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# The Misperception of Sexual Interest

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## Abstract

In the current study ( $N = 199$ ), we utilized a speed-meeting methodology to investigate misperceptions of sexual interest. This method allowed us to evaluate the magnitude of men's overperception of women's sexual interest, to examine whether and how women misperceive men's sexual interest, and to assess individual differences in susceptibility to sexual misperception. We found strong support for the prediction that women would underestimate men's sexual interest. Men who were more oriented toward short-term mating strategies or who rated themselves more attractive were more likely to overperceive women's sexual interest. The magnitude of men's overperception of women's sexual interest was predicted by the women's physical attractiveness. We discuss implications of gender differences and within-sex individual differences in susceptibility to sexual misperception.

## Keywords

social interaction, sex differences, individual differences, male-female relations, inference

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Sexual interest must be inferred from observable cues, but the cues people use to estimate sexual interest may be ambiguous. There are several reasons for such ambiguity: Direct signaling risks damage to the signaler's mate value if he or she is rejected (Symons, 2005); explicit sexual signaling can hinder the signaler's future mating success by fostering a reputation for sexual promiscuity; ambiguous signals can evoke additional courtship behavior and thereby lead to more accurate assessments of the target's sexual interest; and evaluating the escalation or de-escalation of sexual signals allows people to recalibrate their own demonstrations of sexual interest.

Compared with women, men are more likely to overperceive sexual interest (e.g., Abbey, 1982; Farris, Treat, Viken, & McFall, 2008; Henningsen, Henningsen, & Valde, 2006; Maner et al., 2005). Less is known, however, about individual differences in men's sexual misperception, about women's sexual misperception, and about individual differences in women's susceptibility to men's sexual overperception. In previous research, comparisons of women's self-reported interest and men's estimates of women's interest have been limited to single interactions (e.g., Abbey, Zawacki, & McAuslan, 2000; Levesque, Nave, & Lowe, 2006). The present study used a speed-meeting method in which opposite-sex dyads interacted multiple times and participants evaluated their interaction partners on multiple traits—a design that allowed for more direct and reliable calculations of sexual misperception.

alarm for men (Haselton & Buss, 2000). The EMT framework proposes that cognitive and behavioral biases emerged in response to recurrent asymmetries in the costs of false alarms and misses over evolutionary history (Haselton, 2003; Haselton & Buss, 2000; Haselton & Nettle, 2006). In the context of sexual perception, false alarms typically result in trivial expenditures of wasted courtship effort for men: Although rejected men may experience social embarrassment, women generally do not respond antagonistically to men's overperception of sexual interest (Abbey, 1987). The costs of missed mating opportunities, however, were substantial for men over the course of human evolution, because men's reproductive success can be directly affected by access to fertile mates (e.g., Buss, 2003a; Symons, 1979). Given this hypothesized recurrent cost asymmetry, men may have evolved a bias toward overperception of sexual interest (i.e., a *sexual overperception bias*) that minimizes costly errors linked with missed mating opportunities. This reasoning led us to predict that men would report greater sexual interest from women than women self-report.

Individual personality traits, personal experiences, and preferred mating strategy may influence the magnitude of men's overperception of sexual interest. Men vary in the degree to which they pursue short-term and long-term mating strategies (e.g., Buss & Schmitt, 1993; Gangestad & Simpson, 2000). Over human evolutionary history, the recurrent problem of identifying sexually accessible women was more acute for

## Men's Sexual Overperception

According to error-management theory (EMT), the costs of a missed sexual opportunity are greater than the costs of a false

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men oriented toward short-term mating than for men oriented toward long-term mating. Consequently, the cost of missed sexual encounters is exacerbated for men who pursue short-term mating strategies. We hypothesized that such men would exhibit a greater sexual overperception bias than men who pursue long-term mating strategies because such a bias would allow them to minimize missed mating opportunities. Thus, we predicted that men's interest in short-term mating would be positively correlated with their sexual overperception bias.

Men with traits that are highly desirable to women are more successful at short-term mating than are men without such traits (Gangestad & Simpson, 2000). Buss and Schmitt (1993) found that when it comes to short-term mates, women prefer men who are physically attractive and desirable to other women. We hypothesized that more attractive men would be more likely to overperceive women's sexual interest because they tend to pursue short-term mating strategies and therefore face lower costs associated with false alarms (i.e., if rejected, they can find another mate more easily than can less attractive men). Thus, we predicted that men's physical attractiveness would be positively correlated with their overperception of women's sexual interest.

### Women's Physical Attractiveness

The costs of a missed mating opportunity with a physically attractive woman are greater than those of a missed mating opportunity with an unattractive woman because attractiveness and fertility are linked (Sugiyama, 2005). For humans' evolutionary ancestors, the reproductive success of men who were biased toward inferring more interest from attractive women than from unattractive women would therefore have been greater, on average, than the reproductive success of men with no such bias. Indeed, there is some evidence that men perceive attractive women as being more sexually aroused than unattractive women (Maner et al., 2005). We therefore hypothesized that men have an evolved bias to overperceive the sexual interest of attractive women more than the sexual interest of unattractive women. Thus, we predicted that women's physical attractiveness would be positively correlated with men's overperception of their sexual interest.

### Women's Sexual Underperception

A relatively neglected phenomenon in the literature is women's sexual misperception (but see Henningsen et al., 2006, and Shea, 1993). Buss (2003b) hypothesized that women possess a sexual *underperception* bias. Given that female choice is a cardinal component of women's mating strategies, such a bias may serve three potential functions: It can deter unwanted sexual advances, help women to avoid a reputation of promiscuity, and prompt interested men to escalate their courtship displays. Therefore, we predicted that women would perceive less sexual interest from men than men self-report.

## Method

### Participants

Heterosexual undergraduates participated in return for course credit. Participants who were 24 years old or older (more than 3 standard deviations above the mean) or who did not report their age ( $n = 6$ ) were excluded from analysis. The final sample consisted of 96 men and 103 women (mean age = 18.70 years,  $SD = 1.00$ ).

### Materials

**Mating strategy.** Participants completed the Sociosexuality Orientation Inventory (SOI-R; Penke & Asendorpf, 2008), which measures the extent to which a person displays unrestricted sociosexuality (i.e., motivation toward short-term mating). The SOI-R consists of three subscales: Behavior, Attitude, and Desire. Higher SOI-R scores indicate more unrestricted sociosexual orientation.

**Physical attractiveness.** Participants rated their own facial, bodily, and overall physical attractiveness, using 7-point Likert scales ranging from 1 (*well below average*) to 7 (*well above average*).

**Partner ratings.** After each interaction, participants rated their interaction partner on 13 dimensions (see Table 1). On critical items, participants rated the degree to which they were sexually interested in their conversation partner and the degree to which they perceived their conversation partner to be sexually interested in them, using 7-point Likert scales from *well below average* (1) to *well above average* (7), and rated their

**Table 1.** Items Assessing Participants' Sexual Interest in and Perceptions of Their Conversation Partners

- 
1. She is skilled in small talk.
  2. She maintained eye contact.
  3. She is a good listener.
  4. She is funny.
  5. She is smart.
  6. She is friendly.
  7. She is flirtatious.
  8. She is seductive.
  9. I am sexually interested in her.
  10. She is sexually interested in me.
  11. I would rate the attractiveness of her face as . . .
  12. I would rate the attractiveness of her body as . . .
  13. Overall, I would rate her attractiveness as . . .
- 

Note: The table presents the items as they were phrased for male participants; for female participants, male pronouns were substituted. For all items, ratings were made using 7-point Likert scales. For Questions 1 through 10, the anchors for the scales were *well below average* and *well above average*; for Questions 11 through 13, the anchors for the scales were *not at all* and *extremely*.

conversation partner's facial, bodily, and overall attractiveness, using 7-point scales from *not at all* (1) to *extremely* (7). Participants also rated their conversation partner's personality and behavioral traits, using 7-point scales from *well below average* (1) to *well above average* (7).

## Procedure

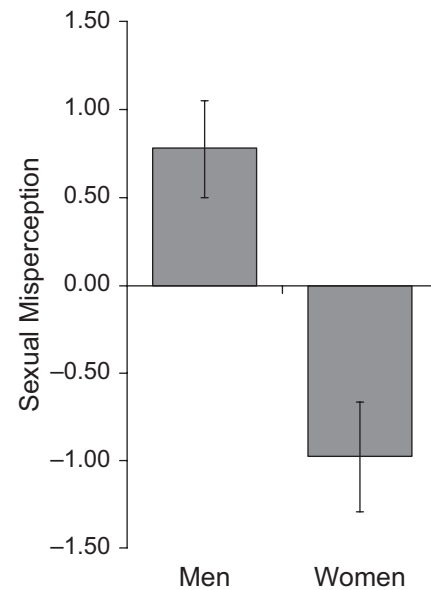
Participants reported to the lab in groups of 5 men and 5 women. The men and the women were seated in separate rooms, where they completed the SOI-R and rated their own attractiveness. After 20 min, the questionnaires were collected, and participants received verbal instructions about the speed-meeting part of the experiment. When the speed-meeting phase began, participants of one sex were each assigned to remain in one of five rooms, and participants of the opposite sex rotated through the rooms. During each rotation, the opposite-sex dyads engaged in a 3-min conversation about neutral topics. At the end of this 3-min period, participants stopped talking, and the rotating participants exited from the rooms. Before interacting with their next conversation partner, participants completed the partner-rating instrument and placed these materials in a container in the room (nonrotating participants) or the hallway (rotating participants). Rotation continued until each opposite-sex pair had interacted. After all dyads had interacted and all instruments had been completed, participants reported any prior interactions with other participants and were debriefed. Partner ratings made by pairs of participants who reported that they had interacted previously were removed from analysis.

## Results

For each participant, we calculated a *sexual-misperception* score for each interaction by subtracting the partner's expressed interest in the participant from the participant's estimate of the partner's interest. We averaged these difference scores across all interactions to create an overall sexual-misperception score for each participant. Positive scores indicated an average overinference of interest, negative scores indicated an average underinference of interest, and a score of zero indicated accuracy. We calculated scores to represent sexual misperception by others for each participant by subtracting his or her actual interest in each interaction partner from that partner's estimate of the participant's interest; we averaged these difference scores across all interactions to create the overall score.

### Sex differences

Men ( $M = 0.78$ ,  $SD = 1.36$ ) inferred more sexual interest from their conversation partners than women did ( $M = -0.97$ ,  $SD = 1.58$ ),  $t(196) = 8.32$ ,  $p < .001$ . Scores for both men and women were significantly different from 0, as shown in Figure 1. As predicted, men significantly overperceived the sexual interest of



**Fig. 1.** Mean sexual-misperception scores of men and women in the study. A score of 0 indicated accuracy in perceptions of sexual interest, positive scores indicated overinference of sexual interest, and negative scores indicated underinference of sexual interest. Error bars represent 95% confidence intervals.

their conversation partners,  $t(95) = 5.62$ ,  $p < .001$ ,  $d = 0.57$ . Also as predicted, women significantly underperceived the sexual interest of their partners,  $t(101) = -6.19$ ,  $p < .001$ ,  $d = 0.61$ .

### Mating strategy

Men's total scores on the SOI-R were positively correlated with their misperception of women's sexual interest,  $r(87) = .27$ ,  $p = .01$ , a result that supports our prediction that men's interest in short-term mating would be positively correlated with their sexual overperception bias. Only scores on the Attitude subscale were significantly correlated with misperception,  $r(96) = .23$ ,  $p = .02$ , although scores on the other subscales did show trends in the same direction—Desire:  $r(94) = .17$ ,  $p = .09$ ; Behavior:  $r(89) = .15$ ,  $p = .17$ . Women's SOI-R scores were not correlated with their misperception of men's sexual interest—total score:  $r(88) = .09$ ,  $p = .39$ ; Attitude:  $r(99) = .07$ ,  $p = .50$ ; Desire:  $r(98) = .14$ ,  $p = .16$ ; Behavior:  $r(93) = .01$ ,  $p = .92$ .

### Physical attractiveness

Table 2 presents the correlations between ratings of the men's attractiveness and their sexual misperception of women. As predicted, men's self-ratings of bodily and overall attractiveness correlated positively with their sexual misperception of women. Women's ratings of the men's bodily attractiveness, however, correlated negatively with men's misperception of women's sexual interest, even though there was a positive correlation between men's self-ratings of attractiveness and women's ratings of men's attractiveness,  $ps < .001$ . Essentially,

men who rated themselves as more attractive were more likely to overperceive women's sexual interest. The more attractive the men actually were to women, however, the more likely they were to underperceive women's sexual interest.

Table 3 presents the correlations between ratings of the women's attractiveness and their tendency to be sexually misperceived by men. As predicted, men's ratings of women's attractiveness correlated positively with the degree to which those women's sexual interest was overperceived. Women's self-ratings of attractiveness, however, were not correlated with the degree to which their sexual interest was misperceived by men, even though there was a positive correlation between women's self-ratings of attractiveness and men's ratings of women's attractiveness,  $ps < .01$ .

## Discussion

This study provides evidence for an adaptive female sexual underperception bias. Buss (2003b) hypothesized that such a bias may function to deflect unwanted sexual interest, to prevent a reputation for sexual promiscuity, and to implement a "choosiness barrier" that truly interested men must overcome. Most previous research has focused on men's misperceptions of women's sexual interest; the current study suggests that women also misperceive men's interest, but with a bias opposite to that exhibited by men. Whether this underperception bias is a true cognitive bias or a reporting bias remains to be determined. Future studies incorporating outcomes with higher stakes for participants than the outcomes in the current study (e.g., phone-number exchange or actual dates) could address this point.

Our results strongly support the hypothesis that men possess a sexual overperception bias. This finding is especially convincing because, rather than examining only single interactions between opposite-sex dyads, we assessed five interactions per participant. We also found that men differed in their degree of sexual overperception. As predicted, men, but not women, who were oriented more toward short-term mating exhibited greater overperception of sexual interest (see also

**Table 2.** Correlations Between Ratings of Men's Attractiveness and Men's Sexual Misperception of Women

Type of rating and item	Correlation with men's sexual misperception of women ( <i>r</i> )
Men's self-rating	
Facial attractiveness	.13
Bodily attractiveness	.24*
Overall attractiveness	.20*
Women's rating of men	
Facial attractiveness	-.16
Bodily attractiveness	-.24*
Overall attractiveness	-.19

\* $p < .05$ .

**Table 3.** Correlations Between Ratings of Women's Attractiveness and Women's Tendency to Be Sexually Misperceived by Men

Type of rating and item	Correlation with women's tendency to be sexually misperceived ( <i>r</i> )
Women's self-rating	
Facial attractiveness	-.04
Bodily attractiveness	.11
Overall attractiveness	.01
Men's rating of women	
Facial attractiveness	.39**
Bodily attractiveness	.51**
Overall attractiveness	.33**

\*\* $p < .001$ .

Haselton, 2003, and Jacques-Tiura, Abbey, Parkhill, & Zawacki, 2007, for similar patterns of results from studies using self-reports rather than direct assessments of misperceptions). These findings are consistent with the hypothesis that misperception facilitates a short-term mating strategy in men. Other studies have documented that women who are oriented toward short-term mating also exhibit heightened misperception of sexual interest (Kunstman & Maner, 2011; Maner et al., 2005), but our results indicated no correlation between mating strategy and misperception in women. Perhaps women pursuing a short-term mating strategy do not face the same asymmetrical costs associated with the perception of sexual interest as do men pursuing a short-term mating strategy. Finding short-term mates is more difficult for men than for women; the lack of an association between misperception and mating strategy in women in our study is consistent with this sex difference.

For men, high self-ratings of physical attractiveness were also associated with overperception of sexual interest, but men who were judged to be attractive by women actually underestimated women's sexual interest. If men's sexual overperception bias functions to provide men with self-confidence and motivation to approach desirable targets and to enhance men's apparent mate value (Haselton & Buss, 2009), this pattern of results may reflect a suite of adaptations designed to promote positive illusions among lower-quality men. Such adaptations might include tendencies among less desirable men to overestimate their value as mates and to overestimate women's sexual interest. Perhaps, contrary to the reasoning we outlined earlier, men who are objectively attractive to women do not need to form positive illusions about their desirability because they are already desired by women. Future studies should determine whether this pattern can be replicated.

Women's attractiveness as rated by men was the key predictor of both women's tendency to be misperceived by men and women's tendency to underperceive men's interest, a finding consistent with the EMT framework. Because of the link between physical attractiveness and fertility, missed mating opportunities with attractive women are costly in terms of reproductive success (Buss, 2003a; Koenig, Kirkpatrick, &

Ketelaar, 2007; Sugiyama, 2005; Symons, 1979). Despite the positive correlations between women's self-ratings of attractiveness and men's ratings of women's attractiveness, women's self-ratings were not correlated with women's tendency to be sexually misperceived. This finding suggests that in their judgments of women's attractiveness, men may take into account some traits that women ignore when rating themselves, and that the degree to which women possess these traits may be positively correlated with women's tendency to be sexually misperceived. For example, sexual accessibility and exploitability (Buss & Duntley, 2008) are traits that men may find attractive but that women would not necessarily incorporate into their self-ratings. Future research could examine whether cues to sexual exploitability influence women's likelihood of having their sexual interest misperceived.

College students arguably represent a key demographic in research on sexuality, given that they have frequent interactions with members of the opposite sex and thus must make frequent sexual inferences. However, future studies should assess samples of participants with different age ranges to determine whether our findings generalize to other age groups. Also, the present results cannot speak to same-sex interactions; future studies could incorporate such interactions to examine whether the target's sex or the perceiver's sex drives these misperception effects. Another important focus for future research would be the difference between perceptions of sexual interest and perceptions of romantic interest. Although these two types of interest may seem similar, depending on their mating strategy, men might show predictable differences between their perceptual biases about women's sexual interest and their perceptual biases about women's romantic interest.

The current study is the first to use multiple direct comparisons of estimated and actual sexual interest to simultaneously assess stable individual differences in tendencies toward short-term mating and sexual misperception itself. Our results highlight the importance of individual differences in sexual misperception. Understanding biases in perception may help to decrease miscommunication between the sexes—an important aim, given the potentially high costs associated with being sexually misperceived (e.g., sexual harassment or even coercion; Abbey, 1991). This study provides a more nuanced understanding of sexual misperception than that offered by previous research. Not all men misperceive the sexual interest of women, and not all women are sexually misperceived by men. Moreover, women show a predictable form of sexual misperception: the tendency to underestimate men's sexual interest. In addition to furthering the understanding of sexual misperception, our research may help individuals to recognize these complexities in their own interactions, and thus may eventually help to reduce conflict produced by errors in perception between the sexes.

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The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

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