How Close is Too Close? “It’s Complicated”: Factors Associated with Cheating, Electronic Extradyadic Intimacy, & Attraction to Close Cross-sex Friends

by

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A Thesis
presented to
The University of Guelph

In partial fulfilment of requirements
for the degree of
Master of Arts
in
Psychology

Guelph, Ontario, Canada

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ABSTRACT

HOW CLOSE IS TOO CLOSE? “IT’S COMPLICATED”: FACTORS ASSOCIATED WITH CHEATING, EXTRADYADIC INTIMACY & ATTRACTION TO CLOSE CROSS-SEX FRIENDS

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Previous research indicates that there are a number of factors that contribute to one’s propensity to engage in cheating. The purpose of the current study was to explore trends in relationships, cheating, and attraction, and to determine the extent to which electronic media influences these. In a self-report survey of 265 participants (217 females; $M$ age 20.9; $SD$ 1.5), it was found that sociosexual orientation and impulsivity were related to past and current cheating, and increased quality of alternatives, diminished commitment and dissatisfaction were associated with current cheating. Impulsivity, quality of alternatives and diminished commitment were also found to be associated with electronic extradidyadic intimacy. Finally, diminished commitment and increased perceived quality of alternatives were found to be associated with attraction to close cross-sex friends. Implications for research and clinical practice are discussed.

Keywords: Cheating, Extradyadic Intimacy, Investment Model Scale, Electronic Extradyadic Intimacy, Extradyadic Relationships, Attraction.
Acknowledgements

There are countless people I would love to thank, whose support, no matter how big or small, made this process possible. First, my advisor Dr. Karl Hennig was a brilliant supervisor, particularly in that he would not stop until we found something I was genuinely passionate about. Karl was phenomenally supportive and understanding, and was flexible enough to thoughtfully consider my most divergent ideas. Next, Dr. Serge Desmarais certainly went above and beyond the duties associated with “advisory committee member”. Despite a schedule that would make most dizzy, Serge assured me that he was always available to meet, and helped me make sense of what was sometimes overwhelming. In addition, I would like to extend a very special thank you to my research assistant, Laura Parrott, and I wish her luck in graduate school. A mention is also due to Dr. Ian Newby-Clark, who helped me with the statistics behind the scenes.

Finally, my family, whose confidence in my ability far exceeds my own, was there through the thick of this process. I cannot thank enough my sisters, new brother-in-law, and my parents for being so patient with me. And last but not least, I’d like to thank my fellow graduate students. I am always in awe and humbled by your brilliance, and I’m so proud that I do not just think of you as colleagues, but my very best friends.
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Can men and women really be *just* friends? When does “innocent” friendship become “cheating”, if one of the friends is in a monogamous, romantic relationship? These questions have been the source of much research within the relationships literature (see Afifi & Faulkner, 2000; Bleske & Buss, 2000; Feldman & Cauffman, 1999) as well as in popular media (Chatterjee, 2001; Daly, 2009), and are further complicated by wide individual differences in perceptions of what constitutes cheating. For the purpose of this study, cheating is defined as a sexual act or acts that violate the relatively agreed-upon norms within the relationship (e.g. kissing, oral sex, sexual touching, intercourse; Blow & Hartnett, 2005). The frequency of cheating in relationships varies in terms of what is reported in the literature, although a review by Blow and Hartnett (2005) concluded that just fewer than 25% of individuals engage in extramarital sex over the course of their committed relationships, while less explicit cheating behaviours such as oral sex and sexual touching, occur more often. Feldman and Cauffman (1999) found that, of college students who had “cheated” on a partner, 88% had engaged in kissing, where 59% had engaged in intercourse. They also found that 68% of their 417 participants had become emotionally involved with the person with which they were cheating.

What is this “emotional involvement”? It is difficult to empirically investigate such a subjectively defined phenomenon, and thus the concept of *extradyadic intimacy* was introduced (McAlister, Pachana and Jackson, 2005). Extradyadic intimacy (hereafter referred to as EI) refers to the amount of time spent discussing a range of intimate topics. It is important that extradyadic intimacy is thought of as being on a continuum, and no definitive line is drawn in which a cross-sex friendship is considered “cheating”. EI is especially important in light of the privacy offered through burgeoning technologies provides secrecy for EI to develop. That is, social networks such as Facebook, personal communication means such as email, and personal cellular phones
offer individuals the tools to develop relationships outside of their primary relationship, which can become complex when negotiating one’s electronic and offline relational worlds (Muise, Christofides & Desmarais, 2009; Subrahmanyam, Reich, Waechter & Espinoza, 2008). When individuals search for intimacy outside of their primary relationship, they expend energy towards new relationships that might be better directed at bettering their primary romantic relationship, and this has genuine consequences for their romantic relationship (Underwood & Findlay, 2004; Whitty, 2005). In the current study, using technologies to seek or establish extradyadic intimacy is referred to as electronic extradyadic intimacy, or eEI.

The general aim of the current study was twofold. The first aim was to replicate previous research that connected certain personality and relationship factors with cheating behaviour. Second, these various factors were examined to determine whether they were related with attraction to cross-sex friends and eEI.

**Cheating and Relationship Factors**

Cheating is related to significant distress and represents a threat to the stability of any romantic relationship (Cann & Baucom, 2004). As one might imagine, treating a relationship that has suffered the impact of cheating is a complicated clinical endeavor. A study by Wiederman and Ageier (1996) of 45 married participants found that cheating caused irreparable harm to married relationships, and that 82.2% of participants indicated that their trust towards their spouse would be diminished, if not destroyed, after knowledge of cheating behaviour. Commonly, participants perceived cheating as an artifact of problems in the relationship (Bravo & Lumpkin, 2010). An exploration of the problems in a relationship that lead to cheating was a component of the current study.
Research shows that the Investment Model proposed by Rusbult (1998) elucidates upon the interplay of relationship factors involved in cheating (McAlister et al., 2005; Rusbult, 1980, Rusbult, Martz & Agnew, 1998). The investment model is comprised of four factors, each of which has been found to be associated with engaging in cheating behaviour (Drigotas, Safstrom & Gentilia, 1999, McAlister et al., 2005). Commitment is defined as intent to persist in a relationship, typically emerging as a result of increasing dependence. Investment refers to the magnitude and importance of the resources that are attached to the relationship. Moreover, these resources are thought to be lost or decline in value if the relationship were to end. Satisfaction refers to the positive affect experienced in a relationship. Finally, quality of alternatives has been defined as the perceived desirability of the better available alternatives to the current romantic relationship. Further, quality of alternatives also involves the extent to which an individual feels their needs would be fulfilled outside the current relationship (Rusbult et al., 1998).

From the perspective of the investment model, there are two rather robust factors related to cheating. These are diminished commitment and low satisfaction. The role of commitment is multifold. That is, although diminished commitment is associated with greater likelihood of engaging in cheating among student samples (McAlister et al., 2005), high commitment is related to increased forgiveness in response to cheating among the same demographic (Cann & Baucom, 2004). Moreover, commitment plays a mediating role in the tendency to perceive relational alternatives as attractive. When individuals who are in very committed relationships are asked to personally rank extremely attractive alternative partners, it is as if their greater commitment acts as a buffer, resulting in a devaluation of the alternatives (see Johnson & Rusbult, 1989). This has been referred to as the commitment calibration hypothesis (Lydon, Meana, Sepinwall, Richards & Mayman, 1999).
Literature reviews on cheating all underscore the prominence of relationship dissatisfaction and its association with extradyadic intimacy (Allen et al., 2005; Blow & Hartnett, 2005). Moreover, the list of individual studies finding a relationship between relational dissatisfaction and cheating is substantial (Barta & Kiene, 2005; Bravo & Lumpkin, 2010; Buss & Shackelford, 1997; McAlister et al., 2005; Shackelford, Besser & Goetz, 2008; Treas & Giesen, 2000; Whisman, Coop Gordon & Chatav, 2007). The relationship between dissatisfaction and cheating is a very well supported one in the literature. Thus, the validity of these relationship factors in relation to cheating demonstrates that Rusbult’s investment model offers a useful framework from which to explore cheating in the current study.

**Cheating and Personality Factors**

As briefly noted above, there is a fairly extensive literature that examines factors associated with cheating (Blow & Hartnett, 2005; Blow & Hartnett, 2005b). Beyond gender (although males more than females; Lalasz & Weigel, 2011), age, education, and income are all predictors of cheating. Those with higher income and more education (Atkins, Baucom & Jacobson, 2001) are more likely to cheat. Age has a somewhat complex relationship with cheating since it is associated with higher rates of cheating until about age 70, at which point cheating decreases as people get older (Atkins, Baucom & Jacobson, 2001). Religious involvement has also been shown to decrease rates of self-reported cheating (Burdette, Ellison, Sherkat & Gore, 2007). Finally, specific personality factors such as sensation seeking, impulsivity, narcissism, and sociosexual orientation have all been related to cheating. They will be included in the current study.

*Sensation seeking* is a predisposition to novel and intense sensations and experiences, often involving risky behaviour (Horvath & Zuckerman, 1993). The construct of sensation
seeking applies to relationships, too, in that an individual high in sensation seeking may seek novel and intense relationships, perhaps outside of their primary romantic relationship. Sensation seeking has been associated with an increased number of sexual partners in a male undergraduate sample (Bogaert & Fisher, 1995) and, in turn, a greater number of sexual partners has been associated with a greater likelihood to engage in cheating (Barta & Kiene, 2005; Feldman & Cauffman, 1999). In a recent study that controlled for sensation seeking by using this variable as a mediator in an analysis testing the previously identified relationship between gender and extradyadic intimacy, sensation seeking was found to fully mediate that relationship (Lalasz & Weigel, 2011).

**Impulsivity** is defined as doing and/or saying things without thinking (Eysenck, Easting & Pearson, 1984). Impulsivity has been linked to susceptibility to cheating, specifically through a predisposition to sexual risk-taking (Bravo & Lumpkin, 2010; Buss & Shackelford, 1997; Shackelford, Besser & Goetz, 2008). In their 1997 paper, Buss and Shackelford made the argument that other personality traits, such as low conscientiousness and high psychoticism, actually share the common trait of impulsivity, which explains why these other factors influence the likelihood that one will engage in cheating.

**Narcissism** involves feelings of inflated self-esteem, omnipotence and/or grandiose self-conceptions (Raskin, Novacek & Hogan, 1991). Narcissism has been associated with both engaging in affairs and an increased likelihood of being cheated on in undergraduate samples (Hunyady, Josephs & Jost, 2008). One possible explanation for this relationship is that individuals with an inflated sense of self would be expected to cheat at higher rates than those with a more modest sense of self, in that they perceive themselves as capable of obtaining and maintaining multiple relationships simultaneously. It is possible that this is a result of the
narcissist’s greater focus on themselves and his or her own desires (Atkins, Baucom, Yi & Christensen, 2005).

Finally, *sociosexual orientation* is a more recent concept derived from evolutionary psychology, involving attitudes and behaviours towards sexuality (Simpson & Gangestead, 1991). A liberal or “unrestricted” socio-sexual orientation has been associated with cheating. Sociosexual orientation encompasses what others have referred to as “opportunity variables” (Aviram & Amichai-Hamburger, 2005), that is, sexual attitudes (e.g. number of previous sexual partners; see McAlister et al., 2005), combined with likelihood of engaging in casual sex (Ostovich & Sabini, 2004). Several studies have found a very strong link between sociosexual orientation and propensity or inclination to engage in cheating (Barta & Kiene, 2005; Seal, Agostinelli & Hannett, 1994).

When taking into account both personality and relationship factors, research has identified some of the antecedents to cheating. However, the ways which relationships evolve have changed drastically even in the last decade. One factor that has influenced this shift is electronic media, and the impact it has had on how people negotiate their social networks has increased substantially over time.

**The Impact of Electronic Media on Close Cross-Sex Friendships**

Emerging adults, in particular, face an unprecedented challenge in the merging of their electronic and “face-to-face” worlds, and relationships are privy to similar challenges (Subrahmanyam et al., 2008). The increase in popularity of social networking sites, such as Facebook, and the increased usage of cell phones, connect individuals to one another more than ever before. Research has found that between 78% and 87% of emerging adults use social networking sites, and individuals spend about 40 minutes using these sites daily (Muise et al.,
Likewise, the use of text messaging has proliferated at an astonishing rate. The number of text messages sent and received increased 450 percent between 2006 and 2009. Teens aged 13-17 send and receive an average of 1742 text messages a month (Reardon, 2009). The use of electronic media introduced an element of potential secrecy to communications with cross-sex friends, and this understudied element of electronic interaction likely has a substantial impact on how cross-sex and romantic relationships unfold.

The notion that electronic extradyadic intimacy (eEI) does not have consequences for primary romantic relationships has been challenged in numerous studies (Underwood & Findlay, 2004; Whitty, 2005; Whitty, 2003). Underwood and Findlay (2004) found that, in 75 adults identifying as being married or in a committed long-term relationship, 84% reported feeling neutral or not satisfied with their primary relationship, while 63% reported that they found their electronic relationship to be satisfying and meaningful. Moreover, research has found that individuals perceived eEI and cheating as very likely to co-occur (Henline, Lamke & Howard, 2007). Whitty (2005) found that participants perceived eEI as having real consequences in relationships, including breached trust and increased jealousy (Guadagno & Sagarin, 2010). Researchers acknowledge that it is important for clinicians to take into account the potential for electronic relationships to seriously impact face-to-face relationships (Hertlein & Webster, 2008; Underwood & Findlay, 2004).

While there is an understanding in the literature of the consequences of eEI (see Guadagno & Sagarin, 2010; Whitty, 2005 and Whitty 2003), knowledge of the antecedents or factors contributing to this phenomenon is lacking. As of yet, no model has been presented that examines both relationship and personality factors as potentially associated with this type of
behaviour. A parallel model presented by Aviram and Amichai-Hamburger (2005) investigated satisfaction, gender, and narcissism as predictive of internet relationship *expectations*. The researchers here looked at attitudes instead of behaviours. Instead, the current study tested the same personality and relationship factors associated with cheating, to determine whether they were likewise associated with electronic EI *behaviour*. Testing this model provided insight into whether or not the antecedents of physical cheating functioned in the same manner in association with eEI.

**Navigating Close Cross-Sex Friendships**

Cross-sex friendships can be expected to be easier to maintain when each of the friends is not in a primary romantic relationship. Even if cheating does not occur within the cross-sex friendship, having these cross sex peers opens up the possibility of extradyadic intimacy. People are quite aware of the potentially problematic nature of cross-sex friendships. In a study by Feldman and Cauffman (1999) of 417 undergraduates (51.5% male), in which participants were asked to indicate their perceptions of behaviours in opposite sex friendships, people rated as unacceptable situations when friendly behaviours became flirtatious or involved an element of emotional connection, such as dreaming about the cross-sex friend.

The reactions to physical cheating and extradyadic intimacy vary (Shackelford, LeBlanc & Drass, 2000). Physical cheating elicits more anger from the romantic partner, while extreme EI tends to elicit more hurt (Sabini & Green, 2004). Moreover, a meta-analysis by Carpenter (2012) found that researchers run amiss by holding fast to the evolutionary psychology tenant that men are more upset by sexual cheating, and women are more upset by the extradyadic variety. In fact, both genders tend to have similar reactions, whereby, in a dichotomous forced choice scenario, extreme extradyadic intimacy is rated as more distressing. However, when
participants are provided with a Likert scale, both men and women rank physical cheating as more distressing (Carpenter, 2012).

Like physical cheating, there is a strong relationship existing between dissatisfaction in the primary relationship and engaging in EI (Allen & Rhoades, 2008; Glass & Wright, 1985). Gender also appears to be associated with cheating behaviour, although the research findings are mixed. In some research women’s extradyadic inclinations have been shown to involve an emotional component whereas this was not be necessarily so when men cheat (see Glass & Wright, 1985). However, more recent research has failed to replicate this finding (Buss & Shackelford, 1997). Where there have been established gender differences in the research is in the cross-sex friend attraction literature. Bleske and colleagues (2012) found that college men tend to overestimate the extent to which they are seen as attractive to their female friends, whereas females do not. Additionally, men experience more attraction to their cross-sex friends than young women do, and experience this as a benefit to cross-sex friendships (Bleske & Buss, 2000).

Though it is an emerging literature packed with difficulties in definition, measurement and interpretation, what is clear is that extradyadic intimacy has potentially negative repercussions, and studying this phenomenon may help to unravel the antecedents to these repercussions. As mentioned, these antecedents have not yet been applied to concepts such as electronic extradyadic intimacy and attraction to close cross-sex friends. The current study endeavoured to bridge that gap.

**Hypotheses**

The current study sought to test the following hypotheses:
H1: Replicating previous research, relationship and personality factors will be associated with physical cheating. Relationship commitment, satisfaction and investment will be negatively associated with physical cheating, whereas perceived quality of alternatives will positively be positively associated with physical cheating. Personality factors (sensation seeking, impulsivity, narcissism and sociosexual orientation) will all be positively related to physical cheating.

H2: Relationship and personality factors identified in hypothesis one will be similarly related to electronic extradyadic intimacy.

H3: Relationship and personality factors identified in hypothesis one will be similarly related to attraction to close cross-sex friends.

H4: Attraction to one’s close cross-sex friends will be stronger if the friend is a past romantic partner.

Methods

Participants and Procedure

Participants were 274 undergraduate students (M age= 21.1, SD= 1.9) recruited from a university in southwestern Ontario. First-year students were excluded from participation due to the general instability of romantic relationships during this year of transition. Participants were primarily recruited from a third year undergraduate course in psychology in exchange for course credit (60.3%). Additional participants were recruited from other classes to increase the male sample in exchange for a chance at a raffle draw for an iPod. The sample was predominantly Caucasian or of European origin (81%). Consistent with previous research on extradyadic relationships, participants identifying as non-heterosexual (n = 9) were excluded (e.g., Feldman & Cauffman, 1999). The resultant sample was composed of 265 students (81.9% female; M age =20.9, SD = 1.5). Over fifty percent (50.6%) of participants reported being involved in a current
romantic relationship. However, for analyses involving cheating in a current (vs. past) relationship, participants needed to have been in a relationship for at least 3 months. This cutoff is consistent with other cut-offs intended to gauge participants in longer-term committed relationships (Allen & Baucom, 2004). The resultant sample of participants in qualifying relationships was composed of 130 students. The average length of relationship for these participants was 21.5 months ($SD = 16.3$). Participants completed an online questionnaire that took approximately 25-35 minutes to complete and was composed of the following measures.

**Measures**

*Demographics.* Participants provided demographic information including age, gender, year of university, and ethnicity. They also included information about their Facebook relationship status and their actual relationship status, as well as indicating, in months, the length of their current relationship, where applicable.

*Physical Cheating.* Cheating was assessed using four commonly used items pertaining to past and current cheating involving kissing, engaging in oral sex, manual stimulating, or having intercourse with someone outside of the primary romantic relationship (Brand, Markey, Mills & Hodges, 2007; Grello, Welsh & Harper, 2006; see appendix C). Reliabilities were good (past cheating, $\alpha = .82$; current cheating, $\alpha = .81$, $n = 132$).

*Electronic Extradyadic Intimacy (eEI).* The Cross-Sex Friendships Questionnaire (Wreford, Hennig & Desmarais, 2011; appendices A & B) was developed to assess the extent, form, and content of electronic communication with an individual’s three closest cross-sex friends. The *extent* of electronic communication was assessed in number of hours per week. The *form* of communication was assessed by providing participants with options of various forms (e.g., Facebook, telephone, face-to-face). Because of an error in the online questionnaire, content
data was not collected for the first 133 participants. For subsequent data collection, six additional content items were included, ranging in intimacy from “discussing non-intimate experiences or interests” to “flirting and/or enjoying sexual banter”. Participants were asked to record the number of hours, per week, that they spent online talking to their cross-sex friend(s) about each content item. Participants’ responses were weighted based on an empirically derived ranking system, from which a composite score was calculated. Weights were derived by having 29 university students rank intimacy items by responding to the prompt, “would you feel comfortable with a dating partner doing the following with a cross-sex friend?” An affirmative response was coded as a 0, and a negative response was coded as a 1. Responses were aggregated across respondents, and higher values were ranked as more intimate, and lower values were inferred as being less intimate (see Appendix D). These scores were all found to be reasonably reliable (eEI, α= .82). Participants reported the number of hours they spent, on average, communicating with their three closest friends both offline and through electronic communication. The scores for the friend with whom the participant reported being most intimate with were the scores that were used for correlational analyses.

Attraction to Close Cross-Sex Friends. Three questions were used to evaluate the extent of attraction to each of the three cross-sex friends participants selected for the purpose of this study. The items were: 1) Are you attracted emotionally to friend X? 2) Are you attracted physically to friend X? and 3) Could you see friend X as a potential romantic interest for you? Reliabilities in the current sample for each of the three cross-sex friends were .85, .83, and .85, respectively.

Relationship Factors. The Rusbult Investment Model and its accompanying measure was used in the current study (Rusbult, 1980; Rusbult, Martz & Agnew, 1998). The measure contains
4 subscales. Satisfaction was assessed using four items. A sample item reads, “my relationship is close to ideal”. Quality of alternatives was assessed using four items (e.g., “if I weren’t dating my partner, I would do fine—I would find another appealing person to date”). Four items measured investment (e.g., “I feel very involved in our relationship- like I have put a great deal into it”). Finally, five items measured commitment (e.g., “I want our relationship to last for a very long time”). Several studies have used this measure, specifically relating it to cheating behaviour (Drigotas et al., 1999; McAlister et al., 2005). Participants responded using a 9-point Likert scale ranging from 0 (Do Not Agree at All) to 8 (Agree Completely). Cronbach alpha reliabilities in the current sample were: satisfaction (.96), quality of alternatives (.88), investment, (.81) and commitment, (.91).

Narcissism. The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1981) is a forty-item true/false inventory and remains the most widely used measure of narcissism. The NPI has subscales assessing authority, exhibitionism, superiority, vanity, exploitativeness, entitlement, and self-sufficiency. A sample item reads “The world would be a better place if I were running it.” Total scale reliability was .82.

Impulsivity. The 19-item Eysenck Impulsivity Inventory (Eysenck, Pearson, Easting & Allsopp, 1985) uses a forced choice yes/no response format. Sample items include “do you work quickly, without bothering to check?” and “do you mostly speak before thinking things out?” The measure has been widely used in research and has shown good validity and test-retest reliability (Miller, Joseph & Tudway, 2004). Reliability in the current sample was .80.

Sensation seeking. The Brief Sensation Seeking Scale (Hoyle, Stephenson, Palmgreen, Puzzles Lorch, & Lewis Donohew, 2002) is an eight-item measure in which participants rank their agreement with a number of statements such as “I like wild parties” and “I get restless when
I spend too much time at home”. The measure has shown good reliability and validity
(DeAndrea, Carpenter, Shulman, & Levine, 2009). Participants responded using a 7-point Likert
scale ranging from 1 (strongly disagree) to 7 (strongly agree). Overall scale reliability in the
current sample was .78.

Sociosexual orientation. The two proposed sexual strategies, restrictive and unrestrictive,
were assessed using the Sociosexual Orientation Inventory (Simpson & Gangestad, 1999). The
inventory asks questions about previous sexual experiences/behaviours (e.g. “with how many
different partners have you had sex (sexual intercourse) within the past year?”) as well as four
Likert scale items which ask about attitudes and value systems surrounding sexuality (e.g. “sex
without love is okay”). Responses for Likert items range from 1 (I strongly disagree) to 9 (I
strongly agree). A higher score on the scale would reflect an unrestricted sociosexual orientation,
but a lower score would indicate a more restrictive sociosexual orientation. Reliability analyses
were conducted separately for the behaviour and attitudes subscales (behaviour subscale, \( \alpha = .78 \);
attitude subscale, \( \alpha = .77 \)). See Simpson and Gangestad (1999) for information on scale
aggregation.

Results

Preliminary Analyses

Relations between gender and the three dependent variables were examined. Gender was
not found to be statistically significantly related with cheating behaviour, either past, \( t(201) = .09, p > .05 \).
or current, \( t(125) = .66, p > .05 \). Gender was related to cross sex attraction, where
males were more likely to rate their cross-sex friends as attractive, \( t(263) = 5.38, p < 0.01 \).
Therefore, in subsequent analyses involving cross-sex attraction, gender will be controlled, that
is, will be entered on step 1 of the hierarchical regressions with other factors entered on step 2. Relationships between all factors can be found in table 1.

Before examining main hypotheses, the sexual activity of the sample was explored. On average, participants reported having sexual intercourse with almost two people in the past year \((M = 1.7; SD = 2.0)\), and foresaw themselves having sex with slightly more than three people in the next five years \((M = 3.2; SD = 4.6)\). Participants reported having sex with an average of 1.5 people as a result of “one night stands” \((SD = 3.4)\). Regarding cheating behaviour, approximately one third of participants indicated having kissed someone outside of their primary relationship whereas ten percent reported having had sex with a person other than their primary partner (i.e., “cheated”; see Table 2). Overall, less intimate physical acts (kissing) were more frequently endorsed than more intimate physical acts, such as intercourse. Results also show that cheating in the past was more frequently endorsed than cheating in one’s current relationship, and that past cheating was significantly correlated with current cheating, \(r = .37, p < .01\). Looking at communication with cross-sex friends, findings indicated that slightly more than 37% of participants identified that one of their three closest cross-sex friends was a past romantic partner.

The data also provided a sense of how individuals used electronic media compared to face-to-face forms of communication. Regarding the extent to which individuals communicated with cross-sex friends and the form used, the average total number of hours per week ranged from approximately 20 minutes over email to almost six hours of text messaging across one’s closest cross-sex friends (see Table 3). The mean number of hours communicating via all electronic media \((M = 11.4)\) combined exceeded face-to-face communication \((M = 9.7)\), \(t(255) = 1.9, p = .06\) (marginally significant).
Given the recent interest in Facebook use in particular, examining relationship status was thought to provide some insight into the gap bridged between the electronic world and the offline one. It is interesting to note that 46.4% of the full sample elected not to indicate their Facebook status. Only 30.9% of participants identified themselves to be in an actual romantic relationship (engaged, married or in a relationship) on Facebook. Over eighteen percent of participants indicated that they were single on Facebook.

**Main Analyses**

*Hypothesis 1: Relationship and Personality Factors Associated with Cheating.*

Replicating previous research and examining zero-order correlations, three relationship factors emerged as significantly positively related with current cheating: quality of alternatives \((r = .23)\), satisfaction \((r = -.27)\) and commitment \((r = -.29)\). Further, in examining personality factors, impulsivity and sociosexual orientation emerged as significantly related to both past cheating (impulsivity, \(r = .20\); sociosexual orientation, \(r = .42\)) and current cheating (impulsivity, \(r = .28\); sociosexual orientation, \(r = .22\)) behaviour. Contrary to expectations, sensation seeking and narcissism did not reach significance, but were correlated in the hypothesized direction. A simultaneous regression was also run, and the results are reported in table 5. Relationship factors accounted for 12% of variance in current cheating while personality factors accounted for 11%. Personality factors accounted for 19% of past cheating behaviour.

*Hypothesis 2: Electronic Extradyadic Intimacy.* Confirming the hypothesis, some of the same factors that were associated with cheating were likewise associated with electronic EI: quality of alternatives and impulsivity (see Table 4). Commitment, satisfaction and sociosexual orientation were not shown to be significantly related to electronic EI. The connection between
narcissism and sensation seeking with electronic EI was not significant. The same was found to be true for commitment and investment.

Hypothesis 3: Examining Attraction to Close Cross-Sex Friends. Data were analyzed using two separate two-step hierarchical regressions examining attraction to close cross-sex friends (see Table 5). Two regression solutions were used to preserve power, given that the \( n \) for relationship factors would be smaller than the \( n \) for personality factors, as a result of only including participants in relationships for the first solution. After controlling for gender, which accounted for 13% of the variance, relationship factors accounted for an additional 16%, \( R^2 = .31, F(5, 122) = 11.2, p < .001 \). Two relationship factors, quality of alternatives and commitment, contributed significantly to the model. In the second regression solution, where personality factors were entered at step 2, gender accounted for 9% of the variance, while personality factors accounted for an additional 3% variance. Beyond quality of alternatives and commitment, no relationship factors (e.g., satisfaction, investment) or personality factors (e.g., narcissism, impulsivity, sensation seeking or sociosexual orientation) were associated with attraction. In general, relationship factors were found to be more associated with attraction than personality factors.

Hypothesis 4: Attraction to Past Romantic Partners. Hypothesis four stated that attraction to any of ones’ closest cross-sex friends would be stronger if the friend was a past romantic partner. Each individual cross-sex friend was analyzed separately, to compare status (past romantic partner or not) with attraction. For participants’ closest cross-sex friends, all three t-tests showed that attraction to a close cross-sex friend was stronger if the friend is a past romantic partner (Friend 1: \( t(261)= 4.11, p< .01 \); Friend 2: \( t(256)= 5.70, p< .01 \); Friend 3: \( t(259)= 5.64, p< .01 \)).
Discussion

While previous research has identified relationship and personality factors associated with cheating, to the best of my knowledge, this is the first study that has integrated both, meanwhile extending these factors to test their association with other relationship variables. Overall, this study found that that certain relationship and personality factors predispose individuals to cheating, cross-sex attraction, and electronic extradyadic intimacy (eEI).

Specifically, two relationship factors, higher perceived quality of alternatives and diminished relationship satisfaction, increased the likelihood of cheating on one’s current partner. In addition, unrestricted sociosexual orientation and high impulsivity were associated with a greater likelihood of cheating on past partners and on one’s current partner. These findings make good intuitive sense, since someone who is impulsive by nature might also be more likely extend their impulsivity to their sex life, which is consistent with an unrestrictive sexual orientation. Moreover, relationship dissatisfaction may lead someone to perceive other opportunities as more attractive, a tenant found by Johnson and Rusbult (1989). Similarly, Broemer and Diehl (2003) found that relationship satisfaction is increased when one’s alternative relationships are contrasted away from a positive relationship stereotype. In sum, it appears that increased satisfaction offers a protective factor against perceiving alternatives to one’s relationship as attractive.

Sensation seeking was not significantly related to any of the outcome variables. This was surprising, though the link between sensation seeking and cheating was more tenuous than some of the other factors. That is, sensation seeking has been found to be associated with a greater number of sexual partners, as in Bogaert and Fisher (1995), a factor that has been associated with greater cheating inclination (Barta & Kiene, 2005; Feldman & Cauffman, 1999). In the current
study, both the correlation between sensation seeking and sociosexual orientation and the correlation between sociosexual orientation and cheating were significant. This is in line with the associations found in previous research, but the association between sensation seeking and cheating did not reach significance. It appears that some other factor or combination of factors contributes to the association between sensation seeking and cheating.

Narcissism was also not significantly related to any of the outcome variables. In line with the findings of Aviram and Amichai-Hamburger (2005), any existing relationship between narcissism and cheating falls away when the outcome variable is related to electronic extradyadic behaviour. However, the current study also failed to find an association between narcissism and physical cheating. In examining findings relating narcissism and cheating more closely, it appears that the association between narcissism and cheating behaviour is much stronger for males than females (Hunyady et al., 2008). Perhaps if the current study involved a more substantial male sample, a significant relationship between these factors would have emerged.

Likewise, of Rusbult’s investment model, relationship investment itself was not significantly associated with cross-sex attraction, electronic EI, or physical cheating. This finding is inconsistent with Drigotas et al. (1999), but consistent with McAlister et al. (2005). McAlister et al. referenced the Roscoe, Cavanaugh and Kennedy (1988) finding that among young adults (e.g. age 19), factors such as revenge/anger/jealousy and being insecure/unsure of the relationship are more predictive of cheating than other relationship variables (such as dissatisfaction). This is certainly possible given that the current study tested these factors with young adults as in Roscoe et al. However, it is also possible that investment was not associated with the outcome variables because those who cheat might not see their actions as potentially
resulting in a break up or dissolution of their primary romantic relationship. Exploring this issue in the future would provide better insight on which of these explanations is more fitting.

The current study also suggests that models involving current cheating are not parallel to models involving electronic extradyadic intimacy. While they share some common factors, such as quality of alternatives and impulsivity, they are different constructs with different antecedents. This finding is consistent with Aviram and Amichai-Hamurbger (2005), which found that there were more distinctions than commonalities in the exploration of eEI as opposed to physical cheating. A new model illustrating eEI is warranted, and studies such as this inform its construction.

**Discussion of Preliminary Analyses**

First and foremost, it was interesting there were no gender differences among the majority of outcome variables, including past and current cheating behaviour and electronic extradyadic intimacy. It was in line with expectation, however, that there were gender differences in cross-sex attraction. Consistent with the findings of Bleske and Buss (2000) and Kaplan and Keys (1997), males were more likely to rate their cross-sex friends as attractive. These findings are especially interesting in light of the finding that “hooking up” with a cross-sex friend appears to reflect more the rule than the exception. 51% of a college student sample reported having engaged in sexual contact with one of their cross-sex friends, and 34% of participants reported engaging in sexual contact on more than one occasion with a cross-sex friend (Afifi & Faulkner, 2000). In the current study, 37.4% of participants were romantically involved with someone they consider to be a close cross-sex friend. Though this figure is not as high as Afifi and Faulkner’s, the current study specified only three close cross-sex friends, and their article more loosely defined past romantic involvement as *any* sexual involvement.
Looking at the relationship demographics of the current study alone, some interesting and novel patterns emerge that may inform future research. For example, one learns that undergraduates typically engage in sexual intercourse with about two partners in the past year, and foresee themselves having sex with about three in the upcoming five years. It was also found that past cheating was found to be significantly predictive of current cheating, though past cheating endorsement was much higher in the current study. Importantly, past cheating endorsement would be expected to be higher, not simply as a result of reporting bias, but because participants more than likely have multiple relationships informing their endorsement. That is, when asking about participants’ current relationship behaviours, they have only one isolated experience from which they can draw their information. However, a participant may have multiple past relationships that inform their endorsement on these scales.

The finding that almost half of the sample does not disclose a relationship status on Facebook might be surprising to some, particularly given that single individuals are less likely to post their relationship status. Facebook is sometimes thought of as a means to seek out relationships, including romantic ones. However, it appears that Facebook might actually act more as a means for people to declare their involvement with a romantic other. A study by Nosko, Wood and Molema (2010) found that declaration of relationship status is correlated with other types of personal disclosure, in that single users posting their relationship status disclose the most information, followed by those in relationships, though individuals who do not post a relationship status at all disclose the least information of all. Studying relationship status trends provides interesting information about how social networking is used.

Finally, referring back to table 3, there are some interesting technology-use patterns that emerge. In order, the most frequently used methods of communication are face-to-face
interaction, followed by text messaging, and then Facebook. The use of the telephone, Instant Messaging and email follow, respectively. The story that this tells is that face-to-face interaction is still socially valued to some degree. Yet, students use their phones to text more than they do to talk. Taken together, these two findings are almost contradictory, but tell something about the way that technology changes the way individuals communicate.

Of course, it would not be prudent to suggest that these results apply to all undergraduates, relationships, and certainly much less to the general population. This is a result of a number of limitations, discussed below.

**Limitations**

There are several limitations that impact both the representativeness and the generalizability of the current data set. Some of these limitations, such as participant underreporting of cheating behaviour, were unavoidable given the research topic, though some could have been prevented, and represent future directions for this research.

*Selection Biases.* The first limitation to be addressed is a selection bias issue: the lack of male participants. Despite specific efforts to recruit males, males still only represent 17.7% of the total sample. In a university where female enrolment greatly exceeds male, this statistic is not surprising. The small number of males is particularly not surprising given that the sample largely comes from a psychology class, and psychology is very much a female-dominated discipline at the university from which the sample is drawn. Because gender was controlled for where appropriate in the analysis, this does not affect the internal validity of the study, but instead represents a threat to external validity. However, the study involved a relatively good sample of women, so at the very least, it provides information about the way women deal with the issues at hand.
Measurement Biases. Because of the nature of the research conducted, social desirability will play a substantial role in the results. This is a result of cheating being perceived as a shameful, embarrassing or “bad” behaviour (Allen et al., 2005; Blow and Hartnett, 2005; Hertlein & Piercy, 2006). Shame may result in an underreporting of cheating behaviour. This of course would hold true for the measures examining conventional, physical cheating. This bias may also pervade the EI questionnaire, as participants in monogamous relationships might still underreport hours spent communicating with cross-sex friends. Blow and Hartnett (2005) identified that, regardless of scrupulous informed consent procedures paying careful attention to the reassurance of confidentiality, participants still fear telling the truth about past and, perhaps even more so, recent extradyadic involvement. Participants still believe that their responses will be made known to their partner, even when researchers endeavor to collect confidential, anonymous data, and are transparent about it.

Common method variance also represents a potential bias. By using a single time point, self-report survey, the true relationship between constructs becomes more difficult to interpret. However, the use of a single method is not uncommon and represents the norm in the area of cheating research. Therefore, the current study is privy to the same bias in this regard as the majority of research related to this topic. Confounding the issue of common method variance is the large proportion of missing data. Although in most cases in the current study missing data can by accounted for (several surveys were not to be filled out by individuals who had not experienced or were not in a romantic relationship), it is certainly possible that some of the missing data is not explained in this way. That is, participants may have simply skipped the individual construct surveys, or specific questions within the survey. In addition, the same
reasons indicated earlier (e.g., social desirability, fear of breached confidentiality) may result in some sort of systemic pattern behind missing data points.

**Future Directions**

The most obvious and important direction for this research is to endeavor to study different cohorts and demographics. Investigating how various age groups approach relationships would most certainly be interesting. Selecting demographics of participants (e.g., employees from various sectors, younger adolescents, etc.) would shed some light on the various developmental trajectories of cheating behaviour.

Along the same line, specific populations may be very interesting to study. Because of the population from which the sample was drawn, it was difficult to find enough non-heterosexual participants to make comparisons based on sexual orientation possible. The dynamic interplay between sexual orientation and physical cheating/extradyadic intimacy, perhaps coupled with examining attraction to same-sex peers, would make for a very interesting and understudied phenomenon to examine. Blow and Hartnett (2005) state that this is a very important area of research to investigate, as same-sex relationships may be privy to different sociocultural ideologies around monogamy.

Another direction of interest would be that of relationship secrecy. As mentioned, definitions of cheating are relatively subjective. What might be taboo in one relationship may actually be considered appropriate in another. By not including a question gauging participants’ actual definition of cheating, it is difficult to claim what constitutes a boundary issue, especially when it comes to extradyadic intimacy. One way to work around this definitional issue would be to ask questions about how much a participant’s partner actually knows about their behaviour.
Looking at the secrecy of behaviour would introduce a novel and interesting dimension to cheating research.

Generally, longitudinal research of this nature is lacking. Blow and Hartnett, in their substantive 2005 review, identified only two longitudinal studies that investigated cheating. Even then, cheating was measured as one of several other variables. Moreover, these researchers also noted that many of the variables associated with cheating are privy to the chicken-and-the-egg paradox. That is, does relationship dissatisfaction cause cheating, or does cheating cause relationship dissatisfaction? The same question applies to the current study. Longitudinal research examining both physical, conventional cheating and extradyadic intimacy is required to help answer this type of question.

Finally, there are a whole host of other factors that were not included in the current study. Other factors that have been found to have some sort of relationship with cheating which were not involved in the current study include religiosity (Burdett et al., 2007; Treas & Giesen, 2000), dependability/reliability (Shackelford, Besser & Goetz, 2008), adult attachment (Allen & Baucom, 2004), substance abuse (Atkins et al., 2005) and education/income (Atkins, Baucom and Jacobson, 2001). It is anticipated that, in time, an inclusive model of extradyadic involvement will emerge, which takes into account the relationships of personal, contextual and social factors.

**Conclusion**

The implications of the current study are both social and clinical. In terms of social conclusions, the current study shows that electronic and physical cheating are distinct categories that must be studied differently. Though electronic extradyadic intimacy shares some of the same antecedents as cheating, there are as many distinctions as similarities. As technology pervades
emerging adults’ lives, a more thorough understanding of this more novel phenomenon is warranted.

Research like this also illustrates that cheating is a relatively common phenomenon and certain factors are associated with a greater propensity to cheat. That is, quality of alternatives, impulsivity, sociosexual orientation and certain relationship variables (e.g., commitment and satisfaction) are related to various types of cheating behaviour. These results suggest that it is not a single variable that creates a predisposition to cheating, but a more complex interplay of relationship, personality and environmental variables that create the circumstances for this type of behaviour. One of the most robust findings, however, was that past cheating predicted current cheating. Yet, it might not be prudent to seek a partner with the ideal blend of low impulsivity, a restrictive sociosexual orientation, unappealing alternatives and a “clean” relationship record. Instead, perhaps it is more important to create room for conversation in relationships around subjective definitions of cheating, both physical and electronic. This is the area that bridges the gap between the social and clinical implications of the current study.

In gaining a better understanding of the antecedents of various forms of cheating, couples are encouraged involve themselves in more informed communication around preventing acts that constitute subjectively defined betrayals. By incorporating a knowledge of trends in cheating behaviour, specifically acknowledging the phenomenon of electronic extradyadic intimacy, clinicians, parents and any professionals working with emerging adults will have a more informed understanding of the complexities of their relational worlds. It is hoped that a better understanding of cheating, whether it be electronic or conventional, physical or emotional, will inform our knowledge around helping couples navigate through the turmoil and heartbreak that often results from betrayals.
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Table 1

*Relationships Among Factors.*

<table>
<thead>
<tr>
<th>1. Investment</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>M(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-.31**</td>
<td>.54**</td>
<td>.35**</td>
<td>-.05</td>
<td>-.16*</td>
<td>-.10</td>
<td>-.21**</td>
<td>.14*</td>
<td>29.4 (8.6)</td>
</tr>
<tr>
<td>2. Quality of Alternatives</td>
<td>-.60**</td>
<td>-.50**</td>
<td>.24**</td>
<td>.30**</td>
<td>.40**</td>
<td>.23</td>
<td>-.19*</td>
<td></td>
<td>22.3 (10.2)</td>
</tr>
<tr>
<td>3. Commitment</td>
<td>.64**</td>
<td>-.13</td>
<td>-.20**</td>
<td>-.30**</td>
<td>-.31**</td>
<td>.24**</td>
<td></td>
<td></td>
<td>45.6 (12.9)</td>
</tr>
<tr>
<td>4. Satisfaction</td>
<td>-.02</td>
<td>-.28**</td>
<td>-.16*</td>
<td>-.27**</td>
<td>.24**</td>
<td></td>
<td></td>
<td></td>
<td>35.6 (9.6)</td>
</tr>
<tr>
<td>5. Narcissism</td>
<td>.26**</td>
<td>.32**</td>
<td>.19**</td>
<td>-.21**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>56.8 (6.3)</td>
</tr>
<tr>
<td>6. Impulsivity</td>
<td>.41**</td>
<td>.21**</td>
<td>-.17**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25.2 (4.1)</td>
</tr>
<tr>
<td>7. Sensation Seeking</td>
<td>.27**</td>
<td>-.15*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>38.0 (8.7)</td>
</tr>
<tr>
<td>8. Sociosexual Orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- .35**</td>
<td>59.5 (38.4)</td>
</tr>
</tbody>
</table>

* p < .05.  ** p < .01.
Table 2

*Endorsement of Past and Current Cheating Behaviour*

<table>
<thead>
<tr>
<th></th>
<th>Past $n$ (%)</th>
<th>Current $n$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kissing</td>
<td>69 (33.3)</td>
<td>16 (12.5)</td>
</tr>
<tr>
<td>Sexual Touching</td>
<td>45 (21.8)</td>
<td>12 (9.4)</td>
</tr>
<tr>
<td>Oral Sex</td>
<td>21 (10.2)</td>
<td>4 (3.1)</td>
</tr>
<tr>
<td>Sexual Intercourse</td>
<td>20 (9.9)</td>
<td>5 (3.9)</td>
</tr>
</tbody>
</table>
Table 3

Use of Various Means of Communication (n = 256)

<table>
<thead>
<tr>
<th>Method</th>
<th>M (SD)</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Face-to-Face</td>
<td>9.7 (13.3)</td>
<td>5.0</td>
</tr>
<tr>
<td>2. Text Messaging</td>
<td>6.0 (9.2)</td>
<td>3.0</td>
</tr>
<tr>
<td>3. Facebook</td>
<td>3.5 (5.5)</td>
<td>2.0</td>
</tr>
<tr>
<td>4. Phone</td>
<td>1.2 (2.3)</td>
<td>0.0</td>
</tr>
<tr>
<td>5. E-mail</td>
<td>0.3 (1.2)</td>
<td>0.0</td>
</tr>
<tr>
<td>6. Instant Messaging</td>
<td>0.5 (2.0)</td>
<td>0.0</td>
</tr>
<tr>
<td>7. All electronic media</td>
<td>11.4 (14.5)</td>
<td>7.0</td>
</tr>
</tbody>
</table>

*Note.* Hours reported in the table are for all three cross-sex friends (and therefore do not represent a mean of time spent communicating for each individual cross-sex friend alone).
Table 4

Correlations between Personality and Relationship Factors and Past and Current Cheating and Electronic Extradyadic Intimacy

<table>
<thead>
<tr>
<th></th>
<th>Past Cheating</th>
<th>Current Cheating</th>
<th>Electronic EI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relationship Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Investment</td>
<td>N/A</td>
<td>-.01</td>
<td>-.18</td>
</tr>
<tr>
<td>2. Quality of Alternatives</td>
<td>N/A</td>
<td>.23*</td>
<td>.36**</td>
</tr>
<tr>
<td>3. Commitment</td>
<td>N/A</td>
<td>-.29**</td>
<td>-.25</td>
</tr>
<tr>
<td>4. Satisfaction</td>
<td>N/A</td>
<td>-.27**</td>
<td>-.21</td>
</tr>
<tr>
<td><strong>Personality Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Narcissism</td>
<td>.02</td>
<td>.09</td>
<td>.15</td>
</tr>
<tr>
<td>6. Impulsivity</td>
<td>.20**</td>
<td>.28**</td>
<td>.28*</td>
</tr>
<tr>
<td>7. Sensation Seeking</td>
<td>.14</td>
<td>.12</td>
<td>.11</td>
</tr>
<tr>
<td>8. Sociosexual Orientation</td>
<td>.42**</td>
<td>.22*</td>
<td>-.05</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>201</td>
<td>125</td>
<td>52</td>
</tr>
</tbody>
</table>

*Note. N/A indicates that one’s current relationship factors bear no meaningful relationship with past cheating, and thus values are not reported. p < .05. p < .01.*
Table 5

Regression Analyses: Standardized Beta Weights Associated with Personality and Relationship Factors for Past and Current Cheating

<table>
<thead>
<tr>
<th>Relationship Factors</th>
<th>Past Cheating</th>
<th>Current Cheating</th>
<th>Electronic EI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2 = .12$</td>
<td>$R^2 = .04$</td>
<td></td>
</tr>
<tr>
<td>1. Investment</td>
<td>N/A</td>
<td>.12</td>
<td>.02</td>
</tr>
<tr>
<td>2. Quality of Alternatives</td>
<td>N/A</td>
<td>.09</td>
<td>.13</td>
</tr>
<tr>
<td>3. Commitment</td>
<td>N/A</td>
<td>-.20</td>
<td>.14</td>
</tr>
<tr>
<td>4. Satisfaction</td>
<td>N/A</td>
<td>-.15</td>
<td>-.20</td>
</tr>
<tr>
<td></td>
<td>$R^2 = .19$</td>
<td>$R^2 = .11$</td>
<td>$R^2 = .06$</td>
</tr>
<tr>
<td>5. Narcissism</td>
<td>-.06</td>
<td>.01</td>
<td>.12</td>
</tr>
<tr>
<td>6. Impulsivity</td>
<td>.13</td>
<td>.26**</td>
<td>.09</td>
</tr>
<tr>
<td>7. Sensation Seeking</td>
<td>.01</td>
<td>-.02</td>
<td>.07</td>
</tr>
<tr>
<td>8. Sociosexual Orientation</td>
<td>.39**</td>
<td>.10*</td>
<td>-.16</td>
</tr>
<tr>
<td>N =</td>
<td>195</td>
<td>119</td>
<td>60</td>
</tr>
</tbody>
</table>

Note. N/A indicates that one’s current relationship factors bear no meaningful relationship with past cheating, and thus values are not reported.

*p < .05. **p < .01.
### Table 6

**Hierarchical Regression Analyses of Relationship Factors Associated with Attraction**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Δ$R^2$</th>
<th>$F$ change</th>
<th>b</th>
<th>r</th>
<th>Partial</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1. Gender</td>
<td>.14</td>
<td>20.20**</td>
<td>-.37**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2. Relationship Factors</td>
<td>.18</td>
<td>7.87**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investment</td>
<td>.14</td>
<td></td>
<td>-.09</td>
<td>.15</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>Quality of Alternatives</td>
<td>.27*</td>
<td></td>
<td>.44*</td>
<td>.26</td>
<td>.23</td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>-.30*</td>
<td></td>
<td>-.47*</td>
<td>-.23</td>
<td>-.20</td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>.02</td>
<td></td>
<td>-.30</td>
<td>.01</td>
<td>.01</td>
<td></td>
</tr>
</tbody>
</table>

* $p<.01$.  ** $p<.001$.
Table 7

**Hierarchical Regression Analyses of Personality Factors Associated with Attraction**

<table>
<thead>
<tr>
<th>Variables</th>
<th>$\Delta R^2$</th>
<th>$F$ change</th>
<th>b</th>
<th>$r$</th>
<th>Partial</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1. Gender</td>
<td>.10</td>
<td>27.40*</td>
<td>-.31*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2. Personality Factors</td>
<td>.04</td>
<td>2.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>.02</td>
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* $p < .001$.  

* $p < .001$.
Appendix A

Cross-Sex Friendships Questionnaire 1

Instructions. It is not uncommon for people to have relationships with a range of cross-sex friends. Please complete the following questionnaire, thinking about three cross-sex friends with whom you are closest. Identified cross-sex friends cannot be family members.

Friend #1 Enter his/her initials here, to help you remember

1. How did you first meet this person (check one)? □ Face-to-Face □ Distance (e.g., texting, email, Facebook)

2. How long have you known Friends#1? _________________ months

3. How far is he/she from where you live? (Driving time) _______ hrs.

4. Is Friend#1 a past romantic partner? □ Yes □ No

   If Yes: How long did you date (or go out)? _____ months

   How long ago did you break up? _____ months

5. Is Friend#1 in a current romantic relationship? □ Yes □ No □ Unknown

6. How many hours per week on average have you spent communicating with him/her using the following? (Enter ‘0’ if item does not apply.)
   Face-to-Face: _____ hrs/wk
   Facebook: _____ hrs/wk
   Text Messaging: _____ hrs/wk
   e-mail: _____ hrs/wk
   Phone _____ hrs/wk
   Other: ____________________ _____ hrs/wk

7. Are you attracted emotionally to Friend#1? □ No □ Somewhat □ Yes

8. Are you attracted physically to Friend#1? □ No □ Somewhat □ Yes

9. Could you see Friend#1 as a potential romantic interest for you?

10. If there is anything you would like to describe about this relationship and your communications together that we haven’t captured with the above questions, please enter in the textbox below.

   Text here

   **The above questions are repeated for Friend #2 and Friend #3.**
Appendix B

Cross-Sex Friendships Questionnaire 2

Instructions. It is not uncommon for people to have relationships with a range of cross-sex friends. Please complete the following questionnaire, thinking about three cross-sex friends with whom you are closest. Identified cross-sex friends cannot be family members.

Friend #1 Enter his/her initials here, to help you remember text

1. How did you first meet this person (check one)? ☐ Face-to-Face ☐ Distance (e.g., texting, email, Facebook)

2. How long have you known Friends#1? _______________ months

3. How far is he/she from where you live? (Driving time) _______ hrs.

4. Is Friend#1 a past romantic partner? ☐ Yes ☐ No
   If Yes: How long did you date (or go out)? _____ months
   How long ago did you break up? _____ months

5. Is Friend#1 in a current romantic relationship? ☐ Yes ☐ No ☐ Unknown

6. How many hours per week on average have you spent communicating with him/her using the following? (Enter ‘0’ if item does not apply.)
   Face-to-Face: _____ hrs/wk
   Facebook: _____ hrs/wk
   Text Messaging: _____ hrs/wk
   e-mail: _____ hrs/wk
   Phone _____ hrs/wk
   Other: ____________________ _____ hrs/wk

7. When communicating with him/her, approximately how many hours per week on average have you spent on each of the given topics. (Indicate number of hours or any portion thereof, e.g., 1.4 hours). “Distance” below refers to any communication that is not face-to-face (e.g., Facebook, texting, phone):

   Friend#1 and I:
   a) Discuss issues in MY current romantic relationship _____ hrs/wk _____ hrs/wk
   b) Discuss issues in my Friend’s current romantic relationship _____ hrs/wk _____ hrs/wk
   c) Recall past intimate experiences together _____ hrs/wk _____ hrs/wk
   d) Provide/receive advice about the opposite sex (relationship tips) _____ hrs/wk _____ hrs/wk
   e) We flirt and/or enjoy “sexual banter” _____ hrs/wk _____ hrs/wk
   f) Discuss non-intimate experiences or interests (e.g., job, financial issues, family problems, gossip) _____ hrs/wk _____ hrs/wk

8. Are you attracted emotionally to Friend#1? ☐ No ☐ Somewhat ☐ Yes
9. Are you attracted **physically** to Friend#1? □ No □ Somewhat □ Yes
10. Could you see Friend#1 as a potential romantic interest for you?
11. If there is anything you would like to describe about this relationship and your communications together that we haven’t captured with the above questions, please enter in the textbox below.

Text here

**The above questions are repeated for Friend #2 and Friend#3.**
Appendix C

**Experiences in Primary Romantic Relationships Inventory**

1. Have you engaged in any of the following behaviours with someone other than your partner while in a PAST committed relationship, that is, “cheated” on a past dating partner?

   *Note: If you have never been in a romantic relationship OR your current romantic relationship is your FIRST, skip this question.*

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<th>Never</th>
<th>Yes</th>
<th>Frequently</th>
</tr>
</thead>
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<td>a.</td>
<td>Kissing</td>
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<td></td>
</tr>
<tr>
<td>b.</td>
<td>Sexual touching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>Oral sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>Sexual intercourse</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Have you engaged or are you engaging in any of the following behaviours with someone other than your partner while in a CURRENT committed relationship, that is, “cheated” on your current dating partner?

   *Note: If you are not in a current romantic relationship, skip this question.*

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Yes</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
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<tr>
<td>d.</td>
<td>Sexual intercourse</td>
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Appendix D

**Rankings Based on Perceived Intimacy of Content Items**

- Flirting and/or enjoying “sexual bantor”
- Recall past intimate experiences together
- Discuss issues in MY current romantic relationship
- Discuss issues in my Friend’s current romantic relationship
- Provide/Receive advice about relationships (e.g., relationship tips)
- Discussing non-intimate experiences or interests

Rankings based on perceived intimacy of content items from Cross-Sex Friendships Experiences Questionnaire 2.