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Original Article

Was that Cheating? Perceptions Vary by Sex, Attachment Anxiety, and Behavior

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Abstract: We generated an inventory of 27 interpersonal behaviors and examined the extent to which participants judged each behavior as cheating on a long-term partner. We predicted variation in these judgments based on participant sex and attachment insecurity. Ratings for items ranged considerably; participants rated sexual behaviors as most indicative of cheating, then erotic behaviors, followed by behaviors consistent with a romantic relationship, and then behaviors related to financial support. Women rated ten items higher than did men, and men's ratings were higher on a minor financial support item. Higher attachment anxiety was associated with higher ratings for 18 of 27 behaviors; higher attachment avoidance was associated with lower scores on five items and higher scores on one item. Principle Axis Factoring identified three dimensions; sexual interaction, behaviors indicating close relationships, and casual social interaction. We discuss these results using the framework of attachment theory and sex-specific mating strategies.

Keywords: attachment, cheating, infidelity, romantic relationships, sex differences

Introduction

We examined the extent to which individuals would identify a range of behaviors as constituting cheating on a long-term partner and factors influencing these judgments.

Cheating in romantic relationships is a popular topic across the psychological literature, especially so in evolutionary psychology. The most prevalent type of study using the framework of evolutionary psychology follows the paradigm used by Buss, Larsen, Westen, and Semmelroth (1992), where individuals are asked whether they would be more distressed (upset, jealous, etc.) if their partner had passionate sexual intercourse or formed a deep emotional bond with someone else. Sexual intercourse with someone other than a long-term partner in the context of a nominally monogamous relationship may be readily identified as cheating. However, there is far less agreement for ambiguous behaviors that could be considered either as signs of mere friendship or as signaling deeper sexual or romantic interest (Feldman and Cauffman, 1999; Mattingly, Clark, Weidler, and Bequette, 2011; Weis and Felton, 1987; Yarab, Sensibaugh, and Allgeier, 1998).

There is a continuum of extra-pair sexual behavior, ranging from flirting to longterm sexual relationships (Buunk, 1980). There are also ranges of behaviors related to emotional connections and material support. Buunk (1980) documented that the prevalence of such behaviors was inversely related to their severity in a Dutch sample; in the past year 59% of men and 48% of women flirted, 36% engaged in light petting, 26% of men and 18% of women had sex, and 17% of men and 14% of women reported having one or more long-term sexual relationship with someone other than their marital partners. Buunk (1980) noted that these frequencies may be higher because of the relatively permissive social norms in the Netherlands, and the inclusion of university students and respondents from the sexually liberal Dutch Federation for Sexual Reform. Buunk sampled these groups to increase the variance in outcome measures. Roscoe, Cavanaugh, and Kennedy (1988) asked older adolescents an open-ended question on what behaviors they thought constituted being "unfaithful" to a dating partner. Responses included dating or spending time (57%), having sexual intercourse (42%), engaging in other sexual interactions (e.g., flirting, kissing, necking, petting; 40%), keeping secrets (17%), and being emotionally involved (10%) with someone other than the dating partner. More women identified dating/spending time with another and keeping secrets from their partner; whereas more men identified engaging in sexual interactions as being unfaithful.

Mattingly, Wilson, Clark, Bequette, and Weidler (2010) demonstrated the influence of individual differences on considering ambiguous behaviors as cheating. They found that lower perceived availability of alternative mates is associated with a greater propensity to identify ambiguous behaviors as cheating (Mattingly et al., 2010). Mattingly et al. (2010) also found a positive correlation between religiosity and perceiving ambiguous behaviors as infidelity—indicating that one's religious beliefs may influence one's perception to assume ambiguous interactions with an extramarital partner as cheating. However, regardless of their religiosity or relationship satisfaction, women are more likely than men to consider behaviors aimed at actively deceiving one's partner, such as lying or withholding information, as cheating (Mattingly et al., 2010). Attachment style is another individual difference related to mating strategies and potentially related to perceptions of cheating behavior.

Adult Attachment and Evaluation of Relationship Threats

Bowlby (1969) observed that early and impulsive displays of sexual and aggressive

behavior were most prevalent in those who had experienced disturbed family relations. He proposed that there is an evolved attachment system that functions to both protect dependent children from danger and motivate caregiving adults to care for children. Under normal conditions where caregivers provide a safe and emotionally warm environment, children would develop emotional bonds with their caregivers and stay physically close to them—they become securely attached. When caregivers do not provide a safe and emotionally warm environment, children can become insecurely attached.

Attachment style may guide sexual strategies (see Del Giudice, 2009). Belsky, Steinberg, and Draper (1991) view the attachment process as an evolved psychological mechanism to evaluate social conditions and choose a contextually effective sexual strategy. Individual differences in attachment orientation vary on two dimensions: anxiety and avoidance (Fraley and Waller, 1998). High scores on attachment-related anxiety (i.e., about attachment figures' availability and responsiveness) "hyperactivation" of the attachment system (Cassidy, 2000) and hypervigilance to attachment figures accessibility and attentiveness (Mikulincer, Gillath, and Shaver, 2002). In contrast, individuals scoring high on attachment avoidance are characterized by chronic attempts to deactivate or inhibit attachment-system activation (Edelstein and Shaver, 2004; Fraley, Davis, and Shaver, 1998). They minimize expressions of distress (Fraley and Shaver, 2000), dislike physical and emotional intimacy (Brennan, Clark, and Shaver, 1998), and grieve less after a breakup than non-avoidant adults (Fraley et al., 1998).

The hyperactivating and deactivating strategies, respectively associated with attachment anxiety and avoidance, influence the interpretation of relationship threats. For instance, anxious individuals tend to overestimate relationship threats and underestimate their partner's commitment to the existing relationship (Collins, 1996). In ambiguous situations, anxious individuals are more likely to perceive partners as insensitive and to suspect relationship problems that may or may not exist. Anxious individuals are also more likely to react in an emotionally-charged manner to romantic relationship partners, and attachment anxiety is positively associated with "mania" or obsessive love (Brennan and Shaver, 1995; Collins and Read, 1990; Collins and Read, 1994). Perhaps because of these factors, individuals high in attachment anxiety tend to experience more jealousy than those who are less anxious (Buunk, 1997; Guerrero, 1998; Radecki-Bush, Farrell, and Bush, 1993; Sharpsteen and Kirkpatrick, 1997).

In contrast to the proximity-seeking behaviors associated with high attachment anxiety, avoidant individuals tend to create psychological distance from relationship partners (Edelstein and Shaver, 2004). Consistent with these deactivation efforts, avoidant individuals may dwell less on issues of jealousy and deny that anything is wrong when thinking about how their relationship can be threatened by a "rival," compared to individuals low in attachment avoidance (Guerrero, 1998; Sharpsteen and Kirkpatrick, 1997).

Although prior research indicates that individual differences in attachment are associated with people's perceptions of relationship threats and their experiences of jealousy, it is unknown if one's attachment style influences judgments of whether certain behaviors constitute cheating in romantic relationships. Those with greater sensitivity to relationship threats may be more likely to identify ambiguous behaviors as cheating. Those

higher in attachment avoidance may be less sensitive to identifying behaviors as cheating.

Sex Differences in Evaluations of Relationship Threats

Sex differences in responses to infidelity are well documented (e.g., Buss, Larsen, and Westen, 1996; Buss et al., 1992). The vast majority of research indicates that men are more distressed when considering the possibility of their partners' sexual infidelity (e.g., having sexual intercourse with someone else, trying different sexual positions) whereas women are more distressed when considering the possibility of their partners' emotional infidelity (e.g., forming a deep emotional bond with someone else, falling in love; Sagarin et al., 2012). Because men have paternal uncertainty, women's sexual infidelity may result in cuckoldry, in which case a man expends resources on another man's offspring (Buss, 1995; Shackelford and Buss, 1997). Although men are generally more likely to commit adultery than women (Johnson, 1970; Kinsey, Pomeroy, Martin, and Gebhard, 1953; but also see Maykovich, 1976; Tarvis, and Sadd, 1975), men are more to initiate divorce proceedings on grounds of infidelity likely than women (Buckle, Gallup, and Rodd, 1995).

On the other hand, women generally perceive emotional infidelity as a greater threat than sexual infidelity because it could lead to her mate deserting her for another woman. This desertion presumably results in the loss of any protection and resources for her (and her children) that her mate was providing (Buss, 1995; Shackelford and Buss, 1997). This sex difference in distress from sexual and emotional infidelity has been found using self-report and physiological measures (Buss et al., 1992), continuous measures of jealousy (Edlund, Heider, Scherer, Farc, and Sagarin, 2006), and reaction times in decision-making (Schützwohl, 2004). It has also been replicated cross-culturally (Buss et al., 1999; Buunk, Angleitner, Oubaid, and Buss, 1996; Geary, Rumsey, Bow-Thomas, and Hoard, 1995) and in an older, community sample (Shackelford et al., 2004). We anticipate that the sex difference in the provocation of jealousy by sexual and emotional domains relate to sex differences in the identification of behaviors in these domains as cheating.

Hypotheses

Based on prior research indicating that those high in attachment anxiety are hypervigilant to relationship threats, we expected that attachment anxiety would directly predict ratings of cheating. We expected that attachment anxiety would have a stronger relationship to the identification of ambiguous behaviors as cheating than attachment avoidance, and that attachment avoidance may actually be inversely associated with the identification of behaviors as cheating. In addition, due to sex differences in concerns for mate desertion versus cuckoldry, we predicted women would rate behaviors indicating emotional bonding, signals of relationship status, and resource investment as more indicative of cheating, whereas men would rate sexual behaviors higher.

We predicted that explicitly sexual physical interactions would be considered most indicative of cheating, followed by erotic behaviors that do not involve direct physical contact, followed by comparison behaviors, such as brief hugging, which is common amongst non-romantic friends. We predicted that items related to extensive socialization (e.g., talking on the phone or taking a road trip together) would be stronger indicators of cheating than comparison items because the former may reflect a trade-off against time

spent with romantic partners, but would be perceived as weaker indicators of cheating than the other ambiguous items related to emotional bonding or financial support. Behaviors that signal or imply an emotional bond between the individuals, as well as financial support, may arouse a moderate degree of cheating detection.

We predicted that cheating perceptions would be influenced by qualitatively similar behaviors with different possible signal intensities. For example, kissing someone on the lips may be perceived as a stronger signal of infidelity than kissing someone on the cheek. Calling someone else when upset about something that happened at work may be seen as a reasonable casual interaction, but calling someone else when upset about something that happened with a relationship partner may be perceived as a betrayal, especially when the person called is the same sex as the partner. Giving someone \$500 is much more substantial than giving someone \$5 and may be perceived as a greater violation of the primary relationship.

Materials and Methods

Ethnically diverse (56% indicated some non-Western European ancestry) heterosexual undergraduates (n=456; 67% female, M age = 19.31, SD age = 2.36) in Introductory Psychology participant pools at two public Mid-Western universities completed anonymous surveys at their convenience over the Internet. There was no significant sex difference in age. Participants identified themselves as Christian (56%), including Catholic (37%), Protestant (15%), Orthodox (4%), Jewish (4%), Hindu (1%), Muslim (2%), "Other" religious affiliation (15%), and no religious affiliation (22%).

We attempted to create a list of behaviors that would span several different dimensions that exist within casual, romantic, and sexual relationships (see Table 1). We generated 27 items including sexual behaviors (e.g., penile-vaginal intercourse, oral sex), erotic behaviors (e.g., texting erotic messages, watching a pornographic movie together), behaviors implying relationship status (e.g., holding hands, kissing on the lips), emotional bonding (e.g., forming a deep emotional bond, sharing secrets), financial support (e.g., supporting the other person financially, giving them \$500), extensive socialization (e.g., talking on the phone several times a week, taking a road trip out of the state), and comparison items (e.g., hugging briefly, calling when upset about something that happened at work). Participants indicated the extent to which they believed a person in a long-term relationship performing each behavior with a person of the opposite sex other than their partner would be cheating using an 11-point decile scale ranging from 0% to 100%. Higher ratings indicate greater perceptions of the behavior as cheating. The items were presented in a randomized order across participants.

We assessed attachment using the first five items from each of the attachment avoidance and attachment anxiety dimensions of the Experiences in Close Relationships (ECR) inventory (Brennan, Clark, and Shaver, 1998). The brief versions of the ECR scales were developed with data from a previous study (n = 808, 51% female, M age = 19, SD age = 1): attachment avoidance Cronbach's alpha = .82, r(807) = .92 with full scale score; attachment anxiety Cronbach's alpha = .86, r(807) = .88 with full scale score.

We used multiple linear regressions, force entering anxiety, avoidance, and

participant sex to obtain beta values in predicting cheating ratings for every item. We ranked behaviors according to their mean cheating inventory scores (see Table 1). As a last step, we conducted Principle Axis Factoring with Oblimin rotation and Kaiser Normalization to examine the correspondence between items and our hypothesized behavioral categories and replicated the regression procedure (see Table 2).

Results

Means ratings for the items varied considerably from 9% to 98%, with sexual behaviors rated as most indicative of cheating and with the least variation in scores (see Table 1). Erotic behaviors were also highly rated, followed by behaviors implying relationship status and financial support. Women's ratings were significantly higher than men's ratings on ten items for erotic behaviors, emotional bonding, behaviors implying relationship status, and financial support. Men's ratings were significantly higher than women's ratings on a minor financial support item (giving \$5).

When compared to participants who were not in an exclusive relationship, those who were currently in an exclusive relationship (48%) gave slightly higher ratings for six items: holding hands, t(454) = 2.90, p < .01, d = .27, kissing on the cheek, t(454) = 2.42, p < .05, d = .23, kissing on the lips, t(454) = 2.03, p < .05, d = .19, staying in the same hotel room, t(454) = 2.08, p < .05, d = .19, and sleeping in the same bed, t(454) = 2.05, p < .05, d = .19.

Women and men did not significantly differ in attachment avoidance (M = 2.67, SD = 1.31; M = 2.85, SD = 1.27, respectively) or attachment anxiety (M = 4.34, SD = 1.44; M = 4.07, SD = 1.35, respectively). Attachment avoidance and anxiety scores were positively associated for women, r(307) = .35, p < .001, but not for men, r(149) = .11, p = .18. Those scoring higher on attachment anxiety rated 18 of 27 items significantly higher, whereas those scoring higher on attachment avoidance rated five items lower and one item (with a low mean rating) higher on cheating.

As predicted, qualitatively similar behaviors with higher levels of intensity were perceived as stronger indications of cheating. Kissing someone on the lips was seen as a stronger indicator of cheating than kissing them on the cheek, t(455) = 20.62, p < .001, d = .97. Giving someone \$500 was seen as a stronger indicator of cheating than giving them \$5, t(455) = 19.03, p < .001, d = .89. Hugging someone for more than 10 seconds was seen as a stronger indicator of cheating than hugging for less than 10 seconds, t(455) = 18.71, p < .001, d = .88. Sleeping in the same bed was seen as a stronger indicator of cheating than staying in the same hotel room, t(455) = 12.56, p < .001, d = .59, Calling a third party when upset about something that happened with their relationship partner was seen as a stronger indicator of cheating than calling when upset about something that happened at work, t(455) = 13.30, p < .001, d = .62.

Principle Axis Factoring identified three dimensions: sexual and erotic interaction (Cronbach alpha = .87; items 1, 2, 3, 4, 5, 6), behaviors indicating close relationships (Cronbach alpha = .95; items 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25), and casual social interaction (Cronbach alpha = .81; items 24, 25, 26, 27). Sexual and erotic interactions were rated highly indicative of cheating overall, casual social

Table 1. Scores on cheating index and associations with attachment dimensions.

Item		M	SD	Beta		
				Anxiety	Avoidance	Sex
1.	Penile-vaginal intercourse	97.7	11.8	.024	088+	.085+
2.	Oral sex	96.8	13.9	.072	078	.099*
3.	Taking a shower together	96.2	13.7	.085 +	103*	.110*
4.	Kissing on the lips	88.7	20.0	.059	103*	.185***
5.	E-mailing pictures of themselves naked	88.2	20.7	.126**	107*	.102*
6.	Texting erotic messages	82.6	23.7	.144**	085+	.172***
7.	Watching a pornographic movie together	75.1	30.8	.124**	086+	.180***
8.	Sleeping in the same bed	68.4	30.5	.106*	097*	.023
9.	Holding hands	63.2	32.0	.149**	085+	.146***
10.	Staying in the same hotel room	52.7	35.3	.162***	038	019
11.	Forming a deep emotional bond	52.4	34.6	.087+	.019	.150***
12.	Spending lots of time together	52.2	30.8	.159***	.023	.057
	Sitting in lap	52.2	32.8	.186***	.003	.033
14.	Accompanying to a formal event	43.3	33.7	.166***	.009	.113*
15.	Going out to dinner	41.4	32.9	.185***	.021	001
16.	Talking on the phone several times a week	40.1	33.2	.143**	.013	.072
17.	Giving \$500 to the other person	37.6	31.7	.063	001	.054
18.	Kissing on the cheek	36.9	32.7	.125*	094*	.014
19.	Sharing secrets	36.5	32.1	.105*	.016	.049
20.	Supporting the other person financially	35.8	30.8	.068+	.039	.110*
21.	Hugging for more than 10 seconds	34.5	30.5	.134**	.008	019
22.	Calling when upset about their relationship partner	33.0	31.4	.138**	.054	.030
23.	Taking a road trip out of the state	32.6	32.6	.192***	084+	048
24.	Telling dirty jokes	25.9	29.9	.184***	005	.073
25.	Calling when upset about work	19.2	26.9	.117*	.093*	025
26.	Hugging briefly (less than 10 seconds)	12.2	21.5	.076	.065	061
27.	Giving \$5 to the other person	8.1	19.5	.051	.093+	112*

Note: n = 456; + indicates p < .08, * indicates p < .05, ** indicates p < .01, *** indicates p < .001. Positive Beta values indicate higher scores for women.

interactions were rated as not indicative of cheating overall, and behaviors indicating close relationships were rated as moderately indicative of cheating (See Table 2). Participants scoring higher on attachment anxiety rated close relationship behaviors and casual social interactions as more indicative of cheating, and showed weaker (non-significant) trends for

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rating the other areas higher. Those scoring higher on attachment avoidance rated sexual and erotic interactions lower in cheating, and showed a weak (non-significant) trend to rate casual social interactions as more indicative of cheating. Women rated items across all dimensions higher on cheating; this relationship was strongest for sexual and erotic interactions.

Table 2. Scores for cheating dimensions and associations with attachment.

Dimension	α	M	SD	Beta		
				Anxiety	Avoidance	Sex
Sexual and erotic interaction	.872	93.08	13.96	.087+	117*	.145**
Close relationship	.954	41.90	21.98	.180***	030	.099*
Casual social interaction	.813	10.50	19.28	.083+	.088+	.092*

Note: n = 456; + indicates p < .10, * indicates p < .05, ** indicates p < .01, *** indicates p < .001. Positive Beta values indicate higher scores for women.

Discussion

We demonstrated individual differences in beliefs of the extent to which behaviors were perceived as cheating in romantic relationships based on sex, attachment anxiety, and attachment avoidance. Those higher in attachment anxiety were more likely to perceive many behaviors as cheating, whereas attachment avoidance was less consistently associated with reductions in the ratings of behaviors as cheating. Women gave several behaviors higher cheating scores than men, including sexual and erotic behaviors—contrary to expectations. Overall, sexual behaviors such as penile-vaginal intercourse and oral sex were rated as most indicative of cheating. Erotic behaviors were also rated as highly indicative of cheating, followed by behaviors implying relationship status and financial support. The associations documented in this study were generally not very strong, though consistent with the mean effect size for published social psychological research (Richard, Bond, and Stokes-Zoota, 2003) and previous work examining the relationships between attachment insecurity and socio-sexuality (e.g., Kruger and Fisher, 2008). Our relatively large sample size enabled many of the weaker trends to reach statistical significance. There are likely many factors influencing cheating perceptions, such as religiosity, perceived availability of alternative mates (Mattingly et al., 2010) and other personality and environmental characteristics.

It is worth noting the similar functions that the attachment system and the process of evaluating relationship threats serve. According to Sharpsteen and Kirkpatrick (1997), both can be thought of as processes aimed at maintaining relationships, are triggered by actual or potential separation from a loved one, involve similar emotional experiences (anger, anxiety, fear, and sadness), and are regulated by mental models of the self and of relationships. Attachment anxiety, related to the fear of losing one's partner, appears to confer somewhat greater sensitivity in reaching judgments that a person's fidelity is in question. Attachment avoidance appears related to lower levels of commitment and Evolutionary Psychology – ISSN 1474-7049 – Volume 11(1). 2013.

exclusivity in relationships (Brennan and Shaver, 1995; Schachner and Shaver, 2002). Those with higher attachment avoidance discounted the cheating relevance of several behaviors. Those higher in avoidance may be more likely to perform a range of these behaviors with third parties while in romantic relationships. However, our design did not include self-reports of actual behaviors, so we will incorporate this consideration into future studies.

Qualitatively similar behaviors with higher levels of intensity were perceived as stronger indications of cheating. This "signal strength" effect occurred across domains; for physical interactions (kissing and hugging), financial support, emotional connection, and sleeping proximity (in the same room vs.in the same bed). These contrasts may not be surprising, yet they support the notion that there is a gradient of interpretations for the identification of potential cheating behaviors. Some behaviors are clearly identified as cheating, some behaviors are clearly not identified as cheating, and some are ambiguous. Yet, even some ambiguous behaviors are considered more indicative of cheating than others.

Inconsistent with our prediction, men did not rate the sexual and erotic items as more indicative of cheating than women. This lack of effect also contrasts with the existing literature on sex differences in the averseness of infidelity by domain. There may be a distinction between the identification of a behavior as cheating and the averseness of a particular behavior, as Sagarin et al. (2012) noted that the way items were framed, e.g., distress vs. jealousy, substantially affected ratings. Responses could be complicated by differences in how participants interpreted the behaviors. We framed the behaviors as relating to anonymous, unspecified individuals. Participants who are imagining their own behaviors and considering whether they could be accused of cheating may show a pattern opposite from same sex participant who imagines the same behaviors conducted by their partners. It is also possible that our results are limited by a ceiling effect, as both men and women rated sexual and erotic behaviors as highly indicative of cheating. This issue deserves further study.

Principle Axis Factoring and analyses of the three derived dimensions provide a succinct summary of the relationships amongst the constructs. Sexual and erotic interactions were distinct from behaviors suggesting close relationships, and both were distinct from casual social interactions. Collectively, these items were high, moderate, and low in ratings of cheating. As would be expected, analyses of individual differences replicated the general patterns seen across individual items. Women and those lower in attachment avoidance had higher ratings for sexual and erotic interactions. Women and those higher in attachment anxiety had higher ratings for behaviors consistent with close relationships. Women also had higher ratings for casual social interactions; both forms of attachment insecurity had weak positive relationships with identifying these casual behaviors as cheating.

One limitation with the current study is that we did not account for one's level of commitment towards their current romantic relationship, if applicable. Yarab, Allgeier, and Sensibaugh (1999) found that those with higher levels of relationship commitment tend to perceive sexual behaviors as significantly more adulterous. We did ask participants if they were currently involved in an exclusive romantic relationship, and found that relationship

status had a minor association with ratings of cheating; it is possible that an older sample with more established relationships would yield stronger findings. For our sample of young adults, we had presumed that those in committed, romantic relationships would report more behaviors as cheating, whereas those who are single or dating casually would be less likely to do so, based on the findings involving relationship maintenance (e.g., Simpson, Gangestad, and Lerma, 1990). However, relationship maintenance mechanisms, such as devaluing potential alternative mates, are moderated by commitment towards the relationship (e.g., Lydon, Meana, Sepinwall, Richards, and Mayman, 1999). It is possible, then, that those who are high in commitment would be more prone to perceive behaviors as indicative of cheating, as compared to less committed individuals.

Similarly, we did not examine whether someone has children; we expect that those who are parents are more sensitive to a mate's potential cheating behavior given that their actions could affect both oneself and one's children. Age would also be an interpersonal factor worthy of investigation, albeit one that might relate to the presence of children mentioned above. It is possible that younger individuals are less likely to classify certain behaviors as cheating, given that they may have different conceptualizations than older individuals of what behaviors are sex (Randall and Byers, 2003). Another obvious limitation is that we relied upon a convenience sample of students. However, past work on jealousy shows that students respond in similar ways to members within the general community.

Overall, our study advances the understanding of psychology related to infidelity. We demonstrate that sexual behaviors with third parties are clearly identified as cheating, common casual social interactions are not identified as cheating, and yet there is a range of behaviors forming a continuum between these definitive interpretations. Those who have greater fears of partner desertion find these behaviors to be more indicative of cheating than their securely attached peers.

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