

Are Sexual and Emotional Infidelity Equally Upsetting to Men and Women? Making Sense of Forced-Choice Responses

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Abstract: Forced-choice measures that assess reactions to imagined sexual and emotional infidelity are ubiquitous in studies testing the Jealousy as a Specific Innate Module (JSIM) model. One potential problem with such measures is that they fail to identify respondents who find both forms of infidelity equally upsetting. To examine this issue, an experiment was conducted in which two groups of participants imagined a romantic infidelity after which participants in the first group used a traditional forced-choice measure to indicate whether they found sexual or emotional infidelity more upsetting. Participants in the second group instead used a modified forced-choice measure that allowed them also to indicate whether they found both forms of infidelity equally upsetting. Consistent with previous research, those given the traditional forced-choice measure tended to respond in a manner that supported the JSIM model. However, the majority of participants given the modified measure indicated that both forms of infidelity were equally upsetting.

Keywords: Infidelity, Sex Differences, JSIM Model, Jealousy, Romantic Relationships

Introduction

Relationship researchers have become increasingly interested in evolutionary approaches to understanding human experience and behavior (Barkow, Cosmides, and Tooby, 1992; Buss, 1995). In the domain of romantic relationships, such approaches have generated a great deal of research and debate regarding the evolutionary function of romantic jealousy (Buss et al., 1999; DeSteno and Salovey, 1996; Harris, 2000, 2003; Sagarin, 2005). One of the more influential but controversial views of romantic jealousy is provided by the Jealousy as Specific Innate Module (JSIM) model, which claims that men and women differ in their relative sensitivity to emotional versus sexual relationship threats. According to the model, women should experience greater jealousy in response to their partner's emotional infidelity than should men, who in turn should experience greater

jealousy in response to their partner's sexual infidelity than should women (Barrett, Frederick, Haselton, and Kurzban, 2006; Buss and Haselton, 2005).

The JSIM Model

The JSIM model proposes that sex differences in jealousy reactions arise from sexually dimorphic jealousy modules that have evolved as a consequence of distinct reproductive pressures that have faced men and women (Buss, Larsen, Westen, and Semmelroth, 1992). Women face potential resource loss for their offspring to female rivals when their partner engages in emotional infidelity, whereas men face paternity uncertainty when their partner engages in sexual infidelity. To the extent that romantic jealousy motivates successful avoidance of resource loss to rivals in women and successful avoidance of paternity uncertainty in men, natural selection would favor the emergence of sex differences in the relative emotional sensitivity to sexual and emotional infidelity.

Different Interpretations of the Model

Theorists agree that the JSIM model predicts gender differences in reactions to romantic infidelity, but questions of interpretation have emerged at various times in the literature. For example, some claim that the model predicts a cross-over gender difference in reactions to sexual and emotional infidelity such that women should be more upset by emotional infidelity than sexual infidelity whereas the opposite should hold for men (Harris, 2003, Sabini and Green, 2004). Although this interpretation of the model appears to be implied by the earlier writings of proponents of the JSIM model (Buss et al., 1992), Buss and Haselton (2005) clarify that the model predicts only simple gender differences. Specifically, they note that the model predicts that women should be more upset than men about emotional infidelity, whereas men should be more upset than women about sexual infidelity.

The Forced-Choice Paradigm

The most common assessment technique for testing the JSIM model is to employ a forced-choice response paradigm that asks respondents to indicate whether they find imagined sexual or imagined emotional infidelity more upsetting (Buss et al. 1992; Buss et al., 1999; Buunk, Angleitner, Oubaid, and Buss, 1996; also see Harris, 2003 for a review). In the forced-choice paradigm, male and female participants typically are asked to imagine that a romantic partner has become interested in someone else and then indicate whether a scenario describing sexual infidelity or a scenario describing emotional infidelity is more upsetting.

In the most comprehensive review to date, Harris (2003) reveals that as of 2003, 42 studies using the forced-choice paradigm have found evidence of gender differences in reactions to sexual and emotional infidelity. Of these, 16 report cross-over gender effects and 26 report simple gender effects in the direction predicted by the JSIM model. In those studies that found a simple gender effect, a consistent pattern emerged: although the majority of both men and women perceived emotional infidelity as more upsetting than sexual infidelity, women were more likely than men to indicate this response.

Alternatives to the Forced-Choice Paradigm

Despite support for the JSIM model from studies using the forced-choice paradigm,

empirical criticisms of the model exist. For example, reviews by Harris (2003) and Sagarin (2005) reveal that with the exception of a few studies (e.g., Pietrzak, Laird, Stevens, and Thompson, 2002), those that employed continuous self-report measures of romantic jealousy found no evidence of sex differences in reactions to sexual and emotional infidelity (for recent examples, also see DeSteno and Salovey, 1996; Green and Sabini, 2006; Sabini and Green, 2004). Harris (2003) also argues that sex differences in response to sexual and emotional infidelity fail to emerge or are inconsistent across studies when self-reported responses to actual instances of infidelity are measured, rates of actual jealousy-inspired aggressive behavior and cases of morbid jealousy are examined, or physiological reactions to imagined infidelity are assessed.

Advantages of the Forced-Choice Paradigm

Although multiple sources of evidence contradict the conclusions suggested by forced-choice measures, these sources also suffer from their own conceptual and methodological pitfalls. First, despite providing evidence that is inconsistent with the model, jealousy-inspired aggression rates and morbid jealousy rates may reflect behavior that is largely atypical of most individuals. Findings from studies that used the forced-choice measure are unlikely to suffer from this problem because they assess reactions that are typical of most individuals. Second, as Harris (2005) points out, it is unclear what psychophysiological measures actually reflect in tests of the JSIM model. As such, interpreting studies that use physiological measures is difficult. Third, Buss (1994) argues that both forms of infidelity are highly upsetting to men and women. Consequently, ceiling effects may occur when continuous measures are used, which will tend to obscure sex differences in distress over sexual and emotional infidelity (however, see Sagarin and Guadagno, 2004, for an approach that may reduce ceiling effects). This problem is avoided when using a forced-choice measure.

Regardless of whether one believes that the strengths of the forced-choice paradigm outweigh the limitations relative to alternative measurement approaches, forced-choice measures are found throughout the literature. Furthermore, they continue to be popular comparison measures in studies that also employ more sophisticated assessment techniques to gauge reactions to romantic infidelity (e.g., Schützwohl, 2008a, 2008b) and studies that examine moderators of sex differences in reactions to romantic infidelity (e.g., Sagarin, Becker, Guadagno, Nicastle, and Millevoi, 2003). Consequently, the forced-choice paradigm remains an important and useful methodological approach in testing evolutionary psychology perspectives of romantic jealousy.

An Unrecognized Limitation?

Despite its empirical utility and ubiquity, however, the forced-choice paradigm does pose a potential, yet unrecognized, methodological limitation. A forced-choice response format allows respondents to clearly indicate which form of infidelity is relatively more upsetting, but its structure poses a challenge to respondents who may perceive both forms of infidelity as equally upsetting. When faced with the traditional forced-choice options, those who find both forms of infidelity equally upsetting may respond in a random manner. This possibility suggests an important implication: individuals whose jealousy reactions to emotional and sexual infidelity are equally weighted cannot be distinguished from individuals whose jealousy reactions are weighted more heavily toward one type or the

other. Consequently, failure to distinguish between these groups of individuals may artificially obscure responses that are consistent (or inconsistent) with the JSIM model.

The Present Research

The purpose of the present research was to provide greater methodological insight into the meaning of forced-choice responses in tests of the JSIM model. Specifically, the present research was designed to assess the extent (if any) to which men and women find imagined sexual and emotional infidelity equally upsetting by modifying the forced-choice measure used in previous research. In the experiment reported below, the forced-choice measure was modified by including a third option that participants could select if they found both sexual and emotional infidelity equally upsetting. The responses of participants who used this modified forced-choice format were then compared to those of participants who used a traditional forced-choice format.

Materials and Methods

Participants

Participants were 194 college undergraduate students (128 women, 66 men) enrolled in psychology courses at the University of Wisconsin Oshkosh who received partial course credit for taking part in the study. Participants were randomly assigned to either a *traditional* forced-choice format condition (64 women, 32 men) or a *modified* forced-choice format condition (64 women, 34 men).

Procedure

Participants were run in groups of 30 to 40. Upon arrival to the study, each participant received a coded envelope that included instructions and a questionnaire. To ensure anonymity, participants were asked not to indicate their identity on the questionnaire and were instructed to place the questionnaire back in the folder when finished.

The instructions on the questionnaire asked participants to do the following:

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.

On the following page, they were asked "which would distress or upset you more about the situation? (Please choose only one; mark an **X** by your choice)." Consistent with previous use of the forced-choice paradigm, participants in the traditional-format condition were presented with two options: "Imagining your partner exploring various sexual positions with that other person" or "Imagining your partner falling in love with that person." The order in which these two options were presented was counterbalanced. Participants in the modified-format condition were also presented with these two options (counterbalanced) but, unlike those in the traditional-format condition, received an additional option: "Both of the above options would upset me equally."

After returning their materials to the experimenter, participants were provided with a written debriefing that explained the purpose of the study and were thanked for their

participation.

Results

Because the response format of the forced choice option differed by experimental condition, the data were analyzed separately by format condition. The percentages of men and women choosing sexual or emotional infidelity in the traditional format condition are presented in the left half of Table 1. In the traditional format condition, 44% of the men reported that sexual infidelity was more upsetting than emotional infidelity, whereas only 27% of the women reported sexual infidelity was more upsetting than emotional infidelity, $\chi^2(1, n = 96) = 2.88, p = .09, \phi = .17$. Within-gender analyses revealed that this pattern was produced by a higher percentage of women indicating that emotional infidelity was more upsetting (73%) than sexual infidelity (27%), $\chi^2(1, n = 64) = 14.06, p < .001$, whereas men showed no statistically significant difference in their infidelity responses, $\chi^2(1, n = 32) = .50, p = .48$. These results are consistent with the JSIM model and much previous research that used a traditional forced-choice format (see Harris, 2003).

Table 1. Percentages of forced-choice infidelity responses by sex and format condition

| Sex | Format Condition | | | | |
|--------|------------------------------|-----------|---------------------------|-----------|----------|
| | Traditional (<i>n</i> = 96) | | Modified (<i>n</i> = 98) | | |
| | Sexual | Emotional | Sexual | Emotional | Equal |
| Male | 44% (14) | 56% (18) | 15% (5) | 15% (5) | 70% (24) |
| Female | 27% (17) | 73% (47) | 5% (3) | 33% (21) | 62% (40) |

Note. Frequencies listed in parentheses.

The right half of Table 1 lists the frequencies of men’s and women’s responses in the modified-format condition. A 2 (sex) x 3 (option) chi-square test of independence revealed a marginally significant association between the sex of respondents and the option they chose, $\chi^2(2, n = 98) = 5.70, p = .06, v = .24$. Sixty-five percent of the participants (62% of women and 70% of men) indicated that both sexual infidelity and emotional infidelity were equally upsetting. The responses of the remaining 35% of participants patterned similarly to those of the participants in the traditional-format condition: Fifty percent of the men and 13% of the women in this subset reported that sexual infidelity was more upsetting than emotional infidelity, $\chi^2(1, n = 34) = 5.52, p = .02$ (Fisher’s exact probability = .031), $\phi = .40$. Within-gender analyses among participants in this subset revealed that this pattern was produced by a higher percentage of women indicating that emotional infidelity was more upsetting (88%) than sexual infidelity (12%), $\chi^2(1, n = 24) = 13.50, p < .001$, whereas men showed no difference in their infidelity selection. Thus, among those in the modified format condition who found one form of infidelity more upsetting, the pattern of

responses was similar to the pattern found among those in the traditional format condition. In fact, not only was the pattern of responses similar, but the effect was larger ($\phi = .40$ vs. $\phi = .17$) and the result of the hypothesis test was stronger ($\chi^2 = 5.52, p = .02$ vs. $\chi^2 = 2.88, p = .09$) even though this subset of participants in the modified format condition was nearly one-third the size of the sample in the traditional format condition.

Two possibilities exist for why the gender difference appears stronger among those in the modified format condition who found one form of infidelity more upsetting than among those in the traditional format condition. First, providing respondents with the third, “equally upsetting” option may alter the perception of which type of infidelity is more upsetting (we thank an anonymous reviewer for suggesting this possibility). The second possibility, proposed earlier, is that those in the traditional format condition who actually perceive both forms of infidelity equally upsetting respond in a random manner when given only two response options.

Table 2. Percentages of forced-choice infidelity responses by sex and format condition assuming random responding

| | Format Condition | | | |
|--------|--------------------------|-----------|-----------------------|-----------|
| | Traditional ($n = 96$) | | Modified ($n = 98$) | |
| Sex | Sexual | Emotional | Sexual | Emotional |
| Male | 44% (14) | 56% (18) | 15% (17) | 15% (17) |
| Female | 27% (17) | 73% (47) | 5% (23) | 33% (41) |

Note. Frequencies listed in parentheses; frequencies in the modified format condition are based on dividing the frequency of men and women who selected the “equally upsetting” option into the actual frequencies of men and women who selected the other two options.

To discriminate among these two possibilities, we added half the frequency of men and women who selected the third option to the frequencies of men and women who selected each of the other options in the modified format condition (see Table 2). If the pattern of responses in the traditional format condition occurs in part from some participants responding in a random manner, then this procedure should yield statistically indistinguishable responses between the traditional and modified format conditions (i.e., no association between format condition and the option selected by men and women). However, if including a third option alters respondents’ perceptions of infidelity, then we should find an association between format condition and the option selected by men and women. Consistent with the random responding explanation, a 2 (format condition: traditional vs. modified) x 4 (gender/option selected: female/sexual vs. female/emotional vs. male/sexual vs. male/emotional) Chi-square test of independence was not statistically significant, $\chi^2(3, n = 194) = 1.61, p = .65, v = .09$.

Discussion

The present research reveals that the traditional forced-choice format used to assess relative distress over imagined sexual and emotional infidelity fails to detect those who find both forms of infidelity equally upsetting. However, use of a modified forced-choice measure, which included a “both are equally upsetting” option, was able to detect such individuals. Moreover, in the present sample, such individuals were in the majority among both men and women. These findings suggest that if participants are only given a forced-choice format on which to report which type of infidelity (sexual vs. emotional) is more upsetting, many participants may respond in a random manner.

Implications

It is important to emphasize that the present research was designed to provide a methodological contribution to the literature on sex differences in reactions to romantic infidelity rather than a theoretical contribution. Although the present findings reveal that the majority of sampled men and women report finding both forms of infidelity equally upsetting, responses among those who did report perceiving one form of infidelity more upsetting were consistent with the JSIM model. Of course some may take issue with this conclusion because the proportions of men and women who report finding both forms of infidelity equally upsetting are so high. However, regardless of the theoretical conclusions one draws from the findings, the important point illustrated here is that the traditional forced-choice measure is insensitive in detecting the actual reactions of a subset of respondents. When this subset is small, theoretical interpretation of forced-choice responses is straightforward; when this subset is large, theoretical interpretation may become more uncertain.

One common criticism of the forced-choice measure is that it uses vague affective terms to assess romantic jealousy (e.g., upset, distress) instead of more concrete affective terms (e.g., *jealous*, *angry*). Not only may use of vague terms fail to capture adequately the subtleties of romantic jealousy, but men and women may differ in the perceived meaning communicated by such terms (Sabini and Green, 2004). Furthermore, Harris and Christenfeld (1996) suggest that many people perceive a correlation between sexual and emotional infidelity scenarios (i.e. love implies sex, sex implies love) like those used in the present research. This issue also clouds theoretical interpretation of forced-choice responses, particularly if men and women tend to differ in their perception of this correlation. To address this concern, Buss et al. (1999) report research that uses more concrete scenarios that more clearly separate sexual infidelity from emotional infidelity. Unfortunately, even if one uses a traditional forced choice measure with more concrete affective terms in conjunction with more concrete infidelity scenarios, the problem of random responding illuminated here may still cloud respondents' actual reactions.

The problem of failing to identify those who find both forms of infidelity equally upsetting also is likely to emerge when employing continuous measures of romantic jealousy. In most studies that use continuous measures, participants rate how negatively they would feel after imagining a sexual infidelity scenario and then again after imagining an emotional infidelity scenario (e.g., DeSteno and Salovey, 1996; Green and Sabini, 2006; Pietrzak, Laird et al., 2002; Sabini and Green, 2004). A comparison is made of the means on a given continuous reaction measure after each type of infidelity scenario. If respondents perceive both forms of infidelity equally upsetting, then they may report ratings of equal

magnitude on the continuous measure after imagining each type of infidelity scenario. The present findings suggest that when using continuous measures it may be informative to examine the number of respondents who give equal ratings for each type of infidelity, as it may illuminate the true strength of potential gender effects among those who do react more intensely to one form of infidelity.

Acknowledgements: We thank Phan Hong, Kris Miller, Todd Shackelford, and three anonymous reviewers for helpful comments on an earlier draft.

Received 19 July 2008; Revision submitted 12 November 2008; Accepted 20 November 2008

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