AN INVESTIGATION INTO THE EFFECTS OF CROSS-SEX FRIENDSHIPS ON HETEROSEXUAL ROMANTIC RELATIONSHIP DYNAMICS

by

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by

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AN INVESTIGATION INTO THE EFFECTS OF CROSS-SEX FRIENDSHIPS ON

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Conrad Alexander Corretti, PhD

The University of Texas at Dallas, 2019

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Friendships outside of a heterosexual romantic relationship are common and fulfill needs for

social support and intimacy. Cross-sex friendships (i.e., friendships with members of the

opposite-sex) are generally as fulfilling as same-sex friendships and provide many of the same

benefits (Monsour, 2001). However, cross-sex friendships may pose unique challenges to those

in heterosexual romantic relationships. Using two studies, this research aimed to investigate the

consequences of cross-sex friendship maintenance for different features of relationship

functioning in heterosexual romantic relationships as well as potential mechanisms underlying

these associations. For Study 1 (n = 347 individuals), I employed a cross-sectional (non-dyadic)

design with participants in heterosexual romantic relationships to test whether individuals with a

greater number of cross-sex friendships, or who believe that their romantic partner has a greater

number of cross-sex friendships, report lower levels of three macro-level relationship outcomes:

commitment, relationship satisfaction, and trust. In Study 2 (n = 108 dyads), I used a daily diary

design with heterosexual romantic dyads to evaluate whether individuals' and their romantic

partners' daily interactions with cross-sex friends predict changes in individuals' relational

vi

maintenance behaviors and romantic relationship satisfaction. In both studies, I also examined the indirect effect of friendship maintenance on relationship outcomes via feelings of jealousy and perceived availability of alternatives to one's own partner. Friendship maintenance was unrelated to romantic relationship outcomes in both Study 1 and Study 2. However, Study 1 provided support for the hypothesis that the cross-sex friendships individuals and their partners hold are indirectly related to participants' relationship outcomes via availability of alternatives and feelings of jealousy, respectively. Additionally, Study 2 provided evidence that daily contact with friends (regardless of gender) is related to lower levels of relationship satisfaction via a greater availability of alternatives. Interestingly, there was not much evidence to suggest that these effects are moderated by characteristics of the friendships, the romantic relationships, or the individuals. Taken together, this research increases our understanding of how heterosexual couples successfully navigate the challenges of cross-sex friendships and two of the mechanisms underlying these experiences.

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CHAPTER 1

PRIOR RESEARCH

Romantic relationships occupy a central place in people's lives. Although they are often rewarding, they can also bring about feelings of insecurity or jealousy and concerns about infidelity. These psychological experiences may be especially common in heterosexual romantic relationships when an individual's romantic partner has a cross-sex friendship, "a nonromantic, nonfamilial, personal relationship between a man and a woman" (O'Meara, 1989, p. 526).

Although cross-sex friendships are nonromantic, they pose a unique challenge to heterosexual romantic relationships because they can contain feelings of sexuality and passion (O'Meara, 1989) or a romantic history (Sheehan & Dillman, 1998; Wilmot, Carbaugh, & Baxter, 1985).

Moreover, given that sexual attraction is common among cross-sex friends (Halatsis & Christakis, 2009; Kaplan & Keys, 1997), it is not surprising that individuals often worry about possible romantic feelings between partners and their cross-sex friends. Therefore, gaining a better understanding of how couples successfully navigate cross-sex friendships has the potential to help romantic relationships flourish in the face of a common challenge.

Cross-sex friendships are common throughout the lifespan (Monsour, 2001), with estimates of 30% to 42% of friendships being cross-sex (Lenton & Webber, 2006). Moreover, married individuals only have 8% fewer cross-sex friendships than singles (Kalmijn, 2002). Despite how common they are, individuals are often threatened by their romantic partner's cross-sex friendships (Worley & Samp, 2014), and these concerns may damage the quality and existence of romantic relationships. In fact, individuals involved in romantic relationships frequently avoid discussing the topic of cross-sex friendships with their partners (Afifi &

Burgoon, 1998), which may lead to romantic partners experiencing further uneasiness or uncertainty about the cross-sex friendship and thus the state of their romantic relationship.

Little research has examined the impact of cross-sex friendship maintenance on relationship outcomes for both members of a romantic relationship. Nevertheless, given how common it is for people to maintain cross-sex friendships, it is important to understand the conditions under which these friendships are threatening or benign. The current work aimed to explore these conditions by testing a theoretical model (see Figure 1) that links individuals' and their partners' cross-sex friendships to individuals' daily relationship behaviors (e.g., relational maintenance behaviors) and macro-level relationship outcomes (e.g., commitment, relationship satisfaction, and trust). For clarification purposes, throughout this model and document, I use the term "individuals" to refer to the focal participants (i.e., the one completing the questionnaire) and the term "partners" to refer to the individuals' romantic partners irrespective of who maintains the cross-sex friendship. To simplify the discussion of this model, I have presented a case in which an individual maintains a cross-sex friendship, but their partner does not, and I have depicted the proposed mediational model without separately showing the total effects (though total effects were analyzed and would be equivalent to the sum of the direct and indirect effects). I have also included individuals' perceived availability of alternatives and their partner's jealousy as mediating processes underlying the effects of cross-sex friendships on the aforementioned romantic relationship dynamics. Finally, moderators were investigated to determine whether these effects differ based upon characteristics of cross-sex friendships, romantic relationships, and the individuals in romantic relationships.

Cross-Sex Friendships

Although cross-sex friendships were historically less common than same-sex friendships (Babchuk & Bates, 1963; Booth & Hess, 1974; Rose, 1985), they are now becoming more common (Lenton & Weber, 2006). In light of this, it is important to understand what they have in common with same-sex friendships, what makes them distinct, and what challenges they might pose for heterosexual romantic relationships. Unfortunately, some of the prior work on cross-sex friendships has failed to clearly define them to participants; therefore, previous findings may include characteristics of romantic relationships due to participants considering their romantic partner as a cross-sex friend (Monsour, 1997). The current work draws predominantly from research on cross-sex friendships and common threats to romantic relationships that do not appear to have a conceptual overlap between cross-sex friends and romantic relationships.

Cross-sex and same-sex friendships are generally similar in their behavioral exchanges and offer many of the same benefits. Like same-sex friendships, cross-sex friendships provide social support and reduce feelings of loneliness (Monsour, 2001). Behavioral norms are also similar; men and women hold similar expectations for same- and cross-sex friendships (e.g., keeping friends' secrets, respecting privacy; Felmlee, Sweet, & Sinclair, 2012).

That being said, there are also some differences. Cross-sex friendships offer the unique benefit of providing insight into how the opposite sex thinks (Monsour, 2001; Sapadin, 1988; Hand & Furman, 2009). Additionally, people who prefer cross-sex friendships experience greater closeness and trust in their cross-sex friendships than their same-sex friendships (Baumgarte & Nelson, 2009). People also report fewer negative interactions in their cross-sex friendships than

in their romantic relationships (Ford, 2016; Hand & Furman, 2009). Therefore, cross-sex friendships offer numerous relationship benefits for those who choose to maintain them.

However, cross-sex friendships also pose unique challenges that same-sex friendships do not. For instance, even though cross-sex friendships provide social support (Monsour, 2001), they may provide less social support than same-sex friendships (Hand & Furman, 2009). In addition, feelings of attraction are common in cross-sex friendships (Halatsis & Christakis, 2009; Kaplan & Keys, 1997), and this attraction is seen as a cost rather than a benefit by both men and women (Bleske-Rechek et al., 2012). Further, people report that friends' physical attractiveness, social status, and personality are more important in cross-sex friendships than in same-sex friendships (Sprecher & Regan, 2002). Finally, both men and women misperceive the level of sexual interest that their cross-sex friends hold toward them (Koenig, Kirkpatrick, & Ketelaar, 2007), and this may complicate the friendships as well as any romantic relationships being maintained.

One of the unique challenges in maintaining cross-sex friendships is *the audience challenge* (O'Meara, 1989) where platonic cross-sex friendships are mistaken for having romantic or sexual intents. This may be especially difficult and result in feelings of jealousy in the context of romantic relationships when partners can misperceive romantic interest between an individual and his/her cross-sex friend(s). Although Schoonover and McEwan (2014) hypothesized that being in a romantic relationship would reduce reports of experiencing and being concerned about the audience challenge, relationship status and romantic partners' support of cross-sex friends were unrelated to these experiences and concerns. In sum, partners may misperceive the sexual interest of individuals and their cross-sex friends and may mistake the

friendship for one with romantic potential even when they support the cross-sex friendship.

However, this work focused on reports of the audience challenge among the entire social network and did not focus on whether romantic partners themselves misperceive the relationship as potentially romantic. Each of these misperceptions related to the presence of a cross-sex friendship has the potential to result in feelings of jealousy and interfere with the day-to-day functioning of a romantic relationship.

Availability of Alternatives: Challenges to People with Cross-Sex Friendships

Both Thibaut and Kelley (1959) and Rusbult (1980) emphasize that individuals compare their romantic partner to the perceived quality of available alternatives. Prior studies show that the availability of higher quality alternative partners is related to lower levels of commitment (see Le & Agnew, 2003 for review). Unfortunately, much of this research has not emphasized the role of cross-sex friendships in perceptions of availability of alternatives. Prior research has, however, established that feelings of attraction for cross-sex friends are related to lower romantic relationship commitment and higher perceived quality of alternatives (Wreford, 2012). Cross-sex friendships may be especially relevant to the perceived availability of alternatives due to the common occurrence of feelings of attraction (Kaplan & Keys, 1997) and closeness that is fostered over time.

More recently, the concept of availability of alternatives has been extended to the areas of "back burner relationships" (Dibble & Drouin, 2014; Dibble, Drouin, Aune, & Boller, 2015) and "partner insurance" (Wedberg, 2016), which refer to relationships maintained to make entering a new (or replacement) sexual or romantic relationship easier in the future. While not all cross-sex friendships are likely to be back-burner relationships, 59% of college students currently involved

in romantic relationships reported having back burners (Dibble et al., 2015). More surprisingly, 29% indicated that they were close friends or best friends with their most frequently talked to back-burner relationship (Dibble et al., 2015). Additionally, people commonly maintain friendships with ex-romantic partners (Sheehan & Dillman, 1998; Wilmot, Carbaugh, & Baxter, 1985) and may be motivated to communicate with them to retain a backup romantic partner (Rodriguez, Øverup, Wickham, Knee, & Amspoker, 2016). Perhaps predictably, individuals involved in romantic relationships are unlikely to disclose their communications with "back burners" to their romantic partners (Dibble et al., 2015).

Therefore, the perception that an opposite-sex friend is a potential partner "on the back burner" may impact the romantic relationship. Moreover, some cross-sex friendships may be more prone than others to being seen as available alternatives, such as those with a romantic history. In the current research, I anticipate that tendencies to evaluate partners in the context of available alternatives will be reflected by cross-sex friendship maintenance being negatively related to romantic relationship dynamics. Additionally, perceptions of the availability of alternatives are anticipated to mediate relations between individuals' cross-sex friendship maintenance and their own romantic relationship dynamics.

Jealousy: Threats to Partners of People with Cross-Sex Friendships

Romantic jealousy is the cognitive, affective, and behavioral experience following threats to the quality or existence of romantic relationships (White & Mullen, 1989). Importantly, jealousy can result from real threats or "rivals" to the relationship or from imagined or perceived threats (White & Mullen, 1989). Experiences of jealousy relate to relationship satisfaction, such that they can be positive or negative depending on the types of jealousy and individual

differences present in the romantic relationship (Dandurand & Lafontaine, 2014). Cross-sex friendships may be accompanied by feelings attraction and intimacy (i.e., real threats) or be mistaken to contain these characteristics (i.e., imagined rivalry) and result in experiences of jealousy that relate to the macro-level functioning of the romantic relationship.

Young- and middle-aged adults often list feelings of jealousy as a cost of cross-sex friendships (Bleske-Rechek et al., 2012), and many college students expect their partners to end cross-sex relationships (Hansen, 1985). In fact, the maintenance of a romantic relationship often results in the dissolution or reduced initiation and maintenance of cross-sex friendships (Monsour, 2001; Werking, 1997). The dissolution of cross-sex friendships may be an attempt to reduce romantic partners' feelings of jealousy (Rubin, 1985), feelings of discomfort (Hart, Adams, & Tullet, 2016), and mate-guarding behaviors (ranging from vigilance to violence; Buss, 2002).

When individuals choose to maintain a cross-sex friendship while in a romantic relationship, their romantic partner may experience feelings of jealousy due to the presence of the cross-sex friendship. People who feel extreme sexual jealousy report feeling intense emotions such as being nervous, shaky, vulnerable, hopeless, and angry (Pines & Aronson, 1983). As a result of these intense emotions, the daily functioning of the romantic relationship may suffer. Specifically, stronger feelings of behavioral, cognitive, and emotional jealousy are related to decreased marital satisfaction (Andersen, Eloy, Guerrero, & Spitzberg, 1995; Guerrero & Eloy, 1992).

Many outcomes associated with cross-sex friendships outside of romantic relationships suggest that cross-sex friendships may introduce or heighten feelings of jealousy in romantic

relationships. For instance, cross-sex friendships often include feelings of attraction (Kaplan & Keys, 1997) and may therefore leave romantic partners suspicious. Additionally, cross-sex friendships are frequently formed with motivations similar to mating strategies (e.g., sexual access, physical protection; Belske-Rechek & Buss, 2001; Lewis, Al-Shawaf, Conroy-Beam, Asao, & Buss, 2012; Salkičević, 2014). In one study, almost half of a college student sample had engaged in sexual activity in otherwise platonic cross-sex friendships (Afifi & Faulkner, 2000). There is also evidence that mate poaching (i.e., the act of an individual leaving a current partner for a specific third party) is successful through cross-sex friendships (Lemay & Wolf, 2016a), and that cross-sex friendships can transition to romantic relationships through a self-fulfilling prophecy (Lemay & Wolf, 2016b). As such, uncertainty about the platonic nature of cross-sex friendships is common (Afifi & Burgoon, 1998). Consequently, it is surprising that much of the research on jealousy in romantic relationships has not focused on cross-sex friendships.

Recent work by Worley and Samp (2014) directly investigated jealousy in romantic relationships in response to cross-sex friendship maintenance. In this study, participants were presented with vignettes manipulating partner's hypothetical friendships to be either same-sex or cross-sex and the length of the friendship to be either newly developed or long-term. After reading about their partner's hypothetical friendship, participants reported their feelings of jealousy and how threatened their relationship and its quality was by the friendship. Cross-sex friendships were related to individuals perceiving a greater threat to the quality and existence of their romantic relationship, but not experiencing jealousy (Worley & Samp, 2014). However, these results were found using scenarios that were written in a way that may elicit jealousy regardless of the friend's gender (i.e., including "All in all, their closeness makes you feel a little

left out when you are with them." in all conditions; Worley & Samp, 2014, p. 235). Although these scenarios were deemed appropriate for the prior work and resulted in these novel findings, Worley and Samp (2014) acknowledge the use of vignettes is a limitation in generalizing to real friendships. Moreover, this study collected cross-sectional responses from one member of the romantic relationship rather than collecting data from both members of the dyad or assessing change over time.

Although not focused on experiences of jealousy, Bennett (2016) investigated differences in expressions of jealousy (e.g., negative communication, rival-focused communication, surveillance) among partners of individuals who have cross-sex compared to same-sex best friends. Bennett (2016) found that partners do not differ in their expression of jealousy when an individual has a cross-sex compared to same-sex best friend. However, it is important to note that individuals with same-sex best friends may also hold close cross-sex friendships that do not qualify as best friends, but still may induce feelings of jealousy in partners. Similar to the study discussed above (Worley & Samp, 2014), Bennett (2016) relied upon cross-sectional responses from one member of the romantic dyad.

The current research aims to address methodological limitations in prior assessments of the role of cross-sex friendships on feelings of jealousy by implementing both dyadic and longitudinal methodology to observe the effects of real-life existing cross-sex friendships on jealousy and subsequent romantic relationship outcomes. Additionally, the current research is intended to extend the scope of Worley and Samp's (2014) study by including more macro-level romantic relationship outcomes that relate to relationship longevity (e.g., relationship satisfaction). Specifically, the current research investigates how individuals' cross-sex

friendships relate to their own and their partners' romantic relationship outcomes, the mediational role of partners' feelings of jealousy, and the characteristics that may determine whether cross-sex friendships induce jealousy in partners.

Characteristics of Cross-Sex Friendships as Moderators of Links between Cross-Sex Friendship Maintenance and Romantic Relationship Outcomes

Some cross-sex friendships may be more likely to be construed by individuals as an available alternative to the romantic relationship or evoke feelings of jealousy from romantic partners than others. For instance, previously romantic relationships turned cross-sex friendships have stronger relations between relationship commitment, perceived quality of alternatives, and attraction toward opposite-sex friends (Wreford, 2012).

Likewise, the mate value (i.e., characteristics that make people more or less likely to attract and retain a mate or romantic partner, such as attractiveness and dominance; Fisher, Cox, Bennett, & Gavric, 2008) of the opposite-sex friend are likely to moderate the effects of a cross-sex friendship on romantic relationship dynamics. Specifically, the mate value of an opposite-sex friend determines whether men and women will misperceive that friend's sexual interests (Koenig et al., 2007) which may be especially relevant to perceptions of available alternatives. Similarly, feelings of jealousy related to partners' cross-sex friendships are expected to be moderated by mate value because people experience greater distress when potential rivals have greater levels of mate value than they do (Buss, Shackelford, Choe, Buunk, & Dijkstra, 2000). Prior work has established that men experience greater jealousy in the face of a dominant rival (e.g., someone who their romantic partner may see as assertive or socially competent) while women experience greater jealousy with physically attractive rivals (Dijkstra & Buunk, 1998;

2002). However, a recent meta-analysis indicates that physical attraction has a medium-sized effect on romantic evaluations for both genders in real rather than imagined scenarios (Eastwick, Luchies, Finkel, & Hunt, 2014). Therefore, in the current research, cross-sex friends' levels of physical attractiveness and dominance were expected to moderate relations between cross-sex friendship maintenance and romantic relationship outcomes for both men and women.

Finally, the amount of time that partners have held a cross-sex friendship is related to the amount of relationship threat and jealousy experienced, such that new cross-sex friendships are more threatening than established ones (Worley & Samp, 2014). Vignettes in prior research have mentioned closeness amongst friends in an attempt to evaluate feelings of jealousy (Worley & Samp, 2014). Individuals with higher levels of emotional closeness, affectional closeness, and behavioral closeness also report greater feelings of attraction towards their own cross-sex friends, while partners' emotional closeness to cross-sex friends is related to individuals feeling less threatened by those friends and feeling more comfortable having their own cross-sex friends (McCubbery, 2006).

In the current research, each of these characteristics (i.e., romantic history, mate value, friendship length, closeness) were explored as possible moderators of the effects of cross-sex friendships on own and partner relationship outcomes as well as the proposed mediational effects of jealousy and availability of alternatives.

Characteristics of Romantic Relationships as Moderators of Links between Cross-Sex Friendship Maintenance and Romantic Relationship Outcomes

Some romantic relationships may be more sensitive to the presence of cross-sex friendships than others. Indeed, certain characteristics of romantic relationships may moderate

the effects of cross-sex friendships on the availability of alternatives and feelings of jealousy. Given that relationship length is associated with relationship stability (Le, Dove, Agnew, Korn, & Mutso, 2010; Simpson, 1987), well-established relationships are less likely to be threatened by cross-sex friendship maintenance. In contrast, previous unfaithfulness predicts responses of revenge and actively working against partners in future hypothetical acts of infidelity (Donovan & Emmers-Sommer, 2012). Similarly, attitudes that individuals and their partners hold toward infidelity frequently reflect prior acts of infidelity or the potential for future acts of infidelity (DeWall et al., 2011). In sum, characteristics of relationships such as being together for long periods of time and having a history of infidelity are likely to shape reactions to future relationship challenges. Therefore, relationships of longer length are anticipated to be capable of better navigating cross-sex friendship maintenance, whereas those with a history of prior infidelity or positive beliefs about infidelity are anticipated to be tumultuous in the presence of cross-sex friendship maintenance.

Characteristics of Individuals in Romantic Relationships as Moderators of Links between Cross-Sex Friendship Maintenance and Romantic Relationship Outcomes

The characteristics of individuals in a romantic relationship are also likely to shape the way they perceive and navigate the possibility of their own friends as available alternatives and the threat of their partner's friends as potential rivals. Adult romantic attachment-related individual differences are one such difference as they reflect how people regulate proximity to their significant other in response to heightened feelings of distress (Fraley & Shaver, 2000). These individual differences are conceptualized along two continuous dimensions: Attachment

anxiety (i.e., concerns that a partner will not provide the closeness needed) and attachment avoidance (i.e., concerns that a partner will impose on desires to remain independent).

Individuals with higher levels of attachment-related avoidance may be likely to maintain cross-sex friendships at the expense of their romantic relationship and experience less jealousy when their partners maintain cross-sex friendships due to their desire to maintain autonomy. Prior research has established that greater levels of avoidant attachment are related to a greater interest in alternatives (Overall & Sibley, 2008) and increased infidelity (DeWall et al., 2011). Similarly, married individuals are more likely to commit acts of infidelity when their partners report higher levels of attachment avoidance (Russell, Baker, & McNulty, 2013). Avoidant attachment-related individual differences are also related to lower levels of jealousy and partner monitoring on Facebook (Marshall, Bejanyan, Castro, & Lee, 2013), suggesting that more avoidant individuals will be less threatened by their partners' cross-sex friends.

Meanwhile, more anxiously attached individuals may be more likely to feel jealous, monitor a partner, and engage in infidelity with an opposite-sex friend. Individuals with greater levels of attachment anxiety report more jealousy and are more likely to monitor their partners on Facebook (Marshall et al., 2013). Prior work has also suggested that attachment anxiety is positively related to infidelity (Allen & Baucom, 2004; Bogaert & Sadava, 2002; Russell, Baker, & McNulty, 2013; but see: DeWall et al., 2011).

In addition to the theoretical extensions of attachment research above, prior research has proposed that attachment-related individual differences relate to who holds cross-sex friendships (McCubbery, 2006; Monsour, 2001) as well as whether partners' cross-sex friendships constitute a threat (McCubbery, 2006). Specifically, both anxious and avoidant attachment style are

negatively related to feelings that partners are comfortable with individuals' cross-sex friendships (McCubbery, 2006). Both anxious and avoidant attachment-related individual differences are also related to feeling more threatened by partners' cross-sex friendships and perceptions that their partner is emotionally closer to their cross-sex friends (McCubbery, 2006). Taken together, levels of both anxious and avoidant attachment are likely to moderate the effects of both own and partner cross-sex friendships on romantic relationship outcomes.

Additionally, holding positive cross-sex friendship beliefs (i.e., beliefs that cross-sex friendships are possible) is related to feeling more comfortable having a friend of the opposite sex (McCubbery, 2006). In contrast, holding beliefs that cross-sex friendships are not possible is related to feeling threatened by a romantic partner's friend of the opposite sex (McCubbery, 2006). Both adult attachment-related individual differences and cross-sex friendship beliefs are anticipated to moderate links between cross-sex friendship maintenance and romantic relationship outcomes.

Theoretical Model

Figure 1 depicts the conceptual model underlying this research. As noted previously, "individual" refers to the focal participant while "partner" refers to the focal participant's romantic partner. Although not shown in Figure 1, the current work proposes that individuals' cross-sex friendship maintenance will be negatively related to both their own and their partners' relationship dynamics (e.g., commitment, relationship satisfaction). Additionally, the current work proposes that individuals who maintain cross-sex friendships will report higher levels of perceived available alternatives to their romantic partners (path *a*). Moreover, individuals who perceive a greater availability of alternatives should report more maladaptive romantic

relationship dynamics (e.g., decreased commitment, lowered trust; path *b*). Further, this increase in perceived availability of alternatives is predicted to mediate relations between an individual maintaining cross-sex friendships and that individual's romantic relationship dynamics (i.e., the *a-b* pathway).

Cross-sex friendship maintenance is also anticipated to have an effect on the individual's partner. Partners of individuals with cross-sex friends should experience greater levels of jealousy due to the presence of a potential romantic rival (path c). Moreover, partners' greater feelings of jealousy should result in more maladaptive romantic relationship dynamics (path d) and mediate the relation between individuals' cross-sex friendship maintenance and their satisfaction and engagement with the romantic relationship (the c-d pathway).

Finally, three categories of individual differences are expected to moderate the effects of individuals' cross-sex friendship maintenance on individuals' perceptions of the availability of alternatives (path e) and their subsequent decline in relationship outcomes (path f), as well as their partner's feelings of jealousy (path g) and subsequent decline in relationship outcomes (path h). First, characteristics of the cross-sex friendships (i.e., friendship history, mate value) are expected to determine whether the cross-sex friendships will result in 1) individuals perceiving an increased availability of alternatives, and 2) partners' feeling more jealous. Second, characteristics of the romantic relationship (i.e., romantic relationship history) are expected to determine whether a cross-sex friendship is viewed as a romantic alternative and potential threat or as just a friend. Third, characteristics of the individuals in the romantic

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¹ Note: Paths *f* and *h* were only estimated in Study 2 due to model complexity, whereas Study 1 investigated whether paths *e* and *g* provided evidence of conditional indirect effects.

relationship (i.e., attachment-related individual differences, beliefs about cross-sex friendships) are expected to shape the effect of cross-sex friendships on their romantic relationship.

CHAPTER 2

STUDY 1

My first study examined the effects that individuals' and their partners' cross-sex friendships have on the individuals' macro-level romantic relationship outcomes. It also investigated some of the potential mediating processes underlying these effects as well as moderators of those processes. The first goal of Study 1 was to investigate whether cross-sex friendship maintenance is linked to macro-level romantic relationship outcomes (i.e., commitment, relationship satisfaction, and trust). The second goal of Study 1 was to investigate whether individuals' perceived availability of alternatives and feelings of jealousy mediate the links between their own and their partner's cross-sex friendship maintenance and macro-level romantic relationship outcomes, respectively. Finally, the third goal of Study 1 was to investigate whether characteristics of cross-sex friendships, romantic relationships, and individuals in romantic relationships moderate the indirect effects underlying relations between cross-sex friendships and romantic relationship outcomes. Two sets of hypotheses follow from these goals: those predicting associations between individuals' own maintenance of cross-sex friendships and individuals' relationship quality, and those predicting associations between individuals' perceptions of their partners' maintenance of cross-sex friendships and their relationship quality.

Own Friend Hypotheses

Hypotheses 1.1.1a-d: Individuals with greater cross-sex friendship maintenance (operationalized as a higher number of cross-sex friendships and spending greater amounts of time with cross-sex friends) will report decreased levels of commitment (Hypothesis 1.1.1a),

relationship satisfaction (Hypothesis 1.1.1b), and trust (Hypothesis 1.1.1c); and perceive an increased availability of alternatives (Hypothesis 1.1.1d).

Own Friend Mediational Hypotheses

Hypotheses 1.1.2a-c: Individuals' increased availability of alternatives will mediate the association between individuals' increased cross-sex friendship maintenance and individuals' decreased levels of commitment (Hypothesis 1.1.2a), relationship satisfaction (Hypothesis 1.1.2b), and trust (Hypothesis 1.1.2c).

Own Friend Moderation Hypotheses

Hypothesis 1.1.3a: The effects predicted in Hypotheses 1.1.2a-c (i.e., relations between individuals' own cross-sex friendship maintenance and their relationship outcomes will be mediated by individuals' perceived availability of alternatives) will be moderated by characteristics of individuals' own cross-sex friendships, such that the effects are stronger when individuals' cross-sex friends are higher in mate value (operationalized as attractiveness and dominance), share a romantic or sexual history with the individual, are close with the individual, or are not close to the partner.

Hypothesis 1.1.3b: The effects predicted in Hypotheses 1.1.2a-c will be moderated by characteristics of the romantic relationship, such that the effects will be stronger when romantic relationship length is shorter, there is a history of infidelity, or the individual holds positive attitudes toward infidelity.

Hypothesis 1.1.3c: The effects predicted in Hypotheses 1.1.2a-c will be moderated by characteristics of the individuals in the romantic relationship, such that the effects will be

stronger for more avoidantly or anxiously attached individuals or those with more negative beliefs about cross-sex friendships (i.e., views that cross-sex friends cannot be just friends).

Partner Friend Hypotheses

Hypotheses 1.2.1a-d: Individuals who perceive that their romantic partner has greater cross-sex friendship maintenance (operationalized as a higher number of cross-sex friendships and spending greater amounts of time with cross-sex friends) will report decreased levels of commitment (Hypothesis 1.2.1a), relationship satisfaction (Hypothesis 1.2.1b), and trust (Hypothesis 1.2.1c); and increased levels of jealousy (Hypothesis 1.2.1d).

Partner Friend Mediational Hypotheses

Hypotheses 1.2.2a-c: Individuals' increased feelings of jealousy will mediate the association between individuals' perceptions of their romantic partners' increased cross-sex friendship maintenance and individuals' decreased levels of commitment (Hypothesis 1.2.2a), relationship satisfaction (Hypothesis 1.2.2b), and trust (Hypothesis 1.2.2c).

Partner Friend Moderation Hypotheses

Hypothesis 1.2.3a: The effects predicted in Hypotheses 1.2.2a-1.2.2c (i.e., relations between perceptions of partners' cross-sex friendship maintenance and individuals' relationship outcomes will be mediated by individuals' feelings of jealousy) will be moderated by characteristics of partners' cross-sex friends, such that the effects are stronger when individuals' cross-sex friends are higher in mate value (operationalized as attractiveness and dominance), share a romantic or sexual history with the partner, are close with the partner, or are not close to the individual.

Hypothesis 1.2.3b: The effects predicted in Hypotheses 1.2.2a-c will be moderated by characteristics of the romantic relationship, such that the effects will be stronger when romantic relationship length is shorter, there is a history of infidelity, or there is a perception that a partner holds positive attitudes toward infidelity.

Hypothesis 1.2.3c: The effects predicted in Hypotheses 1.2.2a-c will be moderated by characteristics of the individuals in the romantic relationship, such that the effects will be stronger for more avoidantly or anxiously attached individuals or those with more negative beliefs about cross-sex friendships (i.e., views that cross-sex friends cannot be just friends).

Method

Participants and Procedure

Participants were recruited via the university SONA participant pool to complete a web-based survey about their romantic relationship and their own and their partner's friendships.

Participation was limited to men and women in monogamous heterosexual romantic relationships of at least three months in length to ensure that the relationships were relatively established, and cross-sex friendships had the potential to pose a threat to the relationship.

Participants completed an online survey in which they provided details about themselves, their friendships, their partner's friendships, and their perceptions of their romantic relationship. Study 1 was designed to focus on macro-level relationship outcomes and minimize demands of participation in an attempt to obtain a large enough sample size to provide well-powered tests of moderation for Hypotheses 1.1.3a-c and 1.2.3a-c. Further, the goal of examining characteristics of cross-sex friendships as moderators was addressed by having participants name specific cross-

sex and same-sex friends that they and their partner maintain and then rate the qualities of some of those friends.

A priori power analyses indicated that 300 participants would result in sufficient power to detect the total effects, indirect effects, and conditional indirect effects of interest (for more details, see Appendix A on the project page for this dissertation on the Open Science Framework [OSF]: https://osf.io/k6ufw/). The initial sample consisted of 502 participants; however, after inspecting the initial set of screening questions as well as the set of debriefing questions, I discovered that 135 individuals did not report being in a monogamous heterosexual romantic relationship and that three individuals were in relationships shorter than three months. I also excluded another five participants who indicated that they did not complete the survey honestly as well as eight participants with shared IP addresses, survey pool IDs, demographics, and friend names. Finally, three participants were identified as outliers due to reporting such an extreme number of friends (discussed below). After removing these participants, the final sample size was 347.

Measures

Table 2 presents descriptive statistics and reliability information of the friendship maintenance variables, proposed mediators, and proposed outcome variables along with zero-order correlations showing their relations to one another. Further, the descriptive statistics and zero-order correlations of the proposed moderators are presented in Table 3.

Friendship Maintenance. Friendship maintenance was operationalized as the number of friends that an individual or partner maintains and the amount of time that he or she spends with those friends. Participants were told that this study defines friendships as nonfamilial,

nonromantic personal relationships that are beyond acquaintanceships. They were then asked to complete a question assessing their understanding of this definition.

Participants were then asked to report the number of cross-sex friendships that they hold using survey logic to ask participants about friends of the opposite gender. Additionally, participants reported the amount of time that they spend with cross-sex friends using a Likert-type scale ranging from 1 (Never) to 5 (A great deal). Participants also completed the same prompts as above, but in regard to their number of same-sex friends and frequency of time spent with same-sex friends so that analyses could isolate the effect of cross-sex friends from that of general popularity or sociability. Participants who reported greater than 25 friends of a given gender for themselves or their partner were excluded from future analyses (total n = 3). The decision to use 25 friends as the cutoff criterion was based on the large number of standard deviations above the mean of these infrequent reports of own same-sex friends (2.96 *SD* above the mean, n = 2), own cross-sex friends (3.71 *SD* above the mean, n = 1), and partner same-sex friends (5.37 *SD* above the mean, n = 1) were. After excluding these participants, the number of friends ranged from 0 to 20 for each type and person. The means and standard deviations of these items are presented in Table 1.

While I did not anticipate that the effects of the number of friends and the amount of time spent with friends to be identical, I was unaware of any prior research that would warrant treating these variables as distinct. Moreover, the two measures are conceptually similar and the measures showed medium-sized positive correlations for both own (r = .33) and partner (r = .34) same-sex friendships, as well as large-sized positive correlations for both own (r = .52) and

partner (r = .57) cross-sex friendships. Therefore, scores on these items were standardized and averaged within person for each friend type.

Finally, participants were asked to name their own same-sex friends, their own cross-sex friends, their partners' same-sex friends, and their partners' cross-sex friends, listing up to five names for each category. Two names from each of these lists were randomly selected and presented to participants to assess characteristics of those friendships. The intent behind having participants list up to five friends and then randomly selecting two of those friends to obtain further information was two-fold. First, requesting a longer list of names should have inhibited participants' tendencies to selectively name friends that are more or less threatening to their romantic relationship (doing so would potentially obscure or exaggerate the moderating effect of characteristics of cross-sex friendships). Second, the use of random selection was intended to help engender sufficient range in variables such as closeness to the friend and friendship length to test for moderation.

Beliefs About Cross-Sex Friendships. Participants' beliefs about cross-sex friendships were assessed via five items adapted from prior literature (Felmlee et al., 2012; Halatsis & Christakis, 2009; Hart et al., 2016; McCubbery, 2006). Example items include "In general I don't believe men and women can have a close platonic relationship" (reverse scored) and "Friendship with a person of the other sex is possible". Beliefs were assessed using a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Scores were averaged together, such that higher scores indicated more positive beliefs about the possibility of cross-sex friendships and the ability for them to remain platonic.

Adult Attachment Style. Participants' levels of anxious and avoidant attachment-related individual differences were assessed via the Experiences in Close Relationships

Questionnaire—Revised (ECR-R; Fraley, Waller, & Brennan, 2000). Participants were asked to complete Likert-type scales about how they generally feel in their current romantic relationship with responses ranging from 1 (Strongly disagree) to 7 (Strongly agree). Anxious attachment scores were computed as the average of 18 items (e.g., "I often worry that my partner doesn't really love me"). Similarly, avoidant attachment scores were calculated as the average of 18 items (e.g., "I find it difficult to depend on my romantic partner).

Friendship Characteristics Measures

Friend Mate Value. To assess mate value, participants rated friends on attractiveness and dominance. To assess attractiveness, participants were asked a single face-valid item: "How attractive is [friend name] to [opposite sex]?". This scale ranged from 1 (Extremely unattractive) to 7 (Extremely attractive) with a midpoint representing neither attractive or unattractive.

Participants completed this scale in reference to two of their own same- and cross-sex friends and two of their partner's same- and cross-sex friends. Unfortunately, an error in the survey flow and logic resulted in the assessment of same- and cross-sex friend's attractiveness being incomparable for both self- and informant-reports. Rather than assessing the attractiveness of individuals' friends (both same- and cross-sex) in reference to the individuals' own gender, the survey asked about the attractiveness of the friend to members of the opposite sex of the friend.

Therefore, it is unclear whether own same-sex friends would be seen as attractive to members of the participants' sex or if partners' same-sex friends would be seen as attractive to members of

the partners' sex making reports of same-sex attractiveness less indicative of potential mate value to the person reporting.

Perceptions of friends' dominance were assessed via a six-item scale previously associated with feelings of jealousy (Dijkstra & Buunk, 1998). Participants used a 5-point Likert-type scale ranging from 1 (Not at all typical) to 5 (Very typical) to rate how typical six characteristics are of each friend: assertive, self-confident, extraverted, influential, socially competent, and a good judge of character. Participants completed this scale in reference to two of their own same- and cross-sex friends and two of their partner's same- and cross-sex friends. Ratings of attractiveness and dominance were standardized and then averaged together for each friend before calculating the average of each type of friendship for participants and their partners.

Friendship Closeness. Participants indicated the closeness that they and their partner feel toward each friend via a single face valid item (i.e., "How close do [you/your partner] feel to [friend name]?") assessed on a 5-point Likert-type scale ranging from 1 (Not at all) to 5 (Extremely).

Friendship History. Participants completed five items regarding the history of each of their own and their partner's friendships. The first item asked participants the length of the friendship in years and months. These responses were then transformed into the number of months.

Next, participants were asked if they or their partner had ever had a romantic relationship with that friend. Participants reported a low frequency of prior friendships with a romantic history for themselves (3% of same- and 15% of opposite sex friends) and their partners (0% of

same- and 13% of opposite sex friends). Participants were then asked about the sexual history of each friendship via three items adopted from Fincham, Lambert, and Beach (2010; i.e., "have [you/your partner] ever engaged in [kissing/sexual intimacy without intercourse/sexual intercourse] with [friend name]?"). Similar to the item regarding a romantic history, the majority of participants did not report any level of sexual history with friends for themselves (96% of same- and 80% of cross-sex friends) or their partner (98%% of same- and 85% of cross-sex friends) friendships. Although the sample size was planned in an attempt to obtain sufficient variability in these responses, the variability obtained was not sufficient to conduct analyses using these variables.²

Relationship Measures

Availability of alternatives. Participants completed the Quality of Alternatives scale (Rusbult, Martz, & Agnew, 1998) to assess their beliefs that there are available alternatives to their current romantic relationship. This measure consists of five items in which participants reported their agreement with the belief that relationships other than the one with their partner are appealing alternatives. Example items include "If I weren't dating my partner, I would do fine—I would find another appealing person to date" and "My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship". Agreement was assessed through a 9-point Likert-type scale ranging from 0 (Do not agree at all) to 8 (Agree completely).

² As per the consent form, this potentially socially damaging information was also removed from the data posted on the OSF as the low frequencies may have resulted in participants' being easily identifiable.

Relationship satisfaction. General satisfaction with the romantic relationship was assessed via the Relationship Assessment Scale (Hendrick, 1988). This scale consists of seven items that ask about the state of the romantic relationship (e.g., "How well does your partner meet your needs?", "In general, how satisfied are you with your relationship?"). Responses were collected via a 5-point Likert-type scale ranging from 1 (e.g., poorly) to 5 (e.g., extremely well).

Commitment. Participants' levels of commitment to their romantic relationship were assessed using the Commitment Level questionnaire (Rusbult, Martz, & Agnew, 1998).

Participants indicated their agreement with seven statements (e.g., "I want our relationship to last for a very long time", "It is likely that I will date someone other than my partner within the next year" [reverse scored]). Responses were scored via a 7-point Likert-type scale ranging from 1 (Do not agree at all) to 7 (Agree completely).

Trust. Levels of trust in the romantic relationship were assessed via the *Faith* and *Dependability* subscales of the Trust Scale (Rempel, Holmes, & Zanna, 1985). The *Faith* subscale consists of 10 items focused on beliefs that a partner will be responsive in future unknown events. Example items include "I can rely on my partner to react in a positive way when I expose my weaknesses to him/her," and "In my relationship with my partner, the future is unknown which I worry about" (reverse scored). The 9-item *Dependability* subscale assesses an ability to count on a partner due to their dispositional qualities. Example items include "In our relationship I have to keep alert or my partner might take advantage of me" (reverse scored) and "My partner has proven to be trustworthy and I am willing to let him/her engage in activities which other partners find too threatening". Responses to both subscales were reported via a 7-

point Likert-type scale ranging from -3 (Strongly disagree) to 3 (Strongly agree) with a midpoint of 0 (Neutral).³

Jealousy. Participants completed scales assessing sexual jealousy, intimacy jealousy, power jealousy, and companionship jealousy (Worley & Samp, 2011) in reference to how they feel about their partner's friends in general. All responses were recorded on a 6-point Likert-type scale ranging from 1 (Strongly disagree) to 6 (Strongly agree). The sexual jealousy subscale consisted of three items (e.g., "I suspect there is something going on sexually between my partner and [friend name]", "I suspect sexual attraction between my partner and [friend name]"). The intimacy jealousy subscale also consisted of three items (e.g., "I worry that my partner and [friend name] keep secrets from me", "I am afraid that my partner will turn to [friend name] instead of me to meet emotional needs"). The power jealousy subscale consisted of three items focused on the influence that friends have on the romantic partner (e.g., "I am concerned about [friend name]'s influence on my partner"). The final subscale, companionship jealousy, assessed individuals' concern regarding their partner spending time with others (e.g., "I am upset by the amount of time my partner spends with [friend name]"). The items of each subscale were averaged together to calculate participants' level of each type of jealousy.

Relationship History. To gain insight into the history of participants' romantic relationships, two constructs were assessed: Longevity and infidelity. To assess longevity, participants were simply asked to indicate how many years and months they have been in a

³ The Trust Scale also includes a subscale assessing Predictability (i.e., consistency in partners' behaviors across situations); however, this scale was not included in the primary analyses of the current study as consistency in a partner's behaviors were less conceptually related to the processes under investigation.

romantic relationship with their partner. As with friendship length, the years and months were transformed into a single value in months.

Participants' and their partner's history of infidelity and attitudes toward infidelity were assessed via two measures. The first measure (Fincham, Lambert, & Beach, 2010) is a face-valid assessment of specific acts of infidelity. Participants were asked if they (or their partner) have ever engaged in kissing, sexual intimacy without intercourse, or sexual intercourse with someone else during their romantic relationship. Similar to the items assessing friend-specific sexual history, there was an insufficient number of reports of any level of own infidelity (9% of respondents), partner infidelity (6%), or infidelity from both people (3%) to analyze or share these data on the OSF.

The second measure, the Attitudes Toward Relationship Infidelity scale (DeWall et al., 2011), assessed participants' agreement with five statements about their attitudes toward infidelity (e.g., "Being faithful to my romantic partner is important to me", "I would cheat on my romantic partner if I was given the opportunity" [reverse scored]). Responses were assessed using a 5-point Likert type scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Participants also completed this measure in reference to how they think their partner would respond.

Results

Preliminary Analyses and Analysis Plan

Given the high degree of conceptual and empirical overlap between intimacy jealousy, power jealousy, and companionship jealousy, as well as their similar relations with the measures of friendship contact, these items were averaged together to form a jealousy composite. Future

analyses examine this jealousy composite and the sexual jealousy subscale; however, the substantive pattern of results is the same when examining the composite's subscales individually. As previously mentioned, descriptive statistics and zero-order correlations can be found in Table 2.

Of note, there were medium-sized positive correlations between individuals' own friendship maintenance and their reports of partner friendship maintenance. The strong positive correlations between the relationship measures of commitment, relationship satisfaction, and trust (i.e., dependability and faith) indicate that although these variables are conceptually distinct, they are strongly empirically related to one another. In line with my hypotheses, own cross-sex friendships were positively related to availability of alternatives and negatively related to commitment. Further, partner cross-sex friendships were positively related to feelings of jealousy. Contrary to expectations, own and partner cross-sex friendships were unrelated to the other measured relationship outcomes.

Three sets of analyses were specified using path analysis in Mplus to test the hypotheses of Study 1: Simple (or total effect) relations, indirect effects, and moderated mediation. Each of the paths that were modeled can be seen in Figure 2.

Simple Relations with Friendship Maintenance

Prior to specifying the model in Figure 2, I first evaluated the total effect of individuals' own same- and cross-sex friendship maintenance on each of their own relationship outcomes (i.e., commitment, relationship satisfaction, and trust; Hypotheses 1.1.1a-c) and availability of alternatives (Hypothesis 1.1.1d) while controlling for partner same- and cross-sex friendship maintenance. Similarly, I evaluated the total effect of partners' cross-sex friendship maintenance

on individuals' relationship outcomes (i.e., commitment, relationship satisfaction, and trust; Hypotheses 1.2.1a-c) and feelings of jealousy (Hypothesis 1.2.1d).

To ensure that effects of cross-sex friendships did not simply exist due to individuals having more friendships, same-sex friendships were also included as predictors and differences between these effects were examined through the use of equality constraints. These equality constraints were specified such that a given same-sex friendship effect (e.g., the effect of own same-sex friendship on availability of alternatives) and the parallel cross-sex friendship effect (e.g., the effect of own cross-sex friendship on availability of alternatives) were estimated to be equal to one another for each effect in the model. A second iteration of each model was conducted without these constraints to determine whether these constraints significantly worsen the fit of the model as per chi-square difference tests. Based on these comparisons, the effects of individuals' own same- and cross-sex friendships were freely estimated when predicting their perceived availability of alternatives. Likewise, the effects of their partner's same- and cross-sex friendships were freely estimated when predicting sexual jealousy. Effects of own same- and cross-sex friendships on commitment, dependability, faith, and relationship satisfaction were constrained to equality. Similarly, effects of partner's same- and cross-sex friendships were constrained to equality for the same outcomes in addition to the jealousy composite.

The results of these analyses are presented in Tables 4 and 5. Individuals' own cross-sex friendship maintenance, but not same-sex friendship maintenance, was a statistically significant predictor of their perceived availability of alternatives. When constrained to equality, individuals' own same- and cross-sex friendship maintenance were also marginally significant predictors of their reports of dependability and relationship satisfaction. Interestingly,

individuals' own levels of friendship maintenance were also negatively related to companionship and power types of jealousy (marginally) as well as intimacy jealousy, sexual jealousy, and the jealousy composite (significantly), such that individuals with more friendship maintenance experienced less jealousy. These results provide some support for Hypotheses 1.1.1b-c and support for 1.1.1d, though the relations with jealousy were unexpected.

In comparison, partners' friendship maintenance, regardless of same- or cross-sex status, was related to increases in individuals' experience of companionship, intimacy, and power jealousy, as well as the jealousy composite. Moreover, partners' cross-sex friendships, but not same-sex friendships, were related to increased reports of sexual jealousy. These results provide partial support for Hypothesis 1.2.1d with the caveat that only sexual jealousy was uniquely related to cross-sex friendships.

Estimating Indirect Effects with Availability of Alternatives and Jealousy as Mediators

The indirect effect captured by the *a-b* pathway in Figure 2 was used to determine whether individuals' own perceived availability of alternatives mediates the relations between their own cross-sex friendship maintenance and relationship outcomes (Hypotheses 1.1.2a-c). Similarly, the indirect effect captured by the *d-e* pathway was used to determine whether individuals' feelings of jealousy mediate the relations between individuals' perceptions of partner's cross-sex friendship maintenance and individuals' relationship outcomes (Hypotheses 1.2.2a-c).

Given that the effect of partner same- and cross-sex friendships was unequal when predicting sexual jealousy, but not the jealousy composite, models were run twice. The first version of each model estimated the indirect effect using the jealousy composite while the

second was estimated using sexual jealousy. In the first model, the effect of partners' friendships on the jealousy composite were constrained to be equal. In the second model, the effect of partners' same- and cross-sex friendships on sexual jealousy were estimated separately. These indirect effects were tested using a bootstrap estimation approach with 5000 samples. The point estimates and 95% confidence intervals are presented in Table 6.

In the first iteration of the models, statistically significant indirect effects of own cross-sex friendships via perceived availability of alternatives were found for commitment, dependability, faith, and relationship satisfaction based on their 95% confidence intervals excluding zero. However, it is important to note that there was only evidence to suggest that the indirect effect of availability of alternatives on commitment and relationship satisfaction were statistically different for same- and cross-sex friendships (p = .05 and p = .04, respectively), whereas the remaining effects did not differ based on friend gender. A similar pattern of effects was found in the second set of models in which sexual jealousy was the jealousy mediator; cross-sex friendships had a statistically significant indirect effect on commitment, faith, and relationship satisfaction via perceived availability of alternatives based on their 95% confidence intervals excluding zero. Again, these effects were only statistically stronger for cross-sex friendships than same-sex friendships for commitment (p = .05) and relationship satisfaction (p = .04).

In the first version of each model, there were statistically significant indirect effects of partners' friendship maintenance on commitment, dependability, faith, and relationship satisfaction via the jealousy composite. As previously mentioned, the effects of partners' same-and cross-sex friendships on the jealousy composite were constrained to equality; therefore, the

estimate could not differ for these indirect effects. These models also revealed statistically significant indirect effects for partners' cross-sex friendships on all outcome variables when using sexual jealousy as the mediator. In contrast, statistically significant indirect effects were not found for partners' same-sex friendships when using sexual jealousy as the mediator. Additionally, the difference between the indirect effects from same- and cross-sex friendships was statistically significant for commitment (p = .04), dependability (p = .03), faith (p = .02), and relationship satisfaction (p = .03). Taken together, these results provide support for Hypotheses 1.1.2a-c and partial support for Hypotheses 1.2.2a-c.

Estimating Moderated Mediation

Finally, although not shown in Figure 2, characteristics of individuals' cross-sex friendships (i.e., mate value, relationship length), characteristics of the romantic relationship (i.e., relationship length, attitudes toward infidelity; Note: Instances of infidelity were not analyzed due to their low base rate in the sample), and characteristics of the individuals in the romantic relationship (i.e., attachment-related anxiety and avoidance, beliefs about cross-sex friendships) were introduced into the model as moderators of the *a* and *d* paths, and the indirect effects captured by the *a-b* and *d-e* pathways were tested for moderated mediation (Hypotheses 1.1.3a-c and 1.2.3a-c). Moderators were entered into models based on the three aforementioned categories; however, each scale was either individually introduced into the model or entered together based on the following groupings.

Characteristics of cross-sex friendships were treated as four separate moderators, the first was mate value (i.e., a composite of attractiveness and dominance), the second was relationship length, the third was individuals' closeness to the friends, and the fourth was partners' closeness

to the friends. Characteristics of the romantic relationship were examined as three separate moderators: relationship length, own attitudes toward infidelity, and partner attitudes toward infidelity. Characteristics of the individuals in the romantic relationship were treated as two sets of moderators: both anxious and avoidant attachment-related individual differences were entered into the same model, whereas beliefs about cross-sex friendships were examined separately. As mentioned above, descriptive statistics and the zero-order correlations of these potential moderators can be found in Table 3. With the exception of relations between attachment-related anxiety and avoidance and beliefs about cross-sex friendships, the correlations among moderators were minimal and suggest that they are empirically distinct.

To investigate moderated mediation, I created new variables within Mplus that represented the simple slopes of the indirect effects at high and low levels of the moderator (i.e., conditional indirect effects at 1 SD above and below the mean of the moderator). The difference between these simple slopes was used to evaluate the statistical significance of moderated mediation. As with the indirect effects, the conditional indirect effects and the indices of moderated mediation were tested using a bootstrap estimation approach with 5000 samples. The point estimates and 95% confidence intervals of the differences in these conditional indirect effects (hereafter referred to as indices of moderated mediation) are presented in Tables 7-10.

The vast majority of the indices of moderated mediation include zero in their 95% confidence intervals, indicating that they do not statistically differ from zero. To account for the large number of statistical tests, a generous Type I error correction of .01 was employed post-hoc. Following this correction, there were no statistically significant effects of moderation.

Overall, there was not sufficient evidence to support Hypotheses 1.1.3a-c; indirect effects of own

cross-sex friendships on relationship satisfaction, trust, and commitment via attachment and jealousy were not moderated by characteristics of the friends, the romantic relationship, or individuals in the romantic relationship. Similarly, there was no evidence to support Hypotheses 1.2.3a-c; indirect effects of partner cross-sex friendships on relationship satisfaction, trust, and commitment via attachment and jealousy were not moderated by the characteristics examined.

Study 1 Discussion

The goal of Study 1 was to determine whether cross-sex friendship maintenance is related to macro-level romantic relationship outcomes among heterosexual couples. The results of Study 1 are in line with prior findings that cross-sex friendships are frequently accompanied by challenges (O'Meara, 1989; Schoonover & McEwan, 2014) and can be indirectly related to poorer romantic relationship functioning (e.g., Lemay & Wolf, 2016a; McCubbery, 2006) and an increased availability of alternatives (Wreford, 2012). Specifically, individuals' and their partners' cross-sex friendships were not directly related to macro-level romantic relationship outcomes (i.e., total effects did not reach statistical significance) but were instead related indirectly via increases in perceived availability of alternatives and feelings of jealousy, respectively. In a cross-sectional design, individuals in heterosexual romantic relationships with greater levels of cross-sex friendship maintenance experienced decreased commitment, trust, and relationship satisfaction via perceptions of increased availability of alternatives. Similarly, partners' cross-sex friendships were indirectly related to individuals' decreased commitment, trust, and relationship satisfaction via increases in individuals' feelings of sexual and non-sexual jealousy. Contrary to the work of Bennett (2016), the results of Study 1 suggest that partners' same- and cross-sex friendships were both related to non-sexual jealousy, but cross-sex

friendships were uniquely related to feelings of sexual jealousy. Study 1 also extended this prior work by investigating more macro-level outcomes (i.e., commitment, trust, relationship satisfaction) as well as finding evidence that jealousy and availability of alternatives are two of the processes underlying these effects.

Although previous studies (e.g., Worley & Samp, 2014; Wreford, 2012) found evidence to suggest that certain friendships or relationships may be more susceptible to the effects of cross-sex friendships than others, the results of Study 1 do not provide evidence of moderated mediation. The indirect effects of cross-sex friendships on romantic relationship outcomes were not found to differ based upon characteristics of the cross-sex friendships, romantic relationships, or individuals in the romantic relationships. Following Type I error correction, the indirect effects of cross-sex friendships on relationship outcomes were not conditional on the mate value of the friends, individuals' or their partners' closeness to the friends, or the length of the friendships. Nor were these indirect effects moderated by the length of the romantic relationship, the individuals' beliefs about infidelity, or their perceptions of their partners' beliefs about infidelity. Lastly, there was no evidence that these indirect effects were different based upon the individuals' levels of anxious and avoidant attachment-related individual differences or beliefs about cross-sex friendships. Taken together, this suggests that cross-sex friendships have a negative indirect relation with romantic relationship outcomes irrespective of many features that would be anticipated to attenuate these effects.

The use of a non-dyadic cross-sectional design for Study 1 permitted me to obtain a large enough sample to test whether specific characteristics of cross-sex friendships (e.g., mate value) moderate the effects of cross-sex friendships on the perceived availability of alternatives and

feelings of jealousy. That being said, Study 1 had limitations worth noting. First, Study 1 only collected responses from one individual in the romantic relationship. Although this undoubtedly facilitated my ability to collect a large amount of data and obtain increased statistical power for tests of my hypotheses involving moderation, it precluded the possibility of investigating dyadic effects. By relying upon individuals to report on their partners' friendships, the effects found for partners' friendships may be a product of shared method variance. Second, Study 1 was limited to assessing macro-level relationship outcomes. Ultimately, this resulted in a large number of responses based upon reports of aggregate behavior, but an inability to investigate short-term within-person effects based on whether individuals engaged in cross-sex friendship maintenance on a given day. Third, although results were consistent across multiple relationship outcomes, these variables were highly correlated to one another. Given that these correlations were medium-to-large in size, it is unclear whether the features that make them theoretically distinct were present in the current data. Therefore, it is possible that effects found in Study 1 are related a general view of the relationship rather than the three distinct constructs assessed. Fourth, relations between cross-sex friendship maintenance and non-sexual jealousy were similar those of same-sex friendships suggesting that these experiences are reflective of friendship maintenance in general. However, the effects of availability of alternatives and sexual jealousy were unique to cross-sex friendships.

CHAPTER 3

STUDY 2

In Study 2, I aimed to address the limitations of Study 1 by examining daily assessments of cross-sex friendship maintenance as well as the daily romantic relationship behaviors of both members of the romantic relationship. Although macro-level relationship outcomes (e.g., commitment and relationship satisfaction) predict relationship dissolution in the long term (Sprecher, 2001), day-to-day interactions can capture micro-level changes that relate to macrolevel outcomes (e.g., commitment; Canary & Stafford, 1994). To investigate the day-to-day functioning of romantic relationships, I focused on "Relational Maintenance Behaviors" (RMBs) in Study 2. RMBs are the behaviors, actions, or activities that individuals engage in "to sustain desired relational properties" (Canary & Dainton, 2006, p. 728), such as acting cheerfully, talking about the relationship, and being open about feelings. The current study focused predominantly on behaviors between romantic partners that sustain the relationship (i.e., relational context; Dindia, 2003). These behaviors are related to commitment, liking, and satisfaction (Stafford & Canary, 1991) and may need to be continually enacted to ensure that positive relationship qualities do not fade over time (Canary, Stafford, & Semic, 2002). Similar to the hypotheses of Study 1 suggesting that cross-sex friendship maintenance is linked to macrolevel outcomes such as commitment, I expected that day-to-day cross-sex friendship maintenance would be detrimental to daily RMBs.

Consistent with Study 1, I investigated characteristics of the friendship, romantic relationship, and individuals in the romantic relationship as potential moderators to better understand whether daily RMBs are more strongly related to cross-sex friendship maintenance.

Prior work using attachment styles has established that secure adult attachment is related to the use of fewer negative RMBs (Goodboy & Bolkan, 2011; Goodboy, Dainton, Borzea, & Goldman, 2017). Therefore, it seemed likely that attachment-related individual differences would moderate the effects of cross-sex friendship interactions on RMBs. However, to the best of my knowledge, prior work has not examined relations between RMBs and the remaining moderators. Therefore, the majority of the analyses involving moderated mediation in Study 2 were fairly exploratory in nature even though a priori directional hypotheses were made to mirror those of Study 1.

Own Friend Hypotheses

Hypotheses 2.1.1a-c: Individuals that interact with a higher number of cross-sex friends on a given day will report lower levels of daily relationship satisfaction (Hypothesis 2.1.1a) and relational maintenance behaviors (Hypothesis 2.1.1b), as well as an increased perceived availability of alternatives (Hypothesis 2.1.1c).

Own Friend Indirect Effect Hypotheses

Hypotheses 2.1.2a-b: Individuals' increased perceived availability of alternatives will mediate the association between individuals' increased contact with cross-sex friends on a given day and individuals' decreased levels of daily relationship satisfaction (Hypothesis 2.1.2a) and relational maintenance behaviors (Hypothesis 2.1.2b).

Own Friend Moderation Hypotheses

Hypothesis 2.1.3a: The effects predicted in Hypotheses 2.1.1a-2.1.2b will be moderated by characteristics of individuals' own cross-sex friends, such that the effects are stronger when individuals' cross-sex friends are more attractive or dominant.

Hypothesis 2.1.3b: The effects predicted in Hypotheses 2.1.1a-2.1.2b will be moderated by characteristics of the romantic relationship, such that the effects are stronger when romantic relationship length is shorter, there is a history of infidelity, or the individual holds positive attitudes toward infidelity.

Hypothesis 2.1.3c: The effects predicted in Hypotheses 2.1.1a-2.1.2b will be moderated by characteristics of the individuals in the romantic relationship, such that the effects are stronger for more avoidantly or anxiously attached individuals or those who hold more negative beliefs about cross-sex friendships.

Partner Friend Hypotheses

Hypotheses 2.2.1a-c: Individuals with partners who interact with a higher number of cross-sex friends on a given day will report lower levels of daily relationship satisfaction (Hypothesis 2.1.1a) and relational maintenance behaviors (Hypothesis 2.1.1b), and increased feelings of jealousy (Hypothesis 2.1.1c).

Partner Friend Indirect Effect Hypotheses

Hypotheses 2.2.2a-b: Individuals' increased feelings of jealousy will mediate the association between partners' increased contact with cross-sex friends on a given day and individuals' decreased levels of daily relationship satisfaction (Hypothesis 2.2.2a) and relational maintenance behaviors (Hypothesis 2.2.2b).

Partner Friend Moderation Hypotheses

Hypothesis 2.2.3a: The effects predicted in Hypotheses 2.2.1a-2.2.2b will be moderated by characteristics of partners' cross-sex friends, such that the effects are stronger when

individuals' cross-sex friends are higher in mate value (operationalized as more attractive or dominant).

Hypothesis 2.2.3b: The effects predicted in Hypotheses 2.2.1a-2.2.2b will be moderated by characteristics of the romantic relationship, such that the effects are stronger when romantic relationship length is shorter, there is a history of infidelity, or a partner holds positive attitudes toward infidelity.

Hypothesis 2.2.3c: The effects predicted in Hypotheses 2.2.1a-2.2.2b will be moderated by characteristics of the individuals in the romantic relationship, such that the effects are stronger for more avoidantly or anxiously attached individuals or those who hold more negative beliefs about cross-sex friendships (i.e., views that cross-sex friends cannot be just friends).

Method

Participants

One hundred and eight dyads (i.e., 216 participants; power analyses justifying this sample size can be found in Appendix A on OSF: https://osf.io/k6ufw/) were recruited via postings on the university SONA participant pool as well as on campus fliers. However, the majority of these dyads contacted us through the participant pool indicating that at least one member of the relationship was enrolled in a course in the social sciences. As in Study 1, participation was limited to men and women in monogamous heterosexual romantic relationships of at least 3 months in length to ensure that cross-sex friendships had the potential to pose a threat to the relationship. Participants were provided their choice of compensation, receiving up to \$15 via Clincard or 2 SONA credits, to reimburse them for the time (roughly one and a half hours) and expenses associated with participating. This compensation was based on participation such that

participants received \$8 or 1 credit for the initial lab visit and \$1 per daily survey submitted or .5 credits for completing 1-3 daily surveys or 1 credit for submitting 4-7 daily surveys. Funding for Study 2 was obtained via the University of Texas at Dallas PhD Research Small Grants Program (\$1,000) and the Chair of the Committee's departmental startup fund.

Procedure

Study 2 involved two parts: an initial intake questionnaire and a daily diary questionnaire. The initial intake questionnaire assessed stable characteristics of the romantic relationship (e.g., relationship length, history of infidelity) and of the individuals in the romantic relationship (e.g., beliefs about cross-sex friendships) to investigate some of the moderators proposed in the theoretical model. The daily diary questionnaire assessed participants' daily feelings of jealousy, availability of alternatives, relationship satisfaction, and RMBs for seven days. In these diaries, participants also logged their contact with friends each day to determine the effect that cross-sex friendship contact has on romantic relationships each day. Finally, participants provided brief details (e.g., attractiveness, gender) about each of the friends that they mentioned to test the moderating effects of friendship characteristics on perceived availability of alternatives and feelings of jealousy (i.e., a conceptual replication of Study 1).

These daily responses regarding interactions with friends allowed me to tease apart the between- and within-person effects of cross-sex friendship interactions on RMBs. Between-person variation captured the effect that differences in the average number of cross-sex friends individuals or their partners interacted with each day has on daily relationship satisfaction and RMBs. These effects are similar to the cross-sectional effects investigated in Study 1. Within-person variation captured how individuals' fluctuations in cross-sex friendship contact (i.e.,

whether individuals are interacting with greater or fewer cross-sex friends compared to their typical level of cross-sex friendship contact) predicts their day-to-day relational maintenance behaviors. In addition to specifying the between- and within-person effects of individuals' cross-sex friendship interactions on their own relationship satisfaction and RMBS (i.e., actor effects; Kenny, Kashy, & Cook, 2006), I also specified the between- and within-person effects of individuals' romantic partners' cross-sex friendship interactions on individuals' relationship satisfaction and RMBs (i.e., partner effects; Kenny et al., 2006) to evaluate the interpersonal effects of cross-sex friendship maintenance (e.g., do individuals' relational maintenance behaviors change in response to their romantic partner spending time with a friend of the opposite sex). Note that although I disentangled the between- and within-person effects of time-varying predictors, my primary interest in Study 2 and corresponding hypotheses focused on the within-person effects of friendship interactions.

Measures

The descriptive statistics of each measure, including Cronbach's alpha and average interitem correlations, are presented in Table 11 (independent variables, proposed mediators, and outcomes) and Table 15 (proposed moderators) to aid in the comparison of reliability and descriptives across measures.

Initial Intake Questionnaire

Relationship history. Relationship longevity, history of infidelity, and attitudes toward infidelity were assessed in the same manner as Study 1. As in Study 1, there was an insufficient number of reports of any level of infidelity (11% of respondents) to obtain statistical power

sufficient enough to test infidelity as a moderator. Because there were so few instances, acts of infidelity were omitted from the OSF data to reduce participants' risk of social harm.

Adult Attachment Style. As in Study 1, participants' levels of anxious and avoidant attachment-related individual differences were assessed via self-reported responses to the ECR-R (Fraley, Waller, & Brennan, 2000).

Beliefs About Cross-Sex Friendships. Participants' self-reported beliefs about cross-sex friendships were assessed using the same items as in Study 1.

Daily Diary Questionnaire

Log of own friend interactions. Participants were told that this study defines friendships as nonfamilial, nonromantic personal relationships. They were then asked to complete a question assessing their understanding of this definition. Participants then completed a daily log in which they listed the names of friends that they interacted with that day. Interactions were defined to participants as any situation involving two or more friends in which the behavior of each person is in response to the behavior of the other person and required that they were not merely in the presence of one another. However, this definition allowed for interactions to occur via face-to-face contact, via phone, or via computer mediated technology. Participants were given the opportunity to ask questions about the current study's definition of friendships and interactions during their in-lab visit and were presented with these definitions on each daily survey.

Prompts also asked for information about the friends that they listed by displaying their name and asking for the participant to report the gender, attractiveness, and dominance of their friend. Attractiveness and dominance were assessed using the same scales as in Study 1, but attractiveness was asked in reference to the participants' gender regardless of the friend's gender

(e.g., both male and female friends of a female participant would be rated for how attractive they are to women).

Although initially planned to be operationalized as daily variability in friends' attractiveness, dominance, and partner presence, the research design and large amounts of missing data prevented me from doing so. Specifically, in an attempt to minimize the demands on participants I did not ask participants to rate the attractiveness and dominance of friends if they said they had told us about that friend previously. Unfortunately, friend names were recorded via free response and discrepancies in spelling and inconsistencies in whether or not participants told us about a friend across days made it unfeasible to link the majority of ratings from day to day. Additionally, days on which participants did not spend time with a given gender resulted in missingness for those variables (e.g., 66% CSF attractiveness missingness, 45% SSF attractiveness missingness). Therefore, attractiveness and dominance were calculated as participant-specific averages (e.g., the male in a given dyad's average rating of his CSFs as attractive to men). Therefore, the usefulness of these moderators is limited and perhaps reflects characteristics of the rater more frequently than characteristics of the friends they interacted with each day.

Daily Jealousy. Participants completed a modified version of the global jealousy subscales used in Study 1 to assess their feelings of jealousy each day. These items were in reference to how participants felt that day with any references to their partners' friends being about friends in general rather than asking about specific friends or genders. As in Study 1, there was evidence to suggest that the average of Companionship, Intimacy, and Power Jealousies

should be taken (henceforth referred to as the Jealousy Composite), whereas Sexual Jealousy should be examined separately.

Availability of Alternatives. Participants completed an adapted version of the Availability of Alternatives Scale (Rusbult et al., 1998) used in Study 1. Participants were asked to indicate their agreement with each item based on how they felt that day rather than in general and daily scores were calculated as the average of the items.

Relational Maintenance Behaviors. Participants' daily RMBs were assessed via an adapted version of the Relational Maintenance Behavior Measure (RMBM; Stafford, 2011). This scale was modified to ask participants to rate the extent to which their partner (i.e., informant report) engaged in various behaviors or activities that day rather than in general. There were two reasons for restricting the measurement of these constructs to informant report (i.e., individuals providing reports on their partners' behaviors and vice-versa). First, given the socially desirable nature of the constructs, I believed that individuals' partners would generally provide a more objective assessment (Vazire, 2010). Second, requesting participants to complete both a self- and informant-report would have greatly increased the burdens placed on their daily participation.

Participants were presented with 19 items that assessed 5 types of partner behaviors:

Positivity (4 items; e.g., "acted cheerfully with me"), Understanding (4 items; e.g., "did not judge me"), Self-Disclosure (4 items; e.g., "was open about his/her feelings"), Relationship

Talks (3 items; e.g., "talked about our relationship"), and Assurances (4 items; e.g., "told me how much I mean to him/her"). Responses were collected via a Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The original RMBM also included a scale assessing tasks that serve to maintain the relationship (e.g., sharing in joint responsibilities); however, this

scale was omitted in the current research as the items pertain to shared responsibilities that may not be relevant for college students not living with their romantic partner. The scale assessing Networks was also omitted due to the fact that variation was not seen in prior work focused on two weeks of behaviors (Stafford, 2011).

Finally, participants completed an adapted version of the Avoidance scale from the Negative Relational Maintenance Questionnaire (NRMQ; Dainton & Gross, 2008). This scale uses four items to assess avoidance-related behaviors that individuals use in an attempt to maintain their relationship (e.g., "I avoided interacting with my partner because he/she was angry with me"). Given that these behaviors include internal motives and thoughts, participants provided self-reports regarding their own avoidance behaviors.

Daily Relationship Satisfaction. Daily relationship satisfaction was assessed via two items that have previously been used as a marker of relationship functioning (Belcher, Laurenceau, Graber, Cohen, Dasch, & Siegel, 2011; Laurenceau, Barrett, & Pietromonaco, 1998; Laurenceau, Barrett, & Rovine, 2005). Each day participants completed Likert-type scales ranging from 1 (Not at all) to 7 (Extremely) for the following items: "What best describes the degree of happiness, all things considered, in your relationship?" and "How much intimacy/connectedness do you feel with your partner?". The average of these items was taken each day due to the high correlation between the items (daily *r* ranged from .64 to .83).

Results

Descriptive Statistics and Zero-Order Correlations

Descriptive statistics and zero-order correlations among daily friendship contact, the proposed daily mediators, and the daily relationship outcomes are presented in Table 11. In

addition to the means and standard deviations, the range of inter-item reliability (i.e., Cronbach's alpha) across time points is included for each scale. With the exception of Relationship Satisfaction, RMBM Self-Disclosures and Understanding, and NRMQ Avoidance, the lowest alpha found for each scale was at least acceptable (i.e., > .80).

In addition to assessing the reliability at each time point, I examined the reliability of within-person change (i.e., R_c; Bolger & Laurenceau, 2013) to determine whether changes in items from day-to-day also demonstrate inter-item consistency. Some measures displayed acceptable reliability of within-person change (i.e., > .80); however, the majority of outcome measures were less than ideal in this regard. Specifically, both measures of jealousy displayed acceptable reliability while availability of alternatives was slightly less reliable. In contrast, of the seven relationship outcomes investigated, only RMBM Positivity showed acceptable reliability. The formula for estimating R_c suggests that low reliability for within-person change can be the result of a lack of systemic change over time or poor between-person internal consistency (Cranford et al., 2006). Given that the range of Cronbach's alpha and average interitem correlations is acceptable for these measures across the time points, it is likely that the poor reliability present is due to a lack of systemic change over the course of the study.

Overall correlations were examined across time points to determine relations between variables prior to specifying models with between- and within-person effects. Given the non-independence present in the data, these zero-order correlations were tested using the Gonzalez and Griffin (2000) correction for interdependent data. As can be seen via the intrapersonal correlations (i.e., correlations between two measures reported by the same individual), participants reporting a greater number of interactions with cross-sex friends also reported a

greater perceived availability of alternatives. There were also weak, but statistically significant, negative relations between availability of alternatives and relationship satisfaction and the RMBM scales, as well as a positive relation with NRMQ Avoidance. Similar relations were found between these daily relationship outcomes and daily reports of the jealousy composite and sexual jealousy, such that increased jealousy was related to lower levels of relationship satisfaction and the majority of RMBM scales and greater NRMQ Avoidance. It is also important to note that there were very strong intraindividual correlations between each of the RMBM measures, and therefore replications across measures may be indicative of this correlation.

Interpersonal correlations (i.e., correlations between a measure reported by the individual and the same or another measure reported by their partner) indicated that participants' reports of interactions with their own cross-sex friends were unrelated to partners' sexual jealousy while their interactions with same-sex friends were negatively related to sexual jealousy. Interestingly, participants' reports of cross-sex, but not same-sex friendship interactions, were related to partners' greater levels of the jealousy composite. Counter to expectations, partners' friendship interactions were unrelated to individuals' reports of jealousy, relationship satisfaction, and relational maintenance behaviors.

Preliminary Analyses

The analyses of Study 2 were intended to address three sets of research questions. The first set examines whether individuals' and partners' interactions with cross-sex friends predict individuals' daily RMBs and relationship satisfaction. The second set evaluates whether daily feelings of jealousy and perceived availability of alternatives mediate the relation between cross-

sex friendship interactions and daily relationship functioning. The third set determines whether qualities of the cross-sex friendships, romantic relationship, or individuals in the romantic relationship, moderate the effects of own and partner cross-sex friendship maintenance on relationship satisfaction and RMBs and the indirect effects for analyses that involve jealousy and availability of alternatives as mediators.

To investigate these questions, multilevel models for dyadic diary data (Bolger & Laurenceau, 2013) were used to analyze daily reports of relationship satisfaction and RMBs. These analyses were carried out in Mplus using Maximum Likelihood with Robust Standard Errors as the estimator. A simplified version of the within-person portion of these models can be seen in Figure 3. In these models, both actor and partner effects were specified for the between-person and within-person effects of time-varying predictors. In models in which the actor effect is the effect of primary interest, partner effects were still included to ensure that estimates of the actor effects are unbiased. Given that RMBM measures were informant reports it is important to note that any actor effects would convey that a participants' own scores on a predictor variable are related to their reports that their partner engaged in fewer relational maintenance behaviors that day. In contrast, the NRMQ Avoidance measure was a self-report and therefore would indicate that the participants' scores are related to their reports that they personally engaged in greater levels of avoidance that day.

The first set of multilevel models tested the effect of own and partner self-reported cross-sex friendship interactions on daily perceived availability of alternatives, feelings of jealousy, relationship satisfaction, and daily RMBs irrespective of moderators. Each of these basic models was tested for omnibus distinguishability on the basis of gender. The fit of nested models in

which all effects were either constrained to be equal between genders or freely estimated were tested via chi-square difference tests. Of the 10 models tested for distinguishability, only one (Assurances, p = .026) indicated a statistically significant decrease in fit when treating the model as indistinguishable (another reached marginal significance: Self-Disclosures, p = .091). For the sake of parsimony, all models in Study 2 were therefore treated as indistinguishable.

Using a similar approach, the 10 indistinguishable basic models were analyzed to determine whether same- and cross-sex friendship interactions have differential effects on the study outcome variables. I first evaluated the differential effects of individuals' own same- and cross-sex friendships on their own outcomes and availability of alternatives. The imposition of equality constraints on these effects did not result in significantly poorer fitting models, but one model reached marginal significance (Relationship Talks, p = .071). Next, I investigated whether partner effects (i.e., the effects of the partners' friendship interactions on individuals' outcomes and jealousy) were differentiated by whether the partners' friendship interactions were same-sex or cross-sex. One of the models (Sexual Jealousy, p = .004) indicated statistically poorer fit when constraining partner effects of same- and cross-sex friendships to equality; moreover, two models reached marginal significance (Jealousy Composite, p = .051; Relationship Satisfaction, p = .072). Given that the majority of models examining the equality constraints of same- and cross-sex friendships did not have statistically poorer fit, future models included equality constraints for the two types of friendships. Unfortunately, the empirical similarity of cross- and

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⁴ Models predicting Sexual Jealousy were found to have poorer fit when constraining same- and cross-sex friendship maintenance to equality in both Study 1 and Study 2 (that is, the effects of cross-sex and same-sex friendship maintenance on sexual jealousy were significantly different from one another). When freely estimating the effect that partners' cross-sex friendships has on sexual jealousy in Study 2, there were no substantive differences in the basic or mediational models.

same-sex friendship effects precludes the ability to directly answer hypotheses in reference to cross-sex friendship interactions and instead requires that inferences be made about interactions with friends regardless of type.

Basic Models

Individuals' daily relationship outcome scores were predicted as a function of individuals' within-person interactions with friends, individuals' between-person interactions with friends, their partners' within-person interactions with friends, and their partners' betweenperson interactions with friends. The results of these models are shown in Tables 12 and 13. The total effect of individuals' within-person fluctuations in interactions with friends on individuals' own daily relationship outcomes (not shown in Figure 3) was used to test Hypotheses 2.1.1a-c. Statistically significant effects were found for perceived availability of alternatives and the jealousy composite indicating that on days participants reported interacting with more friends than normal they also reported a greater perceived availability of alternatives and general feelings of jealousy. Likewise, the total effect of partners' within-person fluctuations in interactions with friends on individuals' daily relationship outcomes (not shown in Figure 3) was used to test Hypotheses 2.2.1a-c. One statistically significant effect was found, such that individuals reported fewer self-disclosures from their partners on days when partners reported interacting with more friends than normal. Of the 10 models assessing this set of hypotheses, only three effects of a possible 20 effects supported the hypotheses. Overall, this suggests that there are not consistent relations between own and partner daily variations in interactions with friends and daily relationship outcomes such as RMBs and relationship satisfaction.

Estimating Indirect Effects

Indirect effects from analyses that include daily availability of alternatives and daily jealousy as mediators were estimated using the delta method implemented in Mplus; these models determined whether within-person effects of jealousy (the *a-b* pathway; Hypothesis 2.1.2a-b) and perceived availability of alternatives (the *f-b* pathway; 2.2.2a-b) mediate the relations between within-person effects of friendship interactions on daily relationship satisfaction and RMBs. As in Study 1, two iterations of these models were conducted: the first treating availability of alternatives and the jealousy composite measure as mediators and the second treating availability of alternatives and sexual jealousy as mediators.

The results of these analyses are shown in Table 14. As indicated by the many non-significant point estimates, the majority of indirect effects did not reach statistical significance. There was one exception—the indirect effect of own interactions with friends on daily relationship satisfaction via perceived availability of alternatives reached statistical significance. This indicates that on days that participants reported interacting with more friends than normal, they reported a greater perceived availability of alternatives (b = .10, SE = .03, p < .001) and in turn reported a lower level of relationship satisfaction (b = -.10, SE = .04, p = .006). Besides this, there was not much evidence to suggest that day-to-day differences in friendship interactions are indirectly related to daily romantic relationship outcomes via feelings of jealousy or perceived availability of alternatives.

Estimating the Moderation of Within-Person Effects

The three remaining sets of models were initially planned to assess whether the withinperson effects and indirect effects previously examined were conditional based upon each of the proposed moderators. Specifically, average characteristics of cross-sex friends (i.e., attractiveness, dominance; Hypotheses 2.1.3a and 2.2.3a; Note: Instances of infidelity were not analyzed due to their low base rate in the sample), characteristics of the romantic relationship (i.e., relationship length, attitudes toward infidelity; Hypotheses 2.1.3b and 2.2.3b), and characteristics of the individuals in the romantic relationship (i.e., attachment-related anxiety, attachment-related avoidance, cross-sex friendship beliefs; Hypotheses 2.1.3c and 2.2.3c) were examined as possible moderators of the within-person effects modeled above (i.e., cross-level moderation) and the indirect effects (i.e., multilevel moderated mediation). Descriptive statistics and zero-order correlations of these moderators are presented in Table 15. With the exception of high correlations between the attractiveness composite and the ratings that comprise it (i.e., attractiveness and dominance), as well as a fairly large correlation between attachment-related anxiety and attachment-related avoidance, the moderators are fairly unrelated.

Unfortunately, the unforeseen complexity of the proposed models resulted in an inability to directly test the hypotheses concerning multilevel moderated mediation above (i.e., the majority of the models failed to converge to a solution). More simplified versions of these models were therefore run in Mplus and estimated with maximum likelihood using Monte Carlo numerical integration. In these models, random effects were specified for the corresponding within-person effects that comprise the principal mediational pathways (e.g., the within-person effect of participants' daily cross-sex friend contact on their own perceived availability of alternatives). These within-person effects were then regressed on the between-person moderators (e.g., participants' attachment-related anxiety) to assess whether the *a* and *b* paths and the *f* and *b* paths were moderated (as opposed to whether the within-person indirect effect themselves were moderated).

In some cases, even these more simplified models would not converge to a solution. Accordingly, I adopted the following model trimming strategy in these situations to aid model convergence. First, if the simplified model would not converge, I removed the cross-partner between-person paths (e.g., the moderating effect of participants' partners' attachment-related anxiety on the within-person effect of participants' daily cross-sex friend contact on their own perceived availability of alternatives). If that model would not converge, I removed the same-sex between-person paths (e.g., the moderating effect of the average attractiveness of participants' same-sex friends on the within-person effect of participants' daily cross-sex friend contact on their own perceived availability of alternatives). If that model would not converge, I tried removing the equality constraints for gender on the moderators. If that model would not converge, I assessed whether trimming the moderator of the "a" path or the moderator of the "b" path would resolve the convergence issues. If neither of those two final options worked, I concluded that it was not possible to evaluate cross-level moderation.

The results of these models can be found in Tables 16-24, and I make note of those models in which model trimming had to be implemented to aid model convergence or cross-level interactions could not ultimately be evaluated. To be sure, the effects presented in Tables 16-24 refer to cross-level interactions, such that the level 1 within-person effect (e.g., the effect of participants' own daily fluctuations in cross-sex friendship contact on availability of alternatives) was regressed on the level 2 between-person effect (e.g., participants' anxious attachment-related individual differences). Although the results are simplified to show only the characteristics of the individual or their partner and their respective friends based upon the path of interest, these models included values for both members of the relationship. Consistent with Study 1, an alpha

correction of .01 was employed after analyses to account for the large number of statistical tests conducted. Across these models, there was not consistent evidence that the within-person effect of friendship interactions on the mediators, or the within-person effects of the mediators on the relationship outcomes, were moderated by the between-person moderators.

Among the models examining the moderating effects of characteristics of cross-sex friendships, there was no evidence that the effect of own or partner cross-sex friendship maintenance was moderated by characteristics of the cross-sex friendships following the Type I error correction. Unfortunately, a large number of the models estimating the moderating effects of characteristics of the romantic relationship failed to converge normally. None of the effects from the models that did successfully converge remained statistically significant after correction. A large number of models estimating the moderating effects of characteristics of the individuals in the romantic relationships required modification to converge and the majority of effects did not reach statistical significance. For men, there was evidence that their levels of Anxious Attachment moderated the effect of Jealousy on their Relationship Satisfaction. To better understand this effect, it was followed up with simple slope analyses to estimate the effect at high and low levels of the moderator (i.e., 1 SD above and below the mean, respectively). At high levels of anxious attachment, jealousy was negatively related to relationship satisfaction for men (b = -.30, SE = .08, p < .001), but at low levels it was not (b = -.11, SE = .07, p = .129).

Study 2 Discussion

The primary goal of Study 2 was to determine whether daily interactions with cross-sex friends were related to daily relationship satisfaction and engagement in relational maintenance behaviors of individuals and their partners. This study aimed to extend Study 1 by focusing on

the micro-level exchanges that are believed to relate to the macro-level outcomes of Study 1 (Canary & Stafford, 1994) and estimating the effects of within-person change. This study also addressed a limitation of Study 1 by obtaining reports from both members of the dyad. The results of Study 2 do not provide much evidence to conclude that day-to-day changes in participants' or their partners' friendship interactions are related to participants' daily relationship satisfaction or RMBs.

Contrary to the hypotheses of Study 2, the basic models predicting daily relationship satisfaction and RMBs did not yield consistent statistically significant results. This comes as a surprise because RMBs are the day-to-day interactions that relate to the macro-level effects of Study 1 (Canary & Stafford, 1994). Nevertheless, these findings are consistent with the lack of statistically significant effects in the basic models of Study 1. Moreover, it was unexpected that the effects of interactions with same- and cross-sex friends would be indistinguishable in these models. Additionally, the indistinguishability of same-sex and cross-sex friendships conflicts with the findings of Study 1 and prior work suggesting that cross-sex friendships pose unique challenges that may be related to romantic relationship functioning (e.g., O'Meara, 1989; Lemay & Wolf, 2016a; McCubbery, 2006). Differences in the source of reporting between Study 1 and Study 2 are likely to explain this discrepancy. Specifically, Study 2 assessed friendship contact via self-reported lists from each member of the dyad on each day, whereas Study 1 collected own and partner friendship maintenance from just one individual. Utilizing self-reports rather than informant reports likely increased the accuracy of reporting in this context but may have also removed uniquely challenging aspects of cross-sex friendship maintenance, such as worry about the amount of time they spend with specific friends (e.g., Bennett, 2016).

There was evidence of one indirect effect, such that on days where participants interacted with more of their own friends they also reported a greater perceived availability of alternatives and in turn reported lower daily romantic relationship satisfaction. This finding is consistent with the Investment Model (Rusbult, 1980) and extends prior work by establishing daily contact with friends as a source of perceived availability of alternatives. Additionally, detrimental relations between daily friendship maintenance and romantic relationship quality parallel prior findings with the maintenance of backburner relationships and lower levels of commitment (Dibble et al., 2015). Although this effect replicates the cross-sectional findings of Study 1 in the context of a longitudinal design, the effect was not limited to cross-sex friendships.

It is also important to interpret this single effect with caution because daily RMBs were largely unrelated to own and partner daily friendship interactions. Given that the majority of RMBs were assessed via informant reports, it is possible that RMBs had no effect due to a lack of shared method variance. However, the negative relational maintenance behavior of avoidance was collected via self-report and was also unrelated to daily friendship interactions. Additionally, participants' reports of their own daily friendship interactions, availability of alternatives, and perceptions that their partner engaged in positive RMBs were coming from the same source, related to both own and partner reported satisfaction, and failed to reach significance.

Finally, there was not consistent evidence to suggest that the within-person effects comprising the indirect effects examined in Study 2 were moderated. Cross-level interactions were used to investigate moderation where each moderator predicted differences in the slopes of each path. There was evidence that the majority of slopes had variability (i.e., their variance was statistically significant), yet there was not consistent evidence to suggest that the characteristics

investigated explained the variability present. It is possible that daily contact with friends is unrelated to daily relationship outcomes regardless of the features of the friendships, the romantic relationships, or the individuals in the romantic relationship. However, it is also possible that additional characteristics not included in the current study exacerbate or attenuate these relations. For instance, desires for a relationship with a specific friend, relationship conflict, and beliefs about monogamy may be important moderators of the daily effects of friendships.

A large limitation of Study 2 resulted from the decision to reduce participant burden by only asking for ratings about friends when the participant indicated that they had not previously told us about that friend. Unfortunately, this decision resulted in large amounts of missing data for the moderator variables and the subsequent need to aggregate characteristics of cross-sex friendships (i.e., attractiveness, dominance) across days rather than allowing them to vary from day-to-day. Rather than determining whether interacting with more attractive or dominant friends on a given day moderated effects, I was limited to determining whether effects differed for people who had more or less attractive or dominant friends on average. It is likely that characteristics of friends would only moderate the effects of maintaining that specific friendship rather than all friendships, but this specificity was sacrificed in the present research. Another limitation of Study 2 is that it focused solely on the number of friendship interactions each day; it may have been beneficial to assess qualities of daily friendship interactions such as the amount of time spent together, disclosure, and intimacy as these constructs are features of friendship maintenance that may be especially likely to increase the perception of available alternatives and be threatening to romantic partners. In addition, it may have been beneficial to extend the

reporting period. Observing couples for a longer period of time would provide more opportunities for couples to interact with their friends and experience subsequent differences in daily relationship dynamics. Moreover, the increase in observations obtained through increasing the assessment period would result in more precise estimates of the effect participants' average contact with friends has on daily relationship dynamics (i.e., between person effects) and provide more assessments of the effect that fluctuations around their average contact with friends has on daily relationship dynamics (i.e., increased power for detecting various within-person effects).

CHAPTER 4

GENERAL DISCUSSION

Popular culture and prior research have suggested that cross-sex friendships are challenging (e.g., Bleske-Rechek et al., 2012; O'Meara, 1989) and can be detrimental to romantic relationships (e.g., Worley & Samp, 2014; Wreford, 2012). However, research on this topic has been relatively sparse. Moreover, rather than focusing on more macro-level relationship outcomes, the majority of prior work has instead focused on more immediate perceptions (e.g., jealousy and perceived threat, Worley & Samp, 2014). The current research built upon prior work by examining macro-level relationship outcomes, day-to-day reports of relationship maintenance behaviors, and mediating processes in two separate studies.

In the first study using a cross-sectional design, there was evidence that people's maintenance of cross-sex friendships is related to poorer romantic relationship functioning via greater levels of perceived available alternatives. Additionally, there was evidence to support the hypothesis that partners' maintenance of cross-sex friendships is related to poorer romantic relationship outcomes via greater feelings of sexual and general jealousy. In contrast, the second study failed to provide consistent support of these hypotheses in the context of a dyadic daily diary study. Although there was a conceptual replication of the mediation of own cross-sex friendships on relationship satisfaction via availability of alternatives, there was no evidence that daily relational maintenance behaviors were indirectly related to own contact with friends via availability of alternatives or partner contact with friends via jealousy. Moreover, both studies failed to provide consistent evidence that these indirect effects are moderated by characteristics of the cross-sex friendships, romantic relationships, or individuals in the romantic relationships.

Relations Between Friendship Maintenance and Romantic Relationship Outcomes

Both studies in the current research examined relations between cross-sex friendship maintenance and romantic relationship outcomes. Neither study provided evidence that individuals' or their partner's cross-sex friendship maintenance is related to traditional romantic relationship outcomes (i.e., the total effects were not statistically significant). This is contrary to prior work that has found relations between feelings of attraction for cross-sex friends and lower levels of commitment to romantic partners (Wreford, 2012). Differences in the primary research questions of the current research and prior studies may explain the discrepancies among results. Wreford (2012) specifically examined attraction toward cross-sex friends, whereas the current project focused on friendship maintenance. Although the current project examined attractiveness of friends as a moderator, it may be that only attraction towards cross-sex friends is related to relationship outcomes. Additionally, the lack of a relation between friendship maintenance and RMBs was surprising. Given that prior work (e.g., Stafford, 2011) did not examine relational maintenance behaviors in such a short time frame, it is possible that the RMB measures lack the sensitivity to detect within-person changes on this time scale. First, although the reliability of change was acceptable (i.e., range: .53 to .83), this may not have been consistent enough to observe systematic change. Second, a week may not provide sufficient daily replications for people to deviate from their normative behavior as the majority of daily reports were positive. Third, the effects of contact with friends may be lagged (i.e., romantic relationships differ the day after contact with friends) or cumulative (i.e., multiple days of contact with friends eventually taxes the romantic relationship).

Although unrelated to traditional romantic relationship outcomes, participants' reports of their cross-sex friendship maintenance were related to their perceived availability of alternatives in Study 1. Similarly, in Study 2, daily reports of interactions with friends were related to participants' daily perceptions of available alternatives. Taken together, these findings suggest that individuals' cross-sex friendship maintenance may bolster their perceptions that there are appealing alternatives to their romantic relationship partner. This is in line with prior work suggesting that cross-sex friendships are frequently accompanied by feelings of attraction (Kaplan & Keys, 1997) and a higher perceived quality of alternatives (Wreford, 2012). Per Rusbult's (1980) model of investment, this increased perception of available alternatives could be detrimental to people's romantic relationships. This may even be the case when cross-sex friendships are indeed platonic, but are also meeting many of the relationship needs of the individual.

Additionally, in Study 1, individuals with partners engaging in greater levels of cross-sex friendship maintenance reported greater levels of jealousy. This finding is consistent with the tendency for feelings of jealousy to be a perceived cost of cross-sex friendships (Bleske-Rechek et al., 2012) and for cross-sex friendships to be perceived as a threat to romantic relationships (Worley & Samp, 2014). It is, however, important to note that in Study 1 only sexual jealousy was found to be uniquely related to cross-sex friendships compared to friendship maintenance in general. Therefore, partners' friendships regardless of type can introduce feelings of jealousy into romantic relationships, whereas cross-sex friendships can introduce an additional challenge of navigating feelings of sexual jealousy. Although there was a macro-level effect found in Study 1, partners' interactions with friends were unrelated to daily feelings of jealousy in Study 2. It

may be that only specific friendship interactions elicit feelings of jealousy or that these feelings take time to accumulate, such that within-person variability over the course of the study was not sufficient to observe an effect. Another possibility is that the design of the current study made it difficult to observe these interpersonal effects. Specifically, in Study 1 relations were found between individuals' reports about their partner's cross-sex friendships maintenance and the individuals' own jealousy, whereas Study 2 estimated relations between partners' reports of interactions with friends and the individuals' reports of jealousy. Although the dyadic design included reports of friendship maintenance that are likely to be more accurate, peoples' perceptions of how much contact their partners have with cross-sex friends may be more strongly related to their feelings of jealousy.

Indirect Effects of Friends on Relationship Outcomes via Jealousy and Availability

The second goal of the current work was to determine whether jealousy and availability of alternatives are two of the mechanisms underlying relations between cross-sex friendships and relationship outcomes. Indirect effects were used to test this question in both studies with Study 1 focusing on cross-sectional macro-level indirect effects and Study 2 focusing on indirect effects of day-to-day variation in friendship interactions and relationship outcomes. In Study 1, individuals' cross-sex friendship maintenance was found to be related to their commitment, trust, and relationship satisfaction indirectly through a greater perception of available alternatives. This finding extends prior work that has established links between availability of alternatives and relationship outcomes (e.g., Le & Agnew, 2003; Wreford, 2012) by focusing on one source of perceived alternatives. It is important to note that this indirect effect was replicated for relationship satisfaction in Study 2 but could not be distinguished between same-sex and cross-

sex friends; moreover, similar relations were not found for RMBs. At the macro-level, partners' increased cross-sex friendship maintenance was related to less commitment, trust, and relationship satisfaction through increased feelings of jealousy. However, the effects of non-sexual jealousy were also present in relationships with same-sex friendship maintenance indicating that they are not unique to cross-sex friendships and instead reflect friendship maintenance in general. Moreover, jealousy was not a mediator of the effects between friendship maintenance and relationship satisfaction or RMBs in Study 2.

The lack of consistent findings across these studies may be a product of differences in the granularity of observations as well as using different sources of reporting. Although RMBs are related to macro-level relationship outcomes (Canary & Stafford, 1994), a week of day-to-day reporting may not have provided enough of a time window to observe the effects of friendship maintenance on relationship dynamics. Additionally, the partner effects observed in Study 1 may reflect relations between participants' tendency to believe that their partner maintains cross-sex friendships and relationship outcomes, regardless of whether the partner actually maintains those friendships. The methodology used in Study 2 would not capture this tendency as each person reported their own interactions with friends and therefore inaccurate or biased beliefs about partners' friendship maintenance would not be captured.

Conditional Effects

Neither Study 1 nor Study 2 provided support for the hypotheses that characteristics of cross-sex friendships, romantic relationships, or individuals in the romantic relationships moderate the indirect effects of own and partner cross-sex friendship maintenance on romantic relationship outcomes via availability of alternatives and jealousy. This is contrary to findings

suggesting that cross-sex friendships' effects on relationships are conditional upon features of the friendship (e.g., Worley & Samp, 2014; Wreford, 2012). However, it is important to note that Worley and Samp (2014) employed a methodology where a single friendship was manipulated to impact perceptions of threat to the relationship, whereas the current studies aggregated across multiple existing cross-sex friendships. Additionally, Wreford (2012) examined the total effect of cross-sex friendship attraction on relationship outcomes while the current study investigated whether the attractiveness of cross-sex friends moderated the indirect effects of cross-sex friendships on relationship outcomes via availability of alternatives and jealousy. Therefore, it is possible that the qualities of individual friendships may be prone to moderation, but these effects are lost when qualities are averaged together and treated as moderators.

Strengths, Limitations, and Future Directions

The current research had multiple strengths. Using both an individual cross-sectional design and a dyadic daily diary design allowed for greater insight into both micro- and macro-level processes. In addition, the use of dyadic daily diary methodology allowed for modeling of both actor and partner effects, reduced shared method variance, and permitted partitioning of within-person variation from between-person variation. The moderators included in the current work also extended the scope of prior work by focusing on multiple features of the friendships, romantic relationships, and individuals in the relationships rather than just a few (e.g., Worley & Samp, 2014; McCubbery, 2006). Additionally, the larger sample size obtained in Study 1 provided well-powered estimates of the majority of conditional indirect effects examined, with the exception of infidelity. Finally, the inclusion of numerous distal relationship outcomes and

some of the mechanisms underlying these effects offered novel insights into the overall effects that cross-sex friendships maintenance has on heterosexual romantic relationships.

In spite of these strengths, the current research also has limitations worth noting. Most importantly, all effects presented in the current research are correlational in nature. Although discussed temporally as cross-sex friendship maintenance preceding relationship outcomes, it is also possible that cross-sex friendships are sought out in romantic relationships with lower levels of commitment, trust, and relationship satisfaction. Additionally, in both studies, there were fairly strong correlations among the relationship outcomes examined. The constructs ostensibly captured by these scales and sub-scales are theoretically distinct; however, their empirical overlap impedes the ability to test the effect of cross-sex friendships on different qualities of romantic relationship functioning. By having participants report on multiple friends, the current research sacrificed the ability to see the effect of a specific opposite-sex friend on romantic relationships for a better estimate of the average effect of cross-sex friends. However, it is possible that specific friends (e.g., back burners, Dibble et al., 2015; or mate poachers, Lemay & Wolf, 2016a) are more threatening to romantic relationships than others and should be examined separately. It is also important to acknowledge that both studies recruited participants on a college campus. There is a possibility that there are not only mean-level differences in cross-sex friendship maintenance between college students and other populations, but also process-related differences in the way these friendships relate to romantic relationship dynamics. Similarly, participation was limited to heterosexual romantic relationships of at least three months in length in an attempt to ensure that relationships were established enough for cross-sex friendships to have an effect on the relationship. This resulted in two limitations to generalizability. First, the

effects of same- and cross-sex friends cannot be estimated among gay and lesbian relationships. Second, fledgling relationships were excluded even though they may also be sensitive to the external threats of cross-sex friendships, possibly more so than established relationships.

Future work would benefit from examining bias in cross-sex friendship reporting, focusing on specific cross-sex friends, and observing cross-sex friendships for a longer period of time. First, it would be beneficial for future work to determine whether perceptions of cross-sex friendship maintenance are stronger predictors of romantic relationship functioning than accurate knowledge. This could be accomplished by using the Truth and Bias model (West & Kenny, 2011) to examine individuals' and their partners' reports of one another's friendships. Second, it may be especially beneficial to determine whether specific cross-sex friendships have a greater impact on romantic relationships rather than aggregating friendships and friendship quality. The current research gathered the names of friends on each day, but due to the complexity of the design, I was unable to examine whether specific friends were related to poorer relationship outcomes than others. The effects of individual friendships could be examined by using a research design similar to the one employed by Lemay and Wolf (2016b; where friends and their romantic interest in one another were surveyed longitudinally) and including both members of the romantic relationship. Third, it would be beneficial to better understand the temporal granularity of the relations between cross-sex friendships and romantic relationship outcomes. The current research focused on macro-level relationship outcomes (i.e., the entire state of the relationship) and micro-level day-to-day relational maintenance behaviors. However, behavioral change may only be apparent when observing relationships for longer periods of time. Therefore, future researchers might consider weekly assessments of behaviors.

Conclusions

Although cross-sex friendships are common (Lenton & Weber, 2006) and beneficial to those who maintain them (Monsour, 2001), the current research demonstrates that their maintenance is indirectly related to poorer macro-level relationship outcomes in heterosexual romantic relationships. Specifically, the cross-sex friendships people maintain are unique from same-sex friendships in their negative relations with commitment, relationship satisfaction, and trust via an increased perceived availability of alternatives. Similarly, the cross-sex friendships people's partners maintain are uniquely related to people experiencing lower commitment, trust, and relationship satisfaction via increased feelings of sexual jealousy. However, whether members of the romantic relationship spent time with friends on a given day does not appear to be related to day-to-day romantic relationship maintenance behaviors. Interestingly, none of the multitude of moderators examined were found to consistently attenuate (or intensify) these effects. Understanding how to alleviate sexual jealousy and reduce the impact of perceived availability of alternatives on romantic relationship outcomes may be beneficial in attempts to improve romantic relationship quality among those who maintain cross-sex friendships.

APPENDIX A

SUPPLEMENTAL FIGURES

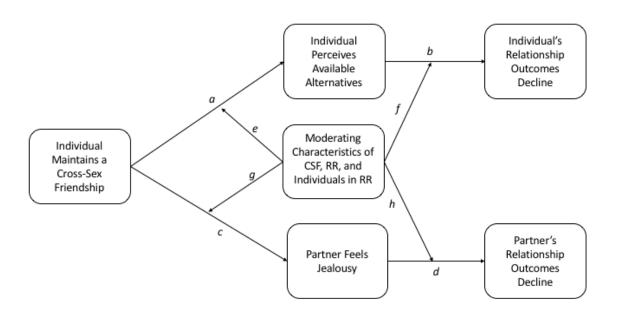


Figure 1. Conceptual model evaluated in present research. *Note*: CSF = Cross-Sex Friendship.

RR = Romantic Relationship.

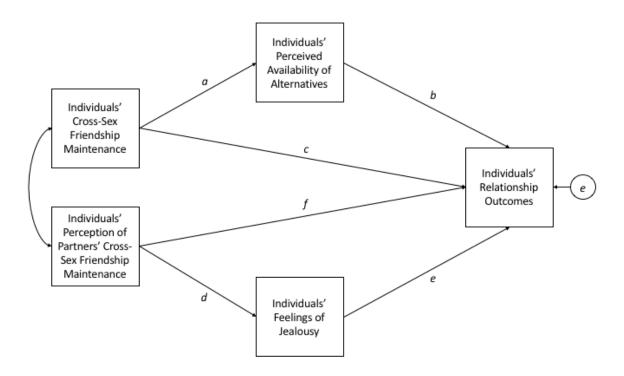


Figure 2. Path diagram of Study 1 proposed analyses.

Note: Each measure of jealousy was entered into the model individually. Relationship outcomes of commitment, relationship satisfaction, and trust were examined individually. Although not shown in this figure, total effects of own and perceived partner friendship maintenance on relationship outcomes were also estimated.

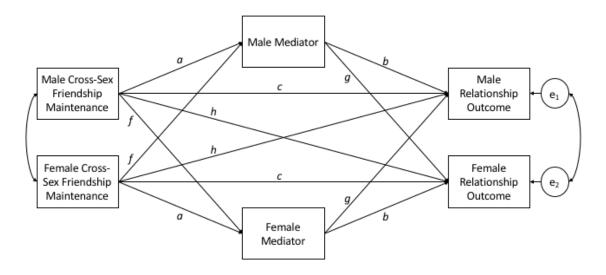


Figure 3. Analytic model of Study 2.

Note: Availability of alternatives and each subscale of jealousy were individually entered into the model as mediators. Outcome variables were daily relationship satisfaction and daily relational maintenance behaviors. Although not shown in this figure, total effects of own and partner friendship maintenance on relationship outcomes were also estimated.

APPENDIX B

STUDY 1 MEASURES

Own Friends.

- 1. How many friends do you have of that are [cross-sex: male/female]?
- 2. How many friends do you have that are [same-sex: male/female]?

1	2	3	4	5
Never				A great deal

- 3. How frequently do you spend time with friends who are [same-sex: male/female]?
- 4. How frequently do you spend time with friends who are [cross-sex: male/female]?
- 5. Please list the name of up to 5 of your friends who are the same sex as you.
- 6. Please list the name of up to 5 of your friends who are [cross-sex: male/female].

Partner's Friends.

- 1. How many friends does your partner have that are [cross-sex: male/female]?
- 2. How many friends does your partner have that are [same-sex: male/female]?

1	2	3	4	5
Never				A great deal

- 3. How frequently does your partner spend time with friends who are [same-sex: male/female]?
- 4. How frequently does your partner spend time with friends who are [cross-sex: male/female]?

- 5. Please list the name of up to 5 of your partner's friends who are [same-sex: male/female].
- **6.** Please list the name of up to 5 of your partner's friends who are [cross-sex: male/female].

Beliefs About Cross-Sex Friendships:

1	2	3	4	5
Strongly				Strongly Agree
Disagree				

- 1. I don't believe men and women can have close friendships that remain platonic.
- 2. Friendship with a person of the opposite sex is possible.
- 3. Men and women can be friends.
- 4. Opposite-sex friendships can be purely driven by motives for platonic companionship.
- 5. Men and women can be 'just friends' without wanting a romantic connection.

Experiences in Close Relationships Scale-Revised: Fraley, Waller, & Brennan (2000)

INSTRUCTIONS: The statements below concern how you generally feel in your relationship with your romantic partner (i.e., your girlfriend, boyfriend, or spouse). Respond to each statement to indicate how much you agree or disagree with the statement.

1	2	3	4	5	6	7
Strongly			Neither			Strongly
Disagree			Agree or			Agree
			Disagree			

- 1. I'm afraid that I will lose my partner's love.
- 2. I often worry that my partner will not want to stay with me.

- 3. I often worry that my partner doesn't really love me.
- 4. I worry that my romantic partner won't care about me as much as I care about them.
- 5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.
- 6. I worry a lot about my relationship.
- 7. When my partner is out of sight, I worry that he or she might become interested in someone else.
- 8. When I show my feelings for my romantic partner, I'm afraid they will not feel the same about me.
- 9. I rarely worry about my partner leaving me.
- 10. My romantic partner makes me doubt myself.
- 11. I do not often worry about being abandoned.
- 12. I find that my partner doesn't want to get as close as I would like.
- 13. Sometimes my romantic partner changes their feelings about me for no apparent reason.
- 14. My desire to be very close sometimes scares my partner away.
- 15. I'm afraid that once my romantic partner gets to know me, he or she won't like who I really am.
- 16. It makes me mad that I don't get the affection and support I need from my partner.
- 17. I worry that I won't measure up to other people.
- 18. My partner only seems to notice me when I'm angry.
- 19. I prefer not to show my partner how I feel deep down.
- 20. I feel comfortable sharing my private thoughts and feelings with my partner.
- 21. I find it difficult to allow myself to depend on my romantic partner.

- 22. I am very comfortable being close to my romantic partner.
- 23. I don't feel comfortable opening up to my romantic partner.
- 24. I prefer not to be too close to my romantic partner.
- 25. I get uncomfortable when my romantic partner wants to be very close.
- 26. I find it relatively easy to get close to my partner.
- 27. It's not difficult for me to get close to my partner.
- 28. I usually discuss my problems and concerns with my partner.
- 29. It helps to turn to my romantic partner in times of need.
- 30. I tell my partner just about everything.
- 31. I talk things over with my partner.
- 32. I am nervous when my partner gets too close to me.
- 33. I feel comfortable depending on my romantic partner.
- 34. I find it easy to depend on my romantic partner.
- 35. It's easy for me to be affectionate with my partner.
- 36. My partner really understands me and my needs.

Global Jealousy:

1	2	3	4	5	6
Strongly					Strongly
disagree					agree
					Ü

Sexual jealousy.

1. I worry about my partner being sexually unfaithful to me

- 2. I suspect there is something going on sexually between my partner and their friends
- 3. I suspect sexual attraction between my partner and their friends

Intimacy jealousy.

- 1. I worry that my partner and their friends will keep secrets from me
- 2. I am afraid that my partner will turn to their friends instead of me to meet emotional needs
- 3. I am concerned that my partner will share things with their friends that they wouldn't share with me

Power jealousy.

- 1. I am concerned that my partner's friends influence my partner's decisions more than me
- 2. I am concerned about my partner's friend's influence on my partner Companionship jealousy.
 - 1. I am upset by the amount of time my partner spends with their friends
 - 2. I am bothered by the fact that my partner shares so many activities with their friends
 - 3. I feel upset about the importance my partner places on their friendships

Availability of Alternatives (Rusbult, Martz, & Agnew, 1998):

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

_1	2	3	4
Don't Agree At All	Agree Slightly	Agree Moderately	Agree Completely

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

- 2. My alternatives to our relationship are close to ideal (dating another, spending time with friends or on my own, etc.,)
- 3. If I weren't dating my partner, I would do fine--I would find another appealing person to date
- 4. My alternatives are attractive to me (dating another, spending time with friends or on my own, etc.)
- 5. My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship

Commitment Level (Rusbult, Martz, & Agnew, 1998):

1	2	3	4	5	6	7
Do Not			Agree			Agree
Agree At			Somewhat			Completely
All						

- 1. I want our relationship to last for a very long time
- 2. I am committed to maintaining my relationship with my partner
- 3. I would not feel very upset if our relationship were to end in the near future
- 4. It is likely that I will date someone other than my partner within the next year
- 5. I feel very attached to our relationship—very strongly linked to my partner
- 6. I want our relationship to last forever
- 7. I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now)

Relationship Satisfaction (Hendrick, 1988)

1. How well does your partner meet your needs?

1	2	3	4	5
Poorly		Average		Extremely Well

2. In general, how satisfied are you with your relationship?

1	2	3	4	5
Unsatisfied		Average		Extremely
				Satisfied

3. How good is your relationship compared to most?

1	2	3	4	5
Poor		Average		Excellent

4. How often do you wish you hadn't gotten into this relationship?

1	2	3	4	5
Never		Average		Very Often

5. To what extent has your relationship met your original expectations?

1	2	3	4	5
Hardly at all		Average		Completely

6. How much do you love your partner?

1	2	3	4	5
Not Much		Average		Very Much

7. How many problems are there in your relationship?

1	2	3	4	5
Very Few		Average		Very Many

Trust Scale (Rempel, Holmes, & Zanna, 1985)

-3	-2	-1	0	1	2	3
Strongly			Neutral			Strongly
disagree						agree

Faith.

- 1. When we encounter difficult and unfamiliar new circumstances I would not feel worried or threatened by letting my partner do what he/she wanted.
- 2. Even when I don't know how my partner will react, I feel comfortable telling him/ her anything about myself; even those things of which I am ashamed.
- 3. Though times may change and the future is uncertain; I know my partner will always be ready and willing to offer me strength and support.
- 4. In my relationship with my partner, the future is unknown which I worry about.
- 5. Whenever we have to make an important decision in a situation we have never

- encountered before, I know my partner will be concerned about my welfare.
- 6. Even if I have no reason to expect my partner to share things with me, I still feel certain that he/she will.
- 7. I can rely on my partner to react in a positive way when I expose my weaknesses to him/her.
- 8. When I share my problems with my partner, I know he/she will respond in a loving way even before I say anything.
- 9. I would never guarantee that my partner and I will still be together and not have decided to end our relationship 10 years from now.
- 10. When I am with my partner I feel secure in facing unknown new situations.

Dependability.

- 1. I can count on my partner to be concerned about my welfare.
- 2. My partner has proven to be trustworthy and I am willing to let him/her engage in activities which other partners find too threatening.
- 3. I feel very uncomfortable when my partner has to make decisions which will affect me personally.
- 4. I have found that my partner is unusually dependable, especially when it comes to things which are important to me.
- 5. In our relationship I have to keep alert or my partner might take advantage of me.
- 6. I am certain that my partner would not cheat on me, even if the opportunity arose and there was no chance that he/she would get caught.
- 7. I can rely on my partner to keep the promises he/she makes to me.

- 8. Even when my partner makes excuses which sound rather unlikely, I am confident that he/she is telling the truth.
- 9. I am willing to let my partner make decisions for me.

Relationship History

- 1. For how many months have you been in a romantic relationship with your partner?
- 2. Have you ever engaged in kissing with someone other than your partner during your romantic relationship?
- 3. Have you ever engaged in sexual intimacy without intercourse with someone other than your partner during your romantic relationship?
- 4. Have you ever engaged in sexual intercourse with someone other than your partner during your romantic relationship?

Attitudes Toward Relationship Infidelity scale (DeWall et al., 2011)

Please indicate the extent to which you agree with the following statements.

1	2	3	4	5
Strongly				Strongly
Disagree				Agree

- 1. Cheating on my partner is morally wrong
- 2. If I could get away with it, I would cheat on my partner*
- 3. Being faithful to my romantic partner is important to me
- 4. Cheating on my romantic partner would not be a big deal*
- 5. I would cheat on my romantic partner if I was given the opportunity*

Informant-report.

- 1. Has your partner ever engaged in kissing with someone else during your romantic relationship?
- 2. Has your partner ever engaged in sexual intimacy without intercourse with someone else during your romantic relationship?
- 3. Has your partner ever engaged in sexual intercourse with someone else during your romantic relationship?

Please indicate the extent to which you think <u>your partner would agree</u> with the following statements.

1	2	3	4	5
Strongly				Strongly Agree
Disagree				

- 1. Cheating on my partner is morally wrong
- 2. If I could get away with it, I would cheat on my partner*
- 3. Being faithful to my romantic partner is important to me
- 4. Cheating on my romantic partner would not be a big deal*
- 5. I would cheat on my romantic partner if I was given the opportunity*

Friend-Specific Assessment:

Mate Value Items.

How attractive is [friend name] to [men/women]?

1	2	3	4	5	6	7	
Extremely			Neither			Extremely	

unattractive		unattractive		attractive
		or		
		attractive		

How typical are the following characteristics of [friend name]?

1	2	3	4	5
Not at all typical				Very typical

- 1. Assertive
- 2. Self-confident
- 3. Extraverted
- 4. Influential
- 5. Socially competent
- 6. A good judge of character

Closeness items.

How close do [you/your partner] feel to [friend name]?

1	2	3	4	5	
Not at all				Extremely	

Please select the picture that best describes [your/your partner's] relationship with [friend name].

Friendship History.

- 1. How many months have [you/your partner] been friends with [friend name]?
- 2. Prior to or during your current romantic relationship have [you/your partner] had a romantic relationship with [friend name]?
- 3. Prior to or during your current romantic relationship have [you/your partner] engaged in kissing with [friend name]?

- 4. Prior to or during your current romantic relationship have [you/your partner] engaged in sexual intimacy without intercourse with [friend name]?
- 5. Prior to or during your current romantic relationship have [you/your partner] engaged in sexual intercourse with [friend name]?

APPENDIX C

STUDY 1 TABLES

Table 1. Descriptive Statistics for Indices of Friendship Maintenance in Study 1

<u>M</u>	<u>SD</u>
4.90	3.38
2.84	2.71
4.61	3.60
2.51	2.78
3.75	1.12
2.70	1.26
3.56	1.20
2.38	1.15
	4.90 2.84 4.61 2.51 3.75 2.70 3.56

Note. Paired sample t-tests revealed that participants reported greater numbers and contact with same-sex friends than with cross-sex friends for themselves and their partners (ps < .001)

Table 2. Descriptive Statistics and Zero-Order Correlations between Primary Variables in Study 1
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Table 2. Descript	<u>1.</u>	<u>2.</u>	<u>3.</u>	4.	<u>5.</u>	6.	<u>7.</u>	<u>8.</u>	<u>y raria</u> <u>9.</u>	10.	11.	12.	<u>13.</u>	<u>14.</u>
1. Own SSF	-		<u>5.</u>	<u></u>	<u> </u>	<u> </u>	<u>,,,</u>	<u> </u>	<u> </u>	10.		<u></u>	10.	<u> </u>
2. Own CSF	.26**	-												
3. Partner SSF	.36**	.37**	-											
4. Partner CSF	.37**	.35**	.31**	-										
Availability	.06	.21**	.05	.06	-									
6. Companionship Jealousy	.04	.08	.21**	.24**	.20**	-								
7. Intimacy Jealousy	03	02	.09	.16**	.13*	.74**	-							
8. Power Jealousy	.01	.02	.18**	$.11^{\dagger}$.12*	.77**	.71**	-						
9. Sexual Jealousy	03	01	.04	.20**	.22**	.64**	.66**	.54**	-					
10. Jealousy Composite	.01	.03	.17**	.20**	.16**	.92**	.92**	.89**	.68**	-				
11. Commitment	.003	12*	08	08	43**	33**	27**	30**	37**	32**	-			
12. Dependability	.05	.01	04	10	18**	42**	46**	40**	50**	47**	.44**	-		
13. Faith	.05	.01	.01	08	22**	44**	43**	41**	50**	47**	.59**	.75**	-	
14. Relationship Satisfaction	$.10^{\dagger}$.02	.01	02	37**	41**	44**	40**	43**	46**	.68**	.65**	.70**	-
M	002	002	.003	005	2.02	1.78	2.15	2.11	1.69	2.01	5.98	5.54	5.89	4.18
SD	.82	.87	.82	.89	.74	1.15	1.36	1.38	1.10	1.17	1.21	1.18	1.06	.74
α	.33	.57	.34	.58	.81	.91	.90	.82	.85	.93	.91	.79	.89	.89
$r_{ m ij}$.33	.52	.34	2	.46	.77	.74	.70	.67	.65	.62	.44	.54	.54
Item Count	2	2	2	.57	5	3	3	2	3	8	7	5	7	7

Note. CSF and SSF are Cross- and Same-Sex Friendship Maintenance, respectively. Jealousy Composite is the average of Companionship, Intimacy, and Power Jealousies. r_{ij} is the average inter-item correlation. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

Tab	le 3. <i>Descriptive St</i>	atistics	and Z	ero-Or	der Coi	relatio	ons of M	loderat	ors in S	Study 1					
	-	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1.	Own SSF Attractive	_													
2.	Own CSF Attractive	.34**													
3.	Own SSF Relationship Length	10	03	_											
4.	Own CSF Relationship Length	.01	.05	.31**	_										
5.	Partner SSF Attractive	.38**	.33**	.07	.06	_									
6.	Partner CSF Attractive	.41**	.20**	04	.12	.39**	_								
7.	Partner SSF Relationship Length	.16*	.05	.27**	.22**	.11	.15 [†]	_							
8.	Partner CSF Relationship Length	.11	.02	.14†	.33**	.03	.15*	.34**	_						
9.	Relationship Length	.06	03	.18**	.29**	.04	.01	.45**	.07	_					
10.	Own Infidelity Beliefs	.13*	.01	.01	.03	.07	.19**	.16*	.04	.11†	_				
11.	Partner Infidelity Beliefs	.13*	01	07	04	.04	.26**	.08	.07	.04	.61**	_			
12.	Attachment Anxiety	10†	09	05	02	.15**	11†	16*	11	12*	19**	31**	_		
13.	Attachment Avoidance	15**	09	05	13 [†]	- .16**	24**	15*	14 [†]	17**	38**	41**	.51**	_	
14.	Cross-Sex Friendship Beliefs	.07	.19**	.05	.01	.20**	.15*	.03	.08	06	.24**	.12*	14**	24**	
M		.001	.00	65.55	47.29	.00	.00	58.54	45.60	25.34	4.66	4.65	2.68	2.17	4.21
SD		.83	.78	50.03	36.71	.84	.84	49.99	37.27	27.79	.66	.69	1.24	1.08	.82
α		-	-	-	-	-	-	-	-	-	.83	.83	.92	.95	.85
r_{ij}		-	-	-	-	-	-	-	-	-	.50	.51	.43	.51	.55

Item Count - - - - - - - - 5 5 18 18 5

Note. CSF and SSF are Cross- and Same-Sex Friendship Maintenance, respectively. r_{ij} is the average inter-item correlation. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

Table 4. Relations between Friendship Maintenance and Relationship Variables

	Availability			Coı	Commitment		Dep	Dependability		Faith				Relationship Satisfaction	
	<u>b</u>	<u>SE</u>	<u>β</u>	<u>b</u>	<u>SE</u>	<u>B</u>	<u>b</u>	<u>SE</u>	<u>β</u>	<u>b</u>	<u>SE</u>	<u>B</u>	<u>b</u>	<u>SE</u>	<u>B</u>
Own CSF	.19**	.05	.22	03	.06	02	$.11^{\dagger}$.06	.08	.07	.05	.06	$.06^{\dagger}$.04	.07
Own SSF	.01	.05	.01	03	.06	02	$.11^{\dagger}$.06	.08	.07	.05	.06	$.06^{\dagger}$.04	.07
Partner CSF	02	.04	03	07	.06	05	13	.06	09	07	.05	05	03	.04	04
Partner SSF	02	.04	03	07	.06	05	13	.06	10	07	.05	06	03	.04	04
χ^2 (df)	.02 (1)		3	3.30(2)		1.36 (2)		2	2.28 (2)	1	1.63 (2)		
RMSEA [90% CI]	.00	[.00, .0	07]	.04	[.00, .	13]	.00	[.00,	.10]	.02	[.00, .	11]	.00	[.00, .	10]
CFI		1.00			.47			1.00			.57			1.00	

Note. CSF and SSF are Cross- and Same-Sex Friendship Maintenance, respectively. Differences in degrees of freedom across models reflect equality constraints; the effects of own CSF and SSF on Availability were estimated separately whereas these effects were constrained to equality in the remaining models for parsimony. $^{\dagger}p < .10$. $^{**}p < .01$.

Table 5. Relations between Friendship Maintenance and Jealousy

		panion ealousy	1	Intima	cy Jeal	lousy	Po	wer Jea	lousy	Sexu	al Jeal	ousy		ealous ompos	
	<u>b</u>	<u>SE</u>	<u>β</u>	<u>b</u>	<u>SE</u>	β	<u>b</u>	<u>SE</u>	<u>β</u>	<u>b</u>	<u>SE</u>	<u>β</u>	<u>b</u>	<u>SE</u>	<u>β</u>
Own CSF	09†	.05	07	18**	.07	11	12	.07	08	13*	.05	10	13*	.06	10
Own SSF	09 [†]	.05	07	18**	.07	11	12	.07	07	13*	.05	10	13*	.06	09
Partner CSF	.29**	.05	.22	.26**	.06	.17	.25**	.07	.16	.34**	.08	.27	.27**	.05	.21
Partner SSF	.29**	.05	.21	.26**	.06	.16	.25**	.07	.15	.04	.08	.03	.27**	.05	.19
χ^2 (df)		.80 (2)		1	.32 (2)			1.66 (2)		.19 (1))		.38 (2))
RMSEA [90% CI]	.00	[.00, .0	08]	.00	[.00, .1	[0]).	00.] 00,	.10]	.00	[.00, .	11]	.00	[.00, .	06]
CFI		1.00			1.00			1.00			1.00			1.00	

Note. CSF and SSF are Cross- and Same-Sex Friendship Maintenance, respectively. Differences in degrees of freedom across models reflect equality constraints; the effects of partner CSF and SSF on Sexual Jealousy were estimated separately whereas these effects were constrained to equality in the remaining models for parsimony. Jealousy Composite is the average of Companionship, Intimacy, and Power Jealousy. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

Table 6. Indirect Effects of Friendships on Relationship Outcomes

	N	Model 1: Jealous	y Composite	1	Model 2: Sexual	Jealousy
Mediational Pathway		Estimate and 95% CI	Model Fit Statistics		Estimate and 5% CI	Model Fit Statistics
Commitment Own SSF via Availability	01	[08, .06]	$\chi^2(5) = 1.27$	01	[08, .04]	$\chi^2(4) = 1.91$
Own CSF via Availability	12**	[20,05]	$ \begin{array}{c} \text{RMSEA} \\ \text{[90% CI]} = \end{array} $	11 **	[19,06]	RMSEA [90% CI] =
Partner SSF via Jealousy	07**	[12,03]	.00 [.00, .02] CFI = 1.00	01	[07, .03]	.00 [.00, .06] CFI = 1.00
Partner CSF via Jealousy	07**	[12,03]	CF1 - 1.00	10**	[17,06]	CF1 - 1.00
Dependability Own SSF via Availability	003	[03, .01]	$\chi^2(5) = 1.14$	002	[02, .01]	$\chi^2(4) = 0.60$
Own CSF via Availability	03 [†]	[07,004]	RMSEA	02	[05, .002]	RMSEA
Partner SSF via Jealousy	13**	[20,08]	[90% CI] = .00 [.00, .00] CFI = 1.00	02	[11, .05]	[90% CI] = .00 [.00, .00] CFI = 1.00
Partner CSF via Jealousy	13**	[20,08]	CF1 - 1.00	18**	[29,11]	CF1 - 1.00
Faith						
Own SSF via Availability	003	[03, .02]	$\chi^2(5) = 2.21$	003	[02, .01]	$\chi^2(4) = 0.25$
Own CSF via Availability	04*	[08,01]	χ (3) = 2.21 RMSEA [90% CI] =	03 [†]	[06, - .004]	χ (4) = 0.23 RMSEA [90% CI] =
Partner SSF via Jealousy	12**	[18,06]	.00 [.00, .05] CFI = 1.00	02	[10, .06]	.00 [.00, .00] CFI = 1.00
Partner CSF via Jealousy	12**	[18,06]	CF1 - 1.00	16**	[26,09]	C11 - 1.00
Relationship						
Satisfaction						
Own SSF via Availability	01	[04, .03]	$\chi^2(5) = 0.60$ RMSEA	01	[04, .02]	$\chi^2(4) = 0.73$ RMSEA
Own CSF via Availability	06**	[09,03]	[90% CI] = .00 [.00, .00] CFI = 1.00	06**	[09,03]	[90% CI] = .00 [.00, .01] CFI = 1.00
			C11 - 1.00		[C11 - 1.00

Partner SSF via Jealousy	07**	[12,04]	01	06, .03]
Partner CSF via Jealousy	07**	[12,04]	08**	[14,05]

Note. CSF and SSF are Cross- and Same-Sex Friendship Maintenance, respectively. Bold point estimates and confidence intervals denote confidence intervals that do not contain 0, whereas asterisks denote traditional p-value tests of significance. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

Table 7. Indices of Moderated Mediation for Analyses Involving Characteristics of the Romantic Relationship as the Moderator

	Com	mitment	Depe	ndability	<u>F</u>	aith_		tionship sfaction
	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval
Relationship Leng	th Model 1:	Jealousy						
Own SSF via Availability	13	[35, .07]	04	[13, .02]	04	[12, .02]	06	[18, .04]
Own CSF via Availability	01	[23, .27]	003	[07, .09]	003	[07, .08]	01	[11, .14]
Partner SSF via Jealousy	.02	[08, .14]	.06	[18, .32]	.05	[15, .27]	.03	[09, .16]
Partner CSF via Jealousy	06	[19, .03]	16	[40, .08]	13	[34, .07]	08	[21, .04]
Relationship Lengt	th Model 2:	Sexual Jealousy						
Own SSF via Availability	12	[33, .07]	02	[09, .02]	02	[08, .01]	06	[17, .03]
Own CSF via Availability	004	[11, .13]	001	[02, .03]	001	[02, .03]	002	[05, .07]
Partner SSF via Jealousy	05	[19, .10]	10	[39, .20]	08	[34, .18]	04	[17, .08]
Partner CSF via Jealousy	.03	[10, .18]	.07	[22, .32]	.06	[20, .29]	.03	[09, .14]
Own Attitudes Tov	ward Infidel	ity Model 1: Jeal	lousy Compos	site				
Own SSF via Availability	.02	[08, .12]	.01	[02, .07]	.01	[02, .04]	.01	[04, .06]
Own CSF via Availability	.00	[11, .08]	.00	[04, .04]	.00	[03, .02]	.00	[06, .04]
Partner SSF via Jealousy	02	[09, .05]	05	[19, .18]	05	[17, .10]	03	[11, .07]
Partner CSF via Jealousy	.004	[05, .06]	.01	[11, .16]	.01	[10, .10]	.01	[07, .07]

Own Attitudes Toward Infidelity Model 2: Sexual Jealousy												
Own SSF via Availability	.02	[08, .17]	.004	[02, .03]	.004	[02, .03]	.01	[04, .06]				
Own CSF via Availability	.00	[10, .11]	.00	[03, .02]	.00	[03, .02]	.00	[06, .04]				
Partner SSF via Jealousy	03	[12, .15]	06	[26, .23]	05	[22, .20]	03	[12, .10]				
Partner CSF via Jealousy	.01	[07, .11]	.002	[17, .14]	003	[16, .12]	.004	[07, .07]				
Partner Attitudes To	ward Infi	delity Model 1: Je	ealousy Com	posite								
Own SSF via Availability	.03	[08, .14]	.004	[02, .03]	.01	[02, .04]	.02	[04, .06]				
Own CSF via Availability	.04	[07, .13]	.01	[01, .03]	.01	[02, .04]	.02	[03, .07]				
Partner SSF via Jealousy	04	[13, .03]	09	[25, .07]	08	[22, .06]	06	[15, .04]				
Partner CSF via Jealousy	.06	[03, .15]	.13 [†]	[01, .27]	.12†	[004, .25]	$.08^{\dagger}$	[003, .16]				
Partner Attitudes To	ward Infi	delity Model 2: S	exual Jealous	sy								
Own SSF via Availability	.03	[07, .14]	.004	[02, .03]	.01	[02, .04]	.02	[04, .07]				
Own CSF via Availability	.04	[07, .13]	.01	[01, .03]	.01	[02, .04]	.02	[04, .08]				
Partner SSF via Jealousy	05	[16, .05]	11	[29, .11]	10	[26, .10]	05	[14, .06]				
Partner CSF via Jealousy	.03	[06, .11]	.06	[12, .21]	.05	[11, .20]	.03	[06, .11]				

Note. All confidence intervals contain zero. $^{\dagger}p < .10$.

Table 8. Indices of Moderated Mediation for Analyses Involving Characteristics of the Individuals in the Romantic Relationship as the Moderator

Romantic Retai		mitment		ndability	F	aith	Relationsh	ip Satisfaction
	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval
Cross-Sex Friendsl	nip Beliefs N	Model 1: Jealousy						
Own SSF via Availability	.01	[15, .16]	.002	[04, .05]	.002	[05, .06]	.004	[07, .08]
Own CSF via Availability	05	[22, .09]	01	[07, .02]	02	[07, .03]	03	[10, .04]
Partner SSF via Jealousy	.01	[10, .12]	.02	[16, .21]	.02	[15, .19]	.01	[10, .12]
Partner CSF via Jealousy	06	[15, .04]	10	[24, .07]	09	[22, .07]	06	[15, .04]
Cross-Sex Friendsl	nip Beliefs N	Model 2: Sexual J	ealousy					
Own SSF via Availability	.01	[14, .15]	.001	[03, .04]	.002	[04, .04]	.004	[07, .08]
Own CSF via Availability	05	[20, .08]	01	[05, .02]	01	[06, .02]	03	[10, .04]
Partner SSF via Jealousy	.07	[06, .19]	.11	[09, .31]	.11	[09, .28]	.05	[05, .14]
Partner CSF via Jealousy	04	[13, .06]	07	[21, .10]	07	[19, .09]	03	[10, .05]
Anxious Attachme	nt Model 1:	Jealousy Compos	site					
Own SSF via Availability	05	[15, .04]	.001	[03, .04]	.01	[01, .04]	03	[08, .02]
Own CSF via Availability	03	[11, .03]	.001	[02, .02]	.01	[01, .03]	02	[05, .02]
Partner SSF via Jealousy	.000	[02, .03]	.01	[07, .10]	.004	[05, .07]	.002	[03, .04]
Partner CSF via Jealousy	.003	[03, .04]	.04	[05, .11]	.02	[03, .08]	.01	[02, .04]
Anxious Attachme	nt Model 2:	Sexual Jealousy						
Own SSF via Availability	05	[15, .03]	.01	[02, .04]	.02	[01, .05]	03	[08, .02]

Own CSF via Availability	03	[10, .03]	.004	[01, .03]	.01	[01, .04]	02	[05, .02]
Partner SSF via Jealousy	02	[08, .02]	07	[19, .05]	05	[14, .03]	01	[05, .01]
Partner CSF via Jealousy	.01	[03, .06]	.03	[08, .15]	.02	[05, .11]	.004	[02, .04]
Avoidant Attachme	nt Model	l: Jealousy Compo	site					
Own SSF via Availability	.06	[03, .16]	001	[04, .04]	02	[05, .01]	.03	[02, .09]
Own CSF via Availability	.04	[01, .12]	001	[03, .02]	01	[04, .004]	.02	[01, .06]
Partner SSF via Jealousy	001	[03, .02]	01	[11, .06]	01	[07, .04]	003	[04, .02]
Partner CSF via Jealousy	.002	[02, .03]	.03	[05, .10]	.02	[04, .07]	.01	[02, .04]
Avoidant Attachme	nt Model 2	2: Sexual Jealousy						
Own SSF via Availability	.06	[03, .16]	01	[05, .03]	02	[05, .01]	.03	[02, .09]
Own CSF via Availability	.04	[01, .11]	01	[03, .02]	01	[04, .004]	.02	[01, .06]
Partner SSF via Jealousy	.01	[04, .05]	.03	[09, .13]	.02	[06, .09]	.01	[02, .03]
Partner CSF via Jealousy	.002	[04, .04]	.01	[11, .11]	.003	[08, .07]	.001	[03, .03]

Note. CSF and SSF are Cross- and Same-Sex Friendships, respectively. Effects for Anxious and Avoidant Attachment as moderators are presented separately for simplicity, but were entered into the same models. All confidence intervals contain zero and all *p*-values > .10.

Table 9. Conditional Indirect Effects for Characteristics of Own Friends

	Com	mitment	Deper	ndability_	<u> </u>	aith aith	Relationshi	p Satisfaction
	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval
CSF Attractiveness	Model 1: J	ealousy Composi	te					
Own SSF via Availability	04	[20, .14]	01	[04, .03]	01	[06, .03]	02	[09, .05]
Own CSF via Availability	09	[26, .17]	01	[07, .03]	02	[08, .03]	04	[13, .05]
CSF Attractiveness	s Model 2: S	exual Jealousy						
Own SSF via Availability	04	[19, .09]	002	[03, .03]	01	[04, .02]	02	[09, .05]
Own CSF via Availability	08	[25, .09]	01	[06, .03]	02	[07, .02]	04	[13, .05]
SSF Attractiveness	Model 1: Jo	ealousy Composi	te					
Own SSF via Availability	.03	[13, .25]	.01	[03, .04]	.01	[04, .06]	.02	[06, .09]
Own CSF via Availability	01	[17, .19]	01	[04, .03]	003	[05, .04]	01	[08, .07]
SSF Attractiveness	Model 2: S	exual Jealousy						
Own SSF via Availability	.03	[13, .18]	.002	[03, .03]	.01	[03, .05]	.02	[07, .09]
Own CSF via Availability	01	[16, .13]	001	[03, .03]	002	[04, .03]	01	[08, .07]
Own Closeness to	CSF Model	1: Jealousy Comp	posite					
Own SSF via Availability	15	[34, .04]	02	[09, .03]	04	[12, .01]	07†	[15, .02]
Own CSF via Availability	03	[20, .12]	01	[05, .03]	01	[06, .04]	02	[10, .06]
Own Closeness to	CSF Model	Sexual Jealous	sy					
Own SSF via Availability	14	[31, .03]	01	[06, .04]	03	[09, .02]	07	[14, .02]
Own CSF via Availability	03	[18, .11]	001	[03, .03]	01	[05, .03]	02	[09, .05]

Own Closeness to SS	SF Model	1: Jealousy Comp	osite					
Own SSF via Availability	.07	[07, .22]	.01	[02, .05]	.02	[02, .07]	.03	[04, .10]
Own CSF via Availability	03	[21, .15]	004	[05, .04]	01	[07, .04]	02	[10, .07]
Own Closeness to SS	SF Model	2: Sexual Jealous	y					
Own SSF via Availability	.06	[07, .20]	.003	[03, .03]	.01	[02, .05]	.03	[04, .09]
Own CSF via Availability	03	[19, .14]	001	[03, .03]	01	[05, .03]	01	[10, .07]
Partner Closeness to	Individua	al's CSF Model 1:	Jealousy Co	mposite				
Own SSF via Availability	03	[20, .15]	003	[05, .03]	01	[07, .04]	01	[10, .07]
Own CSF via Availability	.03	[11, .20]	.004	[02, .04]	.01	[03, .06]	.02	[05, .10]
Partner Closeness to	Individua	al's CSF Model 2:	Sexual Jealo	ousy				
Own SSF via Availability	03	[19, .14]	001	[03, .02]	01	[05, .03]	01	[10, .07]
Own CSF via Availability	.03	[10, .19]	.002	[02, .03]	.01	[02, .05]	.02	[05, .10]
Partner Closeness to	Individua	al's SSF Model 1:	Jealousy Con	mposite				
Own SSF via Availability	02	[20, .14]	002	[04, .03]	01	[06, .04]	01	[10, .06]
Own CSF via Availability	.08	[08, .26]	.01	[02, .06]	.02	[02, .08]	.04	[04, .12]
Partner Closeness to	Individua	al's SSF Model 2:	Sexual Jealo	usy				
Own SSF via Availability	02	[18, .13]	001	[03, .02]	003	[04, .03]	01	[09, .06]
Own CSF via Availability	.08	[07, .25]	.004	[03, .05]	.02	[02, .06]	.04	[04, .12]
CSF Relationship Le	ngth Mod	del 1: Jealousy Co	mposite					
Own SSF via Availability	10	[29, 10]	01	[07, .03]	02	[09, .02]	04	[13, .03]
Own CSF via Availability	$.18^{\dagger}$	[01, .41]	.01	[05, .09]	.03	[03, .12]	.07	[01, .17]
CSF Relationship Le	ngth Moo	del 2: Sexual Jealo	usy					
Own SSF via Availability	09	[28, .09]	.002	[05, .04]	01	[07, .02]	04	[12, .03]

Own CSF via Availability	.17	[01, .40]	004	[07, .07]	.02	[04, .07]	.06	[004, .16]
SSF Relationship Lo	ength Mod	del 1: Jealousy Co	mposite					
Own SSF via Availability	.05	[15, .25]	.003	[03, .05]	.01	[03, .08]	.02	[05, .11]
Own CSF via Availability	16 [†]	[33,01]	01	[07, .05]	03	[10, .02]	06 [†]	[13,003]
SSF Relationship Lo	ength Mod	del 2: Sexual Jealo	usy					
Own SSF via Availability	.05	[15, .24]	001	[04, .04]	.01	[03, .04]	.02	[05, .10]
Own CSF via Availability	15 [†]	[32,01]	.003	[05, .06]	02	[08, .03]	$\textbf{06}^\dagger$	[13,002]

Note. CSF and SSF are Cross- and Same-Sex Friendships, respectively. CSF and SSF effects for a given moderator (e.g., Attractiveness) are presented separately for simplicity, but were entered into the same models. Only pathways including own friendships via Availability of Alternatives are presented as qualities of own friendships were not expected to moderate individuals Jealousy, however, these models do estimate the Jealousy pathways. Bold point estimates and confidence intervals denote confidence intervals that do not contain 0, whereas asterisks denote traditional p-value tests of significance. $^{\dagger} p < .10$.

Table 10. Conditional Indirect Effects for Characteristics of Partners' Friends

	Com	mitment	Deper	ndability	<u> </u>	aith_	Relationsh	ip Satisfaction
	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval	Point Estimate	95% Confidence Interval
	ractiveness N	Model 1: Jealous	y Composite	_				_
Partner SSF via Jealousy	.02	[04, .11]	.04	[08, .21]	.04	[08, .20]	.02	[04, .11]
Partner CSF via Jealousy	06	[14, .01]	12	[24, .000]	12*	[24, .000]	07†	[13, .000]
	ractiveness N	Model 2: Sexual .	Jealousy					
Partner SSF via Jealousy	02	[12, .10]	04	[23, .20]	03	[21, .16]	02	[10, .08]
Partner CSF via Jealousy	$\textbf{08}^\dagger$	[18, - .001]	17*	[33,01]	15*	[28,01]	07*	[13,002]
Partner SSF Attr	activeness N	Model 1: Jealousy	Composite					
Partner SSF via Jealousy	04	[14, .04]	08	[26, .08]	08	[26, .09]	04	[15, .05]
Partner CSF via Jealousy	.02	[11, .11]	.05	[22, .22]	.05	[22, .21]	.03	[12, .12]
Partner SSF Attr	activeness N	Model 2: Sexual J	ealousy					
Partner SSF via Jealousy	.01	[11, .14]	.02	[22, .25]	.01	[19, .22]	.01	[09, .10]
Partner CSF via Jealousy	.02	[10, .12]	.05	[18, .24]	.05	[16, .21]	.02	[08, .09]
	seness to Par	rtners' CSF Mod	el 1: Jealousy	Composite				
Partner SSF via Jealousy	.002	[07, .09]	.004	[14, .16]	.004	[14, .15]	.002	[08, .09]
Partner CSF via Jealousy	05	[16, .02]	10	[28, .06]	10	[27, .06]	06	[16, .03]
Individuals' Clo	seness to Par	rtners' CSF Mod	el 2: Sexual Jo	ealousy				
Partner SSF via Jealousy	.05	[03, .17]	.09	[07, .29]	.08	[06, .23]	.04	[03, .13]
Partner CSF via Jealousy	07	[19, .03]	12	[31, .06]	11	[27, .03]	06	[14, .02]

Individuals' Closer	ness to Par	tners' SSF Model 1	: Jealousy	Composite				
Partner SSF via Jealousy	06	[17, .02]	13	[30, .04]	13	[30, .04]	07	[17, .02]
Partner CSF via Jealousy	05	[21, .01]	15	[38, .02]	15	[37, .02]	08	[22, .01]
-	ness to Par	tners' SSF Model 2	: Sexual Je	alousy				
Partner SSF via Jealousy	04	[17, .05]	09	[30, .10]	08	[27, .06]	04	[13, .05]
Partner CSF via Jealousy	01	[15, .15]	01	[26, .26]	01	[24, .19]	01	[12, .12]
	s to CSF M	Iodel 1: Jealousy C	omposite					
Partner SSF via Jealousy	.00	[08, .08]	.00	[14, .16]	.001	[14, .15]	.00	[08, .09]
Partner CSF via Jealousy	02	[10, .06]	04	[19, .12]	04	[18, .11]	02	[11, .06]
Partners' Closeness to CSF Model 2: Sexual Jealousy								
Partner SSF via Jealousy	04	[19, .10]	08	[34, .20]	07	[31, 17]	03	[15, .09]
Partner CSF via Jealousy	05	[23, .11]	11	[38, .21]	09	[34, .18]	04	[18, .09]
Partners' Closenes	s to SSF M	Iodel 1: Jealousy Co	omposite					
Partner SSF via Jealousy	04	[16, .07]	08	[29, .15]	08	[28, .15]	04	[16, .09]
Partner CSF via Jealousy	.05	[05, .15]	.11	[11, .27]	.11	[10, .26]	.06	[06, .15]
Partners' Closenes	s to SSF M	Iodel 2: Sexual Jeal	ousy					
Partner SSF via Jealousy	02	[19, .16]	04	[33, .30]	04	[30, .25]	02	[15, .13]
Partner CSF via Jealousy	.07	[10, .21]	.14	[19, .35]	.12	[16, .32]	.06	[08, .16]
Partners' CSF Rela	ationship L	ength Model 1: Jea	lousy Com	posite				
Partner SSF via Jealousy	.001	[06, .05]	.01	[20, .18]	.01	[17, .16]	.03	[11, .10]
Partner CSF via Jealousy	001	[08, .04]	04	[24, .12]	03	[20, .11]	02	[13, .07]
Partners' CSF Rela	ationship L	ength Model 2: Sex	ual Jealous	sy				
Partner SSF via Jealousy	03	[17, .07]	07	[31, .16]	06	[29, .14]	03	[14, .07]

Partner CSF via Jealousy	04	[18, .03]	10	[33, .07]	10	[31, .07]	05	[16, .03]
Partners' SSF Rel	ationship l	Length Model 1:	Jealousy Com	posite				
Partner SSF via Jealousy	001	[07, .05]	04	[22, .15]	04	[21, .13]	02	[12, .07]
Partner CSF via Jealousy	01	[11, .06]	07	[32, .19]	07	[28, .18]	04	[17, .10]
via Jealousy001 [07, .05]04 [22, .15]04 [21, .13]02 [12, .07] Partner CSF -01 [11, 06]07 [32, 19]07 [28, 18]04 [17, 10]								
	.001	[14, .11]	.001	[26, .25]	.001	[25, .22]	.001	[12, .11]
Partner CSF via Jealousv	05	[22, .12]	11	[42, .22]	10	[37, .22]	05	[19, .11]

Note. CSF and SSF are Cross- and Same-Sex Friendships, respectively. CSF and SSF effects for a given moderator (e.g., Attractiveness) are presented separately for simplicity, but were entered into the same models. Only pathways including partners' friendships via Jealousy are presented as qualities of partners' friendships were not expected to moderate individuals Availability of Alternatives, however, these models do estimate the Availability of Alternative pathways. Bold point estimates and confidence intervals denote confidence intervals that do not contain 0, whereas asterisks denote traditional p-value tests of significance. $^*p < .05$. $^\dagger p < .10$.

APPENDIX D

STUDY 2 MEASURES

Beliefs About Cross-Sex Friendships:

1	2	3	4	5
Strongly				Strongly Agree
Disagree				

- 6. I don't believe men and women can have close friendships that remain platonic.
- 7. Friendship with a person of the opposite sex is possible.
- 8. Men and women can be friends.
- 9. Opposite-sex friendships can be purely driven by motives for platonic companionship.
- 10. Men and women can be 'just friends' without wanting a romantic connection.

Experiences in Close Relationships Scale-Revised: Fraley, Waller, & Brennan (2000)

INSTRUCTIONS: The statements below concern how you generally feel in your relationship with your romantic partner (i.e., your girlfriend, boyfriend, or spouse). Respond to each statement to indicate how much you agree or disagree with the statement.

1	2	3	4	5	6	7
Strongly			Neither			Strongly
Disagree			Agree or			Agree
			Disagree			

- 1. I'm afraid that I will lose my partner's love.
- 2. I often worry that my partner will not want to stay with me.
- 3. I often worry that my partner doesn't really love me.
- 4. I worry that my romantic partner won't care about me as much as I care about them.
- 5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.
- 6. I worry a lot about my relationship.
- 7. When my partner is out of sight, I worry that he or she might become interested in someone else.
- 8. When I show my feelings for my romantic partner, I'm afraid they will not feel the same about me.
- 9. I rarely worry about my partner leaving me.
- 10. My romantic partner makes me doubt myself.
- 11. I do not often worry about being abandoned.
- 12. I find that my partner doesn't want to get as close as I would like.
- 13. Sometimes my romantic partner changes their feelings about me for no apparent reason.
- 14. My desire to be very close sometimes scares my partner away.
- 15. I'm afraid that once my romantic partner gets to know me, he or she won't like who I really am.
- 16. It makes me mad that I don't get the affection and support I need from my partner.
- 17. I worry that I won't measure up to other people.
- 18. My partner only seems to notice me when I'm angry.
- 19. I prefer not to show my partner how I feel deep down.

- 20. I feel comfortable sharing my private thoughts and feelings with my partner.
- 21. I find it difficult to allow myself to depend on my romantic partner.
- 22. I am very comfortable being close to my romantic partner.
- 23. I don't feel comfortable opening up to my romantic partner.
- 24. I prefer not to be too close to my romantic partner.
- 25. I get uncomfortable when my romantic partner wants to be very close.
- 26. I find it relatively easy to get close to my partner.
- 27. It's not difficult for me to get close to my partner.
- 28. I usually discuss my problems and concerns with my partner.
- 29. It helps to turn to my romantic partner in times of need.
- 30. I tell my partner just about everything.
- 31. I talk things over with my partner.
- 32. I am nervous when my partner gets too close to me.
- 33. I feel comfortable depending on my romantic partner.
- 34. I find it easy to depend on my romantic partner.
- 35. It's easy for me to be affectionate with my partner.
- 36. My partner really understands me and my needs.

Relationship History

- 1. For how many months have you been in a romantic relationship with your partner?
- 2. Have you ever engaged in kissing with someone other than your partner during your romantic relationship?
- 3. Have you ever engaged in sexual intimacy without intercourse with someone other than

your partner during your romantic relationship?

4. Have you ever engaged in sexual intercourse with someone other than your partner during your romantic relationship?

Attitudes Toward Relationship Infidelity scale (DeWall et al., 2011)

Please indicate the extent to which you agree with the following statements.

1	2	3	4	5
Strongly				Strongly Agree
Disagree				

- 1. Cheating on my partner is morally wrong
- 2. If I could get away with it, I would cheat on my partner*
- 3. Being faithful to my romantic partner is important to me
- 4. Cheating on my romantic partner would not be a big deal*
- 5. I would cheat on my romantic partner if I was given the opportunity*

Informant-report.

- 1. Has your partner ever engaged in kissing with someone else during your romantic relationship?
- 2. Has your partner ever engaged in sexual intimacy without intercourse with someone else during your romantic relationship?
- 3. Has your partner ever engaged in sexual intercourse with someone else during your romantic relationship?

Please indicate the extent to which you think <u>your partner would agree</u> with the following statements.

1	2 3	4	5
---	-----	---	---

Strongly		Strongly Agree
Disagree		

- 1. Cheating on my partner is morally wrong
- 2. If I could get away with it, I would cheat on my partner*
- 3. Being faithful to my romantic partner is important to me
- 4. Cheating on my romantic partner would not be a big deal*
- 5. I would cheat on my romantic partner if I was given the opportunity*

Daily Diary

Relational Maintenance Behavior Measure—Stafford (2011):

Please complete the following questions to tell us the extent to which you believe your romantic partner performed each behavior today in order to maintain the relationship.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

Positivity.

- 1. Acted positively with me.
- 2. Was upbeat when we were together.
- 3. Acted cheerfully with me.
- 4. Acted optimistically when he/she was with me.

Understanding.

- 1. Was understanding.
- 2. Was forgiving of me.
- 3. Apologized when he/she was wrong.

4. Did not judge me.

Self-Disclosure.

- 1. Talked about his/her fears.
- 2. Was open about his/her feelings.
- 3. Encouraged me to share my thoughts with him/her.
- 4. Encouraged me to share my feelings with him/her.

Relationship talks.

- 1. Discussed the quality of our relationship.
- 2. Told me how he/she feels about the relationship.
- 3. Talked about our relationship.

Assurances.

- 1. Talked about future events (e.g., having children, or anniversaries, or retirement, etc.).
- 2. Talked about our plans for the future.
- 3. Told me how much I mean to him/her.
- 4. Showed me how much I mean to him/her.

Negative Relational Maintenance questionnaire (Dainton & Gross, 2008):

- 1. I avoided my partner because I did not want to deal with him/her.
- 2. I avoided interacting with my partner because he/she was angry with me.
- 3. I avoided topics that lead to arguments.
- 4. I did not talk about a subject that upsets me.

Daily Jealousy:

Complete the following items about your thoughts and feelings today...

1	2	3	4	5	6
Strongly					Strongly
disagree					agree

Sexual jealousy.

- 1. I worried about my partner being sexually unfaithful to me
- 2. I suspected there is something going on sexually between my partner and their friends
- 3. I suspected sexual attraction between my partner and their friends

Intimacy jealousy.

- 1. I worried that my partner and their friends will keep secrets from me
- 2. I was afraid that my partner will turn to their friends instead of me to meet emotional needs
- 3. I was concerned that my partner will share things with their friends that they wouldn't share with me

Power jealousy.

- I was concerned that my partner's friends influenced my partner's decisions more than
 me
- 2. I was concerned about my partner's friend's influence on my partner

Companionship jealousy.

- 1. I was upset by the amount of time my partner spends with their friends
- 2. I was bothered by the fact that my partner shares so many activities with their friends
- 3. I felt upset about the importance my partner places on their friendships

Daily Availability of Alternatives (Rusbult, Martz, & Agnew, 1998):

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

1	2	3	4
Don't Agree At All	Agree Slightly	Agree Moderately	Agree Completely

- 1. The people other than my partner with whom I might become involved are very appealing
- 2. My alternatives to our relationship are close to ideal (dating another, spending time with friends or on my own, etc.,)
- 3. If I weren't dating my partner, I would do fine--I would find another appealing person to date
- 4. My alternatives are attractive to me (dating another, spending time with friends or on my own, etc.)
- 5. My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship

Daily Relationship Satisfaction

1	2	3	4	5	6	7
Not at all						Extremely

- 1. What best describes the degree of happiness, all things considered, in your relationship?
- 2. How much intimacy/connectedness do you feel with your partner?

1	2	3	4	5	6	7
Very						Very
unsatisfied						satisfied

- 1. How satisfied are you with your relationship partner today?
- 2. How satisfied are you with the interactions you had with your relationship partner today?

3. How satisfied are you with your relationship today?

Friendship Interaction Log

- 1. Please list the names of friends that you spent time with today. Only list those that you chose to spend time with (e.g., outside of class or work) and spent at least 30 minutes with.
- 2. Please list the names of friends that your partner spent time with today. Only list those that they chose to spend time with (e.g., outside of class or work) and spent at least 30 minutes with.
- 3. What is [Friend name]'s gender?
- 4. Were you present when your partner spent time with [Friend name]? / Was your partner present when you spent time with [Friend name]?

Mate Value Items.

How attractive is [friend name] to [men/women]?

1	2	3	4	5	6	7
Extremely			Neither			Extremely
unattractive			unattractive or			attractive
			attractive			

How typical are the following characteristics of [friend name]?

- 1. Assertive
- 2. Self-confident
- 3. Extraverted
- 4. Influential
- 5. Socially competent

6. A good judge of character

APPENDIX E

STUDY 2 TABLES

Table 11. Descriptive Statistics and Zero-Order Correlations between Primary Variables in Study 2 2. 3. 5. 7. 8. 12. 4. 6. 9. 10. 11. .23** $(.17^*)$.15[†] 1. CSF .05 .10 -.07 -.02 .01 -.01 .02 .03 .06 $(.37^{**})$ 2. SSF .24** .09 -.10 -.01 -.001 .03 .05 -.01 .02 .07 -.04 .16* .09 $(.20^*)$.09 .11 -.14[†] -.17* -.08 -.13[†] -.11 -.13[†] .05 3. Availability 4. Sexual -.04 -.008 -.08 .12 (.02).04 -.11 -.10 -.06 -.06 -.07 .05 Jealousy 5. Jealousy $(.15^{\dagger})$.17* .61** .05 -.02 -.14[†] -.13[†] -.09 -.10 -.10 -.10 .10 Composite 6. Relationship .28** .34** .23** .26** .31** -.35** -.30** -.10 -.04 -.19* $(.34^{**})$ -.13[†] Satisfaction -.26** .52** .27** .33** .33** .30** (.34**)-.18* 7. RMBM A -.09 -.01 -.08 -.11 .63** .24** -.28** .59** .28** .29** 8. RMBM P -.02 -.18* -.18* $(.31^{**})$ $-.13^{\dagger}$.01 .41** .84** (.34**).32** .28** -.24** .46** -.09 -.02 -.07 -.13[†] -.08 9. RMBM RT .49** .56** .79** .79** (.38**).24** -.21* -.16* 10. RMBM SD -.04 -.03 -.09 -.12 -.18* -.21* .54** .71** .65** .74** .65** 11. RMBM U -.03 -.03 -.13[†] $(.34^{**})$ -.12 -.38** -.24** -.35** .22* -.28** 12. NRMQ A .002 -.04 .20*.19* $-.14^{\dagger}$ -.21* $(.14^{\dagger})$ Mean .71 1.62 2.88 1.32 1.15 6.12 5.00 5.90 4.83 5.09 5.38 1.97 SD 1.78 1.89 1.93 1.16 1.15 .67 .55 1.07 1.70 1.28 1.63 1.37 .84 -.89 -.78 -.83 -.85 -.87 -.73 -.65 -.83 -.77 α range .94 .81 .95 .93 .90 .88 .94 .94 .91 .84 .50 -.70 -.52 -.64 -.54 -.60 -.68 -.49 -.42 -.35 r_{ii} range .80 .87 .58 .65 .83 .65 .80 .83 .72 .54 Item count 5 3 8 2 4 4 3 4 4 4 .56 R_c .72 .80 .83 .62 .68 .83 .76 .68 .56

Note. CSF and SSF are Cross- and Same-Sex Friendships, respectively. Relationship Maintenance Behavior Measures are abbreviated as (A) Assurances, (P) Positivity, (RT) Relationship Talks, (SD) Self-Disclosures, (U) Understanding, Negative Relational Maintenance Questionnaire Avoidance (A). Intrapersonal correlations taken across days, participants' scores on one variable correlate with

their own scores on another, are reported below the diagonal. Interpersonal correlations, participants' scores on one variable correlated with their partner's score on the same or another variable, are reported along and above the diagonal. r_{ij} is the average inter-item correlation. R_c is the reliability of within person change. $^{\dagger}p < .10$. $^*p < .05$. $^{**}p < .01$.

Table 12. Basic Models of Daily Relationship Outcomes

	Availab	oility of	Jealo	usy	Sex	ual	Relat	ionship	
	Altern	atives	Comp	osite	Jeal	ousy	Satis	faction	
	<u>b</u>	<u>SE</u>	<u>b</u>	<u>SE</u>	<u>b</u>	<u>SE</u>	<u>b</u>	<u>SE</u>	
Between Effect Own Friends	.08	.07	02	.02	02	.02	07†	.04	
Between Effect Partner Friends	.07	.07	002	.03	02	.02	.03	.04	
Within Effect Own Friends	.10**	.03	.02**	.01	.003	.01	.02	.01	
Within Effect Partner Friends	.03	.02	$.02^{\dagger}$.01	.01	.01	01	.02	
χ^2 (df)	20.30		23.32			5 (15)		2 (15)	
RMSEA	.03		.0.		.0		.03		
CFI	.84		.60	5	.9	6		88	

Note. $^{\dagger} p < .10$. $^{**} p < .01$.

Table 13. Basic Models of Daily Relational Maintenance Behaviors

		IBM rances	RMBM Positivity <u>b</u> <u>SE</u>		RMBM Relationship Talks			RMBM Self- Disclosures		RMBM Understanding		NR! Avoid	~
	<u>b</u>	<u>SE</u>			<u>b</u>	<u>SE</u>	<u>b</u>		SE	<u>b</u>	<u>SE</u>	<u>b</u>	<u>SE</u>
Between Effect Own Friends	06	.06	04	.04	09	.07	1	0	.06	09†	.05	06^{\dagger}	.03
Between Effect Partner Friends	.06	.07	.05	.04	.05	.07	.11	†	.06	.12**	.04	.003	.04
Within Effect Own Friends	01	.02	.03	.02	003	.03	00)1	.02	.00	.02	.02	.02
Within Effect Partner Friends	01	.02	.01	.02	02	.02	04	1 *	.02	.01	.01	.02	.02
χ^2 (df))* (15)	11.27	\ /	20.51	` /	19	.57 (15)	12.	98 (15)	14.81	
RMSEA		.04 .00			.03		.02		.00		.00		
CFI	<u>.</u>	74	1.0)0	.89	9		.91			1.00	1.0)()

Note. RMBM are Relational Maintenance Behavior Measure scales. NRMQ is the Negative Relational Maintenance Questionnaire. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

Table 14. Indirect Effects from Analyses that Include Daily Availability and

Jealousy as Mediators

Jealousy as Medi	ators					
	Mod		Model Fit	Mod		Model Fit
	Jealo Comp		Statistics		tual ousy	Statistics
	<u>b</u>	<u>SE</u>		<u><u>b</u></u>	<u>SE</u>	
Relationship Satisfac		SE		<u>U</u>	\underline{SL}	
Own Friends						
via Availability	01*	.01	$\chi^2(57) = 86.40^{**}$	01*	.01	$\chi^2(57) = 68.80$
Partner Friends			RMSEA = .03			RMSEA = .02
via Jealousy	004	.003	CFI = .87	002	.002	CFI = .93
RMBM Assurances						
Own Friends	01 [†]	.01	$\chi^2(57) = 84.80^{**}$	01 [†]	.01	$\chi^2(57) = 68.92$
via Availability	01	.01	RMSEA = .03	01	.01	RMSEA = .02
Partner Friends	01	.004	CFI = .82	002	.002	CFI = .90
via Jealousy	01	.004	CF162	002	.002	CF190
RMBM Positivity						
Own Friends	01	.01	$\chi^2(57) = 71.17^{\dagger}$	01	.01	$\chi^2(57) = 59.11$
via Availability	01	.01	$\chi (37) = 71.17$ RMSEA = .02	01	.01	χ (37) = 39.11 RMSEA = .01
Partner Friends	01 [†]	004		002	002	
via Jealousy	01	.004	CFI = .92	002	.002	CFI = .98
RMBM Relationship	Talks					
Own Friends	01	.01	2(57) = 70 ((*	01 [†]	.01	-2(57) - (5.02)
via Availability	01	.01	$\chi^2(57) = 79.66^*$ RMSEA = .03	01	.01	$\chi^2(57) = 65.02$ RMSEA = .02
Partner Friends	0.1	.004		002	.002	
via Jealousy	01	.004	CFI = .84	002	.002	CFI = .93
RMBM Self-Disclosi	ures					
Own Friends	01	0.1	2(57) 01 50*	01†	0.1	-2(57) (0.66
via Availability	01	.01	$\chi^2(57) = 81.50^*$	01 [†]	.01	$\chi^2(57) = 68.66$
Partner Friends	002	002	RMSEA = .03	002	002	RMSEA = .02
via Jealousy	003	.003	CFI = .83	002	.002	CFI = .91
RMBM Understandin	1g					
Own Friends	0.1	0.1	2(57) 74.24‡	Λ1	0.1	.2(57) (7.96
via Availability	01	.01	$\chi^2(57) = 74.24^{\dagger}$	01	.01	$\chi^2(57) = 67.86$
Partner Friends	004	002	RMSEA = .02	001	002	RMSEA = .02
via Jealousy	004	.003	CFI = .88	001	.002	CFI = .91
NRMQ Avoidance						
Own Friends	002	0.1	2(55) 55 15 [‡]	004	0.1	2(55) 50.21
via Availability	.003	.01	$\chi^2(57) = 75.17^{\dagger}$.004	.01	$\chi^2(57) = 59.31$
Partner Friends	002	0.02	RMSEA = .02	001	001	RMSEA = .01
via Jealousy	.003	.002	CFI = .86	.001	.001	CFI = .98

Note. RMBM are Relational Maintenance Behavior Measure scales. NRMQ is the Negative Relational Maintenance Questionnaire. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

Table 15. Descri	ptive Statist	ics and	<u>Zero-O</u>	<u>rder C</u>	<u>orrelati</u>	ons of	<u>Moderate</u>	ors in St	udy 2	
	1.	2	3.	5.	6.	7.	8.	9.	10.	11

Table 15. Descripin	<u>e siai</u> is	<u>iics an</u> a z	<u>cero-O</u>	raer C	<u>orreia</u> ii	<u>ons oj</u>	<u>woaer</u> aic	<u>irs in</u> Si	iuay 2		
•	1.	2.	3.	5.	6.	7.	8.	9.	10.	11.	12.
 SSF Average Attractiveness 	(07)	01	06	.16*	02	.08	22*	.10	02	04	.13†
2. SSF Average Dominance	.30**	(.27**)	.15†	.01	.21*	$.14^{\dagger}$.04	.04	16*	06	.05
3. SSF Average Attractive Composite	.81**	.80**	(.04)	.09	.11	.13 [†]	11	.09	11	06	.11
5. CSF Average Attractiveness	.33**	.03	.21*	(.06)	03	.01	04	.00	.08	.01	.02
6. CSF Average Dominance	.04	.49**	.31**	.25**	$(.14^{\dagger})$.07	.15 [†]	.15 [†]	13 [†]	04	.004
7. CSF Average Attractive Composite	.24**	.32**	.33**	.79**	.79**	(.05)	.07	.09	03	01	.01
8. Relationship Length9. Infidelity Beliefs	21* .10	.03 .15 [†]	11 .15 [†]	02 15 [†]	.16* .06	.09 06	(1.00**) 08	05 (.11)	13 [†] 26**	06 10	04 .05
10. Attachment Anxiety	03	19*	14†	.06	10	03	14 [†]	14 [†]	(.42**)	.43**	02
11. Attachment Avoidance	18*	17*	22*	04	14 [†]	11	07	27**	.46**	(.18*)	09
12. Cross-Sex Friendship Beliefs	.13 [†]	.10	.15 [†]	.13 [†]	.002	.08	04	.12	10	13 [†]	(.20*)
M	4.52	3.83	02	4.28	3.80	12	33.22	4.80	2.40	1.98	4.17
SD	1.21	.61	.64	1.28	.69	.69	36.64	.44	1.08	.91	.84
α							-	.70	.91	.93	.80
$r_{ m ij}$							-	.37	.36	.45	.46
Item Count					111		- +	5	* 18	18	5
NE COE LOCE	\sim	1 ~	~	т.				. 10	*	- rr	0.1

Note. CSF and SSF are Cross- and Same-Sex Friendships, respectively. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

Table 16. Estimates of Cross-Level Interactions between Characteristics of Own CSFs and the Within-Person Effect of Own CSF Contact on Own Availability and the Within-Person Effect of Own Availability on Own Outcome

	Relationship Satisfaction		RMBM A		RME	RMBM P		BM T		RMBN	M SD]	RMB	<u>M U</u>	<u>NRI</u>	MQ A
	$\frac{b}{b}$	SE	b	SE	b	SE	b = 1	SE		b	SE		b	SE	b	SE
Attractiveness									_							
Own CSF on Availability	02	.06	$.004_{b}$.07	01	.06	01	.08		04	.08	-	.03	.09	.02	.09
Availability on Outcome	.02	.06	$.01_{b}$.05	.10	.07	.01	.06		.002	.05		01	.08	.01	.05
Dominance																
Own CSF on Availability	.01	.13	06 _a	.11	14	.10	08	.11		05	.11	-	.10	.12	09 _a	.11
Availability on Outcome	04	.13	01 _a	.05	07	.12	02	.13		.11	.10	-	.07	.10	01 _a	.10
Attractiveness	Compos	site														
Own CSF on Availability	03	.14	003	.16	08	.12	03	.15		.01	.05		002	.13	002	.13
Availability on Outcome	.05	.14	.02	.08	.11	.14	.08	.16		.23**	.07	•	09	.09	02	.09

Note. CSF are Cross-Sex Friendships. Relationship Maintenance Behavior Measures are abbreviated as (A) Assurances, (P) Positivity, (RT) Relationship Talks, (SD) Self-Disclosures, (U) Understanding, Negative Relational Maintenance Questionnaire Avoidance (A).

Table 17. Estimates of Cross-Level Interactions between Characteristics of Partner CSFs and the Within-Person Effect of Own CSF Contact on Own Jealousy and the Within-Person Effect of Own Jealousy on Own Outcome

	Rel	Sat	RMBN	<u>И А</u>	RMB	M P	RMB	M RT	RMB	M SD	RME	M U	NRM	Q A
	b	SE	b	SE	<i>b</i>	SE	b	SE	b	SE	b	SE	b	SE
Attractiveness														
Partner CSF on Jealousy	01 _a	.01	01 (003) _c	.03 (.04)	.01	.01	$.02_{b}$.03	_	_	$.002_{a}$.02	.003	.03
Jealousy on Outcome	04 _a	.03	16 (01) _c	.14 (.18)	001	.06	11 _b	.12	_	_	08 _a	.07	.03	.13
Dominance Partner CSF on Jealousy	_	_	.004a	.05	.01 (07) _d	.06 (.08)	02	.07	.01	.07	003	.06	01 _b	.04
Jealousy on Outcome	_	_	18 _a	.21	05 (02) _d	.05 (.05)	34	.38	24	.33	27†	.16	06_{b}	.30
Attractiveness	Compo	osite												
Partner CSF on Jealousy	_	_	.01	.05	02	.06	.02	.07	.00	.07	05	.05	.002 _b	.04
Jealousy on Outcome	_	_	18	.14	18	.18	48	.32	30	.32	44*	.19	03 _b	.22

Table 18. Estimates of Cross-Level Interactions between Characteristics of Partner CSFs and the Within-Person Effect of Own CSF Contact on Own Sexual Jealousy and the Within-Person Effect of Own Sexual Jealousy on Own Outcome

	Relationship Satisfaction		RMBM A		RMB	RMBM P RMBM RT		RMBM SD		RME	RMBM U		NRMQ A		
	b	SE	b	SE	b	SE	b	SE		b	SE	b	SE	b	SE
Attractiveness									_					<u> </u>	
Partner CSF on S Jealousy	_	_	.05	.04	.03a	.03	.02	.02		.03	.03	.05*	.02	.02	.04
S Jealousy on Outcome	_	_	04	.09	.01a	.09	02	.23		05	.11	04	.08	.12	.10
Dominance Partner CSF on S Jealousy	.01	.04	.04 _a	.06	01	.05	.02 _a	.04		_	_	.08	.06	08* (.04) _c	.03 (.06)
S Jealousy on Outcome	.11	.12	09 _a	.05	12	.23	09a	.19		_	_	06	.13	.17 (.53*)	.20
Attractiveness	Compo	site													
Partner CSF on S Jealousy	_	_	.07 _a	.06	$.01_{b}$.06	.03	.04		$.07^{\dagger}$.04	$.004_{b}$.07	.01	.06
S Jealousy on Outcome	_	_	15 _a	.23	08_{b}	.29	16	.19		05	.18	06	.13	.34†	.18

Table 19. Estimates of Cross-Level Interactions between Characteristics of the Romantic Relationship and the Within-Person Effect of Own CSF Contact on Own Availability and the Within-Person Effect of Own Availability on Own Outcome

		Relationship Satisfaction		BM A	RME	BM P	RMB	RMBM RT RME		M SD	RME	RMBM U		1Q A
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Own Infidelity	Beliefs								· -				<u> </u>	
Own CSF on Availability	.17	.19	.07	.16	.10	.19	.07	.16	.04	.18	.04	.14	.18	.23
Availability on Outcome	.02	.09	02	.08	.01	.09	.07	.07	.002	.16	.16	.11	04	.12
Relationship L	ength													
Own CSF on Availability	.003	.001	.002	.002	.002	.002	.003	.002	.001	.002	.002	.002	_	_
Availability on Outcome	.00	.002	.00	.001	.00	.002	.00	.002	.00	.001	.00	.001	_	_

Table 20. Estimates of Cross-Level Interactions between Characteristics of the Romantic Relationship and the Within-Person Effect of Own CSF Contact on Own Jealousy and the Within-Person Effect of Own Jealousy on Own Outcome

	Relationship Satisfaction		RMB	RMBM A RMB		<u> </u>	RM R		RMB	RMBM SD RMBM U				NRMQ <u>A</u>	
	b	SE	b	SE	b	SE	<i>b</i>	SE	b	SE	b	SE	b	SE	
Partner Infideli	ty Belie	efs					<u> </u>		'						
Own CSF on Jealousy	_	_	03 (.05) _c	.19 (.07)	04	.11	06	.08	16 (.05) _c	.10 (.08)	11 [†] a	.06	09	.0 6	
Jealousy on Outcome	_	_	27 (.05) _c	.30 (.24)	.10	.14	32	.37	.59 (.12) _c	.69 (.40)	.01 _a	.18	.21	.3 7	
Relationship Le	ength														
Own CSF on Jealousy	_	_	.00	.001	001 (.001) _d	.001 (.001)		_	_	_	001 (.00) _d	.002 (.002)	_	_	
Jealousy on Outcome	_	_	.001	.003	_	_	_	_	_	_	001 (.001) _d	.01 (.004)	_		

Table 21. Estimates of Cross-Level Interactions between Characteristics of the Romantic Relationship and the Within-Person Effect of Own CSF Contact on Own Sexual Jealousy and the Within-Person Effect of Own Sexual Jealousy on Own Outcome

		ionship faction	RMB	M A	RME	<u>8M P</u>	RMBI	M RT	RMB	M SD	RMB	<u>M U</u>	NRM	Q A
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Partner Infideli	ty Belie	efs												
Partner CSF on S Jealousy	_	_		_	14	.09	13*	.06	_	_	11 [†] a	.06	13*	.05
S Jealousy on Outcome	_	_	_	_	03	.12	07	.30	_	_	.01	.18	004	.24
Relationship Lo	ength													
Partner CSF on S Jealousy	_	_	.00	.001	.00	.001	.00	.001	.001 (.00) _c	.002 (.002)	.00 (.00) _c	.001 (.002)	.00 (.00) _c	.001 (.001)
S Jealousy on Outcome	_	_	.001	.01	.002	.01	.001	.01	002 (.002) _c	.01 (.004)	.01 (003) _c	.01 (.004)	002 (.001) _c	.01 (.01)

Table 22. Estimates of Cross-Level Interactions between Characteristics of the Individual and the Within-Person Effect of Own CSF Contact on Own Availability and the Within-Person Effect of Own Availability on Own Outcome

		onship action	RMB	BM A RMBM P		RM R	<u>BM</u> <u>T</u>	<u>R</u>	MBM SD	RME	BM U	NRN	MQ A	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Anxious Attac	hment													
Own CSF on Availability	01	.08	04	.09	.01	.09	.02	.09	.01	.08	.01	.06	.02 (.08) _c	.08 (.15)
Availability on Outcome	03	.07	.02	.05	.02	.09	01	.07	03	.04	.07	.04	.03 (02) _c	.05 (.05)
Avoidant Attac	chment													
Own CSF on Availability	.02	.08	.03	.10	04	.10	06	.09	08	3 .11	05	.07	.01 (11) _c	.09 (.17)
Availability on Outcome	06	.08	01	.05	09	.09	06	.09	09	.06	.03	.04	004 (05) ^c	.07 (.06)
Cross-Sex Frie	endship E	Beliefs												
Own CSF on Availability	.01	.08	10	.06	03	.07	.01	.06	.01	.07	10	.08	04	.08
Availability on Outcome	02	.05	.08*	.04	08*	.03	.05	.10	0:	5 .07	.04	.05	02	.07

Table 23. Estimates of Cross-Level Interactions between Characteristics of the Individual and the Within-Person Effect of Partner CSF Contact on Own Jealousy and the Within-Person Effect of Own Jealousy on Own Outcome

	Relationship Satisfaction		RMI	BM A	RMB	<u>M P</u>	RMBN	M RT	RMBN	<u> I SD</u>	RMB	M U	NRM	<u>Q A</u>
	$\frac{b}{b}$	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Anxious Atta	chment													
Partner CSF on Jealousy	.02 (.01) _c	.02 (.03)	_	_	03 (07) _c	.03 (.04)	04 _a	.03	_		04	.03	.02a	.02
Jealousy on Outcome	.05 (22**) _c	.10 (.06)	_	_	.01 (06) _c	.09 (.09)	13 _a	.14	_	_	.01	.09	05 _a	.16
Avoidant Att	achment													
Partner CSF on Jealousy	01 (.02) _c	.03 (.03) _c	_	_	.02 (.03) _c	.07 (.06)	.03 _a	.03	_	_	.03	.04	004 _a	.03
Jealousy on Outcome	.11 (21) _c	.14 (.15)	_	_	07 (03)c	.13 (.19)	.09 _a	.17	_		.14	.10	04 _a	.22
Cross-Sex Fr	riendship Bo	eliefs												
Partner CSF on Jealousy	.002	.01	_	_	_	_	01	.04	004	.04	002	.03	.01	.04
Jealousy on Outcome	.02	.09	_	_	15 (08) _d	.15 (.12)	16	.23	29	.18	20†	.11	.20	.14

Table 24. Estimates of Cross-Level Interactions between Characteristics of the Individual and the Within-Person Effect of Partner CSF Contact on Own Sexual Jealousy and the Within-Person Effect of Own Sexual Jealousy on Own Outcome

	Relationship Satisfaction		RMB	RMBM A		SM P		MBM RT		<u>IBM</u> SD	RM	BM U	<u>NRN</u>	MQ A
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Anxious Attach	ment													
Partner CSF on S Jealousy	01	.02	04	.04	03 _a	.03	04	.03	_	_	03	.04	.04	.04
S Jealousy on Outcome	.003	.03	06	.15	02 _a	.10	09	.22	_	_	01	.13	.12	.13
Avoidant Attac	hment													
Partner CSF on S Jealousy	.05	.02	.07	.05	.03 _a	.04	.05	.04	_	_	.04	.05	03	.05
S Jealousy on Outcome	001	.05	08	.20	05 _a	.10	04	.28	_	_	.07	.11	11	.15
Cross-Sex Frie	ndship B	eliefs												
Partner CSF on S Jealousy	.01	.02	.01a	.06	.04a	.04	.02	.62	_	_	.01	.05	02	.03
S Jealousy on Outcome	.02	.07	05 _a	.14	08 _a	.06	03	.19	_	_	.03	.08	.21†	.12

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- Wreford, J. (2012). How close is too close? "It's complicated": Factors associated with cheating, electronic extradyadic intimacy, & attraction to close cross-sex friends (Master's Thesis).

Vazire, S. (2010). Who knows what about a person? The self-other knowledge asymmetry (SOKA) model. *Journal of Personality and Social Psychology*, 98(2), 281-300.

BIOGRAPHICAL SKETCH

Conrad Corretti was born and raised in Haslett, Michigan, graduating from Haslett High School in 2007. Conrad attended Michigan State University for his undergraduate education, where he obtained dual Bachelor of Science degrees in Psychology and Sociology. His first role as a researcher was in the Personality and Evolutionary Psychology Lab at Michigan State University under the close mentorship of Dr. Melissa M. McDonald. His interest in Social Psychology stemmed from his time in this lab and the chance he had to design a modernized replication of a study assessing gendered responses to unsolicited sexual requests. After graduating from Michigan State University in 2013, Conrad enrolled in the Psychological Sciences PhD program at The University of Texas at Dallas under the mentorship of Dr. Robert A. Ackerman in the Personality and Interpersonal Relationships Lab. Throughout this time, Conrad's research focused on understanding the initiation, development, and maintenance of close relationships and the role of personality in each. During the summer of 2016, Conrad explored his first opportunity to conduct research outside of academia as a research fellow for the City of Plano where he worked with the department of Sustainability & Environmental Education to understand community engagement in sustainability from the perspectives of diversity and inclusion using methods from the social sciences. In the summer of 2017, Conrad completed an internship in Research and Development at eHarmony. During his final year of doctoral studies, Conrad worked full time at Facebook as a quantitative user experience researcher.

CURRICULUM VITAE

Conrad A. Corretti

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Educational Background

Ph.D.	The University of Texas at Dallas, Richardson, TX
Expected	Psychological Sciences Program, Social/Personality Concentration
December	Dissertation: An Investigation into The Effects of Cross-Sex Friendships
2019	on Heterosexual Romantic Relationship Dynamics
	Advisor: Dr. Robert A. Ackerman
M.S.	The University of Texas at Dallas, Richardson, TX
December	Psychological Sciences Program, Social/Personality Concentration
2017	Thesis: An Investigation into the Impact of Group Membership on the
	Development of Closeness through Self-Disclosure and Disagreement
	Advisor: Dr. Robert A. Ackerman
B.S.	Michigan State University, East Lansing, Michigan
May 2013	Major: Psychology
	Dual Degree: Sociology
	Study Abroad: Greece and Turkey: Contemporary Culture, Politics, and
	Society

Honors, Achievements and Awards

The University of Texas at Dallas PhD Research Small Grant 2017	
Society for Personality and Social Psychology Graduate Travel Award	2017
The University of Texas at Dallas Travel Award	
2014-2018	
Psi Chi National Honor Society in Psychology	
2012-present	
MSUFCU Endowment Study Abroad Scholarship	2012
Michigan State University's Dean's List	2009-2013

Publications

- Landy, J. F., Jia, M., Ding I. L., Viganola, D. Tierney, W., ... Corretti, C.A., ... Uhlmann, E. L. (in press) Crowdsourcing hypothesis tests: Making transparent how design choices shape research results. Manuscript submitted for publication.
- Ackerman, R.A., Carson, K.J., **Corretti, C. A.**, Ehrenreich, S.E., Meter, D.J., & Underwood, M.K. (2019). Experiences with Warmth in Middle Childhood Predict Features of Text-Message Communication in Early Adolescence. *Developmental Psychology*.
- Cheung, I., Campbell, L., LeBel, E., Ackerman, R. A., Aykutoğlu, B., ... Corretti, C. A., ... Yong, J. C. (2016). Registered Replication Report: Study 1 from Finkel, Rusbult, Kumashiro, & Hannon (2002). *Perspectives on Psychological Science*, 11, 750-764.
- Faso, D.J, **Corretti, C.A.**, Sasson, N.J., & Ackerman, R.A. (2016). The Broad Autism Phenotype Predicts Relationship Outcomes within Newly Formed College Roommates. *Autism*.
- Ackerman, R.A., & Corretti, C. A. (2015). Pathological Personality Traits and Intimacy Processes within Roommate Relationships. *European Journal of Personality*.
- Ackerman, R. A., Kashy, D.A., & Corretti, C.A. (2015). A Tutorial on Analyzing Data from Speed-Dating Studies with Heterosexual Dyads. *Personal Relationships*.

Book Chapters

Ackerman, R. A., Corretti, C. A., & Carson, K. J. (2018). Psychometric properties of the Narcissistic Personality Inventory. In T. Hermann, A. Brunell, and J. Foster (Eds.), The Handbook of Trait Narcissism: Key Advances, Research Methods, and Controversies. Springer (accepted on October 24, 2017).

Professional Presentations

Peer-reviewed

- Santos, K. M. C., Rounsaville, S. A., Ackerman, R. A., & Corretti, C. A. (2019). Valentine's Day: An Exploration of Gender Differences in Relationship Outcomes. Poster presented at the Society for Personality and Social Psychology, Portland, OR.
- Corretti, C. A., & Ackerman, R. A. (2018). An Investigation into the Processes Underlying Closeness Development in the Fast Friends Paradigm. Poster

- presented at Society for Personality and Social Psychology, Atlanta, GA.
- **Corretti, C. A.**, & Ackerman, R. A. (2017). The Big Five Personality Traits and Relationship Formation. Poster presented at the Society for Personality and Social Psychology, San Antonio, TX.
- Fernandez, C.C., Corretti, C.A., Ackerman, R.A., Brecheen, C. (2016, March). The Mediating Effects of Academic and Social Involvement on Relations between Personality and Academic Achievement. Poster session at the 16th biennial meeting of the Society for Research on Adolescence, Baltimore, Maryland.
- Corretti, C.A., & Ackerman, R.A. (2016, January). Do People Know What They Want, What They Really, Really Want?: Revisiting Ideal Partner Preferences in the Context of Speed-Dating. Poster presented at Society for Personality and Social Psychology, San Diego, California.
- Yanez, I.A., Corretti, C.A., & Ackerman, R.A. (2016, January). The Role of Pathological Narcissism in Making Accurate Judgements of Disclosure and Social Support.

 Poster presented at Society for Personality and Social Psychology, San Diego, California.
- Corretti, C.A., & Ackerman, R.A. (2015, February). Roommate Closeness Development and Pathological Personality Traits. Poster presented at Society for Personality and Social Psychology, Long Beach, California.
- Ackerman, R.A., Corretti, C.A., Carson, K.J., Ehrenreich, S., & Underwood, M. K. (2015, March). Dominance and Negativity in Middle Childhood Predict Positive and Negative Engagement with Others in Early Adolescence. G. Fosco, *The Interpersonal Legacy of Family Relationships: Implications for Adolescent and Young Adult Peer and Romantic Relationships*. Poster symposium at the biennial meeting of Society for Research in Child Development, Philadelphia, Pennsylvania.
- **Corretti, C.A.**, Ackerman, R.A., & Carson, K.J. (2015, April). *An Introduction to the Actor-Partner Interdependence Model*. Symposium at the meeting of Society of Applied Multivariate Research at the meeting of Southwestern Psychological Association, Wichita, Kansas.
- Carson, K.J., **Corretti, C.A.**, Faso, D.J., & Ackerman, R.A. (2015, April). Consequences of Ignoring Nonindependence in Dyadic Data: An Illustration with Roommate Dyads. Poster session at the meeting of Society of Applied Multivariate Research at the meeting of Southwestern Psychological Association, Wichita, Kansas.
- Corretti, C.A., Carson, K.J., & Ackerman, R. A. (2014, May). *Intimacy Building*

- Behavior in Roommates Relates to Post-Conflict Affect. Poster presented at Association for Psychological Science, San Francisco, California.
- **Corretti, C.A.**, McDonald, M.M., & Donnellan, M. B. (2013, January) *Gender differences in responses to sexual requests*. Poster session at National Collegiate Research Conference, Harvard College.
- McDonald, M.M., Corretti, C.A., & Donnellan, M. B. (2013, January). *Gender differences in responses to sexual requests*. Poster presented at Society for Personality and Social Psychology, New Orleans, LA.
- Effner, S., Corretti, C.A., Wiese, A., Kim, A., McDonald, M.M., Donnellan, M. B. (2012, May). *Ostracism: Evidence for a strong situation?* Poster presented at Midwestern Psychological Association, Chicago, Illinois.
- **Corretti, C.A.**, Effner, S., Wiese, A., Kim, A., McDonald, M.M., Donnellan, M. B. (2012, April). *Reactions to ostracism: Evidence for a strong situation?* Oral presentation at the meeting of University Undergraduate Research and Arts Forum, Michigan State University.

Departmental

- Corretti, C. A. (2016, April). Why Can't We Be Friends?: Disclosure, Disagreement, and the Development of Intergroup Closeness. Developmental, Cognitive, and Social-Personality Lecture Series at the University of Texas at Dallas.
- Ackerman, R. A., & Corretti, C. A. (2015, October). *DCS journal club: "Estimating the reproducibility of psychological science."* Developmental, Cognitive, and Social-Personality Lecture Series at the University of Texas at Dallas.
- Faso, D.J., & Corretti, C. A. (2014, March). *Roommate Relationship Development*. Developmental, Cognitive, and Social-Personality Lecture Series at the University of Texas at Dallas.
- Ackerman, R. A., & Corretti, C. A. (2014, September). *The Broad Autism Phenotype and Roommate Relationships*. Developmental, Cognitive, and Social-Personality Lecture Series at the University of Texas at Dallas.

Research Interests

Interpersonal Relationships, Intergroup Relationships, Romantic Relationships, Relationship Development, Relationship Maintenance, and Dyadic Data Analysis

Teaching Experience

The University of Texas at Dallas, School of Behavioral and Brain Sciences

PSY 2301 Introduction to Psychology, Teaching Assistant, 180 undergraduates

PSY 2301 Introduction to Psychology, Teaching Assistant, 173 undergraduates

PSY 2317 Statistics for Psychology, Teaching Assistant, 25 undergraduates

HCS 6313 Research Methods in Behavioral and Brain Sciences—Part II, Teaching Assistant, 18 graduate students

HCS 6312 Research Methods in Behavioral and Brain Sciences—Part I, Teaching Assistant, 17 graduate students

PSY 3392 Research Design and Analysis, Teaching Assistant, 30 undergraduates

PSY 3331 Social Psychology, Teaching Assistant, 80 undergraduates

Michigan State University, Department of Psychology

PSY 320 Health Psychology, Undergraduate Teaching Assistant, 242 undergraduates

Service

Professional

Personality and Individual Differences, Reviewer Psychological Sciences Coffee Break, Veteran Student Mentor	2017 2017
Student Diversity Advisory Council, Vice-Chairperson	2015-2017
Community service event coordinator for the Office of Diversity and Community Engagement "Campus Visit for International High Schoolers: Exploring What's Possible"	Spring 2016
Association for Psychological Science, Graduate Student Affiliate	2013-present
Society for Personality and Social Psychology, Graduate Student Affiliate	2013-present
Multicultural Center, Student volunteer	2015-2017

Society for Personality and Social Psychology, Student Poster Award Reviewer	2016
Louis Stokes Alliance for Minority Participation, Student Mentor	Summer 2015
Translational Issues in Psychological Science, Reviewer	2015
APS Student Caucus, Student Grant Competition Reviewer	2014, 2015
University	
The University of Texas at Dallas	
Office of Graduate Studies Spring TA/RA Orientation Panelist	2018
Office of Graduate Studies and McDermott Library's Defending the Dissertation Proposal Panelist	2017
School of Behavioral and Brain Sciences TA Orientation Panelist	2014-present
Doctoral Student Recruitment Committee	Spring 2014-
Psychological Sciences Professional Development Luncheon Series Committee	present 2015-2017
Behavioral and Brain Sciences Collaboration Committee, Founder	2014-2016
Psychology Undergraduate Curriculum Review Committee	2014
School of Behavioral and Brain Sciences Roadmap to Graduate School Panelist	2014
Michigan State University	
Undergraduate Research Ambassador	2012-2013
College Assistance Migrant Program, Tutor	Spring 2013