We Want the Same Thing: Projection in Judgments of Sexual Intent

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This article details two studies investigating the proximal role of social projection (i.e., assumed similarity) in judgments of sexual intent. Study 1 demonstrates that men and *women who have a greater desire for casual sex are more likely to perceive sexual intent in others. Study 2 replicates this finding in a more realistic context and, further, situates judgments of sexual intent squarely into the cognitive domain, as results show that projection of casual sexual motivation is more likely when the target is similar to the perceiver and when the target's motivation is relatively ambiguous to begin with.*

Keywords: *projection; sexual intent; sex difference; judgment; perceived similarity*

Judgments of sexual intent are of great interest because they are ubiquitous, have important consequences in everyday social life, and because *mis*judgments may be related to sexual coercion, sexual harassment, and rape (Abbey, 1991; Kowalski, 1993; Muehlenhard, 1988; Shea, 1993; Shotland, 1989). Lamentably, however, sexual intent judgments largely have been examined through only a single lens (Fisher & Walters, 2003): sex differences. This research generally demonstrates that men are more likely than women to perceive signs of sexual interest in others (e.g., Abbey, 1982; DeSouza, Pierce, Zanelli, & Hutz, 1992; Kowalski, 1993; Muehlenhard, Koralewski, Andrews, & Burdick, 1986; Shotland & Craig, 1988; but see also Fisher & Walters, 2003). In an effort to explain this sex difference, researchers have adopted one of two standard distal ("why?") frameworks: socialization or evolution.[1] Although both explanations have received some support, neither account has substantiated the *proximal psychological mechanism* that would explain how the judgment is made. This lack of specificity is a glaring omission, as an explanation of *how* judgments of sexual intent are made would not only address a gap in our knowledge, but it would also provide a much needed basis from which to argue the points of the evolutionary and socialization frameworks. Furthermore, it might offer a more tangible explanation of how sex differences in this judgment arise. Thus, the goal of the present research is to develop an account of the proximal psychological mechanism underlying judgments of sexual intent.

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Our focal hypothesis is that perceptions of sexual intent arise via a well-established psychological habit of projection in social judgments. There is a general tendency for people to presume that others are similar to themselves, especially when there is ambiguity about the other person's beliefs, emotions, and behaviors (Gilovich, 1990; Green & Sedikides, 2001; Krueger, 2000; Lambert & Wedell, 1991). The well-known false consensus effect is one example of this general bias to assume that others are similar to oneself (Marks & Miller, 1987; Ross, Greene, & House, 1977). The predominant cognitive explanation of such effects assumes that the default strategy to infer what another person is thinking, feeling, or doing is to generalize analogically from oneself to the other (e.g., Ames, 2004a; Mussweiler, 2003). People do not always project their own characteristics onto others, however, and there are several divergent accounts of when projection is more likely to occur (cf. Karniol, 2003; Nickerson, 1999). All agree, however, that when the other is unfamiliar and the self does not believe he or she is unique, then self-projection in judgments about the other is likely.

Sexual Intent Judgments: Current State of Knowledge

In Abbey's (1982) pioneering work on sexual intent judgments, an unacquainted man and woman (targets) talked while another man and woman (observers) observed the interaction. Both the observers and the targets rated the targets' sexual intent. Results revealed that male observers *and* targets judged *both* male and female targets to be more motivated by sexual goals than did female observers *and* targets. In other words, the male participants believed that the targets had sexual intentions, whereas female participants believed the targets were being friendly. The finding that male perceivers, on average, give higher ratings of sexual intent to targets has been observed time and again (DeSouza et al, 1992; Kowalski, 1993; Muehlenhard, 1988; Shotland & Craig, 1988).

Gender role socialization is the most frequently advanced explanation for this sex difference. According to this account, men (at least in Western cultures) are socialized to be preoccupied with sex (Mosher & Tomkins, 1988), and they are, therefore, expected to "initiate all sexual encounters" (Abbey, 1991, p. 102). In contrast, gender role socialization teaches women not to acknowledge interest or experience with sex, lest they appear promiscuous (Muehlenhard, 1988). Indeed, research shows that on average, men possess greater sexual interest and are more preoccupied by sex than are women (Baumeister, Catanese, & Vohs, 2001; Peplau, 2003). Accordingly, (heterosexual) men come to see male-female interactions through "sexual glasses" (Shotland & Craig, 1988, p. 66).

Alternately, it has been suggested that men's increased perceptions of sexual intent may be a function of differential evolutionary sexual selection pressures (Haselton & Buss, 2000; Sarles & DeSouza, 1999). Observed sex differences in mating patterns are thought to be attributable to different levels of minimum parental investment put forth by males and females (Trivers, 1972). Because the minimum parental investment by women far exceeds that by men, women tend to be choosier about the selection of a mate, as indiscriminate mating would be more costly for them (Buss & Barnes, 1986; Kenrick, Li, & Butner, 2003; Kenrick, Sadalla, Groth, & Trost, 1990). This leads to a male bias toward the identification of sexually accessible partners and a female focus on long-term faithfulness and resources. Based on this logic, Haselton and Buss (2000) argue that men's higher judgments of sexual intent are the result of there being relatively low costs associated with their overperceiving compared to the high costs associated with their underperceiving female sexual intent and, as a result, missing a mating opportunity. In short, Haselton and Buss reason that an essentially adaptive motivation is translated into biases in cognitive processes.

The socialization and evolutionary accounts are not necessarily in conflict. Both suggest that men have greater interest in sex than women, with, perhaps, socialization patterns exacerbating an evolutionarily determined motivational precursor. More important for the purposes of this article, however, both accounts suggest a similar mechanism by which sexual intent judgments are made: projection of the perceiver's own sexual motivation. In particular, both accounts propose that there is likely to be an association between a perceiver's sexual intent and his or her judgment of another's sexual intent. Of course, we are not the first to propose such a relationship (Shotland, 1989; Shotland & Craig, 1988), which Haselton and Buss (2000) call the default-model hypothesis. They noted at that time, however, that there had not been any direct empirical tests of this proximal account.

The default-model hypothesis comes in two flavors, with one a relatively more cognitive account and the other a relatively more motivational account. Recent work by Maner and colleagues (2005) provides some support for the latter explanation. They primed either a "mate-search motive" or a "neutral motive" in both male and female participants who then rated attractive and average male and female faces with respect to the degree of sexual arousal evident in those faces. Men who had been primed with the mate-search motive gave higher arousal ratings, but *only* to attractive, same-race, female faces. Men primed with a sexually neutral motive gave lower sexual arousal ratings overall and, further,

did not discriminate between the arousal in the attractive female faces and the other faces. There was no effect of the manipulation on women's ratings of attractive versus average male faces. According to Maner et al., men's ratings of others' sexual intent resulted from the "functional projection" of their own sexual intent. According to these researchers, the effect is specific to male participants because, in line with Haselton and Buss's (2000) theorizing, it would be adaptive for men, but not for women, to minimize the chance of missing an opportunity to sexually reproduce. In addition, Nelson and LeBoeuf (2004) found that men who reported having satisfying sex lives were less likely to perceive sexual intent in a woman's behaviors than men who reported that their sex lives were less than ideal. Both of these findings suggest that men make sexual intent judgments based on their own motivational circumstance. Indeed, there is considerable evidence that people selectively perceive that which is consistent with their motivations (e.g., Kunda, 1990; Vallone, Ross, & Lepper, 1985). Thus, according to the functional projection account of how judgments of sexual intent are made, (some) men *want* to believe that women are eager to have sex with them, and this "wanting" biases their judgments.

Though certainly intriguing, this account cannot explain the prior findings concerning perceptions of sexual intent. For example, oftentimes no information (visual or in text) is provided regarding the target's level of attractiveness (e.g., DeSouza et al., 1992; Fisher & Walters, 2003; Haselton & Buss, 2000; Kowalski, 1993; Muehlenhard, 1988), and despite this, men imbue the targets' actions with greater levels of sexual interest than women do. In addition, when visual information about the targets *is* provided (via photo, video, or face-to-face interactions; e.g., Abbey, 1982; Harnish, Abbey, & DeBono, 1990; Muehlenhard et al., 1986; Saal, Johnson, & Weber, 1989; Shea, 1993; Shotland & Craig, 1988; Tomich & Schuster, 1996), (a) the targets had been selected to be of average attractiveness and still there were perceiver sex differences in judgments of sexual intent (e.g., Tomich & Schuster, 1996), (b) the same target was used in multiple conditions across which was found variation in the perception of sexual intent (e.g., Muehlenhard et al., 1986), or (c) targets in the face-to-face interactions—to whom men generally imputed higher sexual intent than did women—were typically sampled from the university population and thus would have been of average attractiveness. Furthermore, there is no indication that the men in all of these studies had either been primed with a mate-search goal and/or were all equally interested in short-term, casual sex encounters. Last, several studies show that (presumably heterosexual) men often give higher ratings of sexual intent than do women to *both* male and female targets; that is, interactions between perceiver and target sex are *in no way* consistent (see Fisher & Walters, 2003; Kowalski, 1993). Taken together, these findings indicate that projection of sexual intent need not depend on the "desirability" of the target or, conversely, the needs of the perceiver (i.e., heterosexual men do not "need" anything sexual from another man, yet they overperceive his sexual intent). In other words, if men's projection of sexual intent were functional or motivated in the way proposed by Maner et al. (2005), then it should not require that a "mate goal" be primed first, nor should researchers find a main effect of perceiver sex in judgments of sexual intent when the to-be-rated female targets are of average or unspecified attractiveness (but they do), and finally, heterosexual men (vs. women) should not give higher sexual intent ratings to other men (but they do). Moreover, the functional projection account does *not* offer a parsimonious explanation for how men and women make judgments of sexual intent, as it fails to explain on what basis women make this judgment. According to this framework, men high in sexual motivation for sex are argued to be the only ones who project. But how do men low in sexual motivation or women make this judgment?

Projection in Social Judgments

We propose—in line with the more cognitively flavored version of the default model—that both men's and women's judgments of sexual intent generally arise from one common projective process in which perceivers use their own standing on some issue to infer that of others. Countless social judgments show this form of projection: There is usually a substantial correlation between perceivers' own attitudes, motivations, and behaviors and their judgments of others' attitudes, motivations, and behaviors (Krueger, 2000), especially when there is little other information available (Robbins & Krueger, 2005).

In much of the prior research examining sexual-intent judgments, participants possess very little information about the targets. If we coalesce this piece of information with the fact that men, on average, possess greater sexual motivation than women (Baumeister et al., 2001; Peplau, 2003), we can see that a more basic form of projection may underlie men's and women's judgments of sexual intent. That is, given sparse information about the targets, men project their relatively higher personal sexual motivation and women project their relatively lower personal sexual motivation onto the to-be-judged targets. Thus, the process underlying how judgments of sexual intent are made is the same for men and women, with their judgments diverging simply because they have different starting points (on average).

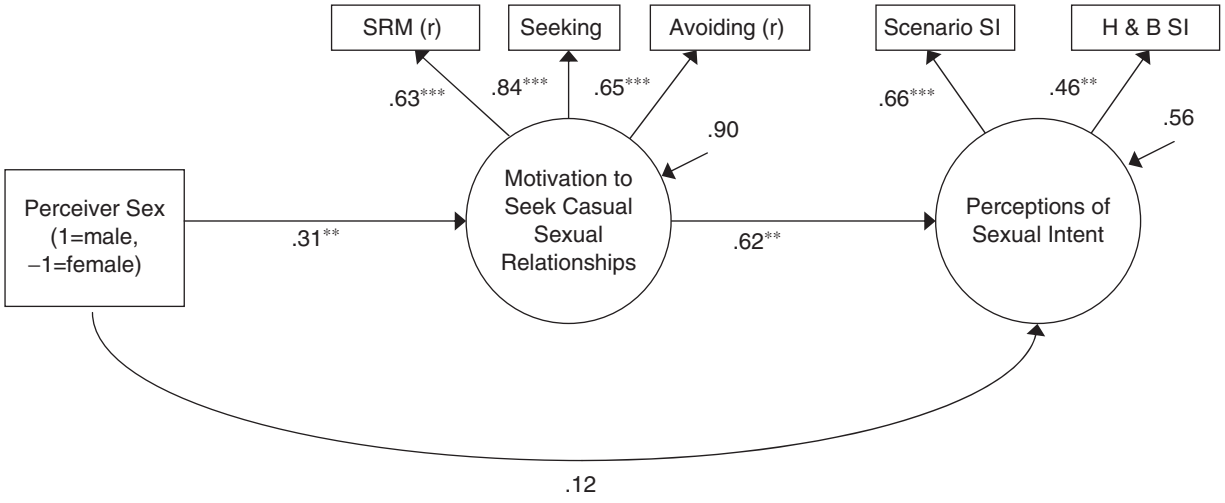

Figure 1 Study 1: Mediational model of perceptions of sexual intent.
NOTE: SRM (r) = Single-item measure of perceivers' sexual relationship motivation, reverse coded so that higher numbers indicate increasing desire for short-term, casual sexual relationships, whereas lower numbers indicate increasing desire for long-term, committed sexual relationship; Seeking = actively seeking a casual sexual relationship; Avoiding (r) = reverse coded value for actively avoiding a casual sexual relationship; Scenario SI = scenario measure of sexual intent; H & B SI = Haselton and Buss (2000) measure of sexual interest. Coefficients are standardized path coefficients. Overall model fit: $\chi^2(7, n = 114) = 8.296$, *ns,* Comparative Fit Index = .99, root mean square error of approximation (RMSEA) = .04, 90% confidence interval on RMSEA (.00-.13).
Paths: $*p < .05$. $**p < .01$. $***p < .001$.

Let us briefly return to the results of Maner et al. (2005) and Nelson and Leboeuf (2004). An alternative interpretation of the latter study is that men with satisfying sex lives simply possess lower sexual intentions than men with unsatisfying sex lives, and each group uses their own sexual intentions to infer that of the target women. There is no need to bring in functional projection to explain this result. With respect to Maner et al.'s findings, in the control condition they found a relationship between participants' sociosexual orientation (Simpson & Gangestad, 1991) and their sexual arousal ratings of attractive opposite-sex, same-race targets,[2] and this relationship did *not* depend on perceiver sex, indicating that both men and women use their own sexual motivation to judge that of others. Thus, projection is not merely the domain of sexually primed men who *want* to see sexual intent in women. Accordingly, the purpose of the present research is to examine whether projection plays a more general role in judgments of sexual intent than the limited role suggest by Maner et al. and, further, if projection in this domain may result from a simple cognitive tendency to assume self-other similarity.

STUDY 1

The purpose of Study 1 was to examine if and to what extent social projection explains perceptions of sexual intent. To enhance the reliability of our measurement of perceivers' sexual relationship motivation and perceived sexual intent, multiple measures were employed. In addition to a single-item measure, a scale composed of two subscales—seeking and avoiding casual sex (Johnson & Miller, 2001)—was also used to assess sexual relationship motivation. Participants responded to both a scenario-based measure of sexual intent judgments and a perceived sexual interest measure developed by Haselton and Buss (2000). The utilization of multiple measures of our theoretical constructs provides a powerful test of the hypothesis that both male and female perceivers' sexual relationship motivation is related to their perceptions of sexual intent (see model in Figure 1).

METHOD

Participants

One-hundred fifteen University of Colorado students participated in an experiment for course credit. Seventy-six of the participants were women, 38 were men, and 1 failed to identify her or his sex. The average age of the participants was 19 (range: 18-28).

Materials/Procedure

Following the informed consent form, participants responded to a survey packet containing, in order, (a) a

scenario-based measure of sexual intent, (b) Haselton and Buss's (2000) measure of sexual interest judgments, (c) Johnson and Miller's (2001) Short-Term Relationship Scale, (d) a single-item measure of current sexual relationship motivation, and (e) demographic items.

The scenario-based measure of perceptions of sexual intent, which was adapted from a study conducted by Kowalski (1992), described two university students meeting in class and later going out on a date. The story concluded with the two students talking and listening to music in the woman's apartment (see the appendix). The questions following the scenario consisted of items to assess participants' perceptions of both the male and female targets' sexual intentions, though it should be noted that the male target's and the female target's behavior was not the same in the scenario and, thus, direct comparisons cannot be drawn. The eight questions (four per target; all rated on a 7-point scale ranging from *not at all true* to *very true*) were adapted from prior studies (see Appendix; Abbey, 1982; Muehlenhard et al., 1986; Shotland & Craig, 1988). Haselton and Buss's (2000) measure of sexual-interest judgments requires participants to indicate the extent to which eight behaviors (e.g., smiling at or touching someone) reflect sexual interest on the part of a man and woman, separately. Thus, while the Haselton and Buss measure assesses participants' relatively more general beliefs about behaviors indicating male and female sexual intent, the scenario-based measure assesses sexual intent as attributed to specific individuals.

Because the behavior of the male and female targets in the scenario-based measure of perceived sexual intent was not controlled, the structural equation model reported below examines participants' judgments of sexual intent ignoring target sex (i.e., ratings of the male and female targets were averaged within each the scenario-based and Haselton & Buss's [2000] sexual interest measures). The high internal reliabilities associated with these generalized judgments (see Results below) indicate that combining the ratings of the male and female targets is perfectly acceptable.[3]

Johnson and Miller's (2001) Short-Term Relationship Scale (SRS) is a semantic differential scale made up of eight items, with four measuring motivation for short-term relationships (e.g., not seeking—actively seeking) and four measuring avoidance of short-term relationships (e.g., not avoiding—actively avoiding). We also used a single-item measure of perceivers' sexual relationship motivation in both studies, which we will refer to as SRM. Participants were asked, "What do you want from a romantic relationship right now?" with the response alternatives "To have a casual sexual partner," "To have a casual dating partner," "To have a steady dating partner," "To have a serious committed relationship," "To be married." Each option represents an increasing level of commitment to a single sexual or romantic partner. Other research (Lenton & Bryan, 2005) has confirmed the validity of this item. After responding to these measures as well as demographic questions (sex, age), participants were debriefed and thanked.

TABLE 1: Study 1: Correlations Among Perceiver Sex and Latent Factors Included in the Model

	(1)	*(2)*	*(3)*
(1) Perceiver sex (–1 = female and 1 = male)	—		
(2) Casual sexual motivation (higher numbers reflect an increasing desire for casual sexual relationships)	.311*	—	
(3) Perceptions of sexual intent (higher numbers reflect higher ratings of sexual intent)	.308*	.652**	—

*$p < .01$. **$p < .001$.

RESULTS AND DISCUSSION

We first examined the internal consistency of each scale utilized. Because we found the reliability of the scenario-based perceived sexual intent scale to be improved with the removal of one item (from $\alpha = .62$ to $\alpha = .85$), this item was not included.[4] Thus, the final scale was based on the average of seven items. Haselton and Buss's (2000) measure of sexual interest judgment (combined male and female) was reliable ($\alpha = .88$). Finally, Johnson and Miller's (2001) SRS subscales were also found to be sufficiently internally consistent ($\alpha = .82$ and .73 for seeking and avoiding, respectively). Latent factors were constructed for both casual sexual motivation and perceptions of sexual intent. Casual sexual motivation included the SRM (reverse coded), the seeking casual sex measure, and the avoiding casual sex measure (reverse coded). Thus, increasing values on the latent factor suggest a stronger motivation to engage in casual sex. Perceptions of sexual intent were measured by two indicators, the Haselton and Buss measure and the scenario-based measure. All indicators loaded significantly on their hypothesized constructs. The correlations among sex and the two latent factors appear in Table 1.

The model in Figure 1 (estimated using EQS 5.7b; Bentler, 1995) exhibited adequate fit to the data, $\chi^2(7, n = 114) = 8.296$, *ns*, Comparative Fit Index (CFI) = .99, root mean square error of approximation (RMSEA) = .04, 90% confidence intervals (CIs) on the RMSEA (.00-.13). Standardized parameter estimates for all paths, along with significance levels of the paths, appear in Figure 1. As can be seen in the figure, all hypothesized

relationships were supported. The relationship between casual sexual motivation and perceived sexual intent was significant such that those more interested in casual (vs. committed) sexual relationships imputed greater sexual intent to the targets ($B = .62$, $p < .001$). There was also a significant path between perceiver sex and casual sexual motivation such that males were more motivated for casual sexual relationships than were women ($B = .31$, $p < .01$). Finally, the path from perceiver sex to sexual intent, which was originally significant ($r = .31$, see Table 1), was nonsignificant after controlling for casual sexual motivation, which is suggestive of mediation ($B = .12$, *ns*). To provide further evidence of mediation, we examined the *z* test for the adaptation of the Sobel (1982) test of the two-part indirect path implemented in EQS 5.7b. A significant *z* score is evidence of a significant indirect (i.e., mediated) effect and thus represents a test of whether the mediated effect is significantly different from 0. In this case, the indirect effect was significant, $z = 2.41$, $p < .05$. These analyses imply that the influence of sex on perceptions of sexual intent is mediated through motivation for casual sexual relationships, and that this effect is statistically significant. This model accounted for 44% of the variance in perceptions of sexual intent, a large effect size according to Cohen (1988). We note that although our sample size might be perceived as small, given the number of measured variables and parameters estimated, we have adequate *n* based on most published guidelines regarding necessary sample size for structural equation modeling (SEM; Bentler & Chou, 1987; Loehlin, 1992; Stevens, 1996). In addition, the fact that every path tested was significant and the model accounted for a large amount of the variance indicates that we are not underpowered to detect reliable effects. Finally, if we conduct these same analyses using an ordinary least squares (OLS) regression approach, the conclusions are identical.

To confirm that the relationship between casual sexual motivation and perceptions of sexual intent was the same across sex, a cross-groups model (Aiken, Stein, & Bentler, 1994; Bentler, 1995) was estimated in EQS such that the exact model in Figure 1 (less the perceiver sex construct, obviously) was simultaneously estimated in male versus female participants, constraining both the structural path from motivation to sexual intent and the loadings of the measured variables on their latent variables to be equal in the two groups. LaGrange multiplier statistics (MacCallum, 1995) confirmed that there was no path or factor loading on which the two groups differed significantly, and the model constraining all of the paths and loadings to be equal across sex was a good fit to the data, $\chi^2(13, n = 114) = 14.87$, $p = .32$, CFI = .98, RMSEA = .04, 90% CI (.00-.10). In particular, there was no significant difference in the strength of the relationship between motivation and perceptions of sexual intent in men versus women, $\chi^2_{\Delta}(1, n = 114) = .53$, $p = .47$. We note, however, that the inequality in size of the samples of men and women biases our findings in the direction of finding no differences between the groups (see Kaplan & George, 1995). For this reason, we conducted these same analyses in OLS regression, forming standardized scales for the motivation and sexual intent constructs. Perception of sexual intent was regressed on centered casual sexual motivation, the weighted effects code for perceiver sex (to account for unequal sample sizes of men and women; see Aiken & West, 1991), and their interaction. In this equation, the effect of casual sexual motivation on perceived sexual intent was still significant ($p < .001$), but the main effect of gender was not significant ($p = .22$) and the Perceiver Sex × Casual Sexual Motivation interaction did not even approach significance ($p = .48$), demonstrating that the relationship of casual sexual motivation to perceptions of sexual intent does not differ for men versus women. These results are consistent with our SEM approach.

The major conclusions are that sexual relationship motivation is correlated with perceptions of sexual intent in exactly the same way among *both* men and women, perceiver sex is correlated with sexual motivation, and sexual motivation explains sex differences in perceptions of sexual intent. It is important that these results indicate that projection need not be restricted to men's (only) perceptions of (attractive) female targets (cf. Maner et al., 2005) and thus may result from a more general default assumption of self-other similarity on the part of the perceivers.

STUDY 2

One purpose of Study 2 was to replicate the findings of Study 1 in a more realistic setting. Thus, participants in Study 2 made judgments of sexual intent in an online dating context. Another purpose of this study was to provide even more compelling evidence that the correlation between a perceiver's sexual relationship motivation and his or her judgment of another's is the result of more cognitive-flavored projection processes. We will do this by exploring the moderating roles of both similarity and ambiguity in this correlation. More than 35 years ago, Ward (1967) found that judge-target similarity influences whether projection will occur when his study showed that men and women use their own height as a basis of estimating the height of another *only* when this other is of the same sex. Since then, the moderating role of similarity has been substantiated by a number of researchers (e.g., Ames, 2004b; Krueger, Acevedo, & Robbins, 2005; Van Boven & Loewenstein, 2003; see Robbins & Krueger, 2005, for a recent review).

The presumption of further similarity from an initial assessment of similarity is one of the most fundamental, frequently observed, and potentially rational examples of inductive reasoning (Heit, 1998). And as would be expected if assumed similarity is, in fact, a rational means by which to judge others, projection appears to facilitate judgment accuracy (Krueger & Clement, 1994; Krueger & Zeiger, 1993; Stanovich, 1998). If the results of this study reveal that the relationship between a perceiver's sexual motivation and his or her judgment of another's sexual intent depends upon perceiver-target similarity, we will have obtained strong evidence that a simple cognitive, inferential process may underlie projection of sexual intent.

To further bolster this claim, we also examined the potential moderating role of intent ambiguity in projection of sexual relationship motivation. It is not always necessary for a perceiver to project his or her personal beliefs, motivations, and so forth. For example, when a target's intention is *un*ambiguous, there is no need for the perceiver to infer the target's intention and, thus, no role for projection (Green & Sedikides, 2001; Lambert & Wedell, 1991). Studies investigating the effects of behavioral ambiguity on sexual intent judgments are supportive of our cognitive-flavored projection account, as they generally show that sex differences in this judgment occur primarily when perceivers are considering relatively ambiguous behavior (Kowalski, 1993; Shotland & Craig, 1988). Note that the functional projection framework, the motivation-flavored account of the role of projection in sexual intent judgments, does not suggest that ambiguity or perceived similarity should moderate the extent to which projection occurs.

METHOD

Participants

Eighty-four individuals (51 of whom were women) participated in return for £5 payment. These participants, who were affiliates of the University of Cambridge (i.e., students or staff), were recruited via announcements made to departmental listservs and a university Web page. The average age of the participants was 21 (range: 18-32).

Materials/Procedure

Following completion of an informed consent form, participants were directed to individual computer stations at which they were presented with a mock dating Web site. "DateOnline.com" was, in fact, a series of Microsoft PowerPoint slides designed to act like a Web site. The first page provided instructions for responding to the mock dating Web site. In particular, here participants were told that they would view—with the purpose of forming impressions—profiles of both men and women who were hoping to meet someone. Participants then proceeded to the subsequent page, which asked them to spend a few moments imagining that they "are truly interested in meeting someone via an online matchmaking site" and to consider those qualities they would want him or her to possess. These instructions were included to enhance the realism of the situation (Carroll, 1978). After this, participants proceeded to the introduction page of DateOnline.com.

This first page of the mock Web site was designed to resemble the entry page of an actual dating Web site by presenting pictures of men and women—in pairs—engaged in various activities (e.g., playing tennis, talking) as well as a DateOnline.com logo and asking participants to indicate their own sex by clicking on one of two buttons. Clicking either button directed participants to the first of 13 profiles, with the initial 1 acting as an orienting profile. The 12 critical profiles that followed were derived from a 3 (intent ambiguity: friendship vs. fun vs. romance/relationship) × 2 (target sex: male vs. female) fully crossed, within-subjects design (two replications per cell, one with and one without a photo, with the photos depicting persons of average attractiveness, i.e., in the vicinity of 4 on a scale from 1-7).[5] It was expected that "friendship" and "romance/relationship" would represent relatively unambiguous sexual intent, whereas "fun" would be more ambiguous.

In addition to noting the target's goal and sex, each profile described the target's age (range: 21-22), location (constant: England, UK), hair color (brown vs. blonde), eye color (blue vs. green vs. brown), height (male range: 5'10"-6'0"; female range: 5'4"-5'6"), body type (constant: medium), language (constant: English), occupation (constant: student), favorite food (Chinese vs. French vs. Indian vs. Italian vs. Japanese vs. Thai), alcohol consumption (constant: occasionally), marital status (constant: single), parental status (constant: no children), and star sign (all 12 represented). Each profile also contained a short, unique blurb in which the person ostensibly described himself or herself. These self-descriptions were adapted from real self-descriptions found on publicly accessible dating Web sites. They were edited to eliminate reference to the person's sex and gender-stereotypic behavior, as well as potentially unusual interests. Two versions of the experimental materials were developed to control for the order of profile presentation and for self-descriptions across target sex. Hair- and eye-color combinations, favorite food, and age were controlled across target sex within each version.

Participants were instructed to form an impression of each individual and then proceed to the next page, which

prompted them to fill out an impressions form. To comply with our cover story, this paper-and-pencil task asked participants to indicate their impression of the target by rating each on 7-point Likert-type scales with respect to his or her physical attractiveness and five basic personality dimensions (agreeableness, conscientiousness, extroversion, open-mindedness, and sense of calm). Participants were then asked to indicate how similar they perceived themselves to be to the person described in the profile (1 = *not at all similar*, 7 = *very similar*). The form concluded by asking participants to make judgments regarding the target's sexual intent. In particular, participants responded to six statements including, The individual "was flirtatious," "appeared to be interested in finding a sexual partner," and "was only looking to make new friends" (reverse coded; 1 = *strongly disagree*, 7 = *strongly agree*). These items were averaged to form a perceived sexual intent score for each target (average α across the 12 targets = .81). Once participants rated every target, they responded to a manipulation check of intent ambiguity: For each of the three available "goals," participants indicated the extent to which that goal was *ambiguous* versus *unambiguous* and *clear* versus *unclear* (on 7-point Likert-type scales). In a final paper-and-pencil survey, participants were administered the SRM (i.e., our single-item measure of perceivers' sexual relationship motivation) and Johnson and Miller's (2001) Short-Term Relationship Scale. In this survey, they were also asked to indicate their sex, age, and current relationship status. This last construct was assessed via two questions: (a) "Are you currently in a romantic relationship?" (yes vs. no) and (b) "If so, how would you describe this relationship?" The response options provided for this second question were (1) "We are casually dating"; (2) "We are steadily dating"; (3) "We are in a serious, committed relationship but not living together"; (4) "We are in a serious, committed relationship *and* living together"; (5) "We are married." As with SRM, higher numbers reflect greater commitment to a single individual. We asked participants to report their current relationship status in order to examine the extent to which perceivers' sexual relationship motivation predicts their sexual intent judgments *over and above* their current relationship status. Upon completing the final survey packet, participants were debriefed and thanked.

RESULTS AND DISCUSSION

Manipulation Check

Ratings of the clarity and ambiguity of each of the three goals were significantly and negatively correlated with one another (friendship: $r = -.71$, $p < .001$; fun: $r = -.61$, $p < .001$; romance/relationship: $r = -.48$, $p < .001$); thus, the ratings for each pair were averaged (after reversing ratings for "clarity"). A repeated-measures ANOVA was conducted to examine the expectation that the goals friendship and romance/relationship would be perceived to be less ambiguous than fun. Results showed a reliable overall effect of intent ambiguity, $F(2, 164) = 26.48$, $p < .001$. Planned contrasts revealed, however, that although romance/relationship ($M = 2.52$, $SE = 0.13$) was indeed perceived as less ambiguous (more clear) than fun ($M = 4.13$, $SE = .19$) $F(1, 82) = 47.84$, $p < .001$; friendship ($M = 4.06$, $SE = 0.16$) was judged to be no less (or more) ambiguous than fun, $F(1, 82) = .05$, *ns*. Thus, for all subsequent analyses investigating the effects of intent ambiguity, the goal categories fun and friendship were combined and henceforth will be referred to as the high-ambiguity category. Romance/relationship alone will represent the low-ambiguity (high clarity) category. It is interesting to speculate why friendship might be thought ambiguous. Perhaps the context of a dating Web site makes the seeking of friendship appear suspect (see General Discussion).

Analysis Notes

We used a "policy capturing" (Stewart, 1988) approach to analyze the data, an analytic tool having a long tradition in the field of judgment and decision making. In short, policy capturing is a reliable method of assessing the relative import of cues across judges and for each judge. It is achieved by presenting individuals with a set of stimuli varying according to levels of a cue, just as we have done (e.g., cue = intent ambiguity, levels = high vs. low ambiguity). Judges' responses to the stimulus set are then submitted to multiple regression analysis (see Brehmer & Brehmer, 1988), and the coefficient or weight associated with each cue is extracted, usually for each judge separately. Analysis then typically focuses on comparing the weights: (a) against 0 (i.e., on average, do the judges use this cue?), (b) between judges (i.e., do different judges use the cues differently?), and/or (c) between stimuli (i.e., does use of the cue depend upon some feature of the stimulus?) Accordingly, each participant in this study assessed the sexual intent of 12 targets varying in terms of their sex, intent ambiguity, and perceived similarity to the target, and then participants' responses to each of these 12 targets were submitted to multiple regression analysis. We utilized this approach in order to assess whether, on average, people who perceive themselves to be more (vs. less) similar to the targets are more likely to use their *own* sexual relationship motivation as a cue in judging others' sexual intent (a Perceived Similarity × Casual Sexual Motivation interaction) and, further, whether the use of one's own sexual relationship

TABLE 2: Study 2: Predictors of Perceptions of Sexual Intent

	t *Value*	df	b	p *Value*
Relationship status (higher numbers reflect greater commitment to a single romantic/sexual partner)	–2.48	11	–.05	.03
Perceived similarity (PSim) (higher numbers reflect greater perceived similarity)	–1.65	11	–.05	.13
Perceiver sex (–1 = female and 1 = male)	–2.41	11	–.11	.04
Casual sexual motivation (CSM) (higher numbers reflect an increasing desire for casual sexual relationships)	3.52	11	.10	.01
PSim × CSM	2.55	11	.11	.03
Perceiver Sex × CSM	–1.23	11	–.03	.25

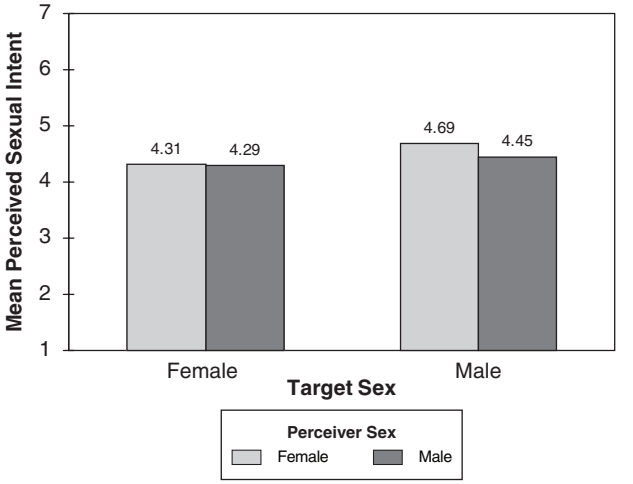

Figure 2 Study 2: Perceiver Sex × Target Sex interaction in perceived sexual intent.

motivation in this judgment depends on the ambiguity of the targets' intent (an Ambiguity × Casual Sexual Motivation interaction). A further advantage to using a regression approach (vs. ANOVA) to answer these questions is that it is robust to missing data for some of the participants (G. H. McClelland, personal communication, March 10, 2005; see Judd & McClelland, 1989) and enhances statistical power.

For each one of the 12 critical targets, participants' judgments of sexual intent (the standardized average of the six sexual intent items, with appropriate items reversed) were regressed on relationship status, perceived similarity (standardized), perceiver sex, casual sexual motivation (CSM; the average of SRM [standardized] and Johnson & Miller's [2001] Short-Term Relationship Scale [standardized]), the Perceived Similarity × Casual Sexual Motivation interaction, and the Perceiver Sex × Casual Sexual Motivation interaction. The raw regression weights for each of the six predictors × 12 targets were then compiled in a new data set for the purposes of hypothesis testing.

Hypothesis Testing

As Table 2 illustrates, relationship status was predictive of participants' sexual intent judgments: When differences in perceived similarity, CSM, and perceiver sex were controlled, individuals in relatively more committed relationships gave *lower* ratings of sexual intent. There was no main effect of perceived similarity over and above the other predictors. Thus, whether a participant perceived himself or herself to be similar to the target was not related to the participant's judgment of the sexual intent of that target.

Unexpectedly, results revealed that women's sexual-intent ratings were, on average, higher than men's. In other words, and contrary to past findings, female participants perceived greater sexual intent in the targets than did male participants. To facilitate our understanding of this result, we conducted follow-up analyses in which we examined whether this effect depended upon target sex by looking at the relationship between perceiver sex and judgments of sexual intent for male and female targets separately (again, with the model controlling for relationship status, CSM, perceived similarity, CSM × Perceived Similarity, and Perceiver Sex × CSM). This analysis revealed that the source of the sex difference was due to men and women's differential ratings of the male target, $t(5) = -3.61$, $p = .02$, $b = -.21$, whereas men's and women's ratings of the female target were similar, $t(5) = -.22$, $p = .84$, $b = -.01$ (see Figure 2). Potential explanations for this unique finding are offered in the General Discussion. In any case, however, that we did not observe the standard sex difference in judgments of sexual intent provides an opportunity for a rigorous test of our contention that projection of motivation (rather than perceiver sex itself) forms the basis for judgments of sexual intent.

Returning to the results, we again found that CSM is predictive of participants' judgments of sexual intent, with those seeking casual sexual relationships perceiving more sexual intent in the targets' profiles than those desiring long-term, committed relationships. This effect did not depend upon perceiver sex, suggesting that projection of sexual intent is equally likely for female perceivers as for male perceivers. Because the behavior of the targets did not differ as a function of their sex (i.e., the contents of the profiles was controlled across target sex), unlike in Study 1, in this study we can further assess whether projection of sexual intent only occurs when perceivers are judging

targets of the other sex and, in particular, if this is more likely to occur among men (Maner et al., 2005). To conduct this analysis, we investigated the effects of the Perceiver Sex × CSM interaction for male and female *targets* separately. These analyses show that the Perceiver Sex × CSM interaction does not reliably predict judgments of sexual intent for either male, $t(5) = -.11$, $p = .92$, $b = -.01$, or female, $t(5) = -2.06$, $p = .10$, $b = -.06$, targets.[6] Thus, male and female perceivers are equally likely to project to male and female targets.

The projection effect did depend, however, on perceived similarity. To understand the nature of this interaction, we ran two regression models for each target. One model examined the relationship between CSM and judgments of sexual intent for judges who perceived a high degree of similarity between the target and themselves, and the other examined this relationship for judges who perceived a low degree of similarity between the target and themselves (per a median split on the perceived similarity score for each target). Both of these models controlled for the other constructs assessed in this study (relationship status, perceiver sex, etc.). The results of this analysis revealed there to be *no* reliable relationship between CSM and judgments of sexual intent when perceived similarity between the participant and the target was low, $t(11) = -.41$, $p = .69$, $b = -.02$. On the other hand, when perceived similarity was high, CSM was a significant predictor of sexual intent ratings, $t(11) = 4.30$, $p = .001$, $b = .21$. Projection of judges' own sexual motivation appears to explain judgments of sexual intent but seemingly only when the judges subjectively perceive themselves to be similar to the target.

The final set of analyses involved examining the extent to which ambiguity of the targets' intent moderated the relationship between CSM and judgments of sexual intent. These analyses revealed that the relationship between CSM and judgments of sexual intent remained reliable when the targets' intent was ambiguous (seeking fun or friendship), whereas this relationship failed to attain significance when the targets' intent was relatively clear (seeking romantic relationship; see Table 3). Thus, projection is more likely to occur when the situation is ambiguous and, thus, in need of subjective interpretation.[7] These analyses further suggest that there is *not* a qualifying three-way interaction between CSM, intent ambiguity, and perceived similarity, as although the Perceived Similarity × CSM interaction is a *marginally* significant predictor of sexual intent judgments when the targets' intent is ambiguous, this effect size is not notably different from the *nonsignificant* Perceived Similarity × CSM interaction for the targets with clear intent. Thus, projection of casual sexual motivation is greatest when similarity between the perceiver and the target is believed to be high *or* the target's sexual intent is unclear.

TABLE 3: Study 2: On the Moderating Role of Intent Ambiguity in Projection

	t *Value*	df	b	p *Value*
Ambiguous intent				
Casual sexual motivation (CSM)	4.53	7	.14	.003
CSM × Perceived Similarity (PSim)	1.92	7	.12	.10
Clear intent				
CSM	0.73	3	.01	.52
CSM × PSim	1.83	3	.09	.17

GENERAL DISCUSSION

The default-model explanation of sexual intent judgments (Haselton & Buss, 2000) argues that men desire sex more than women and then erroneously use their own desire as a gauge of women's desire (Shotland & Craig, 1988). This hypothesis can be further specified in one of (at least) two ways: (a) Maner and colleagues' (2005) proposal that projection of sexual desire is a phenomenon only among men who would like more sex but not among men who are satisfied with their sex lives or among women generally. In this way, projection of sexual intent is motivated, or functional for men seeking casual sexual relationships; and (b) our proposal that both men and women, and both those high and low in sexual motivation, project their personal sexual intent onto others. In this way, projection of sexual intent is a by-product of the basic tendency for people to assume similarity between themselves and others. The two studies reported here demonstrate that the role of projection in sexual intent judgments is much more general than that suggested by Maner et al. As seen in Studies 1 and 2, men and women with high personal sexual intent imputed that intent onto male and female targets of unknown or merely average attractiveness, and men and women with low personal sexual intent imputed that intent onto these same male and female targets. Thus, projection of sexual intent need not depend on the desirability of the target or, more to the point, the *needs* of the perceiver. That is, projection of sexual intent is not necessarily functional, as those low in sexual motivation would not possess the same need as those high in sexual motivation to perceive that others share their low sexual desire. Furthermore, Study 2 demonstrated that projection of sexual intent is most likely to occur when the perceiver believes the target to be similar to himself or herself *or* the target's intent is relatively unclear. These results bolster the claim that judgments of sexual intent are the result of a relatively basic cognitive process wherein people use their own standing on some issue to infer that of another. Still, we encourage other researchers to further investigate the role of sexual appeal more generally in judgments of sexual intent. For example, although our own (Study 1) and other research

(e.g., DeSouza et al., 1992; Fisher & Walters, 2003; Haselton & Buss, 2000; Kowalski, 1993; Muehlenhard, 1988) show that despite being given no information regarding the attractiveness of the to-be-rated targets, there (often) remains a sex difference in the judgment of sexual intent. Perhaps participants in such studies begin with the presumption that the targets are sexually appealing on some level.

Although these findings situate judgments of sexual intent distinctly in the cognition-based projection framework, it is important to recognize that motivation ("hot cognition") and inference ("cold cognition") are not wholly separable forces (Sorrentino & Higgins, 1986; Tetlock & Levi, 1982) and that each may occur simultaneously or even perhaps be used in service of the other (see Schwarz, 2000). For example, attraction to a particular person may compel the perceiver to detect self-other similarities (vs. dissimilarities). Alternately, the detection of self-other similarities may enhance attraction to a particular person.

Turning to some of the other findings, this research also suggests that sex differences in sexual-relationship motivation might explain the much-observed association between perceiver sex and judgments of sexual intent, as Study 1 showed that perceiver sex was no longer predictive of ratings of sexual interest when sex differences in sexual-relationship motivation were controlled. The results of Study 2 complicate this interpretation, however, because they revealed that women gave higher ratings of sexual intent to the male targets than did men, whereas their ratings of the female targets were similar. One potential source of this distinct finding may be the sample in Study 2. The majority of research on sex differences in judgments of sexual intent has relied upon Americans. This is the first study investigating judgments of sexual intent of which we are aware that has relied upon a U.K. sample. Although the U.S. and U.K. cultures are typically lumped together in cross-cultural research (e.g., Markus & Kitayama, 1991), other research indicates that they differ with respect to important dimensions, including values (Ryckman & Houston, 2003) and sexual behavior (e.g., Currie et al., 2004; Singh, Wulf, Samara, & Cuca, 2000). Alternately, this finding may be the result of the context within which the judgments of sexual intent were situated. Women may perceive that men who participate in an online dating Web site are only looking for "one thing," a perception that may not be wholly inaccurate, as men more than women use the Internet to seek short-term sexual partners (Brym & Lenton, 2001). Of course, the unique finding may be due to some other distinct feature of our methods or design (e.g., multiple ratings).

Returning to the main focus of the research, there are several implications for theorizing about social projection. On one hand, a great deal of the research on the role of similarity in projection has demonstrated that people are more likely to project to in-group than to out-group members (for a review, see Robbins & Krueger, 2005). With respect to sexual intent judgments, a strict interpretation of this principle would imply that women are more likely to project to women, whereas men are more likely to project to men. Our results show, however, that men and women are equally likely to project their sexual relationship motivation onto both targets.

Perhaps Ames's (2004b) recently proposed similarity contingency model offers a solution to this conundrum. According to this model, if a person perceives a target to be similar to himself or herself, she or he will project to the target, whereas if a person perceives a target to be different from himself or herself, she or he will stereotype the target. With respect to judgments of sexual intent, this model would suggest that women project their sexual intent to women but stereotype men, whereas men project their sexual intent to men but stereotype women. Thus, the model implies that women's ratings of men's sexual intent would be higher than men's self-ratings, whereas men's ratings of women's sexual intent would be lower than women's self-ratings. Haselton and Buss's (2000) data indicate, however, that although women's ratings of men's sexual intent somewhat exceeds men's self-ratings, there was no corresponding stereotyping of women by men, as men's ratings of women's sexual intent far exceeded women's self-ratings.

Perhaps, then, the judgment of sexual intent is unique. We would argue that instead of viewing this judgment as an outlier, it should be seen as an opportunity for researchers to refine our theories about how projection works. In particular, this research clearly indicates that further thought is warranted about what is meant by "perceived similarity." If a category clearly relevant to the judgment domain—such as perceiver sex in this case—is not used to assess similarity, how can we predict which categories will be? The cognitive literature suggests that similarity assessments depend—just like other judgments—on context, individual differences, expertise, and measurement (Goldstone, Medin, & Halberstadt, 1997; Tversky, 1977). Thus, similarity is neither a fixed nor singular property (see Goldstone, 1994) describing the judge-target relationship; notions hinted at by Ames (2004b) when he suggested that "objective similarity" is not necessarily the basis of perceived similarity. Perhaps in the domain of sexual intent judgment, for example, people perceive both men and women as belonging to a common in-group of nubile individuals. Clearly, what contributes to perceived similarity, and when and how it moderates projection, deserves more attention.

Our findings are certainly not without limitation, of course. Our reliance on self-report, as opposed to behavioral data, is one such limitation. In addition, we are limited in our conclusions regarding the role of physical attraction in projection, as we did not explicitly measure or manipulate it in either study.

Conclusion

This is the first research to demonstrate the proximal *and* general role of *projection* in judgments of sexual intent by both men and women. Across two studies, male and female participants motivated to find a casual sex partner were more likely to impute sexual intent to the targets' behavior. Conversely, male and female participants motivated to find a committed relationship were less likely to impute sexual intent to the targets' behavior. Furthermore, the results of Study 2 indicate that the relationship between perceivers' sexual intent and their judgments of others' sexual intent is moderated by judge-target similarity and judgment ambiguity, suggesting that a relatively cold cognitive process can produce projection in this domain.

APPENDIX
SCENARIO-BASED PERCEIVED SEXUAL INTENT SCALE

John and Mary were both students at a university. Although they had seen each other around campus, they became acquainted when they enrolled in the same class. Because they sat next to each other in class, they talked on occasions and borrowed notes from each other when they had to miss a class. Halfway through the semester, John asked Mary out for the following Friday night. After he picked her up, he suggested they have dinner and then go see a movie she had been wanting to see for a long time. Over dinner, they discussed their classes and the friends they had in common. They continued this conversation while they were waiting in line for the movie. John paid for the tickets and they went inside.

Following the movie, John and Mary were walking to the car trying to decide on something else to do. Mary suggested that she had just bought a new stereo system and that they go to her apartment and listen to music. Upon arriving at the apartment, Mary turned on the stereo and they sat on the couch listening to music and talking.

1	2	3	4	5	6	7
NOT AT ALL TRUE			MAY OR MAY NOT BE TRUE			VERY TRUE

Mary is acting flirtatious. _____
John is acting flirtatious. _____
Mary is sexually attracted to John. _____
John is sexually attracted to Mary. _____
Mary would like to have sexual intercourse with John. _____
John would like to have sexual intercourse with Mary. _____
Mary is acting seductive. _____
John is acting seductive. _____

NOTES

1. The socialization and evolutionary accounts are not necessarily mutually exclusive nor competing accounts (see discussion further down), but this is nevertheless how they have been presented in this particular line of research.

2. Unfortunately, the authors did not report the correlations between sociosexual orientation and the sexual arousal ratings given to targets of average attractiveness and/or of the racial outgroup.

3. There were no sex differences in how participants rated the male versus female targets in either the scenario-based or Haselton & Buss (2000) measures of sexual interest (i.e., there were no significant Participant Sex × Target Sex interactions in the two 2 × 2 ANOVAs, $F(1, 113) = .01$, $p = .94$, and $F(1, 109) = .96$, $p = .33$, respectively).

4. "John would like to have sexual intercourse with Mary."

5. The three photos of each of the male targets and female targets were selected from a larger pool of photos based on the perceptions collected from 10 raters, with the photos matched for level of attractiveness, emotional expression (positive vs. negative), and baby faceness across target sex. For those profiles without photos, text reading no *photo available* was put in place of a photo. We included profiles with and without photos in order to generalize the results across this common variation in the profiles posted on dating Web sites.

6. Because these particular analyses were run post hoc and, further, because the finding concerning the relationship between the Perceiver Sex × Casual Sexual Motivation (CSM) interaction of judgments of female targets' sexual intent is at the outer limit of what might be called marginally significant, we decided to take a conservative approach and interpret this relationship as being nonsignificant. For those who may be interested, however, if we were to interpret this effect, it would not support Maner et al.'s (2005) theorizing, as the interaction suggests that projection of sexual intent to the female targets is stronger among women than it is among men.

7. Of course, because there were more targets with ambiguous intent than with clear intent, one might be tempted to argue that we had less power to detect a relationship between a perceiver's casual sexual motivation and his or her perception of another's (i.e., because of the reduced degrees of freedom associated with the test of projection to targets with clear intent). Even if there were 100 degrees of freedom associated with the analyses of projection to targets with clear intent, however, both t values would remain nonsignificant (for a two-tailed test with 100 degrees of freedom and an

alpha criterion = .05, the obtained *t* value would have to exceed the critical *t* value of |1.984|; Tabachnick & Fidell, 2001). Thus, it is apparent that—at the very least—projection of casual sexual motivation is notably *stronger* when a target's intent is ambiguous rather than more transparent.

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