concern how you feel in intimate relationships. We are interested in how you generally experience relationships, not just in what is happening in your current relationship. Respond to each statement by circling one number on the 7 –point scale to indicate how much you agree or disagree with the, where 1 = Strongly Disagree and 7 = Strongly Agree

a) I find it difficult to depend on others.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

b) Sometimes people are scared away by my wanting to be too close to them.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

c) Love partners often want me to be more intimate than I feel comfortable being.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

d) I m nervous when any one gets too close.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

e) I find that others are reluctant to get as close as I would like.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

f) I often worry that my partner won't want to stay with me.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

g) I feel comfortable having other people depend on me.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

- h) I am somewhat uncomfortable being close to others.
 (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- i) I find it relatively easy to get close to others.
 (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- j) I find it easy to trust others.
 (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- k) I feel comfortable depending on other people.
 (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- l) I don't often worry about someone getting too close to me.
 (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- m) I often worry that my partner doesn't really love me.
 (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- n) I want to merge completely with another person.
 (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)
- o) I don't often worry about being abandoned.
 (Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

16. Please answer the following questions with your current romantic partner in mind. This person is referred to as X.

How often do you have the following thoughts about X? Please circle one number between 1 and 7 on each scale **where, 1= never and 7= all the time**

- a) I suspect that X is secretly seeing someone of the opposite sex.
 (Never) 1 2 3 4 5 6 7 (All the Time)
- b) I am worried that some member of the opposite sex may be chasing after X
 (Never) 1 2 3 4 5 6 7 (All the Time)
- c) I suspect that X may be attracted to someone else
 (Never) 1 2 3 4 5 6 7 (All the Time)

d) I suspect that X may be physically intimate with another member of the opposite sex behind my back

(Never) 1 2 3 4 5 6 7 (All the Time)

e) I think that some members of the opposite sex may be romantically interested in X

(Never) 1 2 3 4 5 6 7 (All the Time)

f) I am worried that someone of the opposite sex is trying to seduce X

(Never) 1 2 3 4 5 6 7 (All the Time)

g) I think that X is secretly developing an intimate relationship with someone of the opposite sex

(Never) 1 2 3 4 5 6 7 (All the Time)

h) I suspect that X is always thinking about members of the opposite sex

(Never) 1 2 3 4 5 6 7 (All the Time)

How would you emotionally react to the following situations? Please circle one number between 1 and 7 on each scale **where, 1= very pleased and 7= very upset**

i) X comments to you to you on how good looking someone of the opposite sex is.

(very pleased) 1 2 3 4 5 6 7 (very upset)

j) X shows a great deal of interest or excitement in talking to someone of the opposite sex.

(very pleased) 1 2 3 4 5 6 7 (very upset)

k) X smiles in a very friendly manner to someone of the opposite sex.

(very pleased) 1 2 3 4 5 6 7 (very upset)

l) A member of the opposite sex is trying to get close to X all the time.

(very pleased) 1 2 3 4 5 6 7 (very upset)

m) X is flirting with someone of the opposite sex.

(very pleased) 1 2 3 4 5 6 7 (very upset)

n) Someone of the opposite sex is dating X.

(very pleased) 1 2 3 4 5 6 7 (very upset)

- o) X hugs and kisses someone of the opposite sex.
 (very pleased) 1 2 3 4 5 6 7 (very upset)
- p) X works very closely with a member of the opposite sex.
 (very pleased) 1 2 3 4 5 6 7 (very upset)

How often to you engage in the following behaviours? Please circle one number between 1 and 7 on each scale, **where 1= never and 7= all the time**,

- q) I look through Xs draws, handbag, email, or pockets
 (Never) 1 2 3 4 5 6 7 (All the Time)
- r) I call X unexpectedly, just to see if he or she is there.
 (Never) 1 2 3 4 5 6 7 (All the Time)
- s) I question X about previous or present romantic relationships
 (Never) 1 2 3 4 5 6 7 (All the Time)
- t) I say something nasty about someone of the opposite sex if X shows an interest in that person
 (Never) 1 2 3 4 5 6 7 (All the Time)
- u) I question X about his or her telephone calls
 (Never) 1 2 3 4 5 6 7 (All the Time)
- v) I question X about his or her whereabouts
 (Never) 1 2 3 4 5 6 7 (All the Time)
- w) I join in whenever I see X talking to a member of the opposite sex
 (Never) 1 2 3 4 5 6 7 (All the Time)
- x) I pay a surprise visit just to see who is with him or her
 (Never) 1 2 3 4 5 6 7 (All the Time)

Thank you for participating. We hope you found it interesting.

QUESTIONNAIRE

Part One

1. Are you a male or a female?

- Male
 Female

2. Please write your age in years only.

3. What is your highest educational attainment?

Please tick one only.

- Secondary education only
 Secondary education plus non university training
 University or post graduate degree

4. Which of the following categories best describes your ethnicity?

Please tick ONE only.

- Aboriginal or Torres Strait Islander
 Asian
 African
 Indian/ Pakistani
 Middle Eastern
 Pacific Islander
 White Caucasian
 Other

5. How many brothers and sisters do you have?

Please tick ONE only.

- None
 One
 Two
 Three
 More than three

6. Which of the following best describes your place in the family when you were growing up?

- Oldest child
 A middle child
 Youngest child

7. What TWO roles are most important to you at this current stage in your life?

Please tick TWO only.

- Being a student
- Being a parent
- Being a professional or manager
- Being an employee or trainee
- Being a romantic partner
- Being a spouse
- Being son or daughter
- Being a brother or sister
- Being a primary care giver (e.g. for a child, parent or other family member)

8. Do you have children?

- Yes
- No

9. If yes, please use the space below to indicate the sex and current age of each of your children. Please indicate if any of your children are stepchildren.

10. Which category best describes your current romantic relationship status? Please tick one only.

- Single
- Boyfriend or girlfriend
- Living together
- Engaged
- Married
- Remarried
- Widow or widower
- Separated or divorced

11. If you are currently in a committed romantic relationship please indicate below how long have you been involved with this person? If you are **not** in a relationship please proceed to **Part Two** of the questionnaire.

Years.....Months.....

12. Is this a heterosexual relationship? Please tick one only.

- Yes
- No

13. Please indicate the degree to which you agree with each of the following statements regarding your current relationship.

Please circle ONE answer for each statement.

a) My partner fulfills my needs for intimacy (sharing personal thoughts, secrets, etc.)

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

b) My partner fulfills my needs for companionship (doing things together, enjoying each other's company, etc.)

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

c) My partner fulfills my sexual needs (holding hands, kissing, etc.)

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

d) My partner fulfills my needs for security (feeling trusting, comfortable in a stable relationship, etc.)

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

e) My partner fulfills my needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.)

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

14. For the following statements indicate the extent to which you agree by circling one number on the scale.

Where 1= Do Not Agree and 9 = Agree Completely

a) I feel satisfied with our relationship

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

b) My relationship is much better than others' relationships.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

c) My relationship is close to ideal.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

d) Our relationship makes me very happy.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

e) Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

15. Please indicate the degree to which you agree with each statement regarding the fulfillment of each need in alternative relationships (e.g., being with another partner, friends, family).

Please circle ONE answer for each statement.

a) My needs for intimacy (sharing personal thoughts, secrets, etc.) could be fulfilled in alternative relationships.

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

b) My needs for companionship (doing things together, enjoying each other's company, etc.) could be fulfilled in alternative relationships.

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

c) My sexual needs (having sex with, kissing, etc.) could be fulfilled in alternative relationships.

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

d) My needs for security (feeling trusting, comfortable in a stable relationship, etc.) could be fulfilled in alternative relationships.

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

e) My needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.) could be fulfilled in alternative relationships

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

16. For the following statements indicate the extent to which you agree by circling one number on the scale.

Where 1= Do Not Agree and 9 = Agree Completely

a) The people other than my partner with whom I might become involved are very appealing.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

b) My alternatives to our relationship are close to ideal (dating another, spending time with friends or on my own etc)

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

c) If I were not with my partner I would do fine, I would find another appealing person to be with.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

d) My alternatives are attractive to me (being with another partner, spending time with friends or on my own, etc.).

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

e) My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

17. Please indicate the degree to which you agree with each of the following statements regarding your current relationship.

Please circle ONE answer for each statement.

a) I have invested a great deal of time in our relationship

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

b) I have told my partner many private things about myself (I disclose secrets to him/her)

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

c) My partner and I have an intellectual life together that would be difficult to replace.

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

d) My sense of personal identity (who I am) is linked to my partner and our relationship

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

e) My partner and I share many memories

Do not	Agree	Agree	Agree
Agree	Slightly	Moderately	Completely

18. For the following statements indicate the extent to which you agree by circling one number on the scale.

Where 1= Do Not Agree and 9 = Agree Completely

a) I have put a great deal into our relationship that I would lose if the relationship were to end

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

b) Many aspects of my life have become linked to my partner (recreational activities, etc.), and I would lose all of this if we were to break up.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

c) I feel very involved in our relationship-like I have put a great deal into it.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

d) My relationships with friends and family members would be complicated if my partner and I were to break up (e.g., partner is friends with people I care about).

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

e) Compared to other people I know, I have invested a great deal in my relationship.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

19. For the following questions indicate the extent to which you agree by circling one number on the scale.

Where 1= Do Not Agree and 9 = Agree Completely

a) I want our relationship to last for a very long time

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

b) I am committed to maintaining my relationship with my partner.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

c) I would not feel very upset if our relationship were to end in the near future.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

d) It is likely that I will date someone other than my partner within the next year.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

e) I feel very attached to our relationship-very strongly linked to my partner.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

f) I want our relationship to last forever.

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

g) I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

1	2	3	4	5	6	7	8	9
Do not Agree			Agree Somewhat			Agree Completely		

Part Two

In this section we are interested in common romantic expectations and what it takes to breach romantic relationship trust. Please think about your current romantic partner and answer the following questions with your current romantic partner in mind. If you are not currently in a romantic relationship with anyone, answer the questions with your most recent partner in mind. If you have never had a romantic relationship, answer in terms of what you think your responses would most likely be.

20 a) Imagine that your romantic partner has been spending time with another person and you believe he or she has betrayed you. What would he or she have done (e.g. actions, events, thoughts and feelings) with that other person for you to believe that there had been a breach of your trust? Please use the space below to describe your thoughts about what type of involvement between your romantic partner and another person would be a breach of your trust.

b) Can you imagine why a romantic partner might be tempted to breach relationship trust like this? Please use the space below to list at least three likely reasons.

1.

2.

3.

4.

5.

21. Have you ever experienced a serious breach of trust on the part of a romantic partner involving another person external to your relationship?

- Yes
- No (proceed to question 23)

22. How many times has this happened to you in your current relationship?

- None
- Once
- More than once

23. How many times has this happened to you in previous committed relationships?

- None
- Once
- More than once

24. Please answer the following questions with your current romantic partner in mind. If you are not currently in a romantic relationship with anyone, answer the questions with your most recent partner in mind. If you have never had a romantic relationship, answer in terms of what you think your responses would most likely be.

Imagine that you find out that your romantic partner has spent time with another person. Please indicate on the scale provided the extent to which you believe the following actions or events would be a breach of your relationship trust.

Where 1= Not a breach of trust and 9 = A complete breach of trust

a) Passionate kissing

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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b) Affectionate cuddling.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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c) Having a sexual experience together that did not include intercourse.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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d) Spending the night together without sex.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
--------------------	---	---	---	---	---	---	---	---	---	--------------------------

e) A sexual encounter after drinking.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
--------------------	---	---	---	---	---	---	---	---	---	--------------------------

f) Flirting

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
--------------------	---	---	---	---	---	---	---	---	---	--------------------------

Please indicate on the scale provided the extent to which you believe the following actions or events would be a breach of your relationship trust.

Where 1= Not a breach of trust and 9 = A complete breach of trust

g) Having an ongoing sexual relationship with limited emotional involvement.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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h) Developing an intimate non-sexual relationship.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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i) Casual one off sexual intercourse

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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j) Developing a very close friendship

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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k) Developing an emotional connection beyond friendship

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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l) Doing things together such as a specific activity or shared interest.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
--------------------	---	---	---	---	---	---	---	---	---	--------------------------

m) Paying for sex or an escort.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
--------------------	---	---	---	---	---	---	---	---	---	--------------------------

n) Communication of a sexual nature, with no physical contact.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
--------------------	---	---	---	---	---	---	---	---	---	--------------------------

o) Falling in love without sex.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
--------------------	---	---	---	---	---	---	---	---	---	--------------------------

p) An ongoing relationship that is both sexually and emotionally involved.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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q) Falling in love after a passionate sexual relationship.

No breach of trust	1	2	3	4	5	6	7	8	9	Complete breach of trust
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Part Three

25. The statements below concern how you feel in emotionally intimate relationships.

We are interested in how you generally experience relationships, not just in what is happening in a current relationship.

Respond to each statement by circling a number to indicate the extent to which you agree.

Where 1= Strongly Disagree and 9 = Strongly Agree

a) I'm afraid that I will lose my partner's love.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

b) I often worry that my partner will not want to stay with me.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

c) I often worry that my partner doesn't really love me.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

d) I worry that romantic partners won't care about me as much as I care about them.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

e) I often wish that my partner's feelings for me were as strong as my feelings for him or her.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

f) I worry a lot about my relationships.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

g) When my partner is out of sight, I worry that he or she might become interested in someone else.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

h) When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

i) I rarely worry about my partner leaving me.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

j) My romantic partner makes me doubt myself.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

k) I do not often worry about being abandoned.

Strongly Disagree 1 2 3 4 5 6 7 8 9 Strongly Agree

Respond to each statement by circling a number to indicate the extent to which you agree.

Where 1= Strongly Disagree and 9 = Strongly Agree

l) I find that my partner(s) don't want to get as close as I would like.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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m) Sometimes romantic partners change their feelings about me for no apparent reason.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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n) My desire to be very close sometimes scares people away.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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o) I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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p) It makes me mad that I don't get the affection and support I need from my partner.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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q) I worry that I won't measure up to other people.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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r) My partner only seems to notice me when I'm angry.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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s) I prefer not to show a partner how I feel deep down.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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t) I feel comfortable sharing my private thoughts and feelings with my partner.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

u) I find it difficult to allow myself to depend on romantic partners.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

v) I am very comfortable being close to romantic partners.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

w) I don't feel comfortable opening up to romantic partners.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

x) I prefer not to be too close to romantic partners.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

Respond to each statement by circling a number to indicate the extent to which you agree.

Where 1= Strongly Disagree and 9 = Strongly Agree

y) I get uncomfortable when a romantic partner wants to be very close.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

z) I find it relatively easy to get close to my partner.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

aa) It's not difficult for me to get close to my partner.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

bb) I usually discuss my problems and concerns with my partner.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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cc) It helps to turn to my romantic partner in times of need.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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dd) I tell my partner just about everything.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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ee) I talk things over with my partner.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

ff) I am nervous when partners get too close to me.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
-------------------	---	---	---	---	---	---	---	---	---	----------------

gg) I feel comfortable depending on romantic partners.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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hh) I find it easy to depend on romantic partners.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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ii) It's easy for me to be affectionate with my partner.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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jj) My partner really understands me and my needs.

Strongly Disagree	1	2	3	4	5	6	7	8	9	Strongly Agree
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26. Listed below are several statements that reflect different attitudes about sex. For each statement fill in the response on the answer sheet that indicates how much you agree or disagree with that statement. Some of the items refer to a specific sexual relationship, while others refer to general attitudes and beliefs about sex. Whenever possible, answer the questions with your current partner in mind. If you are not currently in a romantic relationship with anyone, answer the questions with your most recent partner in mind. If you have never had a sexual relationship, answer in terms of what you think your responses would most likely be.

Please circle ONE answer for each statement.

1 = Strongly agree with statement

2 = Moderately agree with the statement

3 = Neutral - neither agree nor disagree

4 = Moderately disagree with the statement

5 = Strongly disagree with the statement

- | | | | | | |
|--|---|---|---|---|---|
| a) I do not need to be committed to a person to have sex with him/her. | 1 | 2 | 3 | 4 | 5 |
| b) Casual sex is acceptable. | 1 | 2 | 3 | 4 | 5 |
| c) I would like to have sex with many partners. | 1 | 2 | 3 | 4 | 5 |
| d) One-night stands are sometimes very enjoyable. | 1 | 2 | 3 | 4 | 5 |
| e) It is okay to have ongoing sexual relationships with more than one person at a time. | 1 | 2 | 3 | 4 | 5 |
| f) Sex as a simple exchange of favors is okay if both people agree to it. | 1 | 2 | 3 | 4 | 5 |
| g) The best sex is with no strings attached. | 1 | 2 | 3 | 4 | 5 |
| h) Life would have fewer problems if people could have sex more freely. | 1 | 2 | 3 | 4 | 5 |
| i) It is possible to enjoy sex with a person and not like that person very much. | 1 | 2 | 3 | 4 | 5 |
| j) It is okay for sex to be just good physical release. | 1 | 2 | 3 | 4 | 5 |
| k) Birth control is part of responsible sexuality. | 1 | 2 | 3 | 4 | 5 |
| l) A woman should share responsibility for birth control. | 1 | 2 | 3 | 4 | 5 |
| m) A man should share responsibility for birth control. | 1 | 2 | 3 | 4 | 5 |
| n) Sex is the closest form of communication between two people. | 1 | 2 | 3 | 4 | 5 |
| o) A sexual encounter between two people deeply in love is the ultimate human interaction. | 1 | 2 | 3 | 4 | 5 |
| p) At its best, sex seems to be the merging of two souls. | 1 | 2 | 3 | 4 | 5 |
| q) Sex is a very important part of life. | 1 | 2 | 3 | 4 | 5 |
| r) Sex is usually an intensive, almost overwhelming experience. | 1 | 2 | 3 | 4 | 5 |
| s) Sex is best when you let yourself go and focus on your own pleasure. | 1 | 2 | 3 | 4 | 5 |
| t) Sex is primarily the taking of pleasure from another person. | 1 | 2 | 3 | 4 | 5 |
| u) The main purpose of sex is to enjoy oneself. | 1 | 2 | 3 | 4 | 5 |
| v) Sex is primarily physical. | 1 | 2 | 3 | 4 | 5 |
| w) Sex is primarily a bodily function, like eating. | 1 | 2 | 3 | 4 | 5 |

27. Please answer the following questions about your religious faith.

Please circle ONE answer for each statement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
a) I pray daily	1	2	3	4
b) I look to my faith as providing meaning and purpose in my life.	1	2	3	4
c) I consider myself active in my faith or church.	1	2	3	4
d) I enjoy being around others who share my faith.	1	2	3	4
e) My faith impacts many of my decisions	1	2	3	4

Thank you for participating in this study, we hope you found it interesting.