

“Not With *Him* You Don’t!”: Gender and Emotional Reactions to Sexual Infidelity During Courtship

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Gender differences in sexual jealousy have been the focus of earlier research; however, potential effects due to gender of the interloper have not been examined. In Study 1, college men and women rated their upset in response to same-gender versus other-gender sexual infidelity by a dating partner. Men found male-female sexual infidelity most upsetting whereas women found male-male sexual infidelity most upsetting. This gender difference was replicated in Study 2 using a different hypothetical scenario with students from a different university. These men and women also completed measures of religiosity, sex-love-marriage association beliefs, erotophobia/erotophilia, eroticization of same-gender sexual contact, and expressed their degree of agreement with three different attributions regarding the larger meaning of one's dating partner having same-gender sexual contact. The gender difference in response to the jealousy-evoking scenario persisted after controlling for these variables. In Study 3, men and women were randomly assigned to one of four experimental vignettes in which gender of the interloper and gender of the person committing sexual infidelity were manipulated. Participants also completed measures of homophobia and gender-role attitudes. The scenario depicting female-female sexual infidelity was rated the least likely to arouse jealousy, and this finding was not mediated by respondent gender, homophobia, or gender-role attitudes. Findings are discussed with regard to possible explanations and directions for future research.

Jealousy has been the focus of both theoretical formulation and empirical investigation (see Pines, 1992; Salovey, 1991; White & Mullen, 1989, for reviews). Although several types of envy and jealousy have been recognized, sexual jealousy has received the most attention by researchers (Cano & O'Leary, 1997; White & Mullen, 1989), and appears to be a ubiquitous experience (Mullen & Martin, 1994; Pines, 1992). In particular, several researchers have been interested in potential gender differences in the stimuli for sexual jealousy. In general, it appears that men may be more sensitive to the sexual aspects of infidelity, whereas women are more prone to focus on the emotional or relationship implications of infidelity (Buss, Larsen, Westen, & Semmelroth, 1992; Buunk, Angleitner, Oubaid, & Buss, 1996; Geary, Rumsey, Bow-Thomas, & Hoard, 1995; Symons, 1979; Wiederman & Allgeier, 1993).

Researchers have commonly taken an evolutionary perspective in attempting to explain this apparent gender difference in the stimulus for jealousy. That is, it is hypothesized that contemporary men and women possess different psychological mechanisms having to do with concern about sexual versus emotional infidelity, as each type of infidelity had different repercussions for ancestral males versus females throughout our evolutionary history (Allgeier & Wiederman, 1994; Buss, 1994; Symons, 1979;

Wiederman & Allgeier, 1993). Sexual infidelity by a female might result in decreased paternity confidence for the steady male partner, as it is possible that such infidelity would result in conception and pregnancy. For women, confidence in their genetic relationship to their own offspring is not an issue, but potential diversion of resources or abandonment on the part of a wayward relationship partner was potentially of great relevance during our evolutionary history. Evolutionary theorists posit that one would expect corresponding gender differences in sexual jealousy, such that men would be more concerned about potential extradyadic sexual involvement by a steady relationship partner whereas women should be more concerned about potential extradyadic emotional involvement. Indeed, men do appear to be more suspicious than women regarding their mate's sexual fidelity (e.g., Paul & Galloway, 1994) when, in fact, men are more likely than women to have such extradyadic sexual involvement both before (Wiederman & Hurd, in press) and after (Wiederman, 1997) marriage.

Despite the prevalence of sexual jealousy and the recent theorizing and research on the topic from an evolutionary perspective, many questions regarding sexual jealousy remain. For example, does the gender of the interloper affect people's perceptions of the jealousy-inducing liaison? Specifically, do men and women differ in their reactions to a romantic partner engaging in a same-gender versus other-gender encounter outside of the primary relationship? White and Mullen (1989) raised these questions nearly a decade ago. Surprisingly, to our knowledge they have not been addressed by researchers. The objective of the current series of studies was to investigate possible effects of the gender of the interloper in young

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adults' perceptions of potentially jealousy-evoking situations during courtship.

Possible gender differences in reactions to a dating partner's same-gender versus other-gender sexual encounter outside the primary relationship were investigated. Despite the lack of previous findings upon which to base specific hypotheses, we expected women to be more upset over the notion of their partner engaging in a same-gender encounter compared to an other-gender encounter, whereas we hypothesized that men would display more concern over the notion of their partner engaging in sexual activity with another male compared to engaging in sexual activity with a female. From an evolutionary perspective, sex between two women does not reduce a man's paternity confidence, and thus might be less upsetting. For women, homosexual activity on the part of a male relationship partner might be experienced as a strong indicator of the emotional quality of the primary relationship. In line with evolutionary theory, women appear to engage in dating relationships more for reasons of emotional intimacy than do men (Hatfield, 1983; Huston & Ashmore, 1986; Sedikides, Oliver, & Campbell, 1994; Wiederman & Allgeier, 1993). Discovery of homosexual activity by a relationship partner may signal that the level of disclosure within the primary relationship is not high, or that desired emotional closeness may not be possible due to desires or needs the primary partner cannot meet. Women may be more upset than men by such an implication of homosexual infidelity.

Certainly, these hypotheses are speculative. However, although previous research has not focused on the specific issue of sexual jealousy as a function of gender of the interloper, some previous research findings are relevant for the current study. Such previous research has addressed the relative eroticization of female-female sexual contact by men compared to views of male-male sexual contact by women, and the negative gender role connotations frequently ascribed to male-male sexual contact compared to female-female sexual activity.

For example, in a large sample of college students, Nyberg and Alston (1977) found that only 7% of both men and women found "men making love to men" to be what they labeled "an erotic act." In contrast, 33% of the men compared to 10% of the women considered "women making love to women" to be erotic. Accordingly, it is not surprising that among married couples who engage in group sex ("swinging"), male-male sexual contact is relatively rare, yet women are frequently pressured to engage in female-female sexual activity by their own husbands (Dixon, 1984). In an investigation of stigma attached to gays and lesbians, King and Black (1995) found that only 1% of undergraduate women would consider dating or marrying a gay male. In contrast, 32% of men said they would date a lesbian and 11% indicated that they would marry a lesbian. Similarly, Eliason (1997) found that men were more willing to have a sexual relationship with a bisexual woman than women were willing to have a sexual relationship with a bisexual man, and some of the men

noted that such a relationship might allow for a "threesome" involving the respondent and two women. It appears that men are much more likely to eroticize female-female sexual contact than women are to eroticize male-male sexual contact (Louderback & Whitley, 1997).

One possible reason for this gender difference in eroticization of same-gender sexual contact may have to do with gender roles. It appears that heterosexuality may be more of a primary feature of masculinity than femininity (Herek, 1986a, 1986b; Kite, 1994); thus, same-gender sexual contact may be more threatening to male gender role identity than to female gender role identity. Indeed, research has revealed that men and women do not differ in their attitudes toward lesbians, but men are more negative than are women toward gay males (e.g., Engstrom & Sedlacek, 1997), especially as gay males are viewed as violating masculine gender roles (see Kite, 1984; Whitley & Kite, 1995, for reviews). Additionally, among respondents who have engaged in sexual interactions with two partners simultaneously ("threesomes"), female-female sexual contact appears to be less threatening to women than does male-male sexual contact (Karlen, 1988). Similarly, bisexual men appear to be stigmatized more so than bisexual women (Eliason, 1997). Perhaps it is the weaker implications female-female sexual contact has on people's sense of women's gender role conformity, coupled with men's relative eroticization of female-female sexual contact, that explains why the majority of "threesomes" involve two women and one man (Karlen, 1988).

Based on evolutionary theory, the findings related to eroticization of same-gender sexual contact, and speculation about the central role of heterosexuality in the conceptualization of masculinity, we hypothesized that women would be more upset over their dating partner engaging in same-gender sexual contact than would men. The purpose of Study 1 was to test this hypothesis in a simple, straightforward manner. Rather than focus exclusively on *p* values corresponding to inferential statistics, we also present effect sizes (Cohen, 1994) for the analyses testing the hypothesized gender difference. Cohen's (1969) effect size statistic *d* was calculated as the difference between the mean score of the group with the greater score (or rating) and the group with the lower score (or rating) divided by the pooled standard deviation (also see Rosenthal & Rosnow, 1991). Cohen (1969) considered effect sizes, *d*, of .80 or greater as large effects, those around .50 as moderate effects, and those around .20 as small effects, and this rule of thumb has been used by other researchers who have examined effect sizes corresponding to gender differences in the human sexuality research literature (Oliver & Hyde, 1993).

STUDY 1

Method

Participants. Respondents were 103 men and 120 women enrolled in introductory psychology courses at a mid-sized, midwestern state university who indicated a primary or

exclusive heterosexual orientation. All respondents were recruited through the course subject pool to participate in a study "involving the completion of an anonymous questionnaire asking about relationship attitudes" and respondents received partial credit toward completion of the course. Nearly all of the respondents (95.0%) were white and the median age of respondents was 19 years.

Measures. In addition to questions requesting demographic information, respondents were asked to indicate their sexual feelings using the following four response choices: *Sexually attracted exclusively to females*; *Sexually attracted mostly to females, some to males*; *Sexually attracted mostly to males, some to females*; *Sexually attracted exclusively to males*. With regard to jealousy, respondents were presented with two hypothetical situations and asked to indicate the degree of emotional upset they would probably experience in response to each (using a 9-point scale ranging from 1 = *Not at All Upset* to 9 = *Extremely Upset*). The term "upset" was used rather than the term "jealous" as many previous researchers opted for the more generic term to avoid response bias due to social desirability and individual differences in interpretation (see Wiederman, Allgeier, & Ragusa, 1995, for review). The most probable situation was presented first: "You suspect that your boyfriend/girlfriend recently had a one-time sexual encounter with someone of the *other* gender." The second situation was the same as the first with the exception of substituting *same* for *other*. Because respondents might have rated both situations as highly upsetting, thereby obscuring possible gender differences in the relative emotional impact of each situation, respondents also completed a forced-choice item: "Which would make you most upset, if your boyfriend/girlfriend had a sexual encounter with someone of the same or other gender (from themselves)?"

Procedure. The items used in the current study were embedded within a larger questionnaire designed for other purposes (see Wiederman & Allgeier, 1993). Potential participants received a written informed consent form in which it was explained that participation involved completing an anonymous questionnaire on the respondent's attitudes about romantic relationships. None of the potential respondents declined to participate upon learning of the nature of the study. Respondents completed the questionnaires in mixed-gender groups of 5 to 20 participants in the presence of the first author. Upon completion of the questionnaire, respondents placed the survey in a box separated from the researcher by several feet, were thanked, and received a signature on their credit slip verifying participation.

Results

In response to the first (heterosexual) case of infidelity, men ($M = 7.78$, $SD = 1.55$) and women ($M = 7.85$, $SD = 1.45$) did not differ in the mean ratings of upset, $F(1, 220) = .13$, $p < .73$, $d = .05$. However, in response to the second (homosexual) case of infidelity, women ($M = 8.67$, $SD = .93$) indicated substantially greater probable upset than did

men ($M = 7.26$, $SD = 2.21$), $F(1, 220) = 40.25$, $p < .0001$, $d = .79$. Using a *t*-test for paired samples, men's upset in response to the heterosexual infidelity was greater than that in response to the homosexual infidelity, $t(102) = 2.07$, $p < .05$, $d = .20$. In contrast, women's upset was greater in response to the homosexual infidelity than the heterosexual infidelity, $t(118) = 5.99$, $p < .001$, $d = .55$. Responses to the forced-choice item mirrored those with the ratings. The majority (64.7%) of men indicated that they would be more upset in response to the heterosexual infidelity whereas the large majority (85.6%) of women indicated the opposite, $\chi^2(1, N = 220) = 58.92$, $p < .0001$, $d = 1.21$.

Discussion

Clearly, men believed they would be more upset by the thought of their dating partner engaging in sexual activity with another man than with a woman. The reverse was true for women; they indicated greater upset over the thought that their boyfriend would engage in sexual activity with a man than with another woman. However, Study 1 was limited in several ways. It was possible that respondents were confused by the terminology of the survey items (i.e., keeping track of which gender was being referred to). Additionally, as the respondents in Study 1 were relatively young and perhaps sexually inexperienced (we did not measure sexual experience), it may have been difficult for many of them to imagine what "sex" between two women would consist of. That is, to the extent that "sex" was defined by respondents as involving insertion of a penis, sex between two women may have been difficult to comprehend compared to the notion of sex between two men. Similarly, sex between two men may have been considered more offensive by female respondents than female-female sex was by male respondents simply because of the implication of insertive practices in male-male sexual contact.

Study 2 was conducted in an attempt to replicate the findings from Study 1 after correcting for possible problems in terminology. Additionally, we sought to investigate whether gender differences in choosing same-gender or other-gender sexual infidelity as more upsetting might be accounted for by other variables on which college men and women are likely to differ; namely, sexual attitudes and religiosity. Evolutionary explanations for gender differences in jealousy imply that the sexually dimorphic psychological mechanisms responsible for the apparent gender differences in experience would persist regardless of individual differences in sexual attitudes. Last, we conducted Study 2 to investigate whether men's greater eroticization of female-female sexual contact compared to women's eroticization of male-male sexual contact might account for the gender difference in reactions to the jealousy-evoking scenario.

We realized that men's general eroticization of female-female sexual contact may not fully explain the gender difference in response to same-gender sexual infidelity by one's dating partner, but that more specific attributions regarding more or less benign meanings of the infidelity

might. Accordingly, we also included measures of specific attributions respondents might make regarding same-gender sexual contact by one's dating partner; that is, respondents may attribute various meanings to a dating partner's same-gender sexual contact. For example, men may make more benign or erotic attributions for a partner's same-gender sexual contact (e.g., see Quilliam, 1994), whereas women may attach meanings having to do with the continued viability of the primary relationship given the new information about their dating partner.

As mentioned earlier, women appear to engage in dating relationships for reasons of emotional intimacy more often than do men (Hatfield, 1983; Huston & Ashmore, 1986; Sedikides et al., 1994). To the extent that same-gender sexual infidelity is perceived to signal deceit regarding the partner's sexual proclivities, women may be more upset than men over such contact because of the larger implications regarding the quality of the primary relationship. Indeed, it appears that most bisexual men do not disclose their sexual involvement with men to their female partners (Stokes, McKirnan, Doll, & Burzette, 1996). In Study 2, we measured respondent's attributions that their dating partner's same-gender sexual contact might be the result of benign curiosity or exploration, might represent an opportunity for additional sexual experiences for the respondent (or at least would not preclude further sexual involvement within the primary relationship), and might indicate unintentional or intentional deceit within the primary relationship.

STUDY 2

Method

Participants. Respondents were 152 men and 177 women enrolled in introductory psychology courses at a different mid-sized midwestern state university than the sample used in Study 1. All respondents were recruited through the course subject pool and indicated a primary or exclusive heterosexual orientation. Potential respondents were unaware of the nature of the study prior to showing up for potential participation. No one declined to participate upon learning that participation entailed completing an anonymous questionnaire regarding their sexual attitudes and views about relationships. Respondents received partial credit toward completion of the course. Nearly all of the respondents (95.1%) were white and the median age of respondents was 19 years.

Measures. In addition to basic demographic questions and the sexual orientation item used in Study 1, respondents were asked to indicate the number of religious services attended in a typical year and the number of such services they would like to attend, and to indicate the importance of religion in their life using a 7-point scale (ranging from 1 = *Not at all Important* to 7 = *Extremely Important*). Responses to each of these three items were converted into a Z score and the mean of the three Z scores served as a composite measure of religiosity. The internal consistency

coefficient (Cronbach's alpha) for this measure was .73.

Under a section labeled "Relationship Attitudes," respondents were presented with the following scenario meant to be jealousy-evoking:

Imagine that, while you are involved in a serious dating relationship, your partner reveals that she (he) recently had oral sex with someone other than you. Which would make you more upset, jealous, or angry, if your girlfriend (boyfriend) had oral sex with another man or with another woman?

By specifying the sexual behavior engaged in by the relationship partner, the respondent was not left to imagine what behavior(s) "having a one-time sexual encounter" might have included (as in Study 1). Similarly, the sexual behavior was the same across gender pairings, unlike the implication that sex between two men might include insertion of a penis whereas sex between two women would not. Responses were coded 0 if the respondent chose the other-gender pairing (male-female) as most upsetting and coded 1 if the respondent chose the same-gender pairing (male-male for female respondents, female-female for male respondents) as most upsetting.

As measures of more general sexual attitudes, respondents were asked to complete the 8-item Sex-Love-Marriage (SLM) Association Scale (Weis, Slosnerick, Cate, & Sollie, 1986) and the 5-item short version of the Sexual Opinion Survey (SOS; Fisher, Byrne, White, & Kelley, 1988). The SLM Association Scale measures the extent to which the respondent associates sex, love, and marriage as belonging together and has been shown to be predictive of conservative attitudes toward sexual relationships (Weis et al., 1986). The internal consistency coefficient (Cronbach's alpha) for this scale was .76 in the current study. The SOS is a measure of erotophobia/erotophilia—the disposition to respond to sexual stimuli along a negative-positive dimension of affect and evaluation (Fisher et al., 1988), with higher scores indicative of an erotophilic, or positive stance, toward sexual stimuli. The internal consistency coefficient (Cronbach's alpha) for this scale was .66 in the current study.

Because there was no previously published scale to measure eroticization of same-gender sexual contact, six items were written for use in the current study. Men and women received different forms in which the pronoun in each referred to the gender other than the respondent. Men received the following 6 items and were asked to indicate their degree of agreement or disagreement with each using a 5-point scale (ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*): 1) "The idea of two women having sexual contact together is arousing to me"; 2) "A woman who has sexual contact with another woman probably is *not* very feminine"; 3) "Sexual contact between two women is morally wrong"; 4) "I would like to experience a sexual interaction involving two women"; 5) "If a woman has sexual contact with another woman, it is certain that she is lesbian (interested only in sex with women)"; and 6) "The idea of two women having sex together is disgusting." Women received the same 6 items only "woman" was

changed to "man," "women" was changed to "men," "she" was changed to "he," "lesbian" was changed to "gay," and "feminine" was changed to "masculine." After reverse scoring items 2, 3, 5, and 6, responses were summed across items as a measure of eroticization of same-gender sexual contact. Higher scores indicated greater eroticization. Because the scale is new, item-to-total correlations and internal consistency coefficients (Cronbach's alpha) were computed separately for men and women. All items demonstrated corrected item-to-total correlations of .38 or greater (mean correlations were .58 for men and .57 for women) and internal consistency coefficients were .81 for men and .80 for women.

Last, to measure respondents' attributions regarding same-gender sexual contact by one's dating partner, pairs of items were written to reflect three possible attributions: namely, that the behavior may be reflective of sexual curiosity, intentional or unintentional deceit regarding the partner's sexuality, or simply an added dimension to sexual involvement with the respondent. Specifically, male respondents were asked to indicate their degree of agreement or disagreement (using a 5-point scale ranging from 1 = *Strongly Disagree* to 5 = *Strongly Agree*) with several statements regarding "what it might mean if a woman you were dating had sexual contact with another woman." The items were preceded by the stem statement "If my girlfriend had sexual contact with another woman it might mean that . . ." Female respondents were given the same instructions but the pronouns were changed to refer to a man (boyfriend).

The items "she (he) is discovering her (his) true self and it would not be a reflection on me" and "she (he) may have been experimenting just to satisfy her (his) curiosity" were written to measure a benign attribution for the behavior that would not be a reflection on the respondent or the quality of the primary relationship. Responses to these two items correlated .41 ($p < .001$) and the mean of the two responses was used in subsequent analyses (variable labeled "Benign Meaning"). The items "I really did not know her (him) as well as I thought I had" and "she (he) has not been honest with me and our relationship has been a fake" were written to measure an attribution of unintentional or intentional deceit regarding the broader sexual meaning of the same-gender sexual contact for the primary relationship. Responses to these two items correlated .45 ($p < .001$) and the mean of the two responses was used in subsequent analyses (variable labeled "Deceit"). The items "I may be able to experience sex with both women (men) together" and "she (he) will no longer be interested in sex with me" were written to measure the attribution that the same-gender contact does not preclude further sexual involvement with the respondent. After reverse scoring the latter item, responses to these two items correlated .41 ($p < .001$) and the mean of the two responses was used in subsequent analyses (variable labeled "Additional Sex").

Procedure. Respondents completed the anonymous questionnaires in mixed-gender groups of 5 to 20 participants in the presence of one of two female research assis-

tants. Upon completion of the questionnaire, respondents placed the survey in a box separated from the researcher by several feet, were thanked, and received a signature on their credit slip verifying participation.

Results

The pattern of reaction to the infidelity scenario mirrored that found in Study 1. The large majority of men (80.3%) indicated that they would be more upset in response to their partner having oral sex with someone of the other gender (a man) whereas the majority of women (77.4%) indicated greater upset in response to their partner having oral sex with someone of the same gender (a man), $\chi^2(1, N = 329) = 108.79, p < .00001, d = 1.41$. So, gender was related to indicating greater upset over same-gender sexual contact, but was this pattern of response related to sexual attitudes or religiosity?

Indicating greater upset over same-gender sexual contact compared to other-gender sexual contact was correlated with sex-love-marriage association ($r = .24, p < .01$), erotophobia/erotophilia ($r = -.33, p < .001$), religiosity ($r = .19, p < .01$), and eroticization of same-gender sexual contact ($r = -.62, p < .001$). In other words, respondents who indicated greater upset in response to same-gender sexual infidelity by a partner were relatively more religious, more erotophobic, and held greater sex-love-marriage association beliefs. To an even greater extent, these respondents displayed less eroticization of same-gender sexual contact. As expected, there were statistically significant gender differences on nearly all of these measures. Men and women did not differ on the measure of religiosity, $F(1, 327) = 2.34, p < .13, d = .17$. However, compared to men, women were moderately more erotophobic, $F(1, 327) = 25.16, p < .0001, d = .54$, and held somewhat greater sex-love-marriage association beliefs, $F(1, 327) = 6.69, p < .01, d = .28$. Women also eroticized male-male sexual contact much less than men eroticized female-female sexual contact, $F(1, 327) = 237.80, p < .00001, d = 1.30$. It is possible, then, that any one or more of these variables may account for the apparent gender difference in response to the jealousy-evoking scenario.

To investigate the potential mediating effects of religiosity, erotophilia/erotophobia, sex-love-marriage association beliefs, and eroticization of same-gender sexual contact on responses to partner sexual infidelity, each of these variables were entered simultaneously with gender (0 = *male*, 1 = *female*) into a logistic regression equation to predict whether the respondent indicated other-gender sexual contact (coded 0) or same-gender sexual contact (coded 1) as more upsetting. These 5 variables successfully predicted responses to the jealousy item: Model $\chi^2(5) = 165.57, p < .0001$; Goodness of Fit $\chi^2(323) = 353.24, p < .12$; 83.0% of cases correctly classified. However, while simultaneously controlling for the other predictors in the equation, erotophobia/erotophilia, sex-love-marriage association beliefs, and religiosity were unrelated to responses to the jealousy-evoking situation (partial r for each of the

variables was less than .00, each p value greater than .38). In contrast, eroticization of same-gender sexual contact was a statistically significant predictor, partial $r = -.21$, $p < .0001$. Still, even after controlling for eroticization of same-gender sexual contact, respondent gender remained an equally significant predictor, partial $r = .20$, $p < .0001$.

It is still possible that more specific attributions regarding the meaning of same-gender sexual contact by one's dating partner explain the gender difference in response to the jealousy-evoking scenario. Relative to women, men had moderately higher ratings of the Benign Meaning attribution, $F(1, 327) = 23.01$, $p < .0001$, $d = .51$, and substantially higher ratings of the Additional Sex attribution, $F(1, 327) = 170.82$, $p < .0001$, $d = 1.17$. In contrast, women agreed with the Deceit attribution to a moderately higher degree than did men, $F(1, 327) = 22.44$, $p < .0001$, $d = .51$. To investigate the possibility that these attributions explained the gender difference in response to the jealousy-evoking scenario, each of the three attribution variables were entered simultaneously with gender (0 = *male*, 1 = *female*) into a logistic regression equation to predict whether the respondent indicated other-gender sexual contact (coded 0) or same-gender sexual contact (coded 1) as more upsetting. These four variables successfully predicted responses to the jealousy item: Model $X^2(4) = 155.76$, $p < .0001$; Goodness of Fit $X^2(324) = 345.29$, $p < .20$; 80.9% of cases correctly classified.

The Benign Meaning attribution was unrelated to the response to the jealousy-evoking scenario (partial $r = .00$, $p < .61$), whereas both the Deceit attribution (partial $r = .10$, $p < .01$) and the Additional Sex attribution (partial $r = -.13$, $p < .002$) were significantly related. Respondents who tended to attribute a deceptive meaning to a dating partner's same-gender sexual contact were more likely to find same-gender sexual infidelity more upsetting compared to other-gender sexual infidelity. Conversely, those respondents who saw same-gender sexual contact by one's dating partner as not excluding continued sexual involvement with that partner were more likely to find other-gender sexual infidelity more upsetting compared to same-gender sexual infidelity. Even after controlling for these specific attributions, however, respondent gender remained a substantially stronger predictor of responses to the jealousy-evoking scenario (partial $r = .29$, $p < .0001$).

Discussion

Although eroticization of same-gender sexual contact was related to finding same-gender sexual infidelity as relatively less upsetting, the apparent gender difference persisted even after statistically controlling for men's substantially greater tendency to eroticize same-gender sexual contact. Similarly, even though specific attributions regarding the broader meanings attached to a partner's same-gender sexual contact were predictive of responses to the jealousy-evoking scenario, the apparent gender difference persisted after statistically controlling for these specific attributions.

It is possible that general homophobia or gender-role attitudes moderate this persistent gender difference. Study 3 was conducted to investigate this possibility. Additionally, the scenario used in Studies 1 and 2 personalized the infidelity as hypothetically occurring to the respondent. So, the possibility exists that the apparent gender difference in response to the jealousy-evoking scenario is due to a more general gender difference involving a greater aversion to same-gender sexual contact (male-male or female-female) on the part of women. The question also remains as to whether men and women recognize the existence of the gender difference in response to same-gender sexual infidelity.

To address these issues we conducted Study 3, which involved a description of sexual infidelity as occurring to a hypothetical other. The gender of the characters in the scenario were experimentally manipulated in a factorial design. We also included measures of gender role attitudes and general homophobia as potential predictors of response to the jealousy-evoking scenario.

STUDY 3

Method

Participants. Respondents were 208 men and 205 women enrolled in introductory psychology courses at the same mid-sized midwestern state university as the sample used in Study 2. All respondents were recruited through the course subject pool and indicated a primary or exclusive heterosexual orientation. Potential respondents were unaware of the nature of the study prior to showing up for potential participation. No one declined to participate upon learning that participation entailed completing an anonymous questionnaire regarding their sexual attitudes and views about relationships. Respondents received partial credit toward completion of the course. The large majority of the respondents (87.2%) were white and the median age was 19 years.

Measures. Participants were asked to complete the 25-item Attitude Toward Women Scale (AWS; Spence, Helmreich, & Stapp, 1973) as a measure of their gender-role attitudes. The AWS is the most commonly used measure of attitudes toward women and has been validated across several studies (Beere, 1990). Higher scores indicate more egalitarian views, whereas lower scores indicate more traditional attitudes regarding the rights, roles, and responsibilities of women. The internal consistency coefficient (Cronbach's alpha) was .85 in the current study. General homophobia was measured with the 7-item measure published by Bouton et al. (1987). Higher scores indicate a more negative attitude toward homosexuals. The internal consistency coefficient (Cronbach's alpha) was .88 in the current study.

With regard to the jealousy-evoking scenario, each respondent received one of four possible scenarios. Each scenario varied with regard to the gender of the character committing the sexual infidelity and the gender of the

interloper. The following is the scenario involving a female character committing the infidelity with a male interloper:

Josh and Jill are both college sophomores and have been dating for seven months. One day, Jill confesses to Josh that she had oral sex with a male classmate two weeks earlier after a long evening of studying together. Jill wanted to be honest and repeatedly assured Josh that it would not happen again. How upset do you think Josh would be in this situation?

Respondents were then presented with a 7-point scale (ranging from 1 = *Not at all Upset* to 4 = *Moderately Upset* to 7 = *Extremely Upset*). Previous research has indicated that, when so instructed, respondents do differentiate how the proposed character would feel in the described situation as opposed to how the respondent would feel in that situation (Batson, Early, & Salvarani, 1997). The scenarios varied according to whether it was Josh or Jill who had committed the infidelity and whether it was a male or female classmate with whom the oral sex occurred.

Procedure. Respondents completed the anonymous questionnaires in mixed-gender groups of 5 to 20 participants in the presence of a female research assistant. Respondents were randomly assigned to one of the four scenario conditions. Upon completion of the questionnaire, respondents placed the survey in a box separated from the researcher by several feet, were thanked, and received a signature on their credit slip verifying participation.

Results

Scores on the gender-role attitudes measure and the homophobia measure were moderately related ($r = .54, p < .001$). As expected, men had moderately higher scores on the homophobia measure compared to women, $F(1, 411) = 34.51, p < .0001, d = .56$. Men also had substantially more traditional views of female gender roles compared to women, $F(1, 410) = 87.05, p < .0001, d = .84$. Because men and women differed on these two variables, median splits were performed separately for each gender; that is, for purposes of conducting an analysis of variance (ANOVA) on responses to the jealousy scenario, respon-

dents above the median on the AWS were considered relatively more egalitarian whereas respondents below the median were considered relatively more traditional in their gender-role attitudes. Similarly, distinctions were made regarding more versus less homophobic respondents. Those individuals at the median on either measure were excluded from further analyses.

The ratings of how upset the character in the scenario would be were subjected to a 2 (Gender of Respondent) X (Gender of the Person Committing the Infidelity) X (Gender of the Interloper) X (Homophobia) X (Gender Role Attitudes) ANOVA. There were no significant main effects for respondent gender, $F(1, 334) = 1.88, p < .18, d = .15$; homophobia, $F(1, 334) = 1.16, p < .28, d = .12$; or gender role attitudes, $F(1, 334) = .85, p < .36, d = .10$. There were main effects for gender of the person committing the infidelity, $F(1, 334) = 10.56, p < .001, d = .36$, as well as gender of the interloper, $F(1, 334) = 22.34, p < .001, d = .52$. These main effects, however, were superseded by a significant gender of the person committing the infidelity by gender of the interloper interaction, $F(1, 334) = 36.97, p < .001, d = .67$.

Figure 1 illustrates the nature of the interaction between gender of the interloper and gender of the person committing the infidelity. Specific contrasts revealed that respondents, when the interloper was a female, expected significantly less upset when the person committing the infidelity was female (female-female sexual contact) than when the person committing the infidelity was male (male-female sexual contact), $F(1, 186) = 39.94, p < .001, d = .93$. The only other significant two-way interaction involved gender of the respondent and gender of the interloper, $F(1, 334) = 4.03, p < .05, d = .22$. The nature of this interaction is illustrated in Figure 2. Both men, $F(1, 184) = 23.14, p < .001, d = .71$, and women, $F(1, 178) = 1.88, p < .05, d = .21$, expected greater upset when the interloper was male compared to when the interloper was female, and the effect was notably larger for male respondents. No other interactions (two-way or higher) were statistically significant.

Figure 1

Interaction Between Gender of Interloper and Gender of Actor

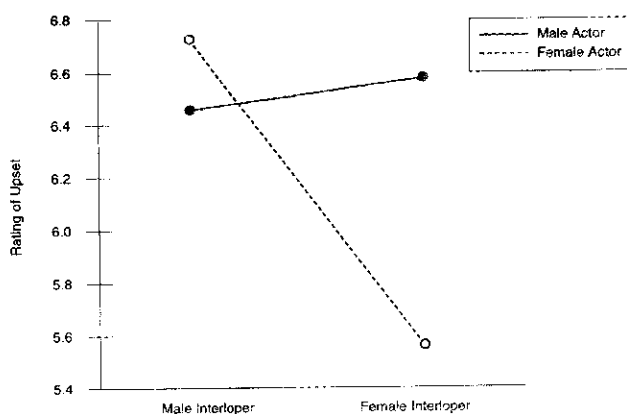
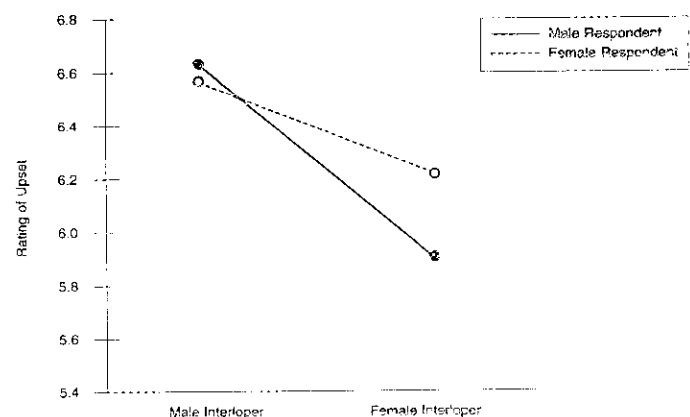


Figure 2

Interaction Between Gender of Interloper and Gender of Respondent



DISCUSSION

Across the first two studies, each involving a sample from a different university, different jealousy-evoking scenarios, and different response formats (forced-choice vs. Likert-type ratings), men and women consistently differed in their response to hypothetical same-gender sexual infidelity compared to such infidelity involving someone of the other gender. Specifically, compared to heterosexual infidelity, men indicated *less* emotional upset over same-gender sexual infidelity, whereas women generally indicated *greater* upset over same-gender sexual infidelity.

In the third study, both men and women recognized that female-female sexual infidelity would be least upsetting. However, as an anonymous reviewer pointed out, the findings in Study 1 appear to be somewhat discrepant with those of Study 3. That is, in Study 3 we found that the upset associated with female-female sexual infidelity was substantially lower than the other three types of infidelity, among whom no differences were found (see Figure 1). In Study 1, however, if one were to plot the means in a similar fashion (that is, according to gender of the actor and gender of the interloper, regardless of gender of the respondent), a different pattern emerges in that the lines would be nearly parallel. In Study 1, ratings of upset in response to heterosexual infidelity were virtually identical, regardless of the gender of the respondent, actor, or interloper. Using these ratings as a baseline, male-male sexual infidelity was rated as more upsetting and female-female infidelity was seen as less upsetting. The findings in Study 1 and Study 3 share the fact that female-female sexual infidelity was considered the least problematic, but they differ with regard to whether male-male sexual infidelity is seen as more upsetting than male-female infidelity.

How are we to explain this apparent discrepancy? Differences in terminology between the two studies were discussed earlier. Additionally, in Study 1, only men rated the female-female sexual infidelity and only women rated the male-male sexual infidelity, which was not the case in Study 3. However, gender of respondent does not appear to explain the discrepancy as this variable was not involved in a 3-way interaction with gender of the actor and gender of the interloper in Study 3. A primary distinction between the methodology of Study 1 and Study 3, however, has to do with presentation of both heterosexual and homosexual infidelity versus presentation of only one form of sexual infidelity. In Study 1, respondents were asked to first rate their probable upset in response to heterosexual infidelity, followed by their response to a scenario involving homosexual infidelity. In Study 3, respondents were randomly assigned to respond to a single scenario involving *either* heterosexual or homosexual infidelity. Perhaps in Study 1 imagining heterosexual infidelity first served as a sort of baseline experience against which respondents compared their probable upset over an instance of homosexual infidelity. In that context, women rated male-male infidelity as more problematic than male-female infidelity, whereas men considered female-female infidelity less upsetting.

Note that in Study 1, order of presentation of the heterosexual and homosexual scenarios was not counterbalanced to allow for examination of order effects. Additional research is needed to determine whether providing respondents with a baseline scenario influences subsequent judgments regarding the potential problematic nature of other forms of sexual infidelity (e.g., see Wiederman & Allgeier, 1993).

With regard to possible explanations for the gender difference in response to homosexual infidelity, we expected men to be less bothered than women by a dating partner's same-gender sexual contact due to men's relatively greater eroticization of such contact. Indeed, as expected, men's scores on our measure of eroticization of same-gender sexual contact by members of the other gender were remarkably greater than were women's (also see Louderback & Whitley, 1997). However, this large gender difference in eroticization did not fully explain the gender difference in response to same-gender versus other-gender sexual infidelity. Similarly, we expected women to make more negative attributions regarding the meaning of same-gender sexual contact by one's dating partner as to the implications of such sexual contact for the primary relationship. Such was the case, yet the gender difference in response to same-gender versus other-gender sexual infidelity persisted after controlling for three specific attributions regarding the meaning of same-gender sexual contact by one's dating partner.

What implications do the current findings have for evolutionary explanations of gender differences in sexual jealousy? Consistent with evolutionary theory, men are less concerned about a female partner's potential sexual infidelity with a female compared to sexual infidelity with a male. For women, male-male sexual infidelity is viewed as at least as upsetting (Study 3), if not more so (Studies 1 and 2), than male-female sexual infidelity. Both findings are consistent with evolutionary theory, and persisted after statistically controlling for general sexual attitudes, homophobia, and gender-role attitudes. However, the gender difference in response to homosexual infidelity is equally consistent with explanations based on prevalent gender role schemas. Accordingly, the results of the current set of studies leave several questions for future research.

For example, although controlling for particular attributions regarding the meaning of homosexual infidelity by one's steady partner did not eliminate the gender difference in response to homosexual infidelity, it is possible that other specific attributions regarding the meaning of same-gender sexual contact would show differential patterns of endorsement by men and women, and that these would explain the gender difference in response to same-gender sexual infidelity. As heterosexuality may be perceived as a more central feature of masculinity than femininity in respondents' gender-role schemas (Herek, 1986a, 1986b; Kite, 1994), male-male sexual contact by one's dating partner may indicate to women greater problems in the gender-role identity of one's partner relative to

the gender-role identity implications of female-female sexual contact by a man's female dating partner. Although we measured generic homophobic attitudes in Study 3, we did not measure specific attributions regarding gender-role implications of same-gender sexual infidelity or bisexuality. LaMar and Kite (1998) found that gender differences in attitudes toward homosexuality varied as a function of the component of that attitude under consideration. For example, women displayed more negative attitudes than did men with regard to the prospect of having contact with lesbians. Future research should consider specific components of attitudes toward gay men and lesbians in addition to the eroticization component investigated here.

Additionally, respondents' own gender-role attitudes appear to be an important mediating variable in understanding homophobia (see Louderback & Whitley, 1997). Although we measured respondents' gender-role attitudes with a widely-used measure of attitudes toward women, it may be fruitful for future research to include a more comprehensive measure of gender-role attitudes such that attitudes about men's roles are also considered, or to use a measure that accounts for respondent views on gender roles regarding sexuality in particular.

Despite our attempts in Studies 2 and 3 to hold the form of sexual activity in the male-male and female-female scenarios constant by depicting infidelity involving only oral sex, it is also possible that male-male sexual contact brings to respondents' minds images of insertive forms of sexual activity, whereas such is probably less likely for depictions of female-female sexual contact. This factor may help explain women's greater aversion to male-male sexual infidelity compared to men's reactions to female-female sexual infidelity. As a side note, the scenarios used in the current set of studies referred to "having oral sex," without specification of whether such activity was shared between the actor and interloper, or was for the exclusive benefit of one of the parties. Additional research is needed to determine whether men and women respond differentially when the sexual infidelity involves receiving oral sex, performing oral sex, or both. Finally, to the extent that HIV and AIDS are associated in respondents' minds with male-male sexual activity, women in the current study may have been more concerned about the health risks associated with male-male sexual infidelity compared with men's concerns about sexually-transmitted diseases from female-female sexual contact by one's dating partner.

In closing, the documented gender difference in response to same-gender sexual infidelity during courtship is intriguing. Understanding the nature of this gender difference may shed additional light on men's and women's psychological mechanisms or schemas regarding sexuality and gender roles. Further research is needed to investigate the underlying meanings respondents

ascribe to same-gender versus other-gender sexual contact in general and sexual infidelity in particular.

REFERENCES

- Allgeier, E. R., & Wiederman, M. W. (1994). How useful is evolutionary psychology for understanding contemporary human sexual behavior? *Annual Review of Sex Research*, 5, 218-256.
- Batson, C. D., Early, S., & Salvarani, G. (1997). Perspective taking: Imagining how another feels versus imagining how you would feel. *Personality and Social Psychology Bulletin*, 23, 751-758.
- Beere, C. (1990). *Gender roles: A handbook of tests and measures*. New York: Greenwood Press.
- Bouton, R. A., Gallagher, P. E., Garlinghouse, P. A., Leal, T., Rosenstein, L. D., & Young, R. K. (1987). Scales for measuring fear of AIDS and homophobia. *Journal of Personality Assessment*, 51, 606-614.
- Buss, D. M. (1994). *The evolution of desire: Strategies of human mating*. New York: Basic Books.
- Buss, D. M., Larsen, R. J., Westen, D., & Semmelroth, J. (1992). Sex differences in jealousy: Evolution, physiology, and psychology. *Psychological Science*, 3, 251-255.
- Buunk, B. P., Angleitner, A., Oubaid, V., & Buss, D. M. (1996). Sex differences in jealousy in evolutionary and cultural perspective: Tests from The Netherlands, Germany, and the United States. *Psychological Science*, 7, 359-363.
- Cano, A., & O'Leary, K. D. (1997). Romantic jealousy and affairs: Research and implications for couple therapy. *Journal of Sex & Marital Therapy*, 23, 249-275.
- Cohen, J. (1969). *Statistical power analysis for the behavioral sciences*. New York: Academic Press.
- Cohen, J. (1994). The earth is round ($p < .05$). *American Psychologist*, 49, 997-1003.
- Dixon, J. K. (1984). The commencement of bisexual activity in swinging married women over age thirty. *The Journal of Sex Research*, 20, 71-99.
- Eliason, M. J. (1997). The prevalence and nature of biphobia in heterosexual undergraduate students. *Archives of Sexual Behavior*, 26, 317-326.
- Engstrom, C. M., & Sedlacek, W. (1997). Attitudes of heterosexual students toward their gay male and lesbian peers. *Journal of College Student Development*, 38, 565-576.
- Fisher, W. A., Byrne, D., White, L. A., & Kelley, K. (1988). Erotophobia-erotophilia as a dimension of personality. *The Journal of Sex Research*, 25, 123-151.
- Geary, D. C., Rumsey, M., Bow-Thomas, C. C., & Hoard, M. K. (1995). Sexual jealousy as a facultative trait: Evidence from the pattern of sex differences in adults from China and the United States. *Ethology and Sociobiology*, 16, 355-383.
- Hatfield, E. (1983). What do women and men want from love and sex? In E. R. Allgeier & N. B. McCormick (Eds.), *Changing boundaries* (pp. 106-134). Palo Alto, CA: Mayfield.
- Herek, G. M. (1986a). On heterosexual masculinity: Some psychical consequences of the social construction of gender and sexuality. *American Behavioral Scientist*, 29, 563-577.
- Herek, G. M. (1986b). The social psychology of homophobia: Toward a practical theory. *Review of Law and Social Change*, 24, 923-934.
- Huston, T. L., & Ashmore, R. D. (1986). Women and men in personal relationships. In R. D. Ashmore & F. K. Del Boca (Eds.), *The social psychology of female-male relations* (pp. 167-210). New York: Academic Press.
- Karlen, A. (1988). *Threesomes: Studies in sex, power, and intimacy*. New York: Morrow.
- King, B., & Black, K. (1995, May). *Heterosexuals' willingness to engage in interpersonal relationships with homosexuals*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago.
- Kite, M. E. (1984). Sex differences in attitudes toward homosexuals: A meta-analytic review. *Journal of Homosexuality*, 10, 69-81.
- Kite, M. E. (1994). When perceptions meet reality: Individual differences in reactions to lesbians and gay men. In B. Greene & G. M. Herek (Eds.), *Contemporary perspectives on gay and lesbian psychology* (pp. 25-53). Newbury Park, CA: Sage.
- LaMar, L., & Kite, M. E. (1998). Sex differences in attitudes toward gay men

- and lesbians: A multidimensional perspective. *The Journal of Sex Research*, 35, 189-196.
- Louderback, L. A., & Whitley, B. E. (1997). Perceived erotic value of homosexuality and sex-role attitudes as mediators of sex differences in heterosexual college students' attitudes toward lesbians and gay men. *The Journal of Sex Research*, 34, 175-182.
- Mullen, P. E., & Martin, J. (1994). Jealousy: A community study. *British Journal of Psychiatry*, 164, 35-43.
- Nyberg, K. L., & Alston, J. P. (1977). Homosexual labeling by university youths. *Adolescence*, 12, 541-546.
- Oliver, M. B., & Hyde, J. S. (1993). Gender differences in sexuality: A meta-analysis. *Psychological Bulletin*, 114, 29-51.
- Paul, L., & Galloway, J. (1994). Sexual jealousy: Gender differences in response to partner and rival. *Aggressive Behavior*, 20, 203-211.
- Pines, A. M. (1992). *Romantic jealousy: Understanding and conquering the shadow of love*. New York: St. Martin's Press.
- Quilliam, S. (1994). *Women on sex: Women of all ages talk intimately about every aspect of their sexual experiences*. New York: Barricade Books.
- Rosenthal, R., & Rosnow, R. L. (1991). *Essentials of behavioral research: Methods and data analysis* (2nd ed.). New York: McGraw-Hill.
- Salovey, P. (Ed.) (1991). *The psychology of jealousy and envy*. New York: Guilford Press.
- Sedikides, C., Oliver, M. B., & Campbell, W. K. (1994). Perceived benefits and costs of romantic relationships for women and men: Implications for exchange theory. *Personal Relationships*, 1, 5-21.
- Spence, J., Helmreich, R., & Stapp, J. (1973). A short version of the Attitudes Toward Women Scale (AWS). *Bulletin of the Psychonomic Society*, 2, 219-220.
- Stokes, J., McKirnan, D., Doll, L., & Burzette, R. (1996). Female partners of bisexual men: What they don't know might hurt them. *Psychology of Women Quarterly*, 20, 267-284.
- Symons, D. (1979). *Evolution of human sexuality*. New York: Oxford University Press.
- Weis, D. L., Slosnerick, M., Cate, R., & Sollic, D. L. (1986). A survey instrument for assessing the cognitive association of sex, love, and marriage. *The Journal of Sex Research*, 22, 206-220.
- White, G. L., & Mullen, P. E. (1989). *Jealousy*. New York: Guilford Press.
- Whitley, B. E., & Kite, M. E. (1995). Sex differences in attitudes toward homosexuality: A comment on Oliver and Hyde (1993). *Psychological Bulletin*, 117, 146-154.
- Wiederman, M. W. (1997). Extramarital sex: Prevalence and correlates in a national sample. *The Journal of Sex Research*, 34, 167-174.
- Wiederman, M. W., & Allgeier, E. R. (1993). Gender differences in sexual jealousy: Adaptionist or social learning explanation? *Ethology and Sociobiology*, 14, 115-140.
- Wiederman, M. W., Allgeier, E. R., & Ragusa, D. M. (1995). Empirical investigation of the use of the term "jealousy" in survey research. *Representative Research in Social Psychology*, 20, 15-29.
- Wiederman, M. W., & Hurd, C. (in press). Extradynamic involvement during dating. *Journal of Social and Personal Relationships*.

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