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Distress in Response to Infidelity: An Examination of the Evolutionary Perspective

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Thesis Proposal

Ninety-nine percent of married persons surveyed expect their spouse to be faithful after they are married, and 99% assume their partner expects sexual exclusivity of them (Treas & Giesen, 2000). Despite these expectations, the actual occurrence of marital infidelity is much higher (e.g., Feldman & Cauffman, 1999). According to a survey of over 1000 Americans, done by the National Opinion Research Center in 1991, eleven percent of the female respondents and 21% of the males surveyed admitted to engaging in extramarital sex (Greeley, 1994). Thus, marital infidelity is a perplexing phenomenon and research indicates that this is also true for other types of infidelity, such as infidelity occurring in dating relationships.

One of the major issues in infidelity research is sex differences, including the examination of sex differences in jealous responses (or distress) to emotional and sexual infidelity. Some researchers (e.g., Buss, Shackelford, Kirkpatrick, Choe, Lim, Hasegawa, Hasegawa & Bennett, 1999; Abraham, Cramer, Fernandez and Mahler, 2001; Cramer, Manning-Ryan, Johnson & Barbo, 2000) have found that men show more distress toward sexual infidelity, while females show more distress toward emotional infidelity. These results have been used to support the evolutionary theory. Other researchers (Harris, 1996, 2000, 2002, 2003; DeSteno & Salovey, 1996; DeSteno, Bartlett, Braverman & Salovey, 2002) who have studied gender differences in response to sexual and emotional infidelity argue against an evolutionary interpretation of sex differences. They suggest other explanations for sex differences such as socialization, the double-shot hypothesis, and faulty measurement.

The purpose of this study is to examine gender differences in distress in response to sexual and emotional infidelity, and to challenge the interpretation that gender

differences exist and are a result of gender-specific evolutionary mechanisms. It is important to know if there are such differences for theoretical reasons, in particular, testing the evolutionary perspective, as well as practical implications, such as determining whether stereotypes of gender differences in infidelity are accurate or not.

Definition of Infidelity

According to Drigotas and Barta (2001), infidelity is defined as “a partner’s violation of norms regulating the level of emotional or physical intimacy with people outside the relationship” (p. 177). Infidelity can be sexual, emotional, or both. *Sexual infidelity* is any behavior that involves sexual contact, such as kissing, intimate touching, oral sex, or sexual intercourse. *Emotional infidelity* involves the formation of a emotional attachment to or affection for another person, and can involve such behaviors as flirting, dating, intimate conversations, or falling in love.

Infidelity can occur in a marital, cohabitating or dating relationship and is therefore more generally referred to as extradyadic involvement (e.g., Thompson, 1983). Some of the domains that sex differences in infidelity have been studied in include: the occurrence of infidelity behavior in a relationship, the attitudes toward infidelity in a relationship, the emotional impact of infidelity on a relationship, justifications of infidelity, and gender differences in response to infidelity.

Evolutionary Theory

Evolutionary theory, also referred to as Jealousy as a Specific Innate Module or JSIM (Harris, 1996), has guided a great deal of research regarding sex differences in emotional reactions to a partner’s infidelity. The evolutionary perspective specifies that men and women are similar in all domains except the ones in which they have faced

different adaptive problems throughout human evolutionary history. Buss (1995) and other evolutionary psychologists argue that men and women differ in their responses to infidelity in ways that have resulted from different adaptations to different reproductive problems. The evolutionary perspective does not dispute that both forms of infidelity, emotional and sexual, are disturbing to both sexes. Instead, evolutionary perspective argues that “men and women put different ‘emotional weighting’ on the different aspects of infidelity” (Buss et al., 1999, p.126). Men should be more distressed over acts of sexual infidelity, because men have faced the adaptive problem of uncertain paternity. Men run the risk of investing resources in a child who is not his. Therefore, if a man senses that his partner is being sexually unfaithful, it triggers an “alarm” and evokes sexual jealousy.

Women, on the other hand, are certain of maternity, making their concern of a different nature. A woman’s adaptive problem is finding a father who is willing and able to invest his resources in a child for the long term. According to evolutionary theory, this is why emotional infidelity is more upsetting to a woman than sexual infidelity. If she finds that the father of her child is emotionally involved with another woman, it is a potential threat that he will begin to invest his resources in the new relationship. This signals an “alarm” of a different nature in the woman-- emotional jealousy.

There is a great deal of evidence supporting this perspective (c.f. Buss, Larsen, Westen & Semmelroth,1992; Buss, Shackelford, Kirkpatrick, Choe, Lim, Hasegawa et al., 1999; Buunk, Angleitner, Oubaid, & Buss,1996). A majority of the support for the evolutionary perspective involves studies using a forced choice, hypothetical scenario created by Buss et al. (1992). Participants are instructed to think of a serious committed

romantic relationship that they have had in the past, that they currently have, or that they would like to have. They are then asked to indicate which would cause them more distress: imagining their partner forming a deep emotional attachment to another person, or imagining their partner enjoying passionate sexual intercourse with another person. In selecting the choice that is the most distressing, results generally show that women are more distressed than men at the thought of their partner becoming emotionally involved with another, while men are more distressed than women at the prospect of their partner becoming sexually involved.

Harris (2003) conducted a meta-analysis on sex differences in emotional responses to infidelity. The meta-analysis included 32 independent samples using the forced-choice hypothetical method. Harris found an effect size of 1.00 (log-odds ratio), typically interpreted as moderate effect size (Harris, 2003). Men were more likely to report that sexual infidelity would distress them more than emotional infidelity, while women were more likely to report that emotional infidelity would distress them more than sexual infidelity.

Another meta-analysis of sex differences in distress in response to infidelity was conducted by Dreznick (2003), utilizing 37 studies. Similar to Harris, Hedges found a moderate effect size, $d = +.49$. A higher proportion of men were more distressed by sexual infidelity than emotional infidelity, and a higher proportion of women were more distressed over emotional infidelity than sexual infidelity.

As a follow-up, Dreznick examined a sub-set of studies that studied jealousy in response to sexual infidelity separately from jealousy in response to emotional infidelity. The effect size for gender differences in distress in response to sexual infidelity was d

$d=.10$ ($k=16$), men were slightly more distressed by sexual infidelity than women. Gender differences in distress in response to emotional infidelity was $d=.45$ ($k=10$), women were moderately more distressed by emotional infidelity than men. A significant difference was found between these two effect sizes. Dreznick concluded that the results for sexual jealousy do not strongly support the evolutionary hypothesis as there was only a small gender difference. However, he argued that the moderate effect size for emotional jealousy provides more support for the evolutionary hypothesis.

Dreznick (2003) suggests that there may be an alternative explanation to evolutionary theory, such as a difference in beliefs of what constitutes infidelity. If men do not perceive emotional infidelity to be infidelity, then they would not be particularly jealous in response to a partner's emotional infidelity. This may explain why the results to Dreznick's study showed a larger effect size in distress in response to emotional infidelity, as opposed to a (small effect size) significant difference between the sexes in response to sexual infidelity.

Although the two meta-analyses provide moderate support for evolutionary theory, many researchers have questioned whether the hypothetical forced choice method is a valid measure of sex differences in responses to infidelity. Some scholars argue that sex differences may be a result of the hypothetical forced-choice question (e.g. DeSteno & Salovey, 1996, 2002; Harris, 1996, 2002, 2003)

The first concern regarding the forced-choice hypothetical measure is the hypothetical nature of the question. Participants are not asked how they responded to an actual instance of infidelity. Instead they are asked to imagine how they would respond to infidelity. Some of the participants may have experienced infidelity and may be able

to answer this question. Others may not have experienced infidelity and may not be able to validly answer this question.

A few studies have tested a participant's actual experience with distress in response to infidelity. In two studies (Harris, 2002; 2003) of responses to actual infidelity, men and women showed no difference in the degree to which they were distressed by emotional vs. sexual infidelity. Furthermore, both males and females reported focusing slightly more on emotional than sexual aspects of their partner's infidelity.

A second concern regarding the forced-choice hypothetical method is the issue of forced-choice. Participants are forced to choose what would distress them more, sexual or emotional infidelity. This type of measurement does not allow the participant to specify the level of their distress or express an equal distress to sexual and emotional infidelity. If an individual indicates that he/she is more distressed by sexual vs. emotional infidelity, we do not know how distressed he/she was over sexual and emotional infidelity nor do we know how much more distressed he/she was over sexual than emotional infidelity. If the evolutionary perspective is valid, a sex difference in response to infidelity should be apparent when continuous measures of emotional distress are used and men should be much more distressed by sexual than emotional infidelity and women should be much more distressed by emotional than sexual infidelity.

A study conducted by DeSteno, Bartlett, Braverman and Salovey (2002) tested evolutionary perspective on emotional responses to infidelity using multiple instruments and levels of measurement, including the forced-choice method, continuous measures of distress scales (e.g., participants indicate on a scale of 1 to 7 the degree to which they

would experience various jealous feeling states, such as angry, jealous, calm, threatened; participants presented with statements to which they respond using a 7 point scale indicating how strongly they agree/disagree with the statement) and checklist measures (e.g., participants were asked to put a check next to each of the adjectives that described how they would feel) to determine if the results found using the forced-choice method generalize across alternative response formats or whether sex differences are an artifact of the forced-choice measure.

When all measures (forced-choice, likert scales and checklists) were employed using the same sample of individuals, sex differences consistent with the evolutionary theory were found when the forced-choice measures were used. However, sex differences did not emerge on the continuous-scale and checklist measures. In fact, they found that both men and women reported more negative feelings in response to sexual infidelity than emotional infidelity. The results of this study demonstrate that support for the evolutionary perspective appears to be limited to using a forced-choice measure.

Another problem with the results of the studies using forced choice method is that the results from some of these studies indicate that both male and female participants were distressed more by emotional, rather than sexual infidelity or they showed that only a slightly larger percentage of men were more upset by sexual infidelity than emotional infidelity. These studies showed men were close to equally split (50/50) between which would bother them more, sexual or emotional infidelity, while there was a much larger discrepancy between the number of women who were more distressed by sexual infidelity and the number of women who were more upset by emotional infidelity (Harris and Christenfeld, 1996; Hupka and Bank, 1996; DeSteno & Salovey, 1996). For

example, DeSteno and Salovey (1996) found that 75% of women selected emotional infidelity as more distressing, and 25% of women selected sexual infidelity, while 49% of men selected emotional infidelity, and 51% of men selected sexual infidelity. Even in the Buss et al. (1992) original study, 49% of men said they would be more distressed by sexual infidelity and 51% of men by emotional infidelity, while 19% of women reported that they would be more distressed by their partner's sexual infidelity and 81% of the women reported they would be more distressed over emotional involvement. These results are not explained by evolutionary theory. As Hupka and Bank (1996) argue, *most* men should become upset over the sexual infidelity and *most* women over the emotional infidelity for evolutionary perspective to be supported.

A final critique of the evolutionary explanation of differences between men and women is the attribution of differences to sex instead of gender. Because sex cannot be randomly assigned (DeSteno & Salovey, 1996), there may be other variables related to sex that cause these differences, specifically nongenetic variables correlated with sex, such as socialization, men's and women's interpretations of sexual and emotional jealousy, or the double-shot hypothesis, which will be discussed in the next section.

In sum, there is evidence that suggests that there are sex differences in responses to infidelity. Some researchers argue that this evidence supports an evolutionary perspective. However, these results were found using only forced-choice, hypothetical measures of emotional responses to infidelity. When other measures (actual vs. hypothetical infidelity and continuous measures versus forced choice) were used to test sex differences in emotional responses to infidelity, results did not support the evolutionary perspective. Therefore, sex differences in emotional response to infidelity

may be a result of measurement rather than actual differences between men and women.

Thus, we propose the following hypothesis and research questions:

H₁: Men are more distressed by sexual infidelity, and women are more distressed by emotional infidelity when using the forced-choice hypothetical method to measure emotional responses to infidelity.

RQ₁: Are there sex differences in emotional responses to sexual and emotional infidelity when participants respond to actual (vs. hypothetical) instances of infidelity?

RQ₂: Are there sex differences in emotional responses to sexual and emotional infidelity when continuous vs. forced-choice measures are used to measure emotional responses to sexual and emotional infidelity?

Double-shot Hypothesis

Sex differences in response to infidelity have, for the most part, been studied using an evolutionary lens and the resulting differences have been attributed to evolutionary adaptation. However, some scholars argue that if sex differences in responses to infidelity are in fact present, they don't necessarily stem from evolutionary differences. They can be explained using a rival hypothesis, the double-shot hypothesis. The double-shot hypothesis states that participants are most distressed by the infidelity, sexual or emotional, that most clearly implies that the other infidelity, sexual or emotional, is also occurring. Thus, an individual may be more distressed by emotional infidelity than sexual infidelity because she/he assumes that if there has been emotional

infidelity there has also been sexual infidelity but does not assume that there has been emotional infidelity if there has been sexual infidelity.

The typical results found on the forced-choice hypothetical tests, may be explained from a socialization standpoint (DeSteno & Salovey, 1996). Men are thought to be capable of sex without emotional involvement, while women typically are not. Because of this assumption, when given the choice between their partner's commission of sexual or emotional infidelity, men will choose sexual infidelity as more distressing than emotional infidelity because they assume that it is likely that if a woman is having sex, she must also be emotionally involved. In this case, men will choose sexual infidelity as more distressing because it implies that both sexual and emotional infidelity are occurring. Conversely, women assume that because men are able to have "meaningless sex" without emotional attachment, a man's emotional infidelity is more distressing because it implies that he is sexually and emotionally involved. This would prompt a woman to be more distressed by emotional than sexual infidelity (Harris & Christenfeld, 1996).

Several scholars have tested this alternative perspective and evidence has emerged to support some predictions (Cramer et al., 2002; DeSteno & Salovey, 1996; Dijkstra et al., 2001; Harris & Christenfeld, 1996). Participants were given scenarios in which they are asked to imagine either their partner falling in love with someone else, or imagining their partner having sex with someone else. They were instructed to indicate how likely one form of infidelity implied that the other form of infidelity was occurring. Results support the double-shot hypothesis; women responded that emotional infidelity implies sexual infidelity more than sexual infidelity implied emotional infidelity, while men

responded that sexual infidelity implied emotional infidelity more so than emotional infidelity implied sexual infidelity (DeSteno & Salovey, 1996; Harris & Christenfeld, 1996). Contrary to the above studies, Cramer et al. (2002) found that neither men nor women reported that sexual or emotional infidelity implied the co-occurrence of the other type of infidelity. Although men responded that sexual infidelity also implied emotional infidelity, the mean difference was not statistically significant, $t(29) = -1.50, p > .05$. Although the women's mean was marginally significant, $t(34) = -1.97, p < .06$, women inferred that sexual infidelity implied emotional infidelity, which was not consistent with the prediction of the double-shot hypothesis (women were hypothesized to have inferred that emotional infidelity implies sexual infidelity).

In another study, Buss et al. (1999) set up the scenarios so that each form of infidelity was mutually exclusive (partner engaged in sexual or emotional infidelity but not both). The results showed a larger percentage of men than women reported greater distress in response to sexual infidelity (when there was no emotional involvement) relative to distress in response to imagining their partner engaging in emotional infidelity (with no sexual involvement).

In a successive test, Buss et al. (1999) gave participants scenarios in which it was clear that both sexual and emotional infidelity were co-occurring, and asked which bothered them most, the sexual or emotional infidelity. He found further support for the evolutionary perspective, with 61% of the men, but only 13% of the women, reporting greater distress to the sexual aspect of the infidelity, while 39% of men and 87% of women were more distressed with the emotional aspect of the infidelity. Buss et al.

(1999) contends that “Based on the cumulative weight of the evidence....the evolutionary account of jealousy appears to be in good scientific standing” (p. 149).

To further test the validity of the double shot hypothesis as a rival hypothesis to evolutionary theory for sex differences in emotional responses to jealousy the following research questions were asked:

RQ₁: Will men report that a partner’s sexual infidelity implies that co-occurrence of emotional infidelity more so than the reverse, and will women report that a partner’s emotional infidelity implies the co-occurrence of sexual infidelity more so than the reverse?

RQ₂: When participants have had actual experience with a partner engaging in both sexual and emotional infidelity (co-occurring), will men be more upset by the sexual infidelity and women more upset by the emotional infidelity?

Method

Participants

(Number) undergraduate students at an urban Midwestern university (xx men, xx women; $M_{age} = xx$, $SD_{age} = xx$ years) participated in this study. The sample included (number) heterosexual participants, (number) homosexual participants, and (number) bisexual participants. (Number) of the participants were married, (number) single, (number) divorced, and (number) widowed. The ethnicity of the sample included (number) Caucasian, (number) African-American, (number) Asian, (number) Hispanic, and (number) other.

Procedures

Participants for the study were solicited in introductory communication courses. Students received extra credit for participating in the study. They were given the Relationship Infidelity Survey and a scantron during class and were told answer the survey outside class on the scantron using a Number 2 pencil and return it within two weeks. Upon completion, the participants returned the survey and consent form with their signature to the teacher, and the anonymous scantron sheets with were put into an envelope and returned to the experimenters.

Measures

The survey measured the hypothetical reactions to infidelity, commission of infidelity, justifications for infidelity, approval of infidelity, and perceptions of the behaviors that constitute infidelity. A copy of the survey is included in the Appendix.

Definition of Infidelity

Participants were presented with several sexual (kissing, fondling, oral sex, sexual intercourse) and emotional (flirting, dating/spending time together, intimate conversations/sharing intimate secrets behaviors, and falling in love) behaviors and asked to identify whether they believe that they are acts of infidelity

Partner's Infidelity

Participants were asked whether they have ever had a partner commit infidelity and if so the type of infidelity (sexual, emotional, sexual and emotional) the partner engaged in, the specific sexual (kissing, fondling, oral sex, intercourse) and emotional (flirting, dating/spending time together, intimate conversations/sharing intimate secrets, and falling in love) behaviors that occurred, and how upset they were over the type of

infidelity that occurred (1= *not at all upset*, 5= *extremely upset*). Additionally, following Harris (date) participants that reported their partner's infidelity as being both sexual and emotional were asked a series of questions assessing the degree to which they focused on the sexual aspects of their partner's infidelity and the emotional aspects of their partner's infidelity measured on a 5-point scale (1= *not at all focused*, 5= *very focused*), along with the following question from Buss et al. (1992): Which were you more upset over?

Thinking of your partner forming a deep emotional attachment with the other person.

Thinking of your partner enjoying passionate sexual intercourse with the other person.

We added the following option. I was equally distressed by both.

Participants were also asked questions regarding the circumstances of their partner's infidelity including questions about the type and length of the relationship with their partner the length of the affair, the amount of time that has passed since the infidelity, the classification of the relationship at the time of the affair, participants relationship with the person their partner cheated on them with, and whether the affair occurred in a current or past relationship. Those that were referring to a past relationship were asked additional questions regarding whether the relationship was terminated due to the infidelity and who terminated the relationship.

Participant Infidelity

Participants were asked whether they had even engaged in infidelity? And if so, to identify the type of infidelity they committed (sexual, emotional, both), and the specific sexual and emotional behaviors they committed. They were asked the reason they committed infidelity (sexual dissatisfaction, emotional dissatisfaction, both sexual and emotional dissatisfaction, or other). They also reported if and how their partner found out

about their infidelity and whether they had admitted or denied their infidelity if confronted by their partner. The same questions asked about the circumstances of the partner's infidelity were also asked about the participant's infidelity with the exception of the relationship the participant had with the person they cheated on their partner with.

Approval of Infidelity

Using a 5-point scale (1= *not at all acceptable*, 5= *very acceptable*) participants were asked to respond to a series of questions regarding their approval of infidelity. The following questions were asked twice, once referring to a man and once referring to a woman: How acceptable is it for a man (woman) to engage in sexual infidelity? How acceptable is it for a man (woman) to engage in emotional infidelity? Two additional questions were asked regarding the acceptability of sexual and emotional dissatisfaction as reasons for engaging in infidelity for men and women.

Hypothetical Reactions to Infidelity

Participants' reactions to hypothetical infidelity were assessed using the measure established by Buss et al. (1992). Participants were asked to think of a serious romantic relationship they've had in the past, currently have, or would like to have and imagine that they discover that their partner has become interested in someone else. Then they were asked what would upset them more? (1) Imagining your partner forming a deep emotional attachment to that other person? (2) Imagining your partner enjoying passionate sexual intercourse with that other person.

Participants were also asked to answer a question from the revised version of this measure (Buss et al., 1992). They were instructed to imagine that they discover that their partner has become interested in someone else. Then they were asked what would upset

them more? (1) Imagining your partner trying different sexual positions with that other person. (2) Imagining your partner falling in love with that other person.

The final measure of hypothetical infidelity included questions adapted by Harris (2004)

from the original version of Weideman & Allgeier, (1993). The questions were:

You suspect that while your boyfriend/girlfriend was on vacation s/he had a one-night stand. You realize that even if s/he did have sex with this other person, they will probably never see each other again. How upset do you think you would feel if this happened?

2. You suspect that while your boyfriend/girlfriend was on a trip s/he fell in love with someone else. You realize that even if s/he did develop these feelings, s/he will probably never see this other person again. How upset do you think you would feel if this happened? These questions were answered using a 5-point scale anchored with the words *not at all upset* (1) and *extremely upset* (5).

Logical Inference Explanation

Using a 5-point scale anchored with the words *not at all likely* (1) and *very likely* (5) participants were asked to answer the following questions: If your partner formed a deep emotional attachment to someone of your gender, how likely is it that your partner and this person are now, or soon will be, sleeping together? If your partner has slept with someone of your gender, how likely is it that your partner has formed, or soon will form, a deep emotional attachment to that person?

Demographics

At the end of the survey, participants were asked to identify their gender, age, sexual orientation, ethnicity, and marital status.

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