
When the sexes need not differ: Emotional responses to the sexual and emotional aspects of infidelity

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Abstract

This study assessed whether previously reported sex differences in jealousy could be accounted for by other related emotions. Participants were presented with hypothetical scenarios involving both a sexual and an emotional infidelity, then were asked how jealous, angry, hurt, and disgusted they would be (using continuous scales). The results replicate the sex difference in response to sexual and emotional infidelity, demonstrate that it is robust when continuous measures are used, and confirm that it is unique to jealousy. Sex differences did not emerge for anger, hurt, or disgust. Instead, sexual infidelity elicited greater anger and disgust, and less hurt, than emotional infidelity, for both women and men. The results also suggest that it is the jealous response to an emotional infidelity that best discriminates women from men, and that both women and those participants in a serious, committed relationship reported significantly greater intensity in their emotional reactions, as compared to men and those not in a committed relationship.

According to evolutionary theorists, sex differences often stem from the different reproductive challenges faced by men and women (Kenrick, Sadalla, Groth, & Trost, 1990). Because a woman carries the fetus and gives birth to the resulting child, she is assured of the genetic link between herself and the child—an assurance distinctly lacking for her male partner. Daly, Wilson, and Weghorst (1982; see also Symons, 1979) suggested that male sexual jealousy may have arisen as a solution to this problem of parental uncertainty. A woman, in contrast, faces the problem of ensuring paternal investment—ensuring that her mate will invest his resources into the upbringing of her offspring rather than divert-

ing these resources to the offspring of a rival female (see Geary, 2000).

The different reproductive challenges faced by men and women led Buss, Larsen, Westen, & Semmelroth (1992) to hypothesize the existence of a sex difference in response to emotional and sexual infidelity. According to Buss et al. (1992), men will be more likely than women to respond with greater jealousy to a sexual infidelity due to paternal uncertainty, whereas women will be more likely than men to respond with greater jealousy to an emotional infidelity because an emotional bond between her mate and another woman represents a greater threat to paternal investment. Buss et al. reported survey and physiological data supporting the theory. A substantially larger proportion of men than women in their sample reported greater distress in response to a sexual infidelity, and the sex difference replicated using

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physiological measures of electrodermal activity and pulse rate (but see Harris, 2000, for a criticism of this interpretation of Buss et al.'s physiological data). The theory has also received cross-cultural support in samples from China (Geary, Rumsey, Bow-Thomas, & Hoard, 1995), the Netherlands and Germany (Buunk, Angleitner, Oubaid, & Buss, 1996), and Korea and Japan (Buss et al., 1999).

Buss et al.'s (1992) study and much of the work that followed asked participants how upset or distressed they would be in response to sexual or emotional infidelity. As such, the theory-relevance of these studies rests on the assumption that the emotions of upset or distress represent jealousy. The present study seeks to examine the veracity of this assumption by asking participants explicitly to rate—on a continuous scale—how jealous each of the two aspects of an infidelity would make them. Furthermore, because many evolutionary and emotion theorists (e.g., Plutchik, 1980) have argued that jealousy is merely a composite of other emotions, we have also asked about other emotions related to jealousy—anger, hurt, and disgust—to assess whether the jealousy difference can be reduced to these other components.

A small number of past studies have also examined multiple emotional responses to sexual and emotional infidelity. Geary et al. (1995) asked participants from China and the United States how jealous, angry, and hurt they would feel in response to both types of infidelity. However, Geary et al. did not report the results of the participant sex by infidelity type interactions (or the corresponding means for each of the emotions). As a result, it is impossible to determine whether the theory-consistent sex difference emerged for jealousy and if so, whether this sex difference could be explained by the other measured emotions.

Shackelford, LeBlanc, and Drass (2000) sought to assess a comprehensive set of emotional responses to sexual and emotional infidelity. To this end, Shackelford et al. (2000) first had 53 participants list the emotions they might feel in response to each type of infidelity. A total of 103 separate emotions were listed. Then, 655 participants were

instructed “to indicate for each of the 103 emotions the degree to which they would feel that emotion if their partner was: (a) sexually unfaithful but not emotionally unfaithful, and (b) emotionally unfaithful but not sexually unfaithful” (p. 647). A factor analysis yielded 15 factors (undesirable/insecure, hostile/vengeful, depressed, helpless/abandoned, happy, shocked, nauseated/repulsed, blame-worthy, content/relieved, humiliated, sexually aroused, tired, homicidal/suicidal, anxious, and forgiving).

Jealousy, anger, hurt, and disgust (the four emotions assessed in the present study) loaded on the factors of undesirable/insecure, hostile/vengeful, depressed, and nauseated/repulsed, respectively. Significant type of infidelity differences emerged for all four of these factors, with emotional infidelity eliciting stronger reactions than sexual infidelity on the undesirable/insecure and depressed factors, and sexual infidelity eliciting stronger reactions than emotional infidelity on the hostile/vengeful and nauseated/repulsed factors. Interestingly, none of these factors displayed significant participant sex by type of infidelity interactions, including the undesirable/insecure factor that contained jealousy (the means for the jealousy item itself followed a theory-consistent pattern, although a test of the interaction was not provided).

The present study was designed to extend this research in four ways. First, we offer a set of theory-driven predictions for women's and men's responses to sexual and emotional infidelity in relation to the emotions of anger, hurt, and disgust. Second, we test these predictions, as well as the evolutionary psychological jealousy-related prediction, by couching the question in terms of an infidelity that explicitly involves both a sexual and an emotional betrayal, which avoids certain alternative explanations for the sex difference that are detailed below. Third, we offer a test of the discriminant validity of jealousy to determine whether the sex difference is unique to this emotion or if it can be accounted for by other negative emotions. Fourth, we examine the moderating effect of relationship status on reactions to hypothetical infidelity scenarios. Each of these is discussed below.

Emotional responses to infidelities

The present study examined reactions to sexual and emotional infidelity across four emotions: jealousy, anger, hurt, and disgust. We focused on anger and hurt, in part, because these were the nonjealousy emotions measured in Geary et al. (1995). However, in contrast to Geary et al., who adopted an evolutionary psychological position with respect to jealousy but made no predictions regarding anger or hurt, we offer predictions for all three emotions. We added the emotion of disgust because disgust's association with contagion concerns suggests specific predictions regarding the pattern of women's and men's disgust reactions to sexual and emotional infidelity. Similarly, although Shackelford et al. (2000) assessed jealousy, anger, hurt, and disgust as part of their larger set of 103 emotions, their study was not intended to make predictions regarding any specific emotions. As Shackelford et al. explain, "The present research was not designed to test specific hypotheses derived from a theory of emotional reactions to infidelity. Instead, the overarching goal of this research was to identify a broad array of emotional reactions that people might experience on the discovery of a partner's sexual or emotional infidelity" (p. 657).

With respect to jealousy, we predicted that the evolved sex difference would emerge (Buss et al., 1992; Daly et al., 1982; Symons, 1979). Specifically, we predicted that men, relative to women, would report greater jealousy in response to a sexual infidelity compared to an emotional infidelity. For disgust, we predicted that a sex difference would not emerge. Instead, because disgust is often elicited through contagion concerns (i.e., transfer of disease or pollution of the partner's body with the bodily fluids of the lover, Nemeroff & Rozin, 1994), we expected that both men and women would report greater feelings of disgust in response to a sexual infidelity. Similarly, we predicted that a sexual infidelity would elicit greater anger from both men and women. Compared to an emotional infidelity, a sexual infidelity is likely to be seen as more intentional and avoidable—two factors that intensify anger (Ben-Zur & Breznitz, 1991).

In addition, it seems likely that anger will be most intense when the transgression is least ambiguous—when the partner has chosen to sleep with a rival. With respect to hurt, we saw two possibilities. First, that hurt would align with jealousy. Alternatively, the emotional withdrawal might lead to greater hurt for both men and women, to the extent that it tapped the depression and sadness associated with a loss that the participants were powerless to address.

Circumventing the double-shot hypothesis

Jealousy, anger, hurt, and disgust were assessed with respect to an infidelity that involves *both* deep emotional attachment and sexual intercourse (as did Buss et al., 1999), in order to avoid a possible confound first pointed out by DeSteno and Salovey (1996). This confound formed the basis of DeSteno and Salovey's *double-shot* hypothesis, which explained sex differences in jealousy in terms of the perceptions that sexual infidelity implies emotional infidelity in women, whereas emotional infidelity implies sexual infidelity in men (see also Harris & Christenfeld, 1996). Buss et al. (1999) addressed this alternative explanation by demonstrating sex differences in jealousy in response to scenarios that precluded a double-shot explanation, for example, a scenario like the one we employed in the present research, in which both a sexual and an emotional infidelity were made explicit. Harris (2003), however, noted that the magnitude of the sex difference appears to be somewhat attenuated in these scenarios, suggesting that the double-shot may explain some but not all of the sex difference in jealousy. We were concerned that the other emotions may be equally susceptible to this alternative explanation. Shackelford et al. (2000) used a scenario that specified either an exclusively sexual infidelity or an exclusively emotional infidelity, but such a scenario leaves open the possibility that the other type of infidelity will occur in the future. To avoid the possibility of this indirect double-shot, we chose a scenario in which both types of infidelity had already occurred.

The discriminant validity of the sex difference for jealousy

To test the discriminant validity of the sex difference in jealousy, a multivariate analysis of variance examined the effects of participant sex and infidelity type on the four emotions. A significant three-way interaction (combined with the predicted simple two-way interaction for jealousy) would demonstrate that the sex difference appears for the evolutionarily adaptive emotion of jealousy but not necessarily for other negative emotions. Furthermore, to test whether the sex difference in jealousy could be accounted for by the other emotions, a two-step logistic regression analysis was run that regressed participant sex first on anger, hurt, and disgust, and then on jealousy. A significant R^2 change between Step 1 and Step 2 would demonstrate that the sex difference in jealousy cannot be fully accounted for by anger, hurt, and disgust. Finally, a discriminant function analysis was run to determine which emotional reactions most effectively discriminated between the sexes.

The moderating effect of relationship status

This study also assessed the relationship status of the participants. It has been previously reported that the proportion of men endorsing the sexual infidelity as more distressing is higher among those who have been the victim of an infidelity in the past (Sagarin, Becker, Guadagno, Nicastle, & Millevoi, 2003). This suggests that, to some extent, the intensity of the emotional reaction to infidelity requires an actual experience with infidelity to become fully active. Accordingly, we expected that those participants who reported being in a committed relationship should also report greater jealousy when contemplating an infidelity. In order to ensure that this was not simply due to the greater ease with which these participants could imagine such an infidelity, we included questions that directly assessed the ease of imagining these two aspects of infidelity. If jealousy and the other emotions are facultative in the sense that they switch on only when infidelity is a real possibility, then participants in a relationship should show more intense emo-

tional reactions to a hypothetical infidelity even after controlling for differences in the ability to imagine such an infidelity.

The present research

In summary, this study examined participants' jealousy, anger, hurt, and disgust in response to a romantic partner's infidelity that involved both emotional and sexual aspects. We predicted that jealousy would be unique in showing a sex difference in regard to which aspect was seen as most upsetting. Our design allowed the use of logistic regression and discriminant analysis to verify the discriminant validity of jealousy, and our framing of the question avoided criticisms of the conventional format of the question. Furthermore, we examined these affective reactions in light of relationship status, and predicted, following Sagarin et al. (2003), that being in a relationship would facilitate the intensity of the emotional responses to a hypothetical infidelity.

Method

Participants

Participants were 223 undergraduate students who completed the questionnaire as part of a lengthy survey administered in their introductory psychology classes. The mean reported age was 18.98 years, and ranged from 16 to 47 years, and the majority of the participants (82%) were Caucasian. Of the 223 respondents, 15 were excluded due to out-of-range or missing answers, and an additional 16 were excluded because they indicated that they were neither currently in, nor interested in, a relationship with a member of the opposite sex. The final sample contained 193 participants, 102 women and 91 men.

Questionnaire

Participants were first asked to entertain the following hypothetical scenario, adapted from Buss et al. (1992):

Please think of a serious committed 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 has become interested in someone else, and has both formed a deep emotional attachment to that other person and had sexual intercourse with that other person.

All participants then answered eight different questions assessing how jealous, angry, hurt, and disgusted/sick they would feel about (a) their partner forming a deep emotional attachment to this other person and (b) their partner enjoying sexual intercourse with this other person. These questions were answered on 10-point scales ranging from 0 (*not at all*) to 9 (*extremely*).

Participants then responded to two questions that asked, respectively, how easy it was for them to imagine their partner was sexually involved with someone else and emotionally involved with someone else (on a 10-point scale). Finally, they indicated their relationship status with the following options: (a) not currently in a relationship, (b) dating multiple people, (c) dating one person, (d) a serious, committed relationship, (e) engaged, or (f) married. For the purposes of these analyses, participants endorsing one of the last three options were combined into a "committed relationship" category. We intended to contrast this with those endorsing "not currently in a relationship," and combined those who selected one of the two "dating" options as a third category. Relationship status thus had three levels: "no relationship" (29 women and 43 men), "casually dating" (27 women and 24 men), and "committed relationship" (47 women and 24 men).

Results

MANOVA and follow-up ANOVAS

In order to assess whether responses to infidelity elicited different patterns of responses across the four emotions, a multivariate analysis of variance was first conducted with emotion (jealousy, anger, hurt, disgust) and infidelity aspect (deep emotional attachment

vs. sexual intercourse) as repeated measures and participant sex and relationship status as between-subjects factors (these means are presented in Table 1). There was a marginal main effect of infidelity aspect, with sexual intercourse generating slightly more intense emotional reactions than deep emotional attachment, $F(1, 187) = 2.76, p = .098$, partial $\eta^2 = .015$. There was a significant main effect of emotion, $F(3, 561) = 15.88, p < .001$, partial $\eta^2 = .079$. The most intense emotional response was hurt ($M = 7.57, SD = 1.91$), followed by jealousy ($M = 7.09, SD = 2.19$), anger ($M = 6.86, SD = 2.24$), and disgust ($M = 6.82, SD = 2.31$). The main effect of participant sex was marginally significant, with females reporting more intense emotional responses than males, $F(1, 187) = 2.77, p = .098$, partial $\eta^2 = .015$. Lastly, there was a significant main effect of relationship status, $F(2, 187) = 6.33, p = .020$, partial $\eta^2 = .063$. Participants who reported being in a committed relationship also reported the most intense emotional reactions ($M = 7.66, SD = 1.95$) relative to those casually dating ($M = 6.83, SD = 2.4$) and those identifying themselves as not in any relationship ($M = 6.86, SD = 2.15$). There was no interaction between participant sex and relationship status.

Only two interactions were significant. There was an interaction of infidelity aspect and emotion, $F(3, 561) = 27.73, p < .001$, partial $\eta^2 = .129$. Most importantly, there was a significant three-way interaction of participant sex, infidelity aspect, and emotion, $F(3, 189) = 3.36, p = .024$, partial $\eta^2 = .017$, motivating us to collapse across relationship status and perform four separate 2 (participant sex) \times 2 (infidelity aspect) ANOVAs for each of the four emotions. (Relationship status did not interact with infidelity aspect, $F(2, 187) = 1.12, p > .2$, and the three-way interaction of participant sex, relationship status, and infidelity aspect was not significant, $F(2, 187) = 1.88, p = .156$; all other interaction tests yielded F s < 1 .)

Jealousy. There was a marginal main effect of infidelity aspect, $F(1, 192) = 3.44, p = .065$, partial $\eta^2 = .018$, and a main

Table 1. Responses to emotional or sexual infidelity as a function of participant gender: Cell means and (standard deviations)

Emotion/question	Men		Women	
	Emotional infidelity	Sexual infidelity	Emotional infidelity	Sexual infidelity
No relationship (men: $n = 43$, women: $n = 29$)				
Jealousy	6.49 (2.03)	6.79 (1.93)	7.24 (1.9)	6.79 (2.19)
Hurt	7.07 (1.83)	7.51 (1.99)	7.86 (1.71)	7.14 (2.28)
Anger	5.98 (2.22)	6.84 (1.84)	6.48 (2.28)	6.76 (2.52)
Disgust	5.81 (2.29)	6.58 (2.13)	6.38 (2.58)	7.07 (2.66)
Casually dating (men: $n = 24$, women: $n = 27$)				
Jealousy	6.63 (2.41)	6.13 (3.13)	7.41 (2.19)	6.44 (2.71)
Hurt	7.50 (1.79)	7.04 (2.35)	7.93 (2.04)	7.48 (2.39)
Anger	6.63 (2.28)	6.38 (2.78)	6.11 (2.59)	7.5 (1.96)
Disgust	6.38 (2.16)	6.79 (2.54)	5.96 (2.79)	7.00 (2.35)
Committed relationship (men: $n = 24$, women: $n = 46$)				
Jealousy	7.13 (2.46)	7.54 (2.69)	8.30 (1.21)	7.65 (1.72)
Hurt	7.96 (1.65)	7.92 (2.12)	8.59 (0.96)	8.00 (1.78)
Anger	7.00 (2.15)	7.71 (2.35)	7.28 (2.02)	7.83 (1.92)
Disgust	6.42 (2.34)	7.63 (2.16)	7.22 (2.26)	8.3 (1.46)
All participants (men: $n = 91$, women: $n = 103$)				
Jealousy	6.69 (2.28)	6.81 (2.52)	7.76 (1.77)	7.09 (2.19)
Hurt	7.42 (1.80)	7.02 (2.18)	8.21 (1.55)	7.62 (2.11)
Anger	6.42 (2.24)	6.95 (2.28)	6.75 (2.29)	7.34 (2.14)
Disgust	6.12 (2.26)	6.91 (2.27)	6.65 (2.54)	7.61 (2.18)

Note. All questions were scored on 10-point scales from 0 to 9, with higher numbers indicating greater intensity of the emotion.

effect of participant sex, $F(1, 192) = 5.06$, $p = .026$, partial $\eta^2 = .026$. These main effects were qualified by the predicted interaction, $F(1, 191) = 7.14$, $p = .008$, partial $\eta^2 = .036$. Follow-up pair-wise comparisons revealed that, for the male participants, the nominal increase in jealousy to the sexual aspect of the infidelity as compared to the emotional aspect was not significant, $F(1, 90) < 1$. However, female participants reported significantly more jealousy to the emotional aspect of the infidelity as compared to the sexual aspect, $F(1, 102) = 11.20$, $p = .001$, partial $\eta^2 = .099$.

Anger. Participants reported greater anger to the sexual aspects of the infidelity, $F(1, 192) = 15.65$, $p < .001$, partial $\eta^2 = .075$. There was no main effect of participant sex,

$F(1, 192) = 1.51$, $p > .2$, and no interaction, $F < 1$.

Hurt. Participants reported greater hurt to the emotional aspects of the infidelity, $F(1, 192) = 14.01$, $p < .001$, partial $\eta^2 = .068$. Women reported more hurt than men, $F(1, 192) = 8.04$, $p = .005$, partial $\eta^2 = .040$. There was no interaction, $F < 1$.

Disgust/sick. Participants reported greater disgust to the sexual aspects of the infidelity, $F(1, 192) = 53.53$, $p < .001$, partial $\eta^2 = .218$. Women reported marginally more disgust than men, $F(1, 192) = 3.61$, $p = .059$, partial $\eta^2 = .018$. There was no interaction, $F < 1$.

Ease of imagining. The responses to the items assessing how easy it was to imagine

an emotional or a sexual infidelity were entered into an ANOVA with participant sex and relationship status. The only significant result was a main effect of relationship status, $F(2, 187) = 21.61, p < .001$, partial $\eta^2 = .187$. Participants who reported being in a relationship also reported the most difficulty imagining aspects of an infidelity ($M = 1.66, SD = 1.95$) relative to those casually dating ($M = 3.53, SD = 2.42$) and those identifying themselves as not in any relationship ($M = 4.20, SD = 2.38$).

Logistic regression analysis

For each participant, and for each of the four emotions, we calculated the difference of the ratings for the sexual and the emotional aspect of the infidelity. A binary logistic multiple regression analysis was conducted to predict participant sex from the anger, hurt, and disgust difference scores. The results indicated that none of these difference scores predicted participant sex, all *Wald's* $< 1, p > .40$. A second analysis was conducted to evaluate whether the jealousy difference predicted participant sex with the other difference scores already in the analysis. The jealousy difference was a significant predictor of participant sex, $b = -.245, se_b = .096, Wald(1\ df) = 6.543, p = .011$.

Discriminant function analysis

This analysis was conducted to determine how the eight emotion items (the four emotional responses to the two aspects of the infidelity) discriminated between the sexes. The overall Wilks's lambda was significant, $\Lambda = .891, \chi^2 = (8, N = 193) = 21.64, p = .006$, indicating that the predictors differentiated between men and women. This discriminant function correctly classified 65.3% of the cases, and computing a kappa coefficient (a measure of predictive accuracy that corrects for chance agreement) obtained a value of .298, a medium-small value. The standardized coefficients for the discriminant function indicated that jealousy over the *emotional* aspect of infidelity was the most discriminating predictor. In fact, when a stepwise procedure

was adopted, this emerged as the only significant predictor, $\Lambda = .993, \chi^2 = (1, N = 191) = 13.25, p < .001$. No other predictor accounted for a significant proportion of the remaining variance (we would have had to relax the “*p* to include” to .14 to admit the next closest predictor, jealousy over the *sexual* aspect). Classification accuracy for this single predictor was 64.4%, and the kappa coefficient was only reduced to .284, suggesting that jealousy over the emotional aspect of an infidelity was the most important difference between men and women in the present sample.

These results, coupled with those from the logistic regression, strongly suggest that jealousy is the *only* emotion that differentiates the sexes.

Discussion

The evolutionary explanation for sex differences in jealousy has received strong support (Buss et al., 1992, 1999; Buunk et al., 1996) and equally strong criticism (DeSteno & Salovey, 1996; Harris & Christenfeld, 1996; see Harris, 2003, for a review). The present results suggest that the sex difference in jealousy is real, that it is robust when continuous measures are used, and that it is unique to jealousy. This study also suggests that it is the jealous response to an emotional infidelity that best discriminates women from men, and that both women and those participants in a serious, committed relationship report significant elevations in these responses.

Comparison of the emotions

DeSteno and Salovey (1996) criticized the exclusive use of the forced-choice paradigm in demonstrations of the sex differences in jealousy. In response to this criticism, we designed this study to use continuous measures, and the same sex difference emerged. Using continuous measures, women, relative to men, reported greater intensity of jealousy in response to an emotional infidelity than to a sexual infidelity. These results suggest that the sex difference is a robust effect and not merely an artifact of the forced-choice

paradigm. Furthermore, because the present study used a scenario in which both sexual and emotional infidelities had already occurred, the results are not susceptible to the double-shot hypothesis (DeSteno & Salovey) as an alternative explanation.

Further evidence for the validity of the jealousy response was obtained by examining a variety of negative emotions elicited by infidelity. Because most previous demonstrations of the sex difference have asked which type of infidelity would upset or distress participants more, an assumption was made that this distress corresponded to jealousy and not to other negative emotions. The present study offered a test of whether this distress is actually jealousy. Participants indicated their emotional response on four emotions: jealousy, anger, hurt, and disgust. Results indicated a unique pattern for jealousy.

Both men and women report that hurt would be the strongest feeling in reaction to an infidelity, and that the emotional aspect of the infidelity would hurt the most. Note that this latter result is consistent with the means reported by Shackelford et al. (2000). Women and men also agree that the sexual aspects of the infidelity would inspire greater anger and greater disgust than would the emotional aspects. Again, the means for anger and disgust are consistent with Shackelford et al. It is only in the case of jealousy that we see the sexes differ in which aspect of the infidelity would cause more distress: Women feel that the emotional aspects would be worse, while the men show a non-significant tendency to view the sexual aspect as worse. This corresponds well with the prototypical forced-choice results, which generally find males being evenly split over which aspect would be more distressing, but females overwhelmingly choosing the emotional aspect.

Hurt, perhaps the closest analogue to the terms “distress” and “upset” used in most of the research, does not produce an interaction of participant sex and infidelity aspect. We have observed this interaction for hurt in two other (as yet unpublished) data sets, but it only occurs when the question is framed such that the infidelity is *either* emotional *or* sexual. That this does not happen when both

aspects have explicitly occurred suggests that when such an interaction for hurt is obtained, it may be due to sex differences in beliefs about the likelihood that one aspect implies the other, as DeSteno and Salovey (1996) and Harris and Christenfeld (1996) have attempted to argue for jealousy proper.

It is likely that a sexual infidelity evokes greater anger than an emotional infidelity because the sexual infidelity involves more of a choice, a decision on the part of the partner to act in a way that threatens the relationship. This may explain why Harris (2002) has reported that both women and men find the sexual aspects of a “one-night stand” more “upsetting”—perhaps it is not the jealousy, but the anger that is informing this response.

Disgust may also tap this moral dimension, though it surely draws additional strength from concerns about cleanliness and contagion (Nemeroff & Rozin, 1994). Furthermore, Lieberman (2004) theorized that disgust plays a critical role in humans’ evolved incest avoidance mechanism. It is possible that disgust also plays an important role in informing men and women when continued contact with a sexual partner may be detrimental to their fitness.

The continuous measures also revealed an unexpected sex difference. Across all emotions, women reported more intense negative reactions to infidelity than men, and this was the case even when we look separately within each level of relationship status. This result was particularly surprising in light of prior research demonstrating that men and women feel equivalent intensity of jealousy (Buunk & Hupka, 1987; White, 1981). A possible explanation for this unexpected sex difference might be found in Sagarin and Guadagno (in press). Sagarin and Guadagno found that when asked to describe a time when they felt extremely jealous, women tend to report jealousy in romantic contexts significantly more often than men, and that this tendency may magnify sex differences on scales that use “extremely jealous” as the upper anchor. It is possible that similar effects appear on scales that use “extremely angry,” “extremely hurt,” and “extremely disgusted” as their upper anchors (as were used in the present study). Alternately,

participants' answers to the jealousy questions, which appeared before the anger, hurt, and disgust questions, may have anchored their answers to the subsequent questions. Future studies could confirm or refute this unexpected sex difference by assessing the intensity of emotional reactions to infidelity on a variety of scales.

Relationship status and ease of imagining

Participants in committed relationships reported significantly more intense emotional responses to infidelity than participants not in committed relationships. Furthermore, this effect cannot be explained by the greater ease that participants in committed relationships have imagining an infidelity—in fact, such participants report that it is significantly more difficult to imagine such an occurrence relative to participants not in a committed relationship. Therefore, while committed participants report more distress at the prospect of an infidelity, they conversely have difficulty imagining one occurring. Perhaps these findings are related: The intense emotions inspired by the contemplation of an infidelity might motivate these participants to rapidly shift their thoughts elsewhere. In any case, being in a relationship appears to intensify negative emotional responses to imagined infidelity in a way that cannot be accounted for by increased salience of the possibility.

Conclusions

The present research makes several contributions to the growing literature examining the sex differences in affective responses to sexual and emotional infidelities. First, more intense emotional reactions to a hypothetical infidelity occurred for those currently in a relationship, a finding consistent with the idea that such reactions are facultative in nature, and are elevated when the possibility (however hard to imagine) truly exists. Second, the results provided additional evidence that DeSteno and Salovey's double-shot hypothesis (1996) does not fully account for the sex difference in jealousy—we observed it here despite asking participants to contem-

plate an infidelity that had both emotional and sexual aspects. Third, both logistic regression and discriminant analysis validated that the sex difference in jealousy could not be reduced to the other emotional responses that we investigated. The latter method further suggested that it is a difference in jealousy to the emotional aspect of an infidelity that best discriminates the sexes. Finally, this study revealed that the sexes need not differ in their affective responses to infidelities when emotions other than jealousy are interrogated. Both women and men reported more anger and disgust to the sexual aspect of the infidelity. And both sexes reported more hurt to the emotional aspect of the infidelity.

Jealousy is the only one of the four emotions that we studied that functions differently for the two sexes vis-à-vis emotional attachment and sexual indiscretion. Jealousy is not unique in that its role is to motivate an individual to deal with an undesired situation—all of the studied emotions do that. There is, however, something to it that cannot be reduced to the other emotions that we studied, a feeling of distress that, more and more, seems tied to the different biological consequences that each sex experiences when contemplating sexual versus emotional aspects of a partner's infidelity.

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