


# A Reexamination of Sex Differences in Sexuality: New Studies Reveal Old Truths

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## Abstract

Recent evidence seems to call into question long-established findings of sex differences in sexuality, such as differences in mate preferences and desires for casual sex. In this article, we place new findings in a broader evidence-based context and show that they confirm previous perspectives on human mating. A wealth of evidence from real-world studies of actual mate choice and marital dynamics supports evolutionary mate-preference predictions. Converging evidence from patterns of extradyadic sex, mate poaching, sexual fantasies, pornography consumption, postcoital regret, sociosexual attitudes, and willingness to engage in casual sex supports the view that men and women have distinct short-term mating psychologies. This article highlights the fact that good science requires a constant re-evaluation of old truths and the proper placement of new studies in broad evidentiary contexts.

## Keywords

sex differences, sexuality, evolutionary psychology, mating strategies

In psychological science, new research studies sometimes cause psychologists to reconsider what were previously viewed as well-established findings. Bringing these new and interesting studies to a wide audience is a laudable goal, especially when it comes to disconfirming fallacious sexual stereotypes. Yet when a revelatory study comes along, it needs to be situated within the full breadth of what was previously known, and competing interpretations of the new results need fair consideration (e.g., Finkel & Eastwick, 2009). Researchers have recently asserted that evolved sex differences in sexuality are nonexistent or negligible (Conley, Moors, Matsick, Ziegler, & Valentine, 2011). In this article, we question the veracity of this claim.

## Sex Differences in Mate Preferences

Conley et al. (2011) reconsidered evidence that humans have sex-specific preferences for certain qualities in mating partners, concluding that such sex differences do not exist “in real-world contexts, which are presumably more valid than hypothetical musings” (pp. 296–297). This claim was based on results from a speed-dating study (Eastwick & Finkel, 2008), which were interpreted as refuting the evolutionary view that “men want a partner who is sexy (i.e., physically attractive), whereas women want a partner with high status” (Conley et al., 2011, p. 296).

Since the early 1990s, evolutionary perspectives have emphasized that temporal context is critical when evaluating sex differences in mate preferences (Buss & Schmitt, 1993). For more than 20 years, evolutionary perspectives have theoretically expected and empirically documented that women do desire “sexy” partners, especially as short-term mates (e.g., one-night stands; Buss & Schmitt, 1993; Kenrick, Sadalla, Groth, & Trost, 1990). Heuristic evolutionary perspectives predicted these findings, whereas other perspectives are based on after-the-fact interpretations (Confer et al., 2010).

In the context of speed-dating, Kurzban and Weeden (2007) reported the following:

... speed daters' focus on physical attractiveness within events with little sex difference suggests the possibility that people at these events might be pushed toward using their “short-term” as opposed to “long-term” criteria for mate selection, given that short-term mate selection criteria are, for both sexes, focused strongly on physical attractiveness. (p. 631)

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The special nature of speed-dating interactions also may reflect an early stage of attraction in which only superficial cues, such as physical attractiveness, are available. Even so, at least some long-term mate preferences are operative, as several speed-dating studies, especially those using community sampling, have found that women's, but not men's, actual choices are affected by a partner's status-related attributes, such as education, income, and intelligence (Asendorpf, Penke, & Back, 2011; Fisman, Iyengar, Kamenica, & Simonson, 2006; Todd, Penke, Fasolo, & Lenton, 2007).

Even if Conley et al. (2011) had conceptually limited their skepticism to sex differences in long-term mate preferences, a proper scientific re-evaluation of evolutionary predictions requires the acknowledgment of previous investigations into real-world mating. Several studies of actual marital choice have found that women (but not men) tend to marry partners who are higher than average in terms of status and resources, whereas men (but not women) tend to marry partners who are younger than they are and possess cues signaling higher fertility (Bereczkei & Csanaky, 1996; Kenrick & Keefe, 1992; Perusse, 1994). Importantly, these preferences do not dissipate after people marry (Shackelford, Schmitt, & Buss, 2005a), and they demonstrably influence marital satisfaction, retention efforts, infidelity, jealousy, and divorce (e.g., McNulty, Neff, & Karney, 2008). Sex differences in preferences for physical attractiveness and status-related attributes in long-term mates have been documented in real-life personal ads, responses to personal ads, and online dating choices (e.g., Feingold, 1992); in nationally representative samples (Sprecher, Sullivan, & Hatfield, 1994); in large cross-cultural studies (Shackelford, Schmitt, & Buss, 2005b); in studies of older adults (Alterovitz & Mendelsohn, 2011); and in many studies that experimentally test for the natural cognitive consequences (e.g., contrast effects) of these mate preferences (Campbell & Wilbur, 2009; Kenrick, Neuberg, Zierk, & Krones, 1994; Roney, 2003).

Also relevant for evaluating the new findings are the subtle differences among preferred, ideal, necessary, and minimally acceptable levels of marriage-partner qualities (Kenrick et al., 1990) and the critical roles of trade-offs and the ways in which one's own mate value affects mate choice (Li, Bailey, Kenrick, & Linsenmeier, 2002), especially in real-world speed-dating contexts (Back, Penke, Schmukle, & Asendorpf, 2011; Todd et al., 2007). Decades of fieldwork by anthropologists, biologists, and behavioral ecologists have further confirmed the influence of physical attractiveness and status on real-world mate choice, dowry payments, and fertility outcomes (Buss, 2003; Hopcroft, 2006).

It is reasonable to expect that some explicitly stated preferences play less of a role in mate choice than people consciously assume, in part because some preference mechanisms are clearly outside of conscious awareness (Pillsworth & Haselton, 2006; Thornhill & Gangestad, 2008). In general, the degree to which conscious preferences influence mate choice probably depends on the specific characteristic under study (e.g., resources, status, ambition, dominance), the type of

relationship sought (e.g., one-night stand, brief affair, dating, marriage), the effects of one's mate value and local sex ratios, and other factors, such as religion and kin, that cause people to not always strive for what they think they want (see Burris, Welling, & Puts, 2011). In terms of preferences for physical attractiveness and status-related attributes in mates, many of these caveats were rightly noted by Eastwick and Finkel (2008): "It would be a tremendous stretch from the current data to suggest that physical attractiveness or earning prospects are never associated with sex-differentiated romantic interest in actual dating partners" (p. 262).

New studies can be scientifically illuminating when properly compared against the cumulative weight of existing evidence (e.g., Kurzban & Weeden, 2007). However, Conley et al. (2011) portrayed a single study as failing to support evolutionary predictions in speed dating and did not address the immense foundation of evidence supporting sex-linked preferences for physical attractiveness and status, yet they definitively resolved that no sex differences exist in real-world mate preferences. Such disregard of extant evidence in a review could seriously inhibit progress in this area of sexual science (Ketelaar & Ellis, 2000).

## Sex Differences in Desired Number of Sex Partners

Conley et al. (2011) also reconsidered whether women desire (and have) fewer sexual partners than men do, concluding that such sex differences are artifacts of "inappropriate statistics and social desirability" rather than reflections of underlying psychological differences. In the context of *desired* numbers of partners, Conley et al. (2011) cited Pedersen, Miller, Putcha-Bhagavatula, and Yang (2002). Numerous studies have addressed problems with Pedersen et al. (2002), including the inappropriate use of the Maritz-Jarrett median test (this statistic allows distributional skew to bias significance testing; Schmitt et al., 2003), failures in replicating the absence of significant median-based sex differences (Fenigstein & Preston, 2007), failures in addressing the tails of men's and women's distributions (McBurney, Zapp, & Streeter, 2005), and problems with the conceptual misconstrual of sexual-strategies theory (Schmitt et al., 2003).

Sexual-strategies theory does not predict that most men will seek large numbers of partners or that few women will seek short-term mates (see also Gangestad & Simpson, 2000). Rather, it predicts that *when* men are actively seeking short-term mates, they should tend to seek larger numbers of sexual partners than women should when they are actively seeking short-term mates. It is because of the psychological shifts that occur *within* men and *within* women when they choose to pursue a short-term mating strategy (as opposed to a long-term mating strategy) that researchers can compare the sexes and expect overall differences across their distributions of desired number of sex partners. When examined in this proper context, repeated cross-cultural tests have shown that men's and

women's desired number of sex partners are not the same; for example, Schmitt et al. (2003) found that about 25% of men but only 5% of women want "more than one" sexual partner in the next month.

None of these important published correctives to Pedersen et al. (2002) were noted by Conley et al. (2011), nor was the wealth of converging evidence of sex differences in desired numbers of short-term sexual partners—such as robust and reliable sex differences in desiring multiple partners for extradyadic sex, short-term mate poaching, sexual fantasies, and pornography consumption, as well as level of postcoital regret, time needed before consenting to sex, and attitudes toward engaging in casual sex (for a review, see Buss & Schmitt, 2011). Sex differences in permissive sociosexuality (e.g., agreeing with the statement, "Sex without love is OK") were universally observed across 53 nations (Lippa, 2009). A meta-analysis of sex differences in sexuality (Petersen & Hyde, 2010) concluded, "In support of evolutionary psychology, results from both the individual studies and the large data sets indicated that men reported . . . more permissive attitudes than women for most of the variables" (p. 21) and "evolutionary psychology proposes that short-term mating strategies are associated with significant gender differences. . . . Results from the current study support this theory" (p. 35). It is unclear how a scientific review of evidence on this topic could lead to the strong assertion that sex differences in desired number of short-term sexual partners are negligible.

### Sex Differences in Attitudes Toward Casual Sex

Conley et al. (2011) contended that results from Conley (2011) should lead psychologists to reconsider whether sex differences exist in liking casual sex, concluding in part that such sex differences are mediated by the proposers' "sexual capabilities." Conley et al. (2011) explained that apparent sex differences in casual-sex attitudes and behaviors—repeatedly observed in previous surveys, meta-analyses, and real-world experiments—are confounded with factors other than the sex of the desirer—namely, the sex of the potential casual-sex partner. In particular, Conley (2011) reported that the perceived sexual capabilities of strangers mediate sex differences in positive reactions to casual-sex offers. This very interesting finding may help to elucidate proximate mechanisms leading men to adaptively consent to casual-sex offers more than women do. However, there are serious problems with considering this finding as being in direct opposition to functional or ultimate levels of explanation or as a refutation of all previous evidence of sex differences in liking casual sex.

First, on the basis of the assumption that "[sexual] offers from women are accepted more often than offers from men" (p. 310), Conley (2011) reasoned that men are more likely to perceive women who make sexual offers as sexually skilled and therefore able to provide more sexual pleasure. This is a critical assumption, but it leads to circular reasoning. The fact

that men have accepted more sexual offers *in the past* is a central antecedent for Conley's (2011) assertion that men will expect *in the future* to have more sexual pleasure from sex with strangers (i.e., men having accepted offers in the past is *required* for short-term interested women to have developed more sexual skill). Without this assumption, the differences in proposers' sexual capabilities cannot exist and cannot appear to mediate why men accept more sexual offers in the present. Conley (2011) both assumes the existence of "actual" sex differences in accepting casual-sex offers and attempts to explain away "apparent" sex differences in accepting casual-sex offers by introducing a mediational variable. The perceived differences in sexual skill of proposers may well be accurate, but what caused men to accept more sexual offers in the first place? Conley's (2011) mediational explanation begs the question of a *first cause* of men's greater willingness to accept offers for sex. A well-supported possibility for this first cause is the existence of evolved preferences in men for easy sexual access when short-term mating (Buss & Schmitt, 1993).

Second, Conley (2011) reported that women were much more likely than men to agree to a brief sexual encounter with a high-profile celebrity (e.g., Brad Pitt, Johnny Depp, Angelina Jolie, Jennifer Lopez) compared with an unknown stranger. Although Conley (2011) claimed that this "eliminated" sex differences in willingness to have casual sex, this finding likely resulted from women's (but not men's) short-term mating psychology being specially designed to obtain good genes from physically attractive short-term partners (Thornhill & Gangestad, 2008). Indeed, investigators have found with people's actual real-world responses to sexual offers that women, but not men, are affected by the physical attractiveness of the proposer (Hald & Høgh-Olesen, 2010). Had Conley (2011) restricted her samples to only preovulatory women who were already in relationships with asymmetrical and submissive partners, it is quite possible women would have appeared *more interested* than men in having sex with celebrity strangers, as such findings would be fully in line with evolutionary perspectives on short-term mating (Pillsworth & Haselton, 2006).

Third, Conley (2011) had participants (22 years of age on average) consider sex with much older celebrities who were married. Women in their 20s generally prefer older partners as short-term mates than men do (Buunk, Dijkstra, Kenrick, & Warntjes, 2001); women tend to find already-mated prospective partners especially attractive (Parker & Burkley, 2009); and when mate poaching, women do not face extreme dangers from other men's sexual jealousy (Buss, 2003). Perhaps a fairer consideration for college-aged participants would involve casual sex with contemporary same-aged, single celebrities, such as Michael Cera or Ellen Page.

Regardless, Conley's (2011) accumulated empirical evidence was largely consistent with evolutionary theories of sex differences in short-term mating psychology. Modern evolutionary psychology views many of women's sexual desires and behaviors as adaptively designed for pursuing a

short-term sexual strategy (in some ways, women's short-term mating psychology is even more "specially designed" than is men's more indiscriminate and opportunistic short-term mating psychology). When women's short-term-mating aim is activated (perhaps temporarily, because of, e.g., high-fertility ovulatory status or desire for an extramarital affair, or more chronically, because of, e.g., a female-biased local sex ratio or a history of insecure parent-child attachment), they appear to express relatively focused desires for genetic traits in "sexy men" that would biologically benefit women when short-term mating (Thornhill & Gangestad, 2008). Regrettably, some researchers mistakenly interpret these new evolutionarily stimulated findings as signifying that there are no sex differences in permissive sexuality at all. Progress in psychological science is stalled by these errors of understanding.

## Conclusions

However much predictive successes established theories and hypotheses may have, Popperian science requires us to be ever vigilant for new evidence that could refute them. Conley et al. (2011) portrayed a new speed-dating study as refuting evolutionary hypotheses, but sex differences in the importance of physical attractiveness are minimized in short-term mating contexts (Kenrick et al., 1990), and an immense wealth of stronger supportive evidence for evolutionarily informed predictions in long-term mating was disregarded. Conley et al. (2011) portrayed a study that used inappropriate statistics as strongly refuting sex differences in desired numbers of short-term sex partners, despite ample confirmatory evidence that sex differences exist in these short-term mating desires (Buss & Schmitt, 2011). Conley et al. (2011) noted a new study that found no sex differences in imagining consenting to intercourse with older, highly attractive celebrities, but given the methodology, this finding largely supports evolutionary theories of short-term mating. The bottom line is this: When putative sexual stereotypes are empirically fallacious, efforts to correct these misperceptions should be encouraged, welcomed, and promoted by psychological scientists. However, deeming sex differences to be categorically untrue when they are actually empirically well-supported can have deleterious outcomes for science, society, and public health (Lawrence & Rieder, 2007).

## Recommended Reading

Gangestad, S. W., Haselton, M. G., & Buss, D. M. (2006). Evolutionary foundations of cultural variation: Evoked culture and mate preferences. *Psychological Inquiry*, *17*, 75–95. Explains how sexual desires and psychological sex differences can express themselves differently in different cultures, and yet still be highly "evolved."

Mealey, L. (2000). *Sex differences: Developmental and evolutionary strategies*. San Diego, CA: Academic Press. A book in which the late Linda Mealey integrated a wealth of information about how features of learning, growth, and culture can interact with

evolved human nature to produce socially important sex differences in affect, behavior, and cognition.

Schmitt, D. P. (2005). Sociosexuality from Argentina to Zimbabwe: A 48-nation study of sex, culture, and strategies of human mating. *Behavioral & Brain Sciences*, *28*, 247–275. Presents research from the International Sexuality Description Project documenting that sex differences in permissive sexual desires follow evolutionarily predicted patterns across cultures and ecologies.

## Declaration of Conflicting Interests

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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