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Emotional and Behavioral Reactions to Emotional and Physical Infidelity: An Evolutionary Perspective

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EMOTIONAL AND BEHAVIORAL REACTIONS TO EMOTIONAL AND
PHYSICAL INFIDELITY: AN EVOLUTIONARY PERSPECTIVE

By

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Bachelors of Arts in Psychology
University of Santa Cruz, California
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A Thesis submitted in partial fulfillment of the requirements of the

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Abstract

The current study examined the effect of sex on how people react, emotionally and behaviorally, to different types of partner infidelity. We expected to replicate previous findings that men experience more jealousy in reaction to their partner's sexual infidelity, and women experience more jealousy in reaction to their partners' emotional infidelity. We hypothesized that sex will affect behavioral reactions to infidelity as well. Specifically, we expected men to respond to sexual infidelity by terminating the relationship and to emotional infidelity by employing mate-guarding behaviors to prevent further infidelity. We hypothesized women would display the opposite pattern, leaving a relationship in response to emotional infidelity and engaging in mate guarding in response to sexual infidelity. One hundred and seventy five participants completed measures to assess these hypotheses and other related variables (emotional reactions to infidelity, behavioral reactions to infidelity, tendency towards jealousy, mate value, personality characteristics). We replicated previously discovered sex difference in emotional responses to jealousy. Additionally, we found differences in regards to partner retention in that women were more likely to retain in response to sexual infidelity and men more likely to retain in response to emotional infidelity. When examining abandonment behaviors, however, we found that both genders endorsed more leaving in response to sexual infidelity.

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

Darwin proposed a theory of evolution based on three principles: variation, inheritance, and selection (Darwin, 1859). First, Darwin observed that all organisms are unique in a variety of ways within a species. Second, he noted that only some of an organism's variation is passed on to its offspring. Third, he observed that organisms with certain heritable characteristics produced more offspring, and he speculated that these characteristics helped increase the organism's reproductive success. Consequently, Darwin theorized that across generations individuals possessing those characteristics would dominate the species and thus the species would change or evolve. In the last chapter of *On the Origin of Species*, Darwin makes the following cryptic prediction about the implications of this theory: "In the distant future I see open fields for far more important researches. Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation. Light will be thrown on the origin of man and his history" (Darwin, 1859). One hundred and thirty years later, evolutionary psychologists have followed Darwin's lead and are attempting to use his theory of evolution to understand human behavior and cognition. Evolutionary psychologists propose that there is no large break between humans and other creatures, and that evolutionary principles apply to humans, including in both biological and psychological aspects (Ingold, 2004).

Naturally Selecting for Behavior

Despite the widespread acceptance of Darwin's theory in the scientific community as an adequate explanation for human morphology and physiology,

controversy remains over its utility as an explanation of human behavior and cognition (Ward, Wallaert, & Schwartz, 2011). Many researchers in psychology (with its long emphasis on learning) have found it difficult to understand how behaviors and thought patterns can be the product of natural selection (e.g., Fodor, 2008).

Evolutionary psychologists make the following arguments. First, that it is well established that the brain's structure and functioning is responsible for human behavior and thought. That is, the types of behavior emitted or thoughts produced by humans are the result of physiological processes in the brain; that evolution by the process of natural selection has produced all tissues in the body including the human brain, therefore natural selection is responsible for structure and functioning of brain. Evolutionary processes, by creating the structure and functioning of the brain, ultimately determine behavior and thought; brain structures and functions can be selected for depending on whether they produce adaptive behaviors and thoughts (Millar, 2009).

Evolutionary Psychology, the Standard Model, and Sociobiology

The standard model used in the social sciences explains behavior in terms of socialization and submits that humans are born with a minimal number of preprogrammed processes (Tooby & Cosmides, 2005). Basically, the standard model proposes that, for the most part, the content and organization of the brain flows inward from the environment, so the brain acts like a general-purpose computer programmed by the environment (Tooby & Cosmides, 2005). The emphasis on the evolutionary origins of behavior has led evolutionary psychologists to reject the standard social science model and take the position that humans are actually born with a considerable amount of cognitive content and organization. The evolutionary approach suggests that the mind

was designed by natural selection to solve the adaptive problems faced by our hunter-gatherer ancestors, such as selecting a mate, cooperating with others, or avoiding predators (Buss, 2009). Consequently, the brain should be composed of many different adaptations (programs or modules) specialized for solving these specific problems (Symons, 1987). Essentially, evolutionary psychologists are claiming that the brain, much like all other tissues in the body, should be primarily composed of a set of adaptations. The brain is not a general-purpose computer programmed by the environment, but rather a set of evolved adaptations (information processing modules) designed to solve problems (Cosmides, 1989).

Evolutionary psychology grows out of sociobiology (Webster, 2007), and both disciplines emphasize the importance of evolutionary processes in determining behavior. However, there are a couple of important differences between the disciplines. First, traditionally sociobiology has focused on the adaptive value of different behaviors, whereas evolutionary psychology emphasizes internal cognitive adaptations. Specifically, evolutionary psychologists, unlike early sociobiologists, propose that natural selection does not operate on behavior, but instead on the way persons process functionally contingent information (Buss & Hasleton, 1998).

An example is the behavior of running. Running is neither an adaptive nor maladaptive behavior. Running is an evolutionarily beneficial behavior if one is escaping a predator such as a bear whereas running towards a bear is maladaptive. The relevant stimuli and the way we act on them, not the behavior alone, is the evolved mechanism. Accordingly, evolutionary processes should not produce rigid behavioral responses, such

as running away but instead act upon neural circuits that contingently respond to the information they receive.

Second, sociobiologists have tended to explain current behavior in terms of its ability to maximize fitness whereas evolutionary psychologists do not believe that current thoughts and behaviors necessarily increase fitness (Griffiths, 2001). Evolutionary psychologists recognize that current thoughts and behaviors are a product of the evolutionary pressures faced by ancestors and that our ancestors' environment differed significantly from the modern environment. Consequently, what was adaptive in our ancestral environment may no longer be adaptive now. For example, although far more people are killed in modern society by cars than snakes, snake phobias are more common because we have evolved to fear these potentially deadly animals (Buss, 2009). In our current environment, a fear of cars would likely prevent death more than a fear of snakes, but snake fears would have aided survival in the environment of our ancestors. This mismatch is also apparent in mating behaviors. Confer et al. (2010) present the example that men can be aroused by pornographic images on a screen even though there is no chance of impregnating a woman and passing on their genetic material. In our evolutionary history, computers did not exist, so a naked woman would indicate the opportunity to impregnate her and pass on one's genetic material. Thus, today men are aroused by these images even though it is not evolutionarily beneficial.

Mate Selection

Given its roots in evolutionary theory, it is not surprising that a great deal of evolutionary psychology's theorizing and research has focused on human mating. The question of whom to mate with was one of the most important adaptive problems that had

to be solved by our ancestors. Two theories have provided an underpinning for most of this theorizing and research: sexual selection theory and parental investment theory. Sexual selection theory was originally proposed by Darwin (1871) in an effort to explain traits that had either no adaptive value, or were maladaptive. Some examples include the plumage of a male peacock that would seem to reduce its ability to avoid predation, or the high levels of testosterone that reduce immunological strength in many mammals. There are two mechanisms through which sexual selection occurs. The first is intra-sexual competition, which occurs when members of one sex compete to gain access to mates. Intra-sexual competition could include physical combat or simply competing for a level of status that facilitates access to mates. A modern example might be a man competing with colleagues for the top job, resulting in more money to attract mates. The second is intersexual selection in which the mate preferences of one sex determine the mating success of the opposite sex. This results in the preference of one sex dictating the desirable characteristics of the other. An example would be if all (or most) women preferred red-haired males. Red hair would then become more prevalent in subsequent generations. Darwin (1871) noted that these mate preferences were happening and affecting evolution; however, it could not account for why opposite sex partners showed particular preferences. For example, why do female peacocks prefer to mate with males who possess extravagant plumage?

Parental investment theory offers an answer to this question by delineating the processes that lead to sexual selection in humans (Trivers, 1972). Trivers (1972) theorizes that men and women have three key biological differences that influence their mating strategies, the amount of investment in their offspring, and ultimately their mate

preferences. First, men have an almost unlimited gamete production and have a relatively long reproductive life compared to women. Theoretically, men can produce hundreds to thousands of offspring while women can produce only a small number of offspring. Second, men require only a small amount of time (minutes) and energy to reproduce whereas women require months and considerable energy to grow the fetus and nurse the child. Finally, Trivers (1972) notes that only women have parental certainty; a woman knows that any child she carries has 50% of her genetic material while men can never be certain of who fathered the child. Based on these differences, Trivers (1972) postulates that men and women will have different optimal mating strategies and mate preferences

Given her limited reproductive capacity and the necessity to invest a great deal in each offspring, the best female strategy is to restrict reproduction, invest heavily in each child, and find a mate who will do likewise. Consequently, women should prefer mates who are able (wealthy) and willing (commitment) to invest in offspring, have the capacity to protect offspring (dominant, strong, brave), are good parents (stable, kind) and have good genotypic qualities (beautiful) (Buss, 1989). That is, women who have these preferences will choose mates who will allow them to implement their optimal strategy. Alternatively, the best strategy for men (with greater reproductive capacity, less necessity to invest, and no parental certainty) would be to broaden reproduction to other women and invest less in each offspring. Overall, men who pursue this strategy in most circumstances will have more reproductive success than men who mate with only one woman. Consequently, relative to women, men should place less emphasis on wealth and personality characteristics and more emphasis on genotypic qualities (beauty) (Buss, 1989).

A considerable body of research has supported these predictions. In a seminal study, Buss (1994) examined mate selection preferences in samples representing 37 countries with over ten thousand participants. In all countries, women placed more importance than men in finding a mate who was a good financial prospect. Overall, women placed twice the importance than men on the financial prospect of a potential mate. Subsequent to this research, women's preference for wealthy males has been found in a number of other cultures (e.g., Gottschall et al., 2003; Marlow, 2004). Complementing this finding, men show evidence that they are aware of this preference in females. For example, Wiederman (1993) investigated sex differences in how people present themselves in personal ads and found that men tended to emphasize their ability to provide financial security for their partner.

Similarly, the prediction that men will place greater emphasis on beauty than women has received widespread support. For example, Buss and his colleagues, in both cross-cultural and cross-generational research (over a 57 year time span), found men more interested in the physical appearance of potential mates than women (Buss, 1994; Buss, Shackelford, Kirkpatrick, & Larson, 2001). More recently, Todd et al. (2007) examined participants' self-reported mate preferences and compared them to actual preferences displayed during speed dating. The actual choices made during speed dating resulted in men choosing more attractive women and women displaying more discriminant preferences in general, judging their partners based on overall desirability.

Sexual Conflict and Infidelity

The divergence between the optimal male and female mating strategies produces conflict between the sexes. That is, it is difficult for most women to find a committed and

child-loving man if most men prefer to mate with many women and invest little in offspring. Similarly, it is difficult for most men to find a woman who is only interested in short term sexual relations if most women prefer to have longer committed relationships. One response to the difficulties associated with finding desired mates has been for both men and women to pursue a mixed mating strategy in which they simultaneously pursue both long and short term mates.

A mixed strategy for a woman will allow her to seek commitment from a resource-provider and secure higher quality genetic material from men who would not be willing to be in a committed relationship with them (Buss & Shackelford, 2008; Symons, 1979). Consequently, women utilizing a mixed mating strategy place more emphasis on cues of genetic value when selecting the short-term mate and more emphasis on resources when selecting a long-term mate. In the short-term relationship, the mate has the opportunity to contribute genetic value but limited time to contribute resources (e.g., Cousins & Gangestad, 2007). A mixed strategy for a man will allow him to obtain the benefits of a long-term relationship (e.g., more offspring survive, increased parental certainty, and the ability to attract higher quality mates) while overcoming the reproductive limitations of mating with only one woman. Overall, mixed strategies provide both men and women a way to maximize their reproductive capacity (Gangestad & Simpson, 2000).

Given these evolutionary imperatives, it is not surprising that numerous studies have found that infidelity is a widespread and common phenomenon. Blow and Hartnett (2005) conducted a two-part literature review of 49 studies investigating infidelity. In part one, they examined the methods researchers used when studying infidelity, and in

part two, the findings from infidelity studies. They reviewed studies conducted between 1980 and 2005. The studies they reviewed found lifetime infidelity instances ranging from 25% of married men and 15% of married women to 13% of all married individuals. The prevalence of infidelity within the past year ranged from around 1.5% to 4%.

Whisman, Gordon, and Chatav (2007) investigated reported instances of infidelity and found that 2.3% of married couples had experienced infidelity in the past year. Another study by the same author found that the prevalence of infidelity in the past year differed based on the method of data collection, and that only 1.08% of participants reported infidelity in the past year in face-to-face interviews, but 6.13% reported infidelity in the past year on an internet survey (Whisman & Snyder, 2007). Brand, Markey, Mills and Hodges (2007) used a broader definition of cheating, including short or long term romantic involvement, including kissing that occurs while the individual engaged in the cheating is in a committed romantic relationship with another person. In this study, they found that 31.4% of women and 20.4% of men had engaged in cheating. In a second study, they asked about intercourse cheating and found that 19% of women and 21% of men had engaged in extra-partner sexual intercourse.

Emotional Responses to Infidelity. Partner infidelity often leads to an intense emotional experience labeled as jealousy. Jealousy is defined in a number of different ways in the extant literature. For example, a few researchers have characterized jealousy as a separate emotion (Sabini & Silver, 2005), whereas other researchers characterize it as combination of other emotions such as suspicion, anger, and fear (e.g., Guerrero, Trost, & Yoshimura, 2005). Still, other researchers have categorized jealousy as multidimensional, with cognitive, emotional, and behavioral aspects (e.g., Pfeifer &

Wong, 1989). Evolutionary researchers have taken a more functional approach and defined jealousy as a negative emotional state that is created when there is a perceived threat to a valued relationship, due to an actual or imagined rival vying for one's partner's attention (e.g., Buss, Larsen, Westen, & Semmelroth, 1992; Buunk, Solano, Zurriaga, & González, 2011).

Research examining jealousy from an evolutionary perspective has repeatedly found that jealousy is experienced differently by each sex. Buss et al. (1992) found that men, on average, experience greater jealousy in response to a partner's sexual infidelity than to their emotional infidelity. This means that men were more upset over the thought of a female partner engaging in sexual intercourse with another man than falling in love and developing a deep emotional attachment to him. The opposite pattern was found in women, in that women relative to men experience more jealousy in response to emotional infidelity. The authors propose an evolutionary explanation for this finding based on Trivers' (1972) Parental Investment Theory. They suggest that it is most detrimental to a man's reproductive fitness if his partner engages in sexual activity with another man due to the extreme risks of raising another man's child. For a woman, emotional infidelity is most dangerous because she risks losing partner investment in both her and her offspring.

This study has been replicated a number of times. Cramer, Abraham, Johnson and Manning-Ryan (2003) tested this prediction using a forced-choice paradigm. They asked participants to choose whether sexual or emotional infidelity would be more upsetting, and also which aspect of a sexual and emotional affair would be more upsetting. They found that women were more likely to choose emotional infidelity as more upsetting and men found sexual infidelity more upsetting. Ward and Voracek (2004) also found that

men are more upset over sexual infidelity and women more upset over emotional infidelity. In addition to normal, healthy individuals, those with clinical disorders also exhibit this pattern. On the one hand, men diagnosed with morbid jealousy were more upset than women by sexual infidelities and focused on rivals' status and resources. Women diagnosed with morbid jealousy, on the other hand, were more upset by emotional infidelity and focused on rivals' physical attractiveness (Easton, Schipper, & Shackelford, 2007). Green and Sabini (2006) found sex differences using continuous rather than forced-choice measures; women were "upset" by emotional infidelity than sexual infidelity at a greater rate than men and men were angrier over sexual infidelity than were women.

Behavioral Responses to Infidelity. From an evolutionary perspective, the emotions created by a partner's cheating should motivate an individual to take action. These actions usually have one of two different goals: mate abandonment/replacement or mate retention. One common action taken is to abandon the current relationship in order to seek out a better relationship with a person who will not engage in cheating behaviors. Many people choose this action, as infidelity is the most commonly cited reason for leaving a relationship (Miner & Shackelford, 2010). The same evolutionary factors that contribute to sex variability in emotional responses to infidelity may also contribute to differences in behavioral responses to infidelity. There has been some evidence to support this idea. Sabini and Green (2004) found that emotional affairs lead to more mate abandonment, especially in women. The evidence that women may be more likely to leave over emotional infidelity suggests that these emotional infidelities may be more damaging to the woman.

If the relationship is not dissolved, the non-cheating partner will likely respond to the infidelity with mate retention behaviors designed to strengthen the relationship and prevent future cheating. Mate retention behaviors are carried out to either influence the mate or influence potential rivals. One mate-retention behavior typically employed by men is mate guarding, or behaviors that attempt to prevent, correct, or anticipate partner infidelity (Miner & Shackelford, 2010). Mate guarding involves a number of strategies that try to maintain the current relationship in different ways. For example, one way a mate might guard his or her partner is to literally guard them from potential other suitors and mate poachers. To accomplish this, an individual conceals the mate and monopolizes all of the mate's time. This can be done by encouraging the mate to spend most nights at home, and making sure all evenings spent out of the home are one-on-one dates instead of outings in the company of other individuals. Another way to guard one's partner is to make the partner believe he or she is not capable of finding a better relationship, which can be accomplished through put-downs and other harsh language. The goal of this type of behavior would be to alter the partner's self-perception and ultimately cause reevaluation of worth. If the partner constantly hears that he or she is unattractive, unintelligent and unpleasant to be around, he or she may start to believe these insults and question whether he or she is capable of finding a better relationship. When the partner believes that an alternative relationship is very unlikely, the current relationship seems much more appealing (Miner & Shackelford, 2010).

A different mate retention strategy includes threats of violence toward the partner. By engaging in this behavior, an individual attempts to keep the partner in the current relationship by force. The individual using this mate guarding behavior hopes the partner

refrains from cheating or leaving due to fear of physical harm. A similar strategy would be to scare off potential rivals. This could mean threatening the rivals instead of the partner with violence. In this instance the individual scares off any potential suitors, leaving the partner with no options but to stay in the current relationship. Alternatives to physical threats would be for the individual to derogate the rival. This would include insults directly to the rival as well as put-downs in front of the partner. This serves to convince the rival he/she is not a quality mate for the partner, and the partner that the rival is not worth leaving the current relationship for (Miner & Shackelford, 2010).

Mate retention might also include behaviors that attempt to persuade a partner to stay faithful to the current relationship. This could be achieved by highlighting the positive aspects of the current relationship. One might try to remind their partner that one is a physically attractive individual by displaying their body in its best light. This could be done by wearing outfits that highlight physical attractiveness, wearing makeup, or presenting a clean appearance. Another contribution to a relationship is access to resources. One could highlight one's access to resources by providing a large number of expensive gifts. In this case, the mate is reminded that leaving the relationship would result in a loss of gifts as well (Miner & Shackelford, 2010).

CHAPTER 2

CURRENT STUDY AND METHODS

The current study explored the moderating effects of sex (male vs. female) and type of infidelity (emotional vs. physical) on emotional and behavioral responses to infidelity. Drawing on evolutionary theory, three hypotheses are proposed.

H1: Men should report experiencing more jealousy in response to physical infidelity and alternatively, women should report more jealousy in response to emotional infidelity.

Rationale: This pattern has been found repeatedly in previous research. Buss et al (1992) originally discovered that men, on average, experience greater jealousy in response to a partner's sexual infidelity than emotional infidelity and that the opposite pattern exists with women. This finding has been replicated numerous times using both forced-choice and continuous measures (Cramer, Abraham, Johnson, & Manning-Ryan, 2003, Ward & Voracek, 2004, Green & Sabini, 2006). Trivers' (1972) Parental Investment Theory best accounts for these findings because a man's reproductive fitness is most damaged by sexual infidelity and a woman's reproductive fitness is most damaged by emotional infidelity. Men stand to lose from raising a non-related child and women stand to lose from raising a child by a man who has moved on to another relationship and no longer contributes resources.

H2: For men, physical infidelity on the part of a mate will be more associated with abandonment and replacement behaviors, and emotional infidelity will be more associated with mate retention behaviors.

Rationale: For men physical infidelity severely threatens reproductive success and after it has occurred a woman's mate value is dramatically reduced and consequently mate replacement may be worth energy. Alternatively, emotional infidelity is primarily a problem for men because it can lead to physical infidelity. If emotional infidelity occurred, but physical infidelity has not occurred, then it may be worth the effort to prevent it with mate retention behaviors.

H3: With women, the pattern will reverse. Emotional infidelity on the part of a mate will be more likely to lead to abandonment and replacement behaviors, and, alternatively, physical infidelity will more likely lead to mate retention behaviors.

Rationale: For women, emotional infidelity is the most severe threat to reproductive success because it is often associated with resource loss. If the man has transferred resources to another woman then mate replacement may be worth the effort. Alternatively, physical infidelity is primarily a problem because it can lead to emotional infidelity (i.e., the woman has parental certainty). If there was physical infidelity, but the man is not emotionally attached to the other woman, it may be worth the effort to engage in mate retention behaviors.

Methods

Participants

Eighty-eight female and 87 male participants from the University of Nevada, Las Vegas subject pool were recruited. Participants were recruited using an electronic signup procedure operated by the psychology department and class credit was offered in exchange for participation. Average participant age was 19.59 years. The racial/ethnic breakdown was 33% Caucasian, 21.6% Asian, 20.5% Hispanic/Latino, 7.4% African

American, 3.4% Native Hawaiian or other Pacific Islander, 2.3% other and 13.6% identifying as multiple races.

Materials and Procedures

Upon arrival, participants were informed that the purpose of this study was to investigate individual differences in dating and relationship strategies. They were asked to complete a few short surveys to assess their attitudes towards dating and relationships. Participants were assured that their responses would be completely anonymous. Participants were instructed not to put any identifying marks on the survey and when the survey was completed to seal them in an envelope and place the envelope in a drop box located in the research room.

Physical vs. Emotional Infidelity and Jealousy. Following the initial directions, participants were presented with 6 infidelity scenarios developed by Buss et al. (1999). Each item presented a choice between an infidelity that was sexual in nature and an infidelity that was emotional in nature. An example scenario asks participants to imagine that either their partner “is still sexually interested in a former lover, but is no longer in love with this person” or that their partner “is still emotionally involved with the former lover, but is no longer sexually interested in this person.” Participants were asked to indicate which of these would be more upsetting. Another scenario asks participants to imagine that their partner formed an emotional attachment to another person and had sex with this person. The participant is asked to read the scenario and circle which aspect of this scenario would be more upsetting: the sexual infidelity or the emotional attachment (see Appendix A for the full set of scenarios).

These dilemmas were originally created and used by Buss et al (1999). Using this series of infidelity scenarios, they showed that men were much more likely to find physical infidelity upsetting and that women were much more likely to find emotional infidelity upsetting. Numerous other research replicated these findings in other cultures (e.g., Fernandez et al., 2007 (Spain), Buss et al., 1999 (Korea), Shackelford et al., 2004 (Sweden)) and in different age groups (see Sagarin, 2005 for a review).

These scenarios use a forced-choice paradigm, which means that participants were asked only to indicate which would be more upsetting, not why this is the case or how much more upsetting. Some researchers feel that forced-choice measures are not entirely valid because participants do not communicate enough information to truly investigate the topic, and suggest significant sex differences might be an artifact of these measures (DeSteno, Bartlett, Braverman & Salovey, 2002; Green & Sabini, 2006). Others argue that forced-choice measures are the best way to test this construct. Edlund and Sagarin (2009) advocated for the use of the forced-choice paradigm because all jealousy reactions tend to be strong, and this allows for a clearer interpretation of sex differences. They pointed out that if there were no systematic difference between men and women, then the forced-choice paradigm would not continuously produce significant results either.

Behavioral Responses to Physical and Emotional Infidelity. Once the jealousy measure was complete, participants were randomly assigned to read a more elaborate scenario that described either a physical or emotion infidelity. The scenarios are shown below.

Sexual Infidelity: Imagine your partner is at a bar after work and happens to meet a man/woman that he/she used to be friends with in high school. Your partner and this individual decide to have a drink together. During the course of the evening he/she begins to flirt with the other person and asks her/him for a dance. Eventually, she/he feels an irresistible sexual attraction for this person and after few more dances she/he heads up to the former classmate's apartment and have sex. After a few months, your partner comes to you and confesses he/she has had sexual relations with this person. He/she tells you that the relationship is purely physical and that the person is beautiful and that he/she is extremely sexually attracted to this person.

Emotional Infidelity: Imagine your partner is surfing Facebook one day and comes across the profile of a man/woman he/she used be friends with in high school. Your partner and this individual begin communicating on a regular basis. The emails are innocent enough but quickly they start to focus on more personal matters. Eventually, she/he feels the need to speak directly to this person and starts engaging in a series of late night phone calls where she/he shares her/his most intimate feelings and thoughts. After a few months, your partner comes to you and confesses he/she has been in contact with this person. He/she tells you that the relationship is purely emotional and that this person understands him/her in a way no one else seems to, and that he/she feels extremely connected to this person.

After reading the scenario, the participants were asked to complete a behavioral response scale. This scale lists potential behaviors one might engage in after discovering one's partner committed an infidelity. This questionnaire contained both items that were abandonment behaviors, such as "End relationship" and "Call up a former lover," and behaviors that were retention behaviors, such as "Try to make partner jealous" and "Give partner gifts." Participants were asked to indicate on a 7-point scale how likely they would be to engage in each of the behaviors, with 1 being "Not Likely" and 7 being "Very Likely." (See appendix B).

Demographic and Background information. Participants were asked to provide their sex, age, level of income or family income if dependent (to assess socioeconomic status), and sexual orientation. They were also asked whether they currently are or have previously been in a romantic relationship, and if so the length of the relationship. They were asked whether they had ever committed an infidelity and whether any previous or current partners had ever committed an infidelity (see Appendix C & Appendix D). Each of these variables has previously been identified as potential moderators of the jealousy-infidelity relationship, and is therefore needed for analyses.

Exploratory individual difference measures. After completing the demographic questionnaire, participants were asked to complete Kirsner's Mate Value Inventory (Kirsner, Figuerdo, & Jacobs, 2003). This inventory had 17 items that ask participants to assess their mate value by indicating how high or low (1 ([extremely low on this trait]) to a 7 [extremely high on this trait]) they would score on a particular trait (Kirsner, Figuerdo, & Jacobs, 2003). Examples of these traits included ambitiousness, attractiveness in face, generosity, health, intelligence, responsibility, and social status.

The internal consistency of the scale was .86 (Kirsner, Figuerdo, & Jacobs, 2003).

Internal consistency for our sample was .82.

CHAPTER 3

RESULTS

Emotional Differences

Hypothesis 1 predicted that the study would replicate the finding that men would be more upset by sexual infidelity and women would be more upset by emotional infidelity. A one-way analysis of variance (ANOVA) comparing men and women demonstrated that men ($M = 3.103, SD = 1.842$) were significantly more likely than women ($M = 1.716, SD = 1.590$) to choose the sexual infidelity as more upsetting than the emotional infidelity ($F(1,173) = 28.46, p < .01$).

Behavioral Differences

To test hypotheses 2 and 3, behaviors were separated into abandonment behaviors and retention behaviors, and responses in each category were summed to create two separate indexes (retention index and abandonment index). Higher numbers indicate that the participant was more likely to engage in the behavior. The abandonment index and the retention index were each examined separately in a 2 (physical vs. emotional infidelity) X 2 (male vs. female gender) ANOVA. When the retention index was analyzed, the predicted interaction between Gender and Infidelity Condition was found ($F(1,171) = 4.58, p < .05, \text{partial } \eta^2 = .03$). As predicted, men reported that they would be more likely to engage in retention behaviors after an emotional infidelity ($M = 41.10, SD = 14.12$) than after a physical infidelity ($M = 33.90, SD = 12.12$), ($F(1,171) = 6.47, p = .01, \text{partial } \eta^2 = .07$). Alternatively, with women, there was no significant difference in retention behaviors after a physical infidelity ($M = 39.53, SD = 12.98$) or an emotional infidelity ($M = 38.34, SD = 12.35$), F

< 1. Overall there was no simple main effect of gender (Men= 44.21, Women = 45.34; $F = .252, p = .62$) or condition (Emotional = 46.36, Sexual = 43.189, $F = 1.97, p = .16$).

When the abandonment index was examined the predicted interaction was not found, $F < 1$. However, a significant main effect for type of infidelity was found, $F(1,170) = 45.15, p < .01$, partial $\eta^2 = .21$. Participants reported that they were more likely to engage in abandonment behaviors after physical infidelity ($M = 10.12, SD = 3.17$) than after emotional infidelity ($M = 6.84, SD = 3.22$). There was no significant effect of gender (Men = 13.24, Women = 12.09, $F = 2.86, p = .09$).

Exploratory Analyses

Mate Value. A series of exploratory analyses were performed to explore the possibility that mate value moderated the effects of gender on distress to emotional and physical infidelity. That is, does a male or female's mate value influence how he/she responds to different types of infidelity? A mate value score was created for each participant by summing their responses on the Kirsner's (2003) Mate Value Inventory. To explore whether a participant's mate value moderated their reported distress, the distress scores were analyzed in a three-step hierarchical regression analysis. In this analysis, three regressions were performed in which the participant's gender, Mate Value Inventory scores, and finally the interaction term (mate value X Gender) were added into the equations used to predict distress scores. The interaction term was created by multiplying the participant's Mate Value Inventory score by his or her gender (See Aiken & West (1991) for a description of this procedure). Neither the addition of the mate value score or the interaction term

was associated with a significant increase in prediction ($\Delta R_s^2 > .05$) over the original model that only contained gender.

Two similar sets of hierarchical regression analyses were performed to explore whether mate value moderated the type of retention and abandonment behavior. In each set of these analyses, three interaction terms were created by multiplication of the variable (mate value X gender, mate value X type of infidelity, and mate value X gender X type of infidelity). In both sets of analyses, the addition of the mate value or the mate value interactions failed to produce a significant increase in prediction of either the retention or abandonment behaviors over the models containing gender and type of infidelity ($\Delta R_s^2 > .05$).

Experience of infidelity. Participants were scored as 1 if they had experienced any infidelity by a partner in their last four relationships and a score “0” if they had not experienced infidelity in their last four relationships. Overall, 43.2% of participants had experienced at least one infidelity by a partner in their last four relationships. To examine whether the actual experience of infidelity moderated the participants’ responses to the emotional and physical infidelity scenarios, their distress scores were analyzed in a 2 (male vs. female Gender) X 2 (infidelity experience vs. no infidelity experience) ANOVA. The actual experience of infidelity did not interact with the gender of the participant, $F < 1$.

To explore whether the experience of infidelity influenced the behavioral responses, the participants’ retention behaviors were analyzed in a 2 (physical vs. emotional infidelity) X 2 (male vs. female gender) X 2 (infidelity experience vs. no infidelity experience) ANOVA. The experience of infidelity was not involved in any

significant interactions, $F(s) < 1$. Yet participants who had experienced infidelity did report that they would be more likely to engage retention behaviors ($M = 40.25$, $SD = 12.67$) than participants who had not experienced infidelity ($M = 36.67$, $SD = 13.24$), $F(1, 171) = 5.24$, $p = .02$, partial $\eta^2 = .03$. When abandonment behaviors were analyzed in the same 3 factor ANOVA the experience of infidelity was not involved in any significant interactions ($F(s) < 1$). Participants who had experienced infidelity did not report that they would be more likely to engage abandonment behaviors than participants who had not experienced infidelity, $F < 1$.

CHAPTER 4

DISCUSSION

Drawing on Trivers' (1972) parental investment theory, Buss et al (1992) proposed that the fitness costs of sexual infidelity by a partner are higher for males than females, and the costs of emotional infidelity by a partner are higher for females. He extrapolated that, as a result, men should report experiencing more jealousy in response to physical infidelity and alternatively, women should report more jealous in response to emotional infidelity. Although there is considerable support for this hypothesis (e.g., Cramer, Abraham, Johnson, & Manning-Ryan, 2003; Ward, 2004; Easton, Schipper, & Shackelford, 2007), there are a number of other researchers who have challenged the validity of this finding, and have failed to replicate it (e.g., DeSteno, Bartlett, Braverman & Salovey, 2002; Harris, 2003). In the current study, using Buss's forced choice methods, we were able to replicate the original findings of Buss, Larsen, Westen, and Semmelroth (1992); men were more likely than women to choose sexual infidelity as more upsetting than emotional infidelity.

The jealousy created by a partner's infidelity may motivate an individual to take action with the goal of either mate abandonment/replacement or mate retention (Buss & Shackelford, 2008; Cousins & Gangestad, 2007). We hypothesized that, for men, physical infidelity by a mate will be more strongly associated with abandonment and replacement behaviors and emotional infidelity will be more strongly associated with mate retention behaviors. For women the pattern should reverse. That is, emotional infidelity by a mate will be more likely to lead to abandonment behaviors and, alternatively, physical infidelity more likely to lead to mate retention behaviors. In the

current study, we partially supported these hypotheses. In regards to retention behaviors, the hypothesized pattern was discovered. Women were more likely to endorse performing retention behaviors in response to sexual infidelity than were men, and men were more likely to endorse performing retention behaviors in response to emotional infidelity than were women. However, contrary to predictions, this pattern was not observed with abandonment behaviors. Both men and women endorsed abandonment higher in response to the sexual infidelity than the emotional infidelity. Men endorsed abandonment behaviors more than women did in response to both types of infidelity.

Why did the findings support predictions regarding retention behaviors, but not abandonment behaviors? One possibility is that this may be due to the difference in the number of items presented. Potentially, if men and women were given as many abandonment behaviors as retention behaviors, we may have seen a similar pattern. Participants were given greater opportunity to consider their attitudes towards retention, and potentially fine-tuned their feelings towards it. Participants were given the opportunity to consider their feelings towards mate retention through the lens of numerous questions, and to report these feelings through thirteen separate questions.

The questions encompassing leaving behavior include “terminate the current relationship,” and three questions that detail activities aimed at finding another mate. These questions may not have fully tapped into the construct of mate abandonment. “Calling up a former lover” may be less about replacing the current mate, but about getting revenge. For this reason, the abandonment questions used may not be the ideal questions to measure the construct. Additionally, while finding a replacement partner may be one aspect of relationship termination, abandonment may consist of other aspects

that the questionnaire is not tapping into. For example, participants may be interested in terminating the current relationship without immediately seeking another one. While partner replacement is likely the most evolutionarily beneficial action, people may engage in a number of other behaviors at the end of a relationship. The end of a romantic relationship is a complicated emotional experience, and may lead to numerous self-focused experiences (Slotter, Gardner, & Finkel 2010). Some may see the dissolution of a relationship as a time for self-focused alone time and pursuit of personal passions, or as a time to expand social connections by spending more time with friends and family. Perhaps a more extensive list of termination behaviors, including spending time alone to find oneself, and reconnecting with old friends, would result in the anticipated pattern.

While the imbalance of abandonment and retention behaviors may account for the partial support of the hypothesis, another possibility is that people are simply more likely to terminate a relationship in response to sexual infidelity than emotional infidelity. In conjunction with our other finding, this would suggest that women endorse more retention behaviors in response to a sexual infidelity than an emotional infidelity, and then men endorse more retention behaviors in response to an emotional infidelity than a sexual infidelity. However, all participants also endorse abandonment behaviors at a higher rate when reading about a sexual infidelity. Women, therefore, are endorsing both leaving and retention behavior at a higher rate in response to sexual infidelities than emotional infidelities. This suggests that women are endorsing a higher likelihood of taking action of any kind in response to sexual infidelity. This may relate to the stigma sexual infidelity carries in our society (Fisher et al. 2012). “Falling in love” is typically viewed as an unintentional process that may happen accidentally, whereas engaging in

sexual relations is always something an individual has control over. When one envisions one's partner falling in love with another person, frustration and hurt might be accompanied by some degree of sympathy/understanding, as this could be interpreted as accidental. Upon learning one's partner engaged in sexual relations with another individual, however, one may be more inclined to blame one's partner, leading to an increase in leaving behavior.

Lastly, due to this stigma, participants could be over-reporting their likelihood of abandoning in response to sexual infidelity. A woman who might consider maintaining a relationship with a man who engaged in sexual infidelity if presented with the situation may be unwilling to admit this to others. In our survey, participants were able to endorse maintaining and abandoning a relationship following an infidelity. Women endorsed engaging in both abandonment and retention behaviors at a higher rate in response to sexual infidelity. In reality, if a woman chose to abandon a relationship there would be no need for retention behaviors. Endorsement of abandonment in conjunction with maintenance may be face-saving response distortion. Additionally, leaving a hypothetical relationship, with no real emotional investment (such as women are endorsing in this situation), may be easier than leaving a real life, potentially long-term relationship. For these reasons, we believe endorsement of partner abandonment may be inflated.

Limitations

Although the results provide partial support for the hypotheses, the current study has a number of limitations. First, this study utilized self-reports data in that participants were asked to indicate what would make them feel more upset and what type of behavior they would be likely to perform. Are participants able or willing to give accurate

information? There is some evidence that participants can do this. Shrauger, Ram, Greninger, and Mariano (1996) found that people are more accurate at predicting their future behaviors than others are; they showed that participants are better predictors of their behaviors over a short period of time than their mothers or friends. Further, there is some evidence that our participants were giving accurate information in that the infidelity rates reported in the study (43.2%) were similar to rates found in the general population (Blow & Hartnett, 2005).

Second, the current study examined undergraduate psychology students who may have only limited experience with infidelity. If a person does not have much long term relationship experience or has not experienced infidelity then how can they accurately indicate how they would feel or react? McNulty and Brineman (2007) point out that dating relationships typically have a higher rate of infidelity than marriages, and that college students are typically presented with an array of parties and other opportunities for infidelity. Consistent with this reasoning, in the current study 43.2% of the participants had experienced infidelity. Further, the experience of infidelity did not moderate the relationship between type of infidelity and behavioral choices suggest that both types of participants (those that experienced infidelity and those that did not) responded similarly. Further studies including only married participants, or participants who have experienced infidelity may help to further support that self-reporting is not an issue.

Additionally, sexual infidelity and emotional infidelity are very different in nature. The idea of emotional infidelity is a difficult construct to measure. While extra-partner sexual interactions are straightforward, in that one can typically clearly define

whether sexual intercourse has occurred or not, some extra-partner emotional connections may be perfectly innocent, and not actually deemed cheating. The scenarios presented participants tried to detail interactions that most would classify as infidelity; however, participants may potentially have differed on whether they believed the emotional situation to fall into the category of infidelity.

Finally, another limitation is the existence of sex-typed behaviors in the questionnaire. For example, “hit or engage in other violent actions against potential rivals” may be a more common response in men, while “put additional effort into physical appearance” may be more common among women. Participants’ responding negatively to certain items may reflect that the behaviors do not fit into the stereotype of their gender, instead of their unwillingness to engage in mate retention behaviors. Specialized questionnaires for men and women may strengthen the finding.

Another issue worth noting is that of alternate theoretical explanations. The hypothesis that men would respond with more leaving in response to sexual infidelity and women would respond with more leaving in response to emotional infidelity is rooted in evolutionary theory; a sexual infidelity is most damaging to a man’s fitness, while an emotional infidelity is most damaging to a woman’s fitness (Buss et al., 1992). It is important to note that evolution isn’t the only theoretical explanation for men and women responding to different infidelities with different behaviors. Socialization could also account for differences. Men and women are socialized differently from a young age. It is possible that women are raised and socialized to place an emphasis on emotions, and men raised and socialized to place an emphasis on sex. For this reason, the most evolutionarily damaging infidelity is potentially also the more upsetting one for social reasons.

Therefore, it is important to note that significant findings do not conclusively prove that evolution accounts for behavior. Rather, the partially significant findings show that the predicted pattern exists to some extent, but further research is needed to conclusively determine whether evolutionary forces are driving these differences.

Future Directions.

Future studies could go about investigating this topic in a different way. If participants gave open-ended responses to the scenarios, their answers could be coded as either an abandonment or retention, to see if the predicted pattern emerges. For example, after reading either of the scenarios provided in this study, participants could be asked to describe, in detail, what actions they might take if they found themselves in the scenario. Responses will be read and coded to determine whether they more heavily endorse leaving, more heavily endorse maintenance, or are primarily mixed/undecided. In this scenario, participants wouldn't be prompted to choose between behaviors that are predetermined, but instead to report their initial reaction upon reading the scenarios. In the original format, participants likely had an initial idea of what they would do, but were not asked to report this to us. This initial reaction may give us deeper insight into the behaviors individuals would actually engage in after their partner committed a similar infidelity, potentially increasing external validity.

Additionally, instead of responding to each behavior with its likelihood, participants could select from a list which behavior they would be most likely to engage in. This parallels Buss' et al. (1992) original study in this area, in which participants were given a forced-choice between sexual and emotional infidelity. These methods would result in participants indicating the behaviors they are most likely to engage in,

potentially resulting in a stronger interaction. In the current study, participants could have indicated that they were very likely to “terminate the current relationship,” but also very likely to “talk through the issues that lead to the infidelity” and “ask your partner to go to a couples therapist with you.” In a real life scenario, participants would likely be choosing between terminating the relationship or going to couples therapy. While participants might not be completely certain as to whether they would leave their partner, resulting in the endorsement of both abandonment and retention behaviors, a forced-choice paradigm would allow us to see which behavior they consider more strongly in response to the scenarios. By asking participants to indicate whether they are more likely to end the relationship or maintain it, only their strongest inclinations are examined.

Another way to investigate these gender differences would be to look for their existence in actual relationships. One interesting way to go about this would be to look at records of divorce settlements. In cases where the reason for divorce is listed, and is infidelity, the nature of the divorce could be examined. For example, if divorces are typically initiated by women after a partner’s emotional infidelity, and men after a partner’s sexual infidelity, this would support the hypothesis that men and women abandon in response to the most evolutionarily detrimental situation.

Lastly, physiological measures could provide additional insight into gender differences. Buss and colleagues (1992) found differences in autonomic arousal in response to imagined infidelity. The behavioral experiment can be conducted with participants hooked up to a machine to measure the electrical conductance of the skin, and measure physiological differences when reporting likely behavioral responses. This would allow for a comparison of the actual physiological differences in men and women

when reading the scenarios and reporting anticipated behavioral responses. If the physiological measures coincided with the self-report measures, with men becoming more aroused in response to the sexual infidelity and women becoming more aroused in response to the emotional infidelity, than this supports the differences. The use of physiological measures would allow us to eliminate the potential problems of participants self-reporting their behaviors. As previously mentioned, there may be a social stigma associated with admitting one would stay with a partner following a sexual infidelity. Employing a physiological measure would protect against this potential response distortion.

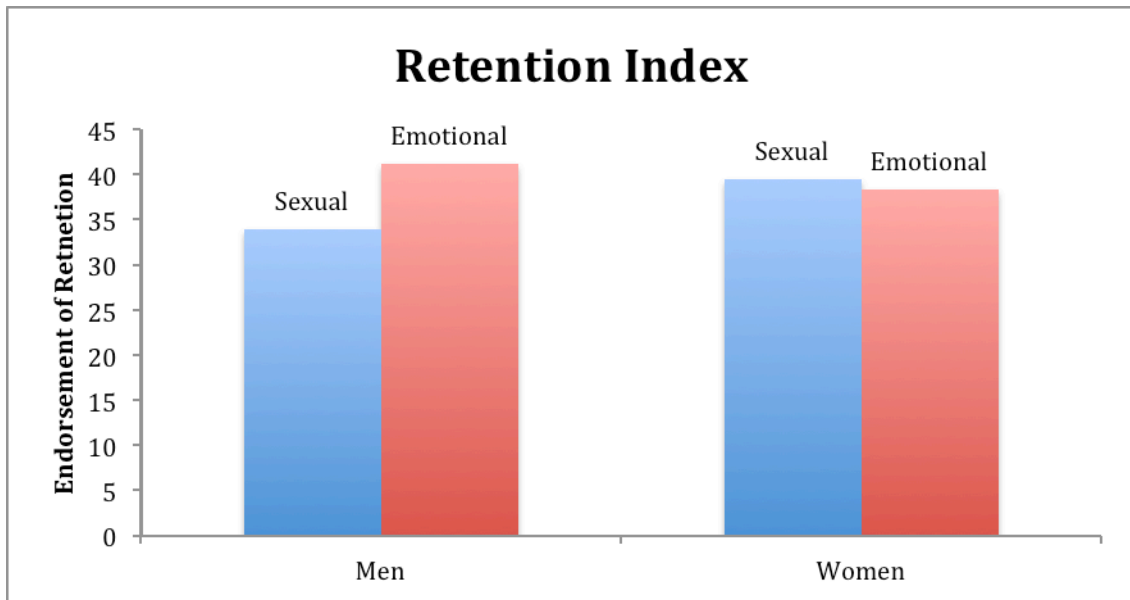
Conclusions

This finding is important because it suggests that evolved emotional reactions may guide relationship behaviors. Humans have evolved specific emotional reactions to partner infidelity not only to alert them of the seriousness of the consequences, but to guide the decisions made in response to these situations. Behavioral differences are more telling than emotional differences, because they suggest that men and women are actually doing different things in their relationships. If men and women respond with different emotional reactions to infidelity, but the same behavioral patterns, this would suggest that emotions do not guide people to make the most evolutionary advantageous decisions. The behavioral differences suggest that the emotions are in fact guiding choices and ensuring the best genetic outcome.

Appendix A

Figure 1.

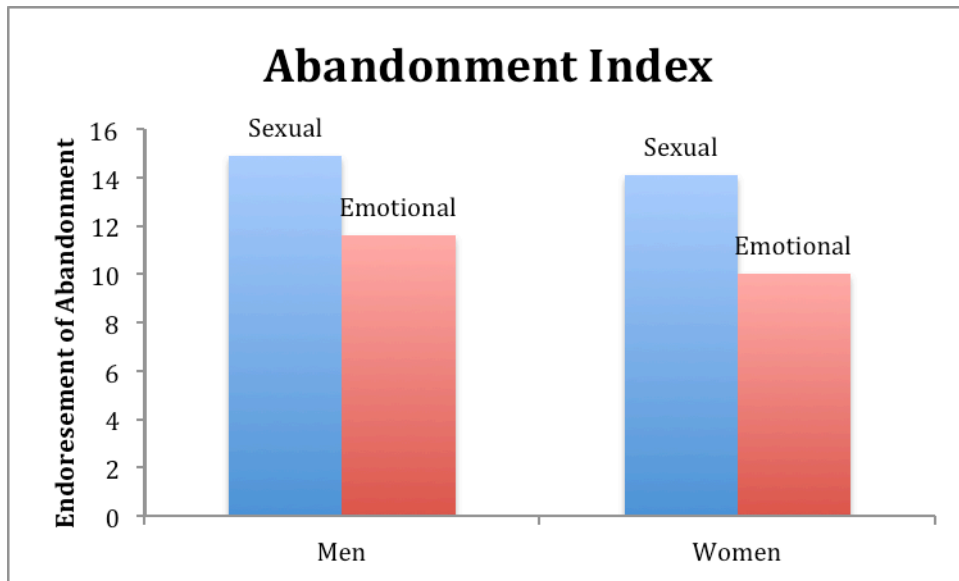
Gender differences in endorsement of mate retention behaviors in response to different types of infidelity



Appendix B

Figure 2.

Gender differences in endorsement of mate abandonment behaviors in response to different types of infidelity



Appendix C

Jealousy Scenarios (Buss et al. 1999)

Please think of a serious committed romantic relationship that you have had in the past, that you currently have, or that you would like to have. Imagine that you discover that the person with whom you've been seriously involved became interested in someone else.

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

- (A) Imagining your partner falling in love with that person.
- (B) Imagining your partner trying new sexual positions with that person

What would upset or distress you more?

- (A) Imagining your partner forming a deep emotional (but not sexual) relationship with that person.
- (B) Imagining your partner enjoying a sexual (but not emotional) relationship with that person

Imagine that your partner both formed an emotional attachment to that person and had sexual intercourse with him/her. Which aspect of your partner's involvement would upset you more?

- (A) The sexual intercourse with that other person
- (B) The emotional attachment to that other person

Which would upset or distress you more?

- (A) Imagining your partner having sexual intercourse with that person, but you are certain that they will not form a deep emotional attachment?
- (B) Imagining your partner forming a deep emotional attachment to that person, but you are certain they will not have sexual intercourse.

Which would upset or distress you more?

- (A) Imagining your partner is still sexually interested in a former lover, but is no longer in love with this person
- (B) Imagining that your partner is still emotionally involved with the former lover, but is no longer sexually interested in this person

Which would upset or distress you more?

- (A) Imagining your partner having sexual intercourse for just one night with another person, with no chance or any further involvement
- (B) Imagining your partner becoming emotionally involved with another person, with no chance of any sexual involvement

Appendix D.

Behavioral Responses to Infidelity Scale

Please imagine either your current romantic relationship, a past romantic relationship, or a romantic relationship you would like to be in some day. Imagine the following scenario occurs during the course of this relationship.

Emotional

Imagine your partner is surfing facebook one day and comes across the profile of a man/woman he/she used be friends with in high school. Your partner and this individual begin communicating on a regular basis. The emails are innocent enough but quickly they start focus on more personal matters. Eventually, she/he feels the need to speak directly to this person and starts engaging in a series of late night phone calls where she/he shares her/his most intimate feelings and thoughts. After a few months, your partner comes to you and confesses he/she has been in contact with this person. He/she tells you that the relationship is purely emotional and that this person understands him/her in a way no one else seems to, and that he/she feels extremely connected to this person.

Physical

Imagine your partner is at a bar after work and happens to meet a man/woman that he/she used to be friends with in high school. Your partner and this individual decide to have a drink together. During the course of the evening he/she begins to flirt with the other person and asks her/him for a dance. Eventually, she/he feels an irresistible sexual attraction for this person and after few more dances she/he heads up to the former classmate's apartment and have sex. After a few months, your partner comes to you and confesses he/she has had sexual relations with this person. He/she tells you that the relationship is purely physical and that the person is beautiful and that he/she is extremely sexually attracted to this person.

Pleas indicate how likely you would be to engage in each of the following behaviors in response to the above situation

Terminate your current relationship

Not likely **very likely**

1 2 3 4 5 6 7

Create online dating profile

Not likely **very likely**

1 2 3 4 5 6 7

Call up former lover

Not likely **very likely**

1 2 3 4 5 6 7

Go on a date with another person

Not likely **very likely**

1 2 3 4 5 6 7

Start checking up on your partner's location throughout the day

Not likely **very likely**

1 2 3 4 5 6 7

Encourage your partner to spend most of his/her time with you

Not likely **very likely**

1 2 3 4 5 6 7

Engage in actions intended to make partner jealous

Not likely **very likely**

1 2 3 4 5 6 7

Make your partner feel guilty

Not likely **very likely**

1 2 3 4 5 6 7

Put down potential rivals in front of your partner

Not likely **very likely**

1 2 3 4 5 6 7

Threaten potential rivals to stay away from your partner

Not likely **very likely**

1 2 3 4 5 6 7

Hit or engage in other violent actions against potential rivals

Not likely **very likely**

1 2 3 4 5 6 7

Entice partner with frequent sex

Not likely **very likely**

1 2 3 4 5 6 7

Put additional effort into physical appearance

Not likely **very likely**

1 2 3 4 5 6 7

Act in loving way towards partner

Not likely **very likely**
1 2 3 4 5 6 7

Offer to change in order to keep partner

Not likely **very likely**
1 2 3 4 5 6 7

Ask your partner to go to couples therapist with you

Not likely **very likely**
1 2 3 4 5 6 7

Talk through the issues that lead to this infidelity with your partner

Not likely **very likely**
1 2 3 4 5 6 7

Appendix E.

Demographic Information

Gender: Male Female

Age: _____

Approximate annual income (family income if dependent): \$ _____

Sexual orientation (Please circle one):

Heterosexual Homosexual Bisexual

Race/Ethnicity (Please circle one):

Asian Black or African American Hispanic or Latino White

Appendix F.

Relationship History Questionnaire

Are you currently in a romantic relationship? Yes No

How many previous romantic relationships have you been in? _____

How many of these relationships have lasted for 6 months or longer? _____

About how many casual dates have you been on in the past year?

Please provide a brief description of your last 4 significant relationships by filling out the following (please include current relationship)

Relationship A.

Are you currently in this relationship: Yes No

How long did this relationship last? _____

Did this person ever engage in infidelity during this relationship: Yes No

If so, how many times? _____

Did you ever engage in infidelity during this relationship: Yes No

If so, how many times? _____

Relationship B.

Are you currently in this relationship: Yes No

How long did this relationship last? _____

Did this person ever engage in infidelity during this relationship: Yes No

If so, how many times? _____

Did you ever engage in infidelity during this relationship: Yes No

If so, how many times? _____

Relationship C.

Are you currently in this relationship: Yes No

How long did this relationship last? _____

Did this person ever engage in infidelity during this relationship: Yes No

If so, how many times? _____

Did you ever engage in infidelity during this relationship: Yes No

If so, how many times? _____

Relationship D.

Are you currently in this relationship: Yes No

How long did this relationship last? _____

Did this person ever engage in infidelity during this relationship: Yes No

If so, how many times? _____

Did you ever engage in infidelity during this relationship: Yes No

If so, how many times? _____

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