
Cues to Infidelity

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This research sought to identify cues to a long-term partner's sexual infidelity and emotional infidelity. In Study 1, 204 participants nominated acts that evoke suspicions of sexual or emotional infidelity. In Study 2, 230 participants evaluated these acts on how diagnostic each was of sexual and emotional infidelity. Factor analysis revealed 14 factors of cues, including Anger and Argumentativeness, Exaggerated Affection, Sexual Boredom, and Relationship Dissatisfaction. Twelve factors were differentially diagnostic of sexual versus emotional infidelity. Sexual Boredom, for example, was more diagnostic of sexual infidelity, whereas Relationship Dissatisfaction was more diagnostic of emotional infidelity. Men and women provided higher diagnosticity ratings for acts performed by an opposite-sex versus same-sex target. For ratings collapsed across sex of target, however, women provided higher diagnosticity ratings than did men. Discussion integrates results with previous research on infidelity and suggests important directions for future research on the cues to infidelity.

Marriage between men and women occurs in every known culture (Buss, 1985; Buss & Schmitt, 1993; Epstein & Guttman, 1984; Vandenberg, 1972). The breach of a marital alliance is a concomitant human universal. Estimates of marital infidelity among American couples range from 26% to 70% for women and from 33% to 75% for men (Buss, 1994; Daly & Wilson, 1983; Fisher, 1987; Hite, 1987; Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953; Symons, 1979). Infidelity is not confined to American or even to Western long-term mateships. In a study of 160 cultures worldwide, infidelity was the most often cited reason for conjugal dissolution (Betzig, 1989).

Infidelity or the suspicion of infidelity can have destructive consequences. Suspicion or knowledge of a partner's infidelity elicits jealousy in men and women alike (Buss, 1994; Buss & Schmitt, 1993; Buss & Shackelford, 1997a, 1997b; Daly & Wilson, 1988). Sexual jealousy can have especially destructive consequences when

evoked in men. The most frequent cause of wife battering and wife killing is male sexual jealousy (Buss, 1994; Daly & Wilson, 1988; Daly, Wilson, & Weghorst, 1982; Wilson & Daly, 1992). Male sexual jealousy also appears to be the cause of many husband killings. In a sample of 47 murders precipitated by a jealous man, for example, 9 of the murdered were men killed in self-defense by women accused of infidelity (Daly et al., 1982).

Infidelity is a significant theoretical issue. From an evolutionary psychological perspective (e.g., Buss, 1995; Buss, Larsen, Westen, & Semmelroth, 1992; Buss & Shackelford, 1997a; Wilson & Daly, 1992), for example, infidelity signals the diversion of important reproductive resources. From an equity theoretical perspective (e.g., Adams, 1965; Messick & Cook, 1983; Walster, Walster, & Berscheid, 1978), infidelity may signal serious inequities in a relationship. From an investment model perspective (e.g., Rusbult, 1980, 1983), infidelity signals lack of commitment to a relationship. In short, infidelity acquires importance in any theory of romantic relationships.

A critical empirical and theoretical question is, What leads men and women to suspect that a partner has been unfaithful? No previous research has identified the cues to a long-term partner's infidelity. The goal of this research was to fill this gap in the infidelity literature.

Previous research on infidelity documents the utility of distinguishing two variants of infidelity: *sexual infidelity* and *emotional infidelity*. Sexual infidelity refers to sexual

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activity with someone other than one's long-term partner. Emotional infidelity occurs when one's partner channels emotional resources such as romantic love, time, and attention to someone else. Men who have affairs are more likely to do so without emotional involvement, whereas women's affairs are more often accompanied by emotional involvement (Atwater, 1982; Blumstein & Schwartz, 1983; Buunk, 1980; Glass & Wright, 1985; Spanier & Margolis, 1983; Thompson, 1983, 1984).

Previous research on jealousy in romantic relationships also attests to the importance of differentiating sexual from emotional infidelity. Men display greater psychological and physiological distress while imagining a mate's sexual infidelity, whereas women manifest greater distress while imagining a mate's emotional infidelity (Buss et al., 1992; Wiederman & Allgeier, 1993). Using a free-response, interview format, Teisman and Mosher (1978) found that men more than women identified a partner's sexual infidelity as the primary source of their feelings of jealousy. Women more than men, in contrast, identified loss of a partner's time and attention as central to their feelings of jealousy.

This research seeks to identify cues that signal a partner's sexual infidelity and emotional infidelity. In Study 1, participants nominated acts that might lead them to suspect that a long-term partner was sexually or emotionally unfaithful. In Study 2, a new sample of participants evaluated the cues nominated in Study 1 on how diagnostic each was of sexual infidelity and of emotional infidelity.

STUDY 1: IDENTIFYING CUES TO INFIDELITY

The goal of this study was to identify the range and diversity of acts that lead one to suspect a long-term partner of sexual infidelity and of emotional infidelity. Toward this end, we employed a cue nomination method (Buss & Craik, 1983).

Method

Participants. Participants were 204 undergraduates (89 men, 115 women) at a large midwestern university, fulfilling a requirement for an introductory psychology course. Approximately 82% of participants were Caucasian. The mean age of participants was 18.8 years, with a range of 17 to 27 years. About 80% of participants reported past or current involvement in a committed romantic relationship. Three in four of these relationships included sexual intercourse.

Materials. Attached to a survey administered for a separate study were two sheets of paper. At the top of one sheet was the title "Cues to Partner's Sexual Unfaithfulness." At the top of the second sheet was the title "Cues to Partner Falling in Love With Someone Else." Partici-

pants were instructed to think of a past, future, or their current committed romantic relationship and to imagine that they suspected that the relevant partner was either having sex with someone else or falling in love with someone else. Participants were then presented with the question, "What cues would lead you to suspect that your partner is sexually unfaithful to you [falling in love with someone else]? These cues might include specific things that your partner might say or do. These cues might also include specific things that your partner fails to say or fails to do. These cues might be physical cues, sexual cues, emotional cues, behavioral cues, or verbal cues." Participants wrote down 10 cues on the lines provided.

Procedures. Participants from a departmental participant pool were randomly scheduled to participate in the study. Approximately 30 students of the same sex participated in each session.

Results and Discussion

The cues nominated by men and women overlapped substantially, as did the cues nominated for sexual and emotional infidelity. Thus, we created a single list of acts that included all the acts nominated by men and women for sexual and emotional infidelity. After assembling the list of acts, we eliminated obvious redundancies. This elimination process erred toward overinclusion in that acts with even partial distinctiveness (e.g., "She doesn't say 'I love you' to her partner anymore" and "She doesn't say 'I love you' to her partner as often as she used to") were retained to maximize the range of coverage. After this elimination process, 170 cues to infidelity remained. The following are sample acts: "He doesn't respond anymore when his partner tells him that she loves him," "She showers her partner with an unusual number of gifts," "He suddenly tries new and unusual positions when he and his partner have sex," and "She acts less interested in having sex with her partner."

No previous research has identified what acts lead people to suspect a partner's infidelity, in spite of the prevalence and consequences of real or suspected infidelity. A general goal of this research was to fill this gap in the empirical literature. A more ambitious goal was to provide infidelity and jealousy researchers with a list of cues to unfaithfulness that might be employed in future research, such as in investigations into the acts that trigger sexual jealousy. Thus, we wanted to identify whether a smaller, more manageable number of factors might underlie the 170 cues.

On the basis of previous research indicating the utility of distinguishing sexual from emotional infidelity, we wanted to identify which of the cues were most diagnostic of sexual infidelity, which were most diagnostic of emotional infidelity, and whether some cues might be differentially diagnostic of one type of infidelity relative to the

other. Because previous research identifies gender as a critical variable with respect to the causes, incidence, and consequences of infidelity, we were also interested in whether men and women perceive the same or different cues to be most diagnostic of infidelity and whether this might depend on the type of infidelity. We designed Study 2 to answer these questions, ideally with reference to the factors that might underlie the 170 cues.

STUDY 2: CUE DIAGNOSTICITY

A first goal of this study was to examine the underlying factor structure of the cues. Assuming an interpretable factor structure emerged, we sought to (a) document the cue factors that are most diagnostic of emotional and sexual infidelity, (b) determine whether the same cue factors differ in diagnosticity when performed by a woman versus a man, (c) determine whether men and women perceive the same or different cue factors as diagnostic of infidelity, and (d) identify whether some cue factors are differentially diagnostic of sexual versus emotional infidelity.

Method

Participants. Participants were 230 undergraduates (114 men, 116 women) at a large midwestern university, fulfilling a requirement for an introductory psychology course. Approximately 81% of participants were Caucasian. The mean age of participants was 18.8 years, with a range of 18 to 24 years. About 91% of participants reported past or current involvement in a committed romantic relationship. Three in four of these relationships included sexual intercourse. Approximately 40% of participants reported that they had had sex with someone else, fallen in love with someone else, or both while involved in a committed romantic relationship.

Materials. The survey completed by participants opened with several biographical questions, followed by a section on their romantic relationship history. Participants were then presented with the 170 acts nominated in Study 1. Participants were instructed to imagine a committed, sexual relationship between a man and a woman and to provide diagnosticity ratings for each act with respect to both sexual and emotional infidelity.

We employed two indexes of cue diagnosticity. For each act, half the participants rated the likelihood that infidelity had occurred, given the performance of that act. Ratings were provided along an 8-point Likert-type scale ranging from 0 (*Infidelity not at all likely*) to 4 (*Infidelity moderately likely*) to 8 (*Infidelity extremely likely*). The remaining half of participants rated, for each act, the likelihood of act performance, given the occurrence of infidelity. Ratings were provided along an 8-point Likert-type scale ranging from 0 (*Act not at all likely to*

occur) to 4 (*Act moderately likely to occur*) to 8 (*Act extremely likely to occur*). Thus, we secured two indexes of diagnosticity for each act with respect to sexual and emotional infidelity: the likelihood of infidelity given the act and the likelihood of the act given infidelity.

To the left of each act were two blank spaces, forming two vertical columns of blank spaces down the left side of the page. At the top of each column was the label *Falling in Love* or *Sexually Unfaithful*. We reversed the order of the columns for half of the surveys. Across the two levels of diagnosticity ratings, half of the participants rated acts in which the woman in the relationship was the suspected or known unfaithful partner. The remaining half of subjects rated acts in which the man was the suspected or known unfaithful partner. In sum, Study 2 was a 2 (sex of rater) \times 2 (sex of target) \times 2 (diagnosticity rating) \times 2 (infidelity type) design, with sex of rater, sex of target, and diagnosticity rating serving as between-subjects variables and infidelity type serving as a within-subjects variable.

Procedures. Participants from a departmental participant pool were randomly scheduled to participate in the study. Approximately 30 students of the same sex participated in each session.

Results

To assess whether it would be necessary to differentiate the two variants of diagnosticity ratings in further analyses, we calculated the correlation between the aggregate ratings (mean across participants) of the 170 acts for (a) likelihood of infidelity given the act and (b) likelihood of the act given infidelity. For diagnosticity ratings with respect to sexual infidelity, this correlation was $r = .91$ ($N = 170$ acts, $p < .001$). For diagnosticity ratings with respect to emotional infidelity, this correlation was $r = .89$ ($N = 170$ acts, $p < .001$). Across infidelity type, this correlation was $r = .88$ ($N = 170$, $p < .001$). Correlations of this magnitude suggest data redundancy (Tabachnick & Fidell, 1996). Because we had no theoretical reasons to differentiate the diagnosticity ratings and because these ratings were highly correlated, we collapsed ratings across type of diagnosticity rating for all further analyses.

Factor analysis of the 170 cues to infidelity. To identify the most general factor structure that might underlie the 170 cues, we performed a principal components analysis followed by oblimin (oblique) rotation on diagnosticity ratings, collapsing across sex of rater, sex of target, and infidelity type. Although 26 factors emerged with eigenvalues greater than 1.00, the oblimin solution failed to converge using this large number of factors. We examined several principal component solutions in which we extracted and obliquely rotated a varying number of

TABLE 1: Factor Loadings for 14 Factors of Cues to Infidelity, Study 2

<i>Factor and Acts (Female Actor)</i>	<i>Factor Loading</i>
Angry, Critical, Argumentative Toward Partner	
She acts unusually angry with her partner when they are together.	.66
She is unusually critical of her partner.	.62
She is suddenly less forgiving of her partner when he makes mistakes.	.60
She starts looking for reasons to start arguments with her partner.	.59
Sexual Infidelity Is Revealed	
Her partner walks in on her and another man having sex.	.74
She tells her partner that she has been sexually unfaithful to him.	.69
Another man tells him that he (the other man) has been having sex with his partner.	.66
Friends tell her partner that she is having sex with another man.	.48
Changes in Normal Routine and Sexual Behavior With Partner	
She sleeps more than she used to.	.65
Her eating habits suddenly change.	.64
She suddenly tries new and unusual positions when she and her partner have sex.	.61
Her clothing style suddenly changes.	.60
She suddenly begins complaining of pain in her genitals.	.60
She less often has an orgasm when she and her partner have sex.	.59
Apathetic Toward Partner	
She doesn't share her feelings with her partner as often.	.62
She more often avoids the topic of sex when talking with her partner.	.58
She acts less excited than usual to see her partner.	.57
She doesn't spend as much time on her physical appearance before she sees her partner.	.53
She starts telling her partner she is too tired to have sex with him.	.50
Increased Sexual Interest/Exaggerated Display of Affection Toward Partner	
She acts more interested in having sex with her partner.	.65
She is unusually upset when her partner doesn't want to have sex with her.	.65
She acts unusually happy when she is with her partner.	.64
She talks about sex more often when she is with her partner.	.61
She starts acting overly affectionate toward her partner.	.58
She says "I love you" to her partner more frequently than she used to.	.56
Sexual Disinterest/Boredom With Partner	
She suddenly has difficulty remaining sexually aroused while she and her partner are having sex.	.54
She suddenly has difficulty becoming sexually aroused when she and her partner want to have sex.	.38
She becomes more mechanical in the way she has sex with her partner—like she is just going through the motions.	.37
She more often tells her partner he is doing something wrong when they have sex together.	.35
When she and her partner have sex, she wants to have sex for a shorter duration than usual.	.35
She is less sexually adventurous with her partner than she used to be.	.35
Her partner notices that she seems bored when they have sex.	.34
Relationship Dissatisfaction/Loss of Love for Partner	
She breaks up with her partner to date another man.	.77
She suggests to her partner that they begin seeing other people.	.61
She breaks up with her partner.	.61
She starts talking to her partner about ending their relationship.	.60
She acts nervous when her partner asks if she is falling in love with another man.	.46
She tells her partner that she does not love him anymore.	.43
Passive Rejection of Partner/Inconsiderateness	
She becomes less gentle with her partner when they have sex.	.51
She starts acting rudely toward her partner.	.48
She starts asking her partner if he still feels the same love for her.	.40
She doesn't say "I love you" to her partner anymore.	.37
She doesn't tell her partner as often that she enjoys spending time with him.	.37
Reluctance to Discuss a Certain Other Person	
She begins avoiding talking about a certain other man in conversations with her partner.	.61
She acts nervous when a certain man's name comes up in conversations with her partner.	.56
Reluctance to Spend Time With Partner	
She doesn't want to go out on dates with her partner as often.	.52
She less often invites her partner to spend time with her and her friends.	.42
She less often invites her partner to spend time with her and her family.	.41

(continued)

TABLE 1: Continued

<i>Factor and Acts (Female Actor)</i>	<i>Factor Loading</i>
Increased Reference to and Time Spent With Another Person^a	
Her partner notices that she's wearing something that belongs to another man.	.66
She calls her partner by another man's name.	.59
Friends tell him that they have seen his partner with a certain other man on several occasions.	.57
She starts talking to her partner about her desire to have sex with another man.	.55
She begins spending more time with another man.	.49
Acting Guilty, Anxious Toward Partner^a	
She is unusually apologetic toward her partner.	.57
She won't look her partner in the eyes anymore.	.40
She stops returning her partner's phone calls.	.38
She acts unusually guilty after she has sex with her partner.	.38
Physical Signs of Sexual Infidelity/Disinterest in Sexual Exclusivity	
She contracts a sexually transmitted disease that her partner did not have.	.64
Her partner notices that she smells like she recently had sex—although not with him.	.47
She suddenly refuses to have sex with her partner.	.46
She tells her partner that she doesn't want their relationship to be exclusive.	.31
Emotional Disengagement From Partner^a	
She starts forgetting the couple's anniversaries and other special dates.	.68
Her partner notices excitement in her voice when she talks about another man.	.40
She doesn't say "I love you" to her partner as often as she used to.	.35
She doesn't respond anymore when her partner tells her that he loves her.	.32

NOTE: For factor solution, $N = 210$.

a. All loadings on this factor are negative.

factors. An interpretable structure emerged when we extracted and rotated 14 factors that accounted for 70% of the interitem variance. Thus, we retained the first 14 factors for further analysis. Table 1 displays the highest loading items for each factor, along with factor loadings, beginning with the factor that accounted for the most variance.

The Angry, Critical, Argumentative Toward Partner factor includes acts in which the unfaithful person is uncharacteristically critical of or angry with partner, is less forgiving of partner's mistakes, and seems to be looking for reasons to start arguments with partner. The Apathetic Toward Partner factor includes acts suggesting a general loss of interest in partner, such as acting less excited to see partner, not sharing feelings as often, and claiming to be too tired to have sex. The Relationship Dissatisfaction/Loss of Love for Partner factor includes acts such as suggesting the couple should see other people, talking about ending the relationship, and revelations of falling out of love with partner.

The Passive Rejection of Partner/Inconsiderateness factor includes acts of passive rather than direct rejection of partner, such as not saying "I love you" to partner anymore and not telling partner as often that he or she enjoys spending time together. This factor also includes a dimension of inconsiderateness toward partner, such as being less gentle during sex and acting rudely toward partner. The Reluctance to Discuss a Certain Other Person factor includes acts in which the unfaithful person avoids talking about a certain other person or be-

comes nervous when that person's name comes up in conversation with partner. The Reluctance to Spend Time With Partner factor includes acts wherein the unfaithful person does not want to spend time with partner, either alone or together, with family or with friends.

The Increased Reference to and Time Spent With Another Person factor is a collection of acts ranging from the unfaithful person spending more time with another person, to accidentally calling partner by another person's name. Also loading highly on this factor are acts such as revealing to partner desire to have sex with another person and partner noticing that the unfaithful person is wearing something that belongs to another person. The Acting Guilty, Anxious Toward Partner factor covers acts in which the unfaithful person seems generally uncomfortable and nervous or acts guilty around partner, such as not being able to look partner in the eyes. The Emotional Disengagement From Partner factor includes such acts as forgetting the couple's anniversaries, not saying "I love you" as often, and not responding when partner says "I love you."

Five factors contain explicitly sexual content. The Sexual Infidelity Is Revealed factor includes the partner witnessing his or her mate in flagrante delicto, as well as instances in which the unfaithful person or a third person reveals the sexual infidelity. The Changes in Normal Routine and Sexual Behavior With Partner factor includes items such as changes in sleeping patterns and eating habits in addition to acts tapping changes in the

TABLE 2: Alpha Reliabilities and Mean Interitem Correlations for 14 Factors of Cues to Infidelity, Study 2

Factor	No. of Items	Infidelity Type				Across Infidelity Type	
		Sexual		Emotional		Alpha	IIC
		Alpha	IIC	Alpha	IIC		
Angry, Critical, Argumentative Toward Partner	16	.94	.49	.94	.52	.96	.58
Sexual Infidelity Is Revealed	6	.80	.41	.83	.45	.85	.49
Changes in Normal Routine and Sexual Behavior With Partner	12	.91	.45	.90	.42	.93	.52
Apathetic Toward Partner	15	.91	.42	.91	.42	.94	.50
Increased Sexual Interest/Exaggerated Display of Affection Toward Partner	9	.87	.42	.83	.35	.88	.44
Sexual Disinterest/Boredom With Partner	10	.91	.51	.90	.46	.93	.56
Relationship Dissatisfaction/Loss of Love for Partner	11	.92	.51	.89	.44	.93	.53
Passive Rejection of Partner/Inconsiderateness	9	.90	.51	.89	.46	.91	.55
Reluctance to Discuss a Certain Other Person	13	.94	.54	.94	.55	.95	.61
Reluctance to Spend Time With Partner	10	.95	.63	.95	.63	.96	.69
Increased Reference to and Time Spent With Another Person	9	.88	.45	.86	.42	.89	.49
Acting Guilty, Anxious Toward Partner	6	.80	.40	.81	.42	.85	.49
Physical Signs of Sexual Infidelity/Disinterest in Sexual Exclusivity	4	.62	.32	.65	.32	.70	.38
Emotional Disengagement From Partner	8	.91	.56	.90	.52	.92	.60

NOTE: $N = 230$; IIC = mean interitem correlation.

unfaithful person's behavior during sex with partner, such as suddenly trying new and unusual positions or having orgasms less frequently. The Increased Sexual Interest/Exaggerated Display of Affection Toward Partner factor includes acts by the unfaithful person demonstrating greater interest in sex with partner, as well as exaggerated displays of affection and love for partner, such as saying "I love you" more frequently than usual. The Sexual Disinterest/Boredom With Partner includes events such as a sudden inability to become or remain sexually aroused with partner, boredom with sex, and becoming more mechanical during sex with partner. The Physical Signs of Sexual Infidelity/Disinterest in Sexual Exclusivity factor includes two closely related sets of acts. One set of acts includes contracting a sexually transmitted disease that partner did not have and partner noticing that the unfaithful person smells as if he or she recently had sex—although not with partner. A second set of acts includes acts such as the unfaithful person telling partner that he or she does not want their relationship to be exclusive.

Reliabilities and mean interitem correlations for 14 factors of cues to infidelity. To obtain reliable indexes of each factor, we summed with unit weighting acts loading at least $|.30|$ on the factor and not loading greater than $|.30|$ on any other factor. Table 2 shows the number of acts, alpha reliability coefficients, and mean interitem correlations for each factor for sexual infidelity, emotional infidelity, and across infidelity type. Across infidelity type and separately for sexual and emotional infidelity, 13 of

the 14 factors exhibit excellent reliability and high mean interitem correlations. The factor with the lowest reliability figures, Physical Signs of Sexual Infidelity/Disinterest in Sexual Exclusivity, is also the factor subsampling the fewest acts. Even this factor, however, manifests alpha coefficients above $.60$ and mean interitem correlations above $.30$ by infidelity type and across infidelity type.

Differential diagnosticity of 14 factors of cues to infidelity. Our data permitted us to assess the statistical reasonableness of distinguishing sexual from emotional infidelity. The correlation between the aggregate diagnosticity ratings of the 170 acts for sexual and emotional infidelity was $r = .40$ ($N = 170$, $p < .001$). Thus, the variance of diagnosticity ratings with respect to sexual infidelity overlaps 16% with the variance of diagnosticity ratings with respect to emotional infidelity. This level of correlation suggests that our participants did distinguish sexual from emotional infidelity.

To assess whether any of the factors of cues was differentially diagnostic of sexual versus emotional infidelity, we conducted correlated means t tests on the diagnosticity of each factor for the two types of infidelity. Table 3 presents the results of these analyses. For the reader's reference, also shown in Table 3 are the diagnosticity ranks for each factor by infidelity type. Twelve factors were differentially diagnostic of one type of infidelity relative to the other. The first panel of Table 3 displays the five factors of cues rated as more diagnostic of sexual infidelity. These factors were Physical Signs of Sexual

TABLE 3: Differential Diagnosticity of Factors of Cues to Infidelity, Study 2

Factor	Likelihood of Infidelity Given Occurrence of Acts Within Factor		Differential Diagnosticity <i>t</i> Value ^a	Diagnosticity Rank by Infidelity Type	
	Sexual Infidelity	Emotional Infidelity		Sexual	Romantic
	Mean (SD)	Mean (SD)			
More diagnostic of sexual infidelity					
Physical Signs of Sexual Infidelity/Disinterest in Sexual Exclusivity	6.19 (1.28)	4.46 (1.45)	17.79***	2	11
Sexual Infidelity Is Revealed	6.22 (1.33)	4.86 (1.54)	14.58***	1	8
Changes in Normal Routine and Sexual Behavior With Partner	4.03 (1.57)	3.37 (1.46)	11.94***	13	13
Increased Sexual Interest/Exaggerated Display of Affection Toward Partner	3.20 (1.63)	2.55 (1.32)	8.03***	14	14
Sexual Disinterest/Boredom With Partner	4.84 (1.54)	4.62 (1.42)	2.93**	6	10
More diagnostic of emotional infidelity					
Relationship Dissatisfaction/Loss of Love for Partner	5.06 (1.47)	6.08 (1.21)	11.85***	4	1
Emotional Disengagement From Partner	4.52 (1.51)	5.44 (1.43)	11.61***	8	2
Passive Rejection of Partner/Inconsiderateness	4.12 (1.53)	4.87 (1.39)	10.39***	12	9
Angry, Critical, Argumentative Toward Partner	4.34 (1.44)	5.05 (1.46)	10.37***	10	7
Reluctance to Spend Time With Partner	4.29 (1.56)	5.07 (1.55)	9.30***	11	6
Reluctance to Discuss a Certain Other Person	4.69 (1.48)	5.09 (1.46)	5.54***	7	5
Acting Guilty, Anxious Toward Partner	5.05 (1.38)	5.39 (1.34)	4.67***	5	4
Equally diagnostic of sexual and emotional infidelity					
Apathetic Toward Partner	4.34 (1.39)	4.42 (1.38)	1.21	9	12
Increased Reference to and Time Spent With Another Person	5.34 (1.38)	5.42 (1.31)	1.06	3	3

NOTE: Ratings of mean diagnosticities could range from 0 to 8; larger means indicate greater diagnosticity. $N = 230$.

a. *t* values are absolute and were produced by two-tailed correlated means *t* tests; *df* ranged from 220 to 227 due to missing data.

** $p \leq .01$, two-tailed. *** $p \leq .001$, two-tailed.

Infidelity/Disinterest in Sexual Exclusivity, Sexual Infidelity Is Revealed, Changes in Normal Routine and Sexual Behavior With Partner, Increased Sexual Interest/Exaggerated Display of Affection, and Sexual Disinterest/Boredom With Partner.

The second panel of Table 3 displays the seven factors of cues rated as more diagnostic of emotional infidelity. These factors were Relationship Dissatisfaction/Loss of Love for Partner; Emotional Disengagement From Partner; Passive Rejection of Partner/Inconsiderateness; Angry, Critical, Argumentative Toward Partner; Reluctance

to Spend Time With Partner; Reluctance to Discuss a Certain Other Person; and Acting Guilty, Anxious Toward Partner. The final panel of Table 3 displays the two factors rated as equally diagnostic of sexual and emotional infidelity: Apathetic Toward Partner and Increased Reference to and Time Spent With Another Person.

Sex-of-rater effects, sex-of-target effects, and sex of rater by sex of target interactions. We conducted a 2 (sex of rater) \times 2 (sex of target) ANOVA on factor diagnosticity for each factor, separately for sexual and emotional infidelity.

TABLE 4: Interactions Between Sex of Rater and Sex of Target on Factor Diagnosticity, Study 2

Factor	Factor Diagnosticity				Sex of Rater by Sex of Target F value ^a
	Male Rater		Female Rater		
	Male Target Mean (SD)	Female Target Mean (SD)	Male Target Mean (SD)	Female Target Mean (SD)	
Sexual infidelity					
Increased Reference to and Time Spent With Another Person	5.07 (1.38)	5.43 (1.33)	5.87 (1.19)	4.98 (1.46)	12.08***
Passive Rejection of Partner/Inconsiderateness	3.78 (1.50)	4.04 (1.23)	4.80 (1.55)	3.85 (1.64)	9.06**
Acting Guilty, Anxious Toward Partner	4.65 (1.49)	5.08 (1.19)	5.53 (1.13)	4.90 (1.54)	8.63**
Angry, Critical, Argumentative Toward Partner	3.96 (1.68)	4.32 (1.10)	4.88 (1.22)	4.20 (1.56)	7.56**
Emotional Disengagement From Partner	4.20 (1.63)	4.43 (1.25)	5.08 (1.32)	4.37 (1.67)	5.64*
Reluctance to Spend Time With Partner	3.93 (1.78)	4.13 (1.23)	4.92 (1.35)	4.17 (1.65)	5.40*
Reluctance to Discuss a Certain Other Person	4.37 (1.66)	4.57 (1.28)	5.25 (1.22)	4.56 (1.60)	5.37*
Relationship Dissatisfaction/Loss of Love for Partner	4.84 (1.54)	5.03 (1.33)	5.49 (1.35)	4.84 (1.58)	4.71*
Emotional infidelity					
Increased Reference to and Time Spent With Another Person	5.18 (1.32)	5.61 (1.18)	5.70 (1.26)	5.17 (1.40)	7.98**
Passive Rejection of Partner/Inconsiderateness	4.46 (1.45)	4.76 (1.28)	5.45 (1.31)	4.74 (1.39)	7.76**
Angry, Critical, Argumentative Toward Partner	4.60 (1.60)	5.03 (1.22)	5.58 (1.22)	5.04 (1.63)	6.34**
Emotional Disengagement From Partner	4.95 (1.59)	5.50 (1.21)	5.84 (1.22)	5.49 (1.50)	5.79*
Acting Guilty, Anxious Toward Partner	4.91 (1.59)	5.32 (1.03)	5.87 (1.00)	5.49 (1.49)	5.12*
Reluctance to Discuss a Certain Other Person	4.69 (1.62)	5.08 (1.23)	5.50 (1.27)	5.08 (1.57)	4.53*
Relationship Dissatisfaction/Loss of Love for Partner	5.73 (1.54)	6.13 (1.04)	6.34 (1.06)	6.12 (1.21)	3.89*

NOTE: Ratings of mean diagnosticities could range from 0 to 8; higher numbers indicate greater diagnosticity. $N = 230$.

a. For each F value, df between = 1 and df within ranged from 216 to 224 due to missing data.

* $p \leq .05$, two-tailed. ** $p \leq .01$, two-tailed. *** $p \leq .001$, two-tailed.

With alpha set to .05, 15 of 28 ANOVAs revealed a significant Sex of Rater \times Sex of Target interaction, 8 for sexual infidelity, and 7 for emotional infidelity. Table 4 displays the factors for which these interactions obtained, separately by type of infidelity. The upper panel of Table 4 shows the factors for which these interactions obtained with respect to sexual infidelity. The lower panel of Table 4 shows these interactions with respect to emotional infidelity. The factors manifesting interactions are identical for the two types of infidelity, with one exception: The interaction on factor diagnosticity obtained for the Reluctance to Spend Time With Partner factor for sexual infidelity but not for emotional infidel-

ity. Also of note, Sex of Rater \times Sex of Target interactions were not obtained for any factor rated as more diagnostic of sexual infidelity. Except for the interaction for the Increased Reference to and Time Spent With Another Person factor, participants rated the factors for which the interactions obtained as more diagnostic of emotional infidelity.

Every significant interaction followed the same pattern: Men and women rated performance of acts within a given factor as more diagnostic of infidelity when the target (the potentially unfaithful person) was someone of the opposite sex, relative to when the target was someone of the same sex. Consider the first factor dis-

played in Table 4, Increased Reference to and Time Spent With Another Person. On an 8-point scale in which higher ratings indicate greater diagnosticity, men rated the mean likelihood of sexual infidelity given performance of acts within this factor as 5.07 when the target was a man and as 5.43 when the target was a woman. Conversely, women's ratings of the mean likelihood of sexual infidelity given performance of acts within this factor were higher when the target was a man (5.87) than when the target was a woman (4.98).

With alpha set to .05, 15 of 28 ANOVAs revealed significant sex-of-rater effects on factor diagnosticity. Table 5 displays the factors for which sex-of-rater effects obtained, separately for sexual and emotional infidelity. The first panel of Table 5 shows those factors for which diagnosticity ratings differed by sex of rater with respect to sexual infidelity. The lower panel displays these effects with respect to emotional infidelity. The factors manifesting sex-of-rater effects were the same for sexual and emotional infidelity, with the exception that the sex-of-rater effect for the Sexual Disinterest/Boredom With Partner factor obtained for emotional but not sexual infidelity.

For every significant sex-of-rater effect, women provided higher diagnosticity ratings than did men. Also notable is that participants rated the factors for which sex-of-rater effects obtained as more diagnostic of emotional infidelity, with two exceptions: Women provided higher diagnosticity ratings than did men for the Apathetic Toward Partner factor, across both types of infidelity. Participants rated this factor as equally diagnostic of sexual and emotional infidelity. Women also provided higher diagnosticity ratings than did men for the Sexual Disinterest/Boredom With Partner factor with respect to emotional infidelity. Participants rated this factor as more diagnostic of sexual infidelity.

With alpha set to .05, two sex-of-target effects obtained with respect to sexual infidelity. Participants rated performance of acts within the Apathetic Toward Partner and Increased Sexual Interest/Exaggerated Display of Affection factors as more diagnostic of a man's than of a woman's sexual infidelity, $F(1, 223) = 10.44, p = .001$, and $F(1, 222) = 3.75, p = .05$, respectively. No significant sex-of-target effects obtained with respect to emotional infidelity.

Discussion

Study 2 makes several important contributions to the infidelity literature. The dozens of cues to a long-term partner's infidelity are reducible to 14 reliable factors. Participants rated several of these factors as more diagnostic of one type of infidelity relative to the other. Participants perceived exaggerated displays of affection, for example, to be more diagnostic of sexual infidelity,

TABLE 5: Sex-of-Rater Effects on Factor Diagnosticity, Study 2

Factor	Factor Diagnosticity		Main Effect: Sex of Rater <i>F value</i> ^a
	Female Rater Mean (SD)	Male Rater Mean (SD)	
Sexual infidelity			
Reluctance to Spend Time With Partner	4.55 (1.55)	4.03 (1.53)	6.32**
Reluctance to Discuss a Certain Other Person	4.91 (1.46)	4.47 (1.48)	5.11*
Angry, Critical, Argumentative Toward Partner	4.54 (1.43)	4.14 (1.43)	4.44*
Passive Rejection of Partner/ Inconsiderateness	4.33 (1.65)	3.91 (1.37)	4.38*
Emotional Disengagement From Partner	4.73 (1.54)	4.31 (1.45)	4.28*
Apathetic Toward Partner	4.51 (1.41)	4.17 (1.36)	3.78*
Acting Guilty, Anxious Toward Partner	5.22 (1.38)	4.86 (1.36)	3.76*
Emotional infidelity			
Sexual Disinterest/Boredom With Partner	4.93 (1.42)	4.32 (1.38)	10.74***
Acting Guilty, Anxious Toward Partner	5.68 (1.28)	5.11 (1.35)	10.45***
Reluctance to Spend Time With Partner	5.37 (1.48)	4.78 (1.57)	8.38**
Passive Rejection of Partner/ Inconsiderateness	5.10 (1.39)	4.61 (1.37)	7.14**
Angry, Critical, Argumentative Toward Partner	5.31 (1.45)	4.81 (1.43)	6.76**
Emotional Disengagement From Partner	5.66 (1.37)	5.22 (1.44)	5.66*
Apathetic Toward Partner	4.62 (1.41)	4.22 (1.33)	4.79*
Reluctance to Discuss a Certain Other Person	5.29 (1.44)	4.88 (1.45)	4.50*

NOTE: Ratings of mean diagnosticities could range from 0 to 8; higher numbers indicate greater diagnosticity. $N = 230$.

a. For each F value, df between = 1 and df within ranged from 216 to 224 due to missing data.

* $p \leq .05$, two-tailed. ** $p \leq .01$, two-tailed. *** $p \leq .001$, two-tailed.

whereas they perceived argumentativeness and anger to be more diagnostic of emotional infidelity. Men and women appear primed to infer infidelity when an opposite-sex person displays the cues, relative to when a same-

sex person displays the same cues. Women provide higher diagnosticity ratings than do men, however, for both types of infidelity when ratings are collapsed across sex of the suspected infidel. In the next section, we speculate on possible explanations for these findings.

GENERAL DISCUSSION

Much previous research documents the sometimes devastating consequences of real or suspected infidelity (e.g., Daly & Wilson, 1988; Daly et al., 1982; Wilson & Daly, 1992). No previous work, however, has examined what cues trigger suspicions of infidelity. A general goal of these studies was to identify the cues to infidelity. In Study 1, both sexes had no trouble generating a plethora of cues that might signal infidelity. The ease with which participants generated these cues and the sheer volume of the cues generated suggest that neither sex is insensitive to the acts that may covary probabilistically with a partner's infidelity.

Study 2 generated several important findings about the cues that signal a long-term partner's infidelity. The 170 cues nominated in Study 1 are reducible to 14 reliable factors that capture nearly three fourths of the variance among the cues. These 14 factors of partner-directed cues range from uncharacteristic levels of anger and argumentativeness to exaggerated displays of affection and sudden increases in sexual interest. Researchers working in the jealousy and infidelity fields can readily employ the 14 factors and associated cues (available from the first author upon request) in future work. We caution, however, that these 14 factors describe the structure of the 170 cues for a single sample of undergraduates. The degree to which these 14 factors might replicate in other samples remains an important direction for future work. Particularly important is an assessment of the replicability of the factors in samples of married couples, in which higher levels of relationship investment exacerbate the costs of infidelity.

Of the factors of cues, 12 are differentially diagnostic of one type of infidelity relative to the other, corroborating previous research documenting the utility of distinguishing sexual from emotional unfaithfulness (e.g., Blumstein & Schwartz, 1983; Buss et al., 1992; Buunk, 1980; Glass & Wright, 1985; Shackelford, 1997; Shackelford & Buss, 1996; Spanier & Margolis, 1983; Thompson, 1984). Although we designed Study 2 to assess cue diagnosticity with respect to the two types of infidelity, the structure of the questionnaire may have contributed to or detracted from this differentiation. Providing diagnosticity ratings for sexual and emotional infidelity side-by-side may have caused some participants to inflate their assessments of differential diagnosticity, having been forced to consider how the two types of infidelity may differ. This structure may have caused other partici-

pants, however, to deflate their assessments of differential diagnosticity, having been forced instead to consider the many similarities between the two types of infidelity. The upshot is that we do not know whether and to what degree the structure of our instrument may have contributed to or detracted from estimates of differential diagnosticity. We suspect, however, that an approximately equal level of differential diagnosticity deflation countered any differential diagnosticity inflation.

The five factors rated as more diagnostic of sexual infidelity range from relatively clear evidence of sexual infidelity (e.g., Physical Signs of Sexual Infidelity/Disinterest in Sexual Exclusivity, Sexual Infidelity Is Revealed) to more subtle and ambiguous indications of sexual infidelity (e.g., Changes in Normal Routine and Sexual Behavior With Partner, Increased Sexual Interest/Exaggerated Display of Affection). In contrast, none of the seven factors rated as more diagnostic of emotional infidelity unequivocally indicate emotional infidelity. This may be because emotional infidelity, defined as the diversion of resources such as time investment, attention, emotional support, and love, is a less identifiable variant of unfaithfulness than is sexual infidelity.

One of the most intriguing findings of Study 2 is that men and women perceive performance of acts within many of the factors as more diagnostic of both types of infidelity when the suspected infidel is someone of the opposite sex, relative to when the suspected infidel is someone of the same sex. These findings suggest that men are more sensitive to cues signaling a woman's infidelity, whereas women are more sensitive to cues signaling a man's infidelity. In a signal-detection sense, each sex appears to have a lower threshold for drawing inferences about infidelity when an opposite-sex target emits these cues. Curiously, this "sexocentric bias" (Buss & Dedden, 1990) occurs primarily with respect to factors rated as more diagnostic of emotional infidelity. None of the factors rated as more diagnostic of sexual infidelity manifest this pattern of findings.

Women perceive performance of acts within many of the factors as more diagnostic of both types of infidelity than do men. These findings suggest that women may have a lower threshold for inferring infidelity than do men, and the findings corroborate research documenting that women are more attuned to relationship perturbations than are men (see reviews in, e.g., Clark & Reis, 1988; Glass & Wright, 1985; Hatfield & Rapson, 1996). Men, relative to women, are more likely to commit an infidelity (Buss, 1994; Daly & Wilson, 1983; Fisher, 1987; Hite, 1987; Kinsey et al., 1948, 1953; Symons, 1979), see their own infidelity as more justified, and experience less guilt when they are unfaithful (Athanasidou, Shaver, & Tavis, 1970; Johnson, 1970; Spanier & Margolis, 1983). Our finding that women appear to have a lower thresh-

old for infidelity detection may reflect men's greater susceptibility to infidelity. As with our findings suggesting a bias in favor of opposite-sex infidelity detection, the factors along which women provide higher diagnosticity ratings with respect to both types of infidelity are rated as more diagnostic of emotional infidelity. With one exception, men and women did not make significantly different inferences about either sexual or emotional infidelity for those factors rated as more diagnostic of sexual infidelity.

Finally, our participants do not perceive performance of acts within a given factor as differentially diagnostic of a man's relative to a woman's infidelity, with two exceptions. Participants in our study rated Apathy Toward Partner and Increased Sexual Interest/Exaggerated Display of Affection as more diagnostic of a man's infidelity. Because these two isolated findings obtained within a series of 28 exploratory analyses, however, we refrain from interpreting what may represent chance results.

These studies are limited in several ways that suggest directions for future research. The studies dealt with inferences about acts performed by hypothetical persons. Does a man or a woman whose partner displays uncharacteristic levels of anger and argumentativeness infer an infidelity with the same diagnosticity indicated by the current studies? Daily diary studies might provide one means of documenting partner acts that produce suspicions of infidelity. Such studies of naturalistically occurring acts and infidelities pose formidable ethical and design difficulties but are needed to confirm the results found in the current studies.

A second limitation pertains to the samples, which were undergraduates from a single culture and a relatively restricted age range. It is possible that our studies missed some important cues that might be more available to older, married samples, who are more experienced in the domain of perceiving and committing infidelity. We note, however, that across our undergraduate samples, 85% of participants reported past or current involvement in a committed romantic relationship. Three in four of these relationships included sexual intercourse. One in five undergraduates reported falling in love with another person while involved in a committed relationship. One in four reported having sex with someone else while involved in a committed relationship. These rates of infidelity are comparable to rates reported for married persons (e.g., Buss, 1994; Daly & Wilson, 1983; Fisher, 1987; Hite, 1987; Kinsey et al., 1948, 1953). Our use of undergraduates to identify cues to a long-term partner's infidelity is, therefore, reasonable, although it is important to extend this research to samples of older, married persons. Additionally, samples from other cultures are needed to determine which cues

to infidelity might be culturally invariant and which might be specific to particular cultures.

A third limitation is that the current studies examined cues to infidelity iteratively and in isolation. In everyday life, however, cues to infidelity may come in constellations. It is possible that some infidelities are discovered or suspected on the basis of a single cue, especially if the cue is highly diagnostic. It is likely, however, that more than one cue is displayed by someone who is unfaithful. Additional studies could examine constellations of cues to more closely mirror the complex multifaceted cue structure that individuals confront as they make their way through life in relationships embedded in social groups composed of kin, cooperators, alternative potential mates, and intrasexual competitors.

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