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The desire for sexual variety as a key to understanding basic human mating strategies

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Abstract
Different authors have proposed competing evolutionary theories of human mating. Some argue that both sexes are designed to pursue a singular long-term mating strategy. Others contend that both sexes are designed to function as essentially multiple maters. Sexual Strategies Theory (SST; D.M. Buss & D.P. Schmitt, 1993), in contrast, proposes that men and women have evolved short-term and long-term mating strategies that are pursued differently by each sex depending on theoretically derived dimensions of context. According to SST, the sexes tend to differ in the nature and prominence of the short-term component of human mating—particularly the short-term desire for sexual variety. The current research was designed to test competing empirical predictions from these contrasting theories by focusing on sex differences in the desire for sexual variety. Study 1 (N = 1,049), consisting of five separate samples, found large and consistent sex differences in the desire for short-term sexual variety, even after employing statistical methods to control for skewed distributions and statistical outliers. Study 2 (N = 192) confirmed the results of Study 1 using an older, more mature sample. Study 3 (N = 50) again replicated these sex differences using an observer-based method of inquiry. Study 4 (N = 167) found evidence that short-term mating was unrelated generally to psychological dysfunction and may be related to mentally healthy personality characteristics in men. Discussion focuses on the viability of pluralistic compared with monomorphic evolutionary theories of human mating strategies.

The fundamental nature of human mating strategies has been the focus of intense theoretical and empirical scrutiny over the past decade (e.g., Buss & Schmitt, 1993; Gangestad & Simpson, 2000; Kenrick, Sadalla, Groth, & Trost, 1990). Although researchers have converged on many of the basic outlines of mate selection criteria, far more debate has centered on the temporal dimension of mating. Are humans fundamentally monogamous, designed to seek a singular partner for a lifetime? Or are humans essentially promiscuous, designed to seek multiple short-term partnerships? Do humans have a mixed menu of temporally diverse mating strategies? And do men and women differ fundamentally in the temporal component of their mating strategies?

The debate about the temporal dimension of mating has crystallized into several basic positions. According to one evolutionary theorist, humans are designed to be serial monogamists: "Human pair-bonds originally evolved to last only long enough to raise a single dependent child through infancy, the first 4 years ... those first hominid forebears who remained together until their child was weaned survived disproportionately, selecting for serial monogamy" (Fisher, 1992, p. 154). Fisher argues that by divorcing after roughly 4 years, a man would be able to re-mate with a younger woman of higher fertility, whereas a woman would be able to re-mate with another man

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who provided "better protection and support" (Fisher, 1992, p. 159). Furthermore, "with each new pair-bond social ties would be extended to a band nearby" (Fisher, 1992, p. 161).

Fisher's theory of an evolved serial monogamy strategy is proposed to be equally optimal for both sexes. One problem with this theory is that a woman's reproductive value declines more than a man's with increasing age (Symons, 1979; Williams, 1975). Moreover, the presence of children generally makes it more difficult for a woman to mate with increasingly better partners because children are typically viewed by prospective partners as a cost, not a benefit, on the mating market (Daly & Wilson, 1988). Fisher responds to these points by suggesting that infrequent interband contact would have limited a woman's ability to acquire a "prime mate" on her first mateship, and hence over time contact with other bands may have afforded opportunities to "marry up." Furthermore, she notes that an existing man's mate value might decline precipitously due to injury, opening up to women the advantages of "trading up." Serial monogamy, in roughly 4-year intervals, thus represents one theoretical position on the temporal dimension of human mating strategy design.

A second theory is that humans are fundamentally designed for life-long romantic relationships, and any deviation from long-term pair-bonding would represent a disruption of our natural mating psychology. Zeifman and Hazan (1997), for example, argue that human mating psychology has co-opted evolved attachment mechanisms. Adult attachment, in this view, is designed to provide mutual support and protection, cement the bond between a man and a woman, and enhance the survival and reproduction of children. Without the force of attachment, they argue, mating partnerships would become unstable. Men, in particular, might stray from the bonds of long-term mating, imperiling the survival and reproduction of the children. According to Zeifman and Hazan, any tendency toward short-term mating would severely jeopardize children, given the many years of protection and assistance human offspring typically need to thrive: "It is doubtful that a short-term bonding mechanism, or serial monogamy, would have been selected for" (p. 251). The Zeifman-Hazan theory, therefore, contrasts markedly with Fisher's serial monogamy theory.

A clear implication of the Zeifman-Hazan theory is that deviations from secure attachment represent evolutionary or ultimate-level maladaptations rather than viable alternative mating strategies. Indeed, insecure attachment experiences are related to a broad range of psychological dysfunction (Dozier, Stovall, & Albus, 1999). Moreover, "dysfunctional early attachment relationships [those that are not secure] are a common precursor of adult sexual deviance" (Zeifman & Hazan, 1997, p. 255). Thus, this view holds that our most basic human mating strategy consists of secure romantic attachment and relatively long-term monogamy. Deviations from this pattern are seen as ultimately maladaptive in posing risks to children in the evolutionary currencies of survival and reproduction and are proximately maladaptive in causing romantic relationship instability and general psychological dysfunction (Hazan & Zeifman, 1999).

Miller and Fishkin (1997) concur with Zeifman and Hazan's theory but are even more explicit in claiming that short-term mating and variations from secure attachment represent early developmental failures: "It seems that a propensity to spend more of one's time seeking short-term relationships rather than long-term ones may have been a 'fallout' of a failure to interface with human's adapted for social environment (e.g., responsive paternal and maternal caregivers)" (p. 228). Short-term mating is seen as a perturbation or deviation from the preferred species-typical pair-bonding strategy, resulting from unnatural and recent sources of variability in parental care that emerged only "after the Pleistocene era" (p. 228). They contend "our current biological design—rooted in our Pleistocene gatherer-hunter roots—strongly favors relatively en-

during relationships and few sex differences in mating strategies" (p. 197). Thus, ancestral men and women alike are believed to have normatively developed secure attachments with parents and subsequently pursued long-term pair-bonds as adults.

At the other end of the temporal spectrum of theoretical positions are those who argue that men and women are fundamentally and equally designed to be short-term maters. Silverstein (1996) argues that both men and women are essentially promiscuous, drawing special attention to species closely related to humans such as bonobo chimpanzees, which are highly indiscriminate in their mating practices. However, beyond phylogenetic comparisons few theoretical arguments or human empirical evidence are provided to support this position (see also Hrdy, 1981).

The final theoretical position on the temporal spectrum of mating design involves pluralistic approaches to human mating strategies (e.g., Gangestad & Simpson, 2000). These approaches tend to view the many forms of human mating, including those linked to both secure and insecure attachment, as potentially viable reproductive strategies (Belsky, 1997; Chisholm, 1996). They tend also to use a behavioral ecological perspective, emphasizing that varying environments during an individual's development naturally induce adaptive shifts in mating strategies and behaviors (Belsky, Steinberg, & Draper, 1991; Lancaster, 1989). We will focus in this article on one version of the pluralistic perspective called Sexual Strategies Theory (SST) that has provoked theoretical debate about the fundamental nature of human mating strategies.

According to SST (Buss & Schmitt, 1993), men and women have evolved a temporal menu of mating alternatives, including both short-term and long-term sexual strategies. Each sexual strategy is thought to harness certain adaptive desires that lead (or would have led in our ancestral past) to increased reproductive success in a given selective environment. A central feature of SST is that the evolved psychological underpinnings of these mating strategies are proposed to differ between the sexes, sometimes in rather profound ways. In long-term mating, for example, the sexes are proposed to differ in several of the key qualities desired in a partner, with men placing a greater value on cues to fertility (age, features of physical appearance) and fidelity (signals of sexual faithfulness) and women placing a greater value on resources and men's long-term commitment to them and their children (Ellis, 1992; Schmitt & Buss, 1996).

The short-term mating strategy, too, is proposed to differ between the sexes. For women, short-term mating may have evolved as a strategy to develop special protective friendships with certain males (Smuts, 1985), to gain access to males with high quality or diverse genes (Gangestad & Simpson, 1990; Smith, 1984), to gain access to some males with many resources (Symons, 1979), or to gain access to many males with some resources (Hrdy, 1981). Women may also seek short-term mates as a means of finding a higher-quality mate in case their current partners someday need replacement (Schmitt & Buss, 2001; Smith, 1984). Thus, for women the adaptive benefits of short-term mating may result from a relatively discriminating process of carefully identifying and selectively mating with men who possess superior levels of status, resources, or genetic quality (Greiling & Buss, 2000).

In contrast, for men the adaptive benefits of short-term mating likely followed from more indiscriminate desires, particularly the indiscriminate desire for sexual variety (Symons, 1979). This tenet stems from the selective consequences that follow from a large and fundamental sex difference in minimum obligatory parental investment (Trivers, 1972). Whereas it takes a woman a substantial 9-month investment of internal fertilization and gestation to produce a child, a man's minimum investment can be as small as a single act of sex. The direct reproductive benefits associated with multiple mating via sexual variety, therefore, would have been considerably higher for human males than for females, all else be-

ing equal (see also Bjorklund & Shackelford, 1999).

Buss and Schmitt (1993) used this line of reasoning to make three key predictions concerning sex differences in short-term mating psychology. *Prediction 1*: Men will express greater desire for, or interest in, short-term mates more than women. *Prediction 2*: Men will prefer a larger number of sex partners over varying time intervals than women. *Prediction 3*: Men will require less time to elapse before consenting to sex than will women. With each prediction, SST asserts that the design of men's short-term mating psychology—due to a selective history of lower obligatory parental investment—should be influenced by the desire for sexual variety more than the design of women's short-term mating psychology. Note that these predictions do not imply that all men should pursue short-term mating as a sole, or even primary, reproductive strategy. SST clearly delineates the many adaptive benefits for men that accrue from long-term mating. Nor does this series of predictions imply that women should completely refrain from seeking short-term mating relationships. Women may gain significant adaptive advantages by pursuing situationally contingent short-term mateships (Greiling & Buss, 2000; Lancaster, 1989). Instead, SST forecasts that men will more actively desire brief mating relationships, prefer larger numbers of partners, and require less time before sex than women because men, but not women, possess an adaptive short-term desire for sexual variety.

Although a voluminous body of empirical evidence has cumulated supporting the basic tenets of SST (see Buss, 1998 for a review), this suite of hypothesized sex differences in the desire for sexual variety has remained hotly disputed. Miller and Fishkin (1997), for example, contend that findings of significant mean-level sex differences in the desire for a large number of sex partners are misleading due to the presence of male outliers. In their attempt to replicate Buss and Schmitt's (1993) original findings, Miller and Fishkin note: "These variables were highly skewed resulting in severe violations of assumption of normality" (p. 220). Rather than natural variation in the desire for sexual variety residing both within each sex and between the sexes, Miller and Fishkin hypothesize "few sex differences in mating strategies" (p. 197). Most men and women are assumed to be fundamentally alike in their mating desires, with both wanting "one or two" partners for a lifetime: "In fact, we would expect that whereas most men and women would be seeking a long-term mate, their desire to seek a short-term mate would be minimal" (p. 224).

This point of contention is pivotal for discriminating among different evolutionary theories of human mating and romantic relationships. Any theory that portrays humans as designed to be exclusively long-term strategists would forecast very few individuals to express short-term desires for sexual variety. Only those unfortunate few who have experienced developmental attachment failures would forsake monogamous long-term mating as adults and engage in short-term sexual relationships. Even then, any short-term maters would likely display residual expressions of psychological dysfunction. Theories that view humans as essentially promiscuous would expect nearly all people to report a potent desire for sexual variety. Any reported lack of short-term desires might be explained as resulting from religious, legal, or cultural traditions designed to counter our natural tendency toward promiscuity. Furthermore, all monomorphic theories of human sexuality—whether most people are expected to be monogamous or promiscuous—would logically predict no significant sex differences in the desire for sexual variety because all humans should be designed to pursue the same basic mating strategy. Of course, it is not the case that monomorphic theories anticipate all people to be *exactly identical* in manifest or phenotypic sexual behavior, but such theories produce the reasoned expectation that differences in desires for sexual variety both between and within the sexes "would be minimal" due to a uniform genotypic design of the human mind.

In contrast, pluralistic evolutionary approaches like those of Belsky (1997) and Chisholm (1996) would predict substantive adaptive variation exists within each sex in the desire for short-term opportunistic mating. Depending on their own mate value, the local sex-ratio, and other ecological sources of information (see Gangestad & Simpson, 2000), some men and women should pursue frequent short-term mateships, whereas others in different situations are expected to pursue long-term mating strategies. Pluralistic approaches such as SST (Buss & Schmitt, 1993) would further predict that functional sex differences in short-term mating would be driven by the adaptive male desire for sexual variety. Thus, the goal of the current set of studies was to pit the predictions from the various temporal mating theories against each other, with a special focus on sex and individual differences in the desire for sexual variety.

Study 1: The Desire for Sexual Variety among College Undergraduates

Method

Sample. The participants in this study were comprised of five samples. The first sample was obtained from an archival data set originally collected by Buss and Schmitt (1993). This sample included 75 men and 73 women from a large public university in Michigan; the average age of participants was 18.7 years. We will refer to this data set as the "Original" sample.

The second sample included 103 men and 214 women from a medium-sized private university in Illinois. The third sample included 120 men and 268 women from a public university in Florida. The fourth sample included 81 men and 137 women from a large public university in Texas. The fifth sample included 35 men and 91 women from a public university in New York. The second through fifth samples were combined to form what will be referred to as the "Undergraduate" sample. The Undergraduate sample had a total of 339 men and 710 women, and the average age of participants was 21.3 years. Members of all samples participated in the current study for extra credit in psychology courses, and they were primarily middle-class and Caucasian.

Procedure. The Undergraduate sample completed questionnaires adapted specifically from Buss and Schmitt (1993). All participants were presented with a packet of measures entitled "The Anonymous Questionnaire Study." The first page of the packet contained blanks on which participants were to provide their age and sex, and it contained the following instructional set: "*Instructions*: This questionnaire is entirely voluntary. All your responses will be kept confidential and your personal identity will remain anonymous. No identifying information is requested on this survey, nor will any such information be added later to this survey. If any of the questions make you uncomfortable, feel free not to answer them. You are free to withdraw from this study at any time for any reason. This questionnaire should take about 5 minutes to complete. Thank you for your participation."

The first questionnaire adapted from Buss and Schmitt (1993) was used to test Prediction 1 and will be referred to as the "Currently Seeking" measure. This measure asked participants: "Please rate the degree to which you are currently seeking a long-term mating partner (i.e., a marriage partner) and short-term mating partners (i.e., one-night stands, brief affairs, etc.) by circling one number on each of the following 7-point scales." This instructional set was followed by two Likert-type scales ranging from 1 (currently not at all seeking) to 7 (currently strongly seeking), one scale for rating "Long-Term Mating Partner Seeking" and one scale for rating "Short-Term Mating Partner Seeking."

The second questionnaire adapted from Buss and Schmitt (1993) was used to test Prediction 2 and will be referred to as the "Number of Partners" measure. This measure instructed participants to fill in open-ended blanks with their responses concerning: "Ideally, how many different sex partners would you like to have . . ." over

different periods of time ranging from 1 Month to "your remaining lifetime." Unlike the original measure from Buss and Schmitt, participants in this study also responded regarding how many different partners they would ideally like to have sex with in the next day and in the next week.

The third questionnaire adapted from Buss and Schmitt (1993) was used to test Prediction 3 and will be referred to as the "Time Known" measure. This measure asked participants to rate on a 6-point scale ranging from +3 (definitely yes) to −3 (definitely not) the degree to which, "If the conditions were right, would you consider having sexual intercourse with someone you viewed as desirable if . . ." they had known that person for varying amounts of time ranging from 5 Years to 1 Hour. Unlike the original measure from Buss and Schmitt, participants also responded to time periods of 10 Years and 1 Minute. The specific order of presentation of the three measures had participants first complete the Time Known measure, then the Number of Partners measure, and then the Currently Seeking measure.

Results and discussion

Do male undergraduates seek short-term mates more than female undergraduates? Prediction 1 from SST forecasts that men will actively desire short-term mates more than women. To test this prediction, we performed independent *t*-tests comparing undergraduate men's mean level of seeking short-term mates with undergraduate women's mean level of short-term seeking as assessed by the Currently Seeking measure. As described in Buss and Schmitt (1993), the Original sample included men who, on average, rated their current level of short-term seeking ($M = 4.7, SD = 1.7$) significantly higher than did women ($M = 2.9$, $SD = 1.8$), $t(121) = 5.76, p < .001$. To evaluate whether this sex difference was generalizable to populations other than young undergraduate students from Michigan, we examined the levels of short-term mate seeking among men and women in the larger and more diverse Undergraduate sample. The original sex difference in short-term mate seeking was replicated in the Undergraduate sample, with men's level of seeking short-term mates ($M = 3.4$, $SD = 2.1$) significantly higher than women's ($M = 2.2, SD = 1.7$), $t(1035) = 10.12, p < .001$.

Although no explicit predictions were made about overall levels of long-term mate seeking, we also examined sex differences in the tendency to seek long-term mates. In the Original sample, men and women were similar in their self-reported long-term mate seeking. However, in the larger Undergraduate sample consisting of participants from four diverse universities, we found that women ($M = 4.5$, $SD = 2.1$) were significantly higher than men ($M = 3.8, SD = 2.0$) in their long-term mate seeking, $t(1033) = -5.04$, $p < .001$. Buss and Schmitt (1993) also hypothesized that "short-term mating will represent a larger component of men's sexual strategy than of women's sexual strategy." (p. 210). We found the relative proportion of short-term mate seeking (short-term mate seeking divided by the sum of short-term and long-term mate seeking) was significantly higher in men ($M = .47, SD = .21$) than women ($M = .34, SD = .20$), $t(1031) = 10.12, p < .001$. This sex difference displayed a moderate to large effect size ($d = .65$) and was also statistically significant and moderate in size in the Original sample, $t(121) = 3.54, p < .001, d = .62$.

Overall, Prediction 1 was supported in the current study utilizing a larger and somewhat more diverse sample than was originally used in Buss and Schmitt (1993). From this we can conclude that, although there is meaningful variation within each sex, college-aged men do seek short-term mates more than women. They do so on average, and they do so proportionately. Among evolutionary theories of human mating, pluralistic theories that predict sex differences in the short-term desire for sexual variety seem to most reasonably account for this pattern of results.

It is important to note that alternate

nonevolutionary explanations of these findings exist, such as gender socialization and social-role stereotyping (e.g., Eagly, 1987). Men may desire sexual variety and seek short-term mates more than women because men have experienced a developmental history in which they observed other men preferring sexual variety, and short-term mating was seen as consistent with their particular culture's view of masculinity. Certainly, it will be important to replicate these findings across a wide range of cultures, and this research is currently underway. However, this form of alternate explanation often leaves many unanswered questions. Why do men experience this form of socialization, why do cultures define masculinity in this way, and why do sex-roles exist in the first place? Indeed, one of the earliest critics of sex difference research recently concluded: "The socialization account has not proved adequate to the task of explaining gender differentiation" (Maccoby, 1998, p. 9). Of course, the forces of gender socialization likely do play an important role in the development of human mating tendencies. However, we feel the evolutionary perspective will be essential in fully explaining these phenomena. Only by integrating what we know from comparative psychology, human ethology, and reproductive biology with standard socialization explanations of human mating will a comprehensive theory of sex differences be possible (e.g., Geary, 1998; Mealey, 2000). At present, because our findings reside amid a vast array of empirical studies supporting the theory of parental investment (including decades of research on nonhuman animals), we believe our evolutionary explanation of sex differences in the desire for sexual variety is the most parsimonious among alternate psychological hypotheses.

Do male undergraduates prefer more sexual partners than female undergraduates? The second prediction from SST was that men will desire larger numbers of sexual partners than women. To evaluate the replicability of the empirical findings from Buss and Schmitt (1993), we examined the extent to which sex differences existed in the Number of Partners measure in the Undergraduate sample. A primary criticism of the findings reported by Buss and Schmitt using the Number of Partners measure was that because the scales are open-ended, some participants (particularly a few insecure men) might respond with "extreme" desires for large numbers of future sexual partners. These extreme responses might skew the distribution of short-term desires among men as a whole and artificially inflate the group mean representing the average man (see Miller & Fishkin, 1997). In fact, Buss and Schmitt had some male participants report extreme desires (i.e., more than 2 standard deviations above the mean) and dealt with the issue by truncating all outliers above 100 to 99.

Although most methods of dealing with outliers result in similar statistical outcomes, Rosenthal and Rosnow (1991) suggest a better way to handle extreme scores on open-ended scales is to use "trimmed means," both in terms of reporting means and when performing statistical significance tests of differences between means (see also Howell, 1987; Yuen & Dixon, 1972). Trimmed means are created by eliminating a percentage of scores on both sides of a distribution. Typically, the outer 5% of scores are eliminated, reflecting the view in the social sciences that the outer 5% of scores may be significantly different from the true mean. In accordance with the recommendations of Rosenthal and Rosnow, we eliminated from consideration the outer 5% of participants based on their responses to the "lifetime" scale of the Number of Partners measure. This was done within each sample by removing the top 2.5% and the bottom 2.5% from the distributions of each sex. We also eliminated from our statistical analyses all participants who failed to complete the "lifetime" scale from the Number of Partners measure. As a result, the final sample sizes for our statistical analyses involving trimmed means included 69 men and 67 women from the Original

sample and 287 men and 644 women from the Undergraduate sample.

A comparison of the number of partners desired by men and women in the Original sample and the larger Undergraduate sample is displayed in Figure 1. The trimmed means for male and female participants in the Original sample were largely replicated in the Undergraduate sample. None of the male means from the Undergraduate sample were significantly different from the Original sample's male means. Among women, the Undergraduate sample reported desiring slightly fewer partners than the Original sample for the time periods after the 6-Month interval. Hence, the only significant differences between the Original and Undergraduate samples were that Undergraduate women wanted fewer sex partners than the Original women.

As shown in the first two columns of Table 1, the sex differences in desire for sexual partners found in the Original sample also were replicated in the large and geographically diverse Undergraduate sample. The average Undergraduate man wanted approximately 14 sex partners in his lifetime, whereas the average woman wanted just over 2, $t(929) = 7.20, p < .001$. Even so, the Undergraduate male distributions had standard deviations that were quite large. Further examinations of the male Undergraduate distribution revealed that even after eliminating the most extreme scores, the male distribution was still significantly skewed. This led us to consider using medians to further evaluate whether men and women differed significantly in the number of partners they desire across future time intervals.

In the Original sample, the medians for men and women were significantly different at every time interval. For example, over a participant's lifetime the median man desired 9 sexual partners, whereas the median woman desired 3, $\chi^2(142) = 16.2, p < .001$. The interpolated medians of men and women in the Undergraduate sample are displayed down the right side of Table 1. Because the use of medians made unnecessary the need to eliminate outliers, the results in Table 1 were based on the original sample sizes first reported in the Method

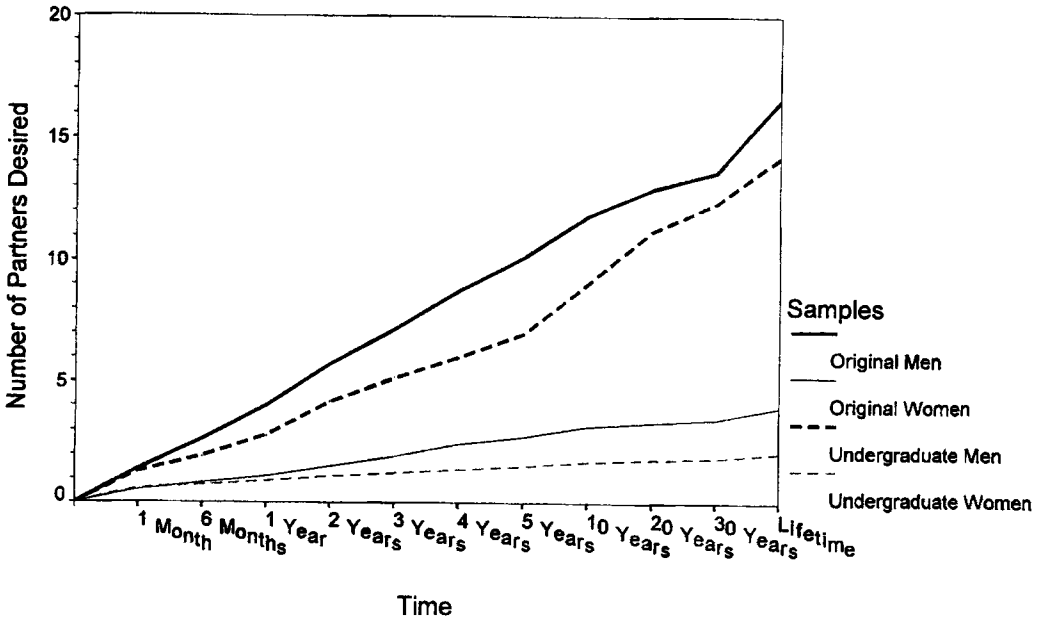

Figure 1. Trimmed mean number of sexual partners desired by men and women in the Original and Undergraduate samples at different time periods into the future.

Table 1. *Sex differences in the number of partners desired in the undergraduate sample*

	Trimmed Means			Medians		
Time	Men	Women	t	Men	Women	χ^2
1 Month	1.3	0.6	9.42***	1.0	0.6	102.10***
	(1.6)	(0.6)		(0.7)	(0.6)	
6 Months	1.9	0.7	9.21***	1.3	0.7	154.88***
	(3.1)	(0.6)		(0.9)	(0.6)	
1 Year	2.8	0.9	9.59***	1.6	0.9	177.05***
	(4.9)	(0.7)		(1.3)	(0.5)	
2 Years	4.2	1.1	8.82***	1.9	1.0	135.46***
	(8.7)	(0.8)		(1.8)	(0.5)	
3 Years	5.1	1.2	9.39***	2.2	1.1	112.50***
	(10.4)	(1.0)		(2.0)	(0.5)	
4 Years	6.0	1.4	9.33***	2.4	1.2	87.95***
	(12.4)	(1.1)		(2.4)	(0.7)	
5 Years	7.0	1.5	9.39***	3.0	1.3	78.12***
	(14.5)	(1.3)		(2.8)	(0.7)	
10 Years	9.1	1.7	8.39***	3.6	1.4	76.78***
	(21.9)	(1.6)		(3.8)	(0.8)	
20 Years	11.2	1.8	6.32***	3.6	1.4	69.65***
	(37.4)	(1.7)		(4.3)	(0.9)	
30 Years	12.4	1.9	6.45***	3.8	1.4	70.06***
	(40.8)	(1.8)		(4.6)	(0.9)	
Lifetime	14.2	2.1	7.20***	4.0	1.5	54.26***
	(42.7)	(2.0)		(4.8)	(1.1)	

Note: Means reported in this table were trimmed means (Rosenthal & Rothnow, 1991) from a sample of 287 men and 694 women. The standard deviation of each mean is reported in parentheses below the mean. The t-values represent the significance of sex differences between trimmed means. The medians reported were interpolated from the distributions of 339 men and 710 women. The Interquartile Range (Q) for each distribution is presented in parentheses below each median. The χ^2 statistics were computed using the Median Test command from SPSS, uninterpolated medians were used in the Median Tests. *** = $p < .001$.

section. As shown down the second set of columns of Table 1, the medians for men and women in the Undergraduate sample were significantly different for every time interval. For example, over a participant's lifetime the median Undergraduate man desired 4 sexual partners, whereas the median woman desired 1.5, $\chi^2(977) = 54.26, p < .001$.

The interquartile ranges for the sexes, listed below each median in Table 1, also suggested that the male and female distributions diverged in a robust manner. For example, the 75th percentile for Undergraduate men was at about 9 sex partners in a lifetime, whereas for women the 75th percentile was less than 3 partners. In addition, Kolmogorov-Smirnov tests for differences in the distributions of male and female desires for sexual variety were also significant (e.g., number of partners desired in a lifetime, K-S $Z = 4.95$, $p < .001$). In short, although the median number of partners desired was less than the mean for all time intervals and for both sexes, *the differences between men and women in their desires for large numbers of sex partners persisted whether trimmed means, medians, or distributions were analyzed.* Indeed, Miller and Fishkin (1997) reported that male and female medians were significantly different in their study using the Number of Partners measure.

Finally, we examined whether the number of partners desired by men and women in the Undergraduate sample were significantly different from one. In men, the number of partners desired was significantly higher than one for all time periods, ranging from 1 Month, $t(286) = 2.88, p < .01$, to an

entire Lifetime, $t(286) = 5.25, p < .001$. In addition, the median number of partners desired by men in lifetime was 4.0. Although the modal number of partners desired in a lifetime was 1, over 58% of men reported a desire for more than one mating partner in a lifetime. For women, the number of partners desired was significantly *less* than one for time periods ranging from 1 Month, $t(643) = -18.32, p < .001$, to 1 Year, $t(643) = -3.49, p < .001$. However, from the time period 2 Years, $t(643) = 2.94, p < .01$, to an entire Lifetime, $t(643) = 13.64, p < .001$, women did desire significantly more than one partner. The median number of partners desired by women in a lifetime was 1.5. The modal number of partners desired in a lifetime was 1 for women, and 40% of women reported a desire for more than one mating partner in a lifetime. Figure 2 displays the complete distribution of male and female scores, using the categories employed by Miller and Fishkin (1997) for extreme values.

From these results we can conclude that college-aged men and women, on average, tend to express desires for more than one mating partner. Moreover, men tend to express this preference more strongly, and more consistently, than women. Across all subsamples from Texas to New York we found that men have a greater desire for sexual variety than women. Indeed, using a similar set of measures, this pattern of results was recently replicated in Germany (H.A. Euler, personal communication, January 12, 2001). The robust nature of these results suggests that the existence of a monomorphic mating orientation—with almost all humans possessing either long-term or short-term reproductive strategies—is manifestly unlikely. A large number of men (58%) and women (40%) preferred more than one mating partner for a lifetime, which strongly contradicts the hypothesis that most humans are long-term sexual strategists. On the other hand, a significant portion of men

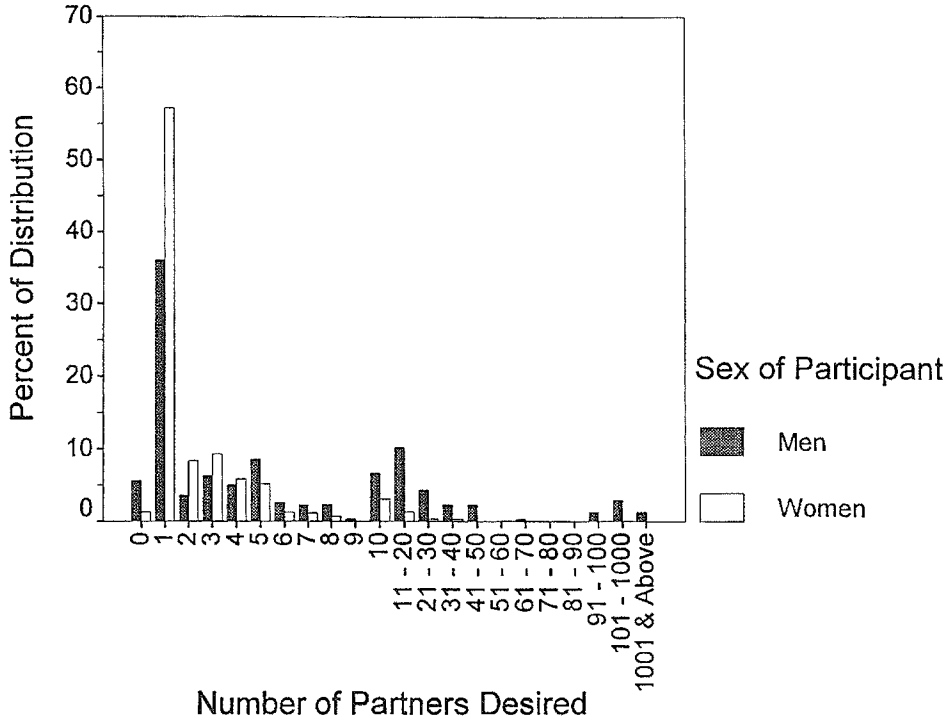

Figure 2. Frequency distributions of the number of sexual partners desired by men and women in a lifetime, Undergraduate sample (latter frequencies are collapsed into categories).

and women expressed a desire for only one mating partner for a lifetime, suggesting that some humans are devoted long-term maters. Overall, these data are most consistent with pluralistic evolutionary theories such as SST (see also Gangestad and Simpson, 2000, for an examination of the trade-offs that might occur that lead men and women to actively pursue short-term versus long-term sexual strategies). Both men and women exhibited a wide range of mating desires, including short-term and long-term temporal orientations; and men preferred a higher number of sexual partners, an index of the desire for sexual variety, than did women.

Do male undergraduates require less time before consenting to sex than female undergraduates? The third prediction from SST was that men will be willing to engage in sexual intercourse after less time has elapsed than women. To test this prediction in a larger and somewhat more diverse sample, we performed independent *t*-tests comparing men's mean level of sexual intercourse likelihood with women's mean level of sexual intercourse likelihood across all time periods as assessed by the Time Known measure.

In the Original sample, men were significantly more likely than women to consider having sex with someone they viewed as desirable after knowing the person for multiple time periods ranging from 1 Hour to 2 Years. As displayed in Figure 3, the pattern of responses found in the Original sample was confirmed in the Undergraduate sample. Moreover, the sex differences found in the Original sample also were replicated in the Undergraduate sample. Unlike the Original sample, the difference between men and women also was significant at the 5-Year interval in the Undergraduate sample, $t(1043) = 3.43$, $p < .001$. Across both samples, the average woman considered having sex with someone they viewed as desirable only after they had known the person for about 6 Months, whereas the average man across samples considered having sex with someone they viewed as desirable after knowing the person for about 1 Week.

Overall, the Time Known findings of Buss and Schmitt (1993), along with all the other findings of Buss and Schmitt, were

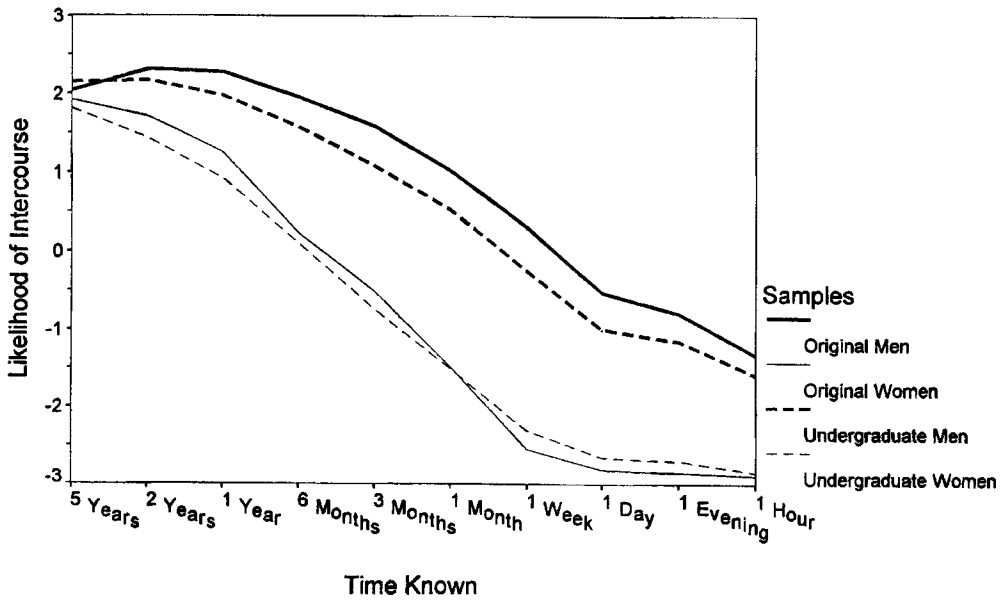

Figure 3. Likelihood of consenting to sexual intercourse with a desirable person at different time periods into the future, reported by men and women; Original and Undergraduate samples.

replicated in Study 1 across a larger and more geographically diverse sample of participants. At this point, it appears highly likely that college-aged men desire sexual variety significantly more than college-aged women. Most important, among modern evolutionary theories of human mating it seems pluralistic theories such as SST best account for the robust nature of sex and individual differences in the desire for sexual variety.

Study 2: The Desire for Sexual Variety in a Mature Sample

The primary goal of Study 2 was to test the three key sexual variety predictions from SST in an older and more mature sample of participants. Because previous studies have focused on young college undergraduates, it remains unknown whether sex differences in actively seeking short-term mates, in preferring large numbers of sexual partners, or in requiring less time to elapse before consenting to sex might endure across the lifespan. Women could become more engaged in short-term mating over time, perhaps because they gain self-confidence or accrue material resources with age (cf. Townsend, 1993). Conversely, it has been argued that men tend to become more long-term oriented with more sexual experience and emotional maturity (Mathes, King, & Miller, 1998). In either case, it is possible that sex differences in the desire for sexual variety substantially diminish over time. Thus, the persistence of sex differences in short-term mating across mature samples would constitute additional support for the SST position that men's natural short-term sexual psychology is anchored in the desire for sexual variety. Finding significant sex differences in the desire for sexual variety among older individuals would also provide evidence that monomorphic theories of human mating are unlikely to be correct.

Method

Sample. A sample consisting of 83 men and 109 women who were older than age 30 was collected from a public university in Florida. This sample will be referred to as the "Mature" sample, and the average age of participants was 39.9 years with a standard deviation of 7.9 years. No differences existed in age between men (M = 40.3) and women (M = 39.6) in the Mature sample. Members of this sample participated in the study for extra credit in a psychology course and were primarily middle-class and Caucasian.

Procedure. The Mature sample completed the same packet of measures adapted from Buss and Schmitt (1993) described in Study 1. This included the Time Known measure, the Number of Partners measure, and the Currently Seeking measure.

Results and discussion

Do older men seek short-term mates more than older women? To evaluate whether the sex differences in short-term mate seeking found in Study 1 were generalizable to older populations with more sexual experience, we examined the levels of short-term seeking among men and women in the Mature sample. The Mature sample provided a further replication of the sex difference in short-term seeking uncovered by Buss and Schmitt (1993), with men (M = 2.7) seeking short-term mates more than women (M = 1.5), $t(186) = 4.71, p < .001$. In addition, we found the relative proportion of short-term mate seeking was significantly higher in mature men than mature women, $t(184) = 3.40$, $p < .001$. This sex difference once again displayed a moderate effect size (d = .50), further replicating the results of Study 1.

As displayed in Figure 4, there appeared to be a tendency for participants to report less interest in short-term mating as the age of the sample increased, $F(2, 1345) = 32.06$, $p < .001$. It is possible that interest in short-term mating generally decreases with age. For example, all post hoc Tukey HSD's examining differences among the various samples were significant. That is, all samples were significantly different across age groupings. Perhaps older participants are

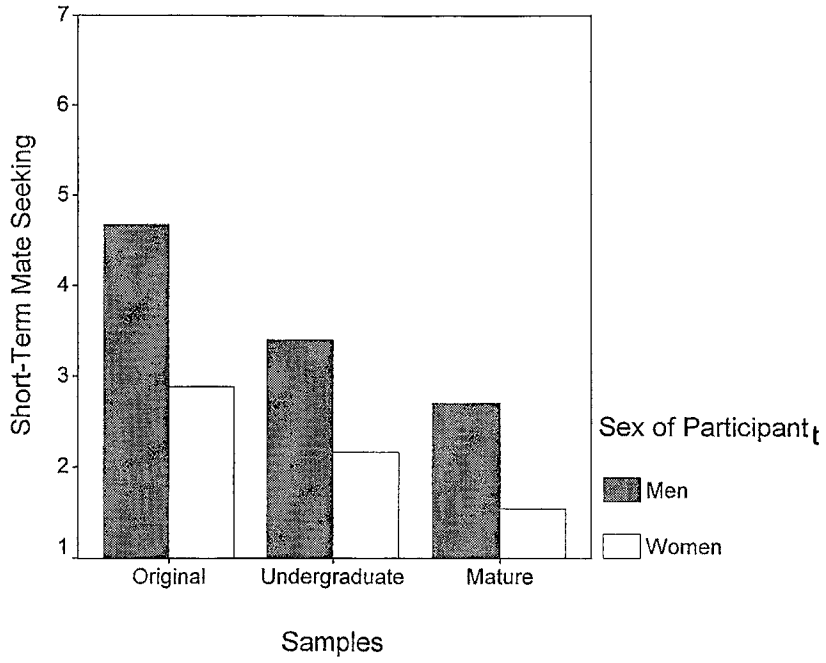

Figure 4. Mean level of seeking short-term mates reported by men and women; Original, Undergraduate, and Mature samples.

more likely to be married, and so their short-term mate seeking was significantly attenuated. It may also be that older participants experience a lower sex drive, and this lessens their overall tendency to seek short-term mates. An alternate explanation of the significant differences among samples could involve the fact that the Undergraduate and Mature samples were assessed after the onset of AIDS awareness. The Original data was collected in 1987, and research has shown that sexual attitudes and behaviors of short-term mating were lessened by AIDS awareness throughout the 1980s and early 1990s (Clark, 1990; Laumman, Gagnon, Michael, & Michaels, 1994). With our current methods, it is difficult to pinpoint precisely why age differences exist in short-term mate seeking. Nevertheless, in the current study, mean-level sex differences in short-term mate seeking were replicated in an older and presumably more sexually experienced sample.

In the Mature sample, no sex differences were found in mean-levels of seeking long-term mates. However, two findings stand out among the levels of long-term mate seeking displayed in Figure 5. First, the Mature participants reported seeking long-term mates significantly less than the other samples, $F(1, 1343) = 105.34$, $p < .001$. It seems likely that members of the Mature sample were already in marital relationships and so were not in the midst of currently seeking long-term mating partners. Unfortunately, we failed to assess marital status in collecting data from either the Undergraduate or Mature samples. Second, women in the Undergraduate sample ($M = 4.5$) reported seeking long-term mates significantly more than women in the Original sample ($M = 3.3$), $t(759) = -4.11$, $p < .001$. We might speculate that women from the Undergraduate sample, who were an average age of about 21 years and presumably near the end of their undergraduate educations, felt greater motivation for currently seeking long-term mates than those from the Original sample, who were about 19 years of age and near the beginning of their

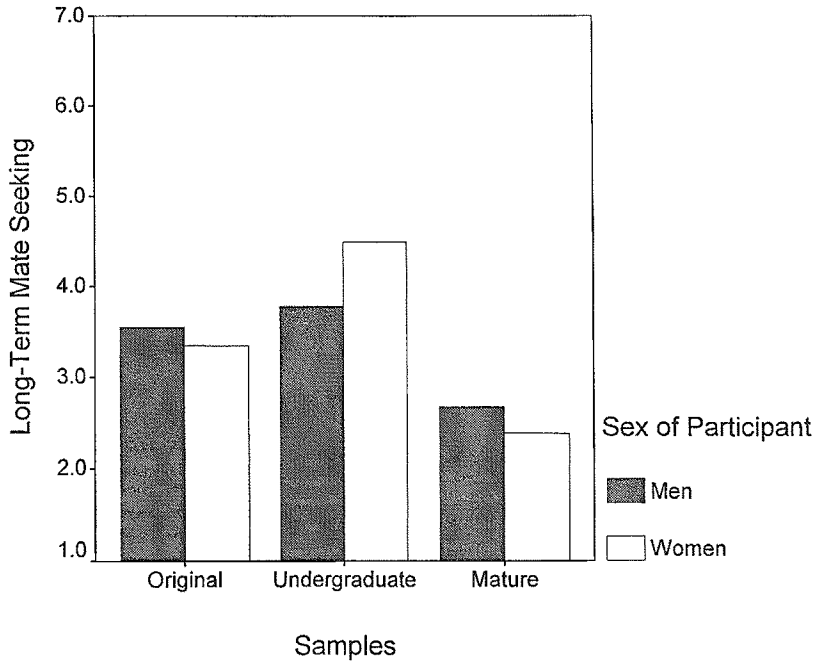

Figure 5. Mean level of seeking long-term mates reported by men and women; Original, Undergraduate, and Mature samples.

college experiences. In sum, Prediction 1 was strongly supported in a sample of older participants.

Do older men prefer more sexual partners than older women? The second prediction from SST was that men will desire larger numbers of sexual partners than will women. To evaluate the replicability of the empirical findings from Study 1 among older participants, we examined the extent to which sex differences existed in the Number of Partners measure in the Mature sample. As shown in the first two columns of Table 2, the significant sex differences in the desire for sexual partners found in the Original and Undergraduate samples were replicated in the Mature sample. Using trimmed means, with a sample of 67 men and 99 women, the average Mature man wanted over 74 sex partners in his lifetime, whereas the average woman wanted 1.4. As presented down the right side of Table 2, the medians for men and women also were significantly different at every time interval. For example, over a participant's lifetime the median Mature man desired 1.8 sexual partners, whereas the median woman desired 1.2. In addition, Kolmogorov-Smirnov tests for differences in the distributions of mature male and female desires were also significant (e.g., number of partners desired in a lifetime, K-S $Z = 1.95, p < .001$).

We examined whether the number of partners desired by mature men and women were significantly different from one. In mature men, the number of partners desired was significantly higher than one for all time periods, ranging from 1 Month, $t(66) = 2.71$, $p < .01$, to an entire Lifetime, $t(66) = 2.83, p < .01$. The median number of partners desired by men in a lifetime was 1.8. As with the Undergraduate sample, although the modal number of partners desired in a lifetime was 1, over 46% of mature men reported a desire for more than one mating partner in a lifetime. For women, the number of partners desired was significantly less than one for the time period of 1 Month, $t(98) = -3.61, p < .001$. However, from the time period 10

Table 2. *Sex differences in the number of partners desired in the mature sample*

	Trimmed Means			Medians		
Time	Men	Women	t	Men	Women	χ^2
1 Month	2.1	0.8	3.72***	1.2	0.8	13.03***
	(3.4)	(0.5)		(0.7)	(0.6)	
6 Months	4.8	0.9	3.58***	1.4	0.9	18.29***
	(10.8)	(0.5)		(1.2)	(0.6)	
1 Year	8.7	1.0	3.13**	1.5	1.0	21.39***
	(24.2)	(0.5)		(1.4)	(1.1)	
2 Years	16.6	1.1	2.82**	1.6	1.1	15.32***
	(54.0)	(0.6)		(2.1)	(0.6)	
3 Years	22.5	1.1	2.83**	1.6	1.1	18.01***
	(74.3)	(0.7)		(2.3)	(0.6)	
4 Years	27.6	1.1	2.83**	1.7	1.1	16.55***
	(91.9)	(0.7)		(2.5)	(0.6)	
5 Years	31.6	1.1	2.76**	1.7	1.1	17.50***
	(107.6)	(0.7)		(2.8)	(0.6)	
10 Years	41.3	1.3	2.97**	1.7	1.2	11.73***
	(132.1)	(1.3)		(3.3)	(0.6)	
20 Years	48.4	1.2	3.06**	1.7	1.2	14.88***
	(151.1)	(0.9)		(4.8)	(0.6)	
30 Years	59.0	1.3	3.14**	1.7	1.2	10.10**
	(180.2)	(1.0)		(7.6)	(0.6)	
Lifetime	74.1	1.4	3.43***	1.8	1.2	10.12**
	(211.3)	(1.3)		(13.0)	(0.6)	

Note: Means reported in this table were trimmed means (Rosenthal & Rothnow, 1991) from a sample of 67 men and 99 women. The standard deviation of each mean is reported in parentheses below the mean. The t-values represent the significance of sex differences between trimmed means. The medians reported were interpolated from the distributions of 83 men and 109 women. The Interquartile Range (Q) for each distribution is presented in parentheses below each median. The χ^2 statistics were computed using the Median Test command from SPSS, uninterpolated medians were used in the Median Tests. ** = $p < .01$, *** = $p < .001$.

Years, $t(98) = 2.31, p < .05$, to an entire Lifetime, $t(98) = 3.44, p < .001$, women did desire more than one partner. The median number of partners desired by women in a lifetime was 1.2. The modal number of partners desired in a lifetime was 1 for women, and over 25% of women reported a desire for more than one mating partner in a lifetime.

It should be noted that the medians in the Undergraduate and Mature samples were somewhat lower than in the Original sample. One possible explanation for the lower medians in the samples from Studies 1 and 2 may involve the use of two new scales in the Number of Partners measure. The Number of Partners measure completed by the Mature and Undergraduate samples asked how many sexual partners the participants desired in 1 Day and 1 Week. The Original sample's Number of Partners measure started at the 1 Month interval. Because the number of sex partners desired in 1 Day is likely less than the number desired in 1 Month, the first item on the Number of Partners measure may have acted as an anchor from which participants in the Mature and Undergraduate samples never adjusted (Tversky & Kahneman, 1974).

Do older men require less time before consenting to sex than older women? The third prediction from SST was that men will be willing to engage in intercourse after less time has elapsed than women. The pattern of responses found in the Original and Undergraduate samples was replicated in the

Mature sample, as were the sex differences in the likelihood of consenting to sex at various time intervals. Unlike the Original sample, the difference between men and women in likelihood of having sex with someone who was viewed as desirable after having known the person for 5 years was significant in the Mature sample, $t(182) = 2.24, p < .05$. As with the Original and Undergraduate sample, the average Mature woman considered having sex with someone she viewed as desirable only after she had known the person for about 6 Months, whereas the average man across samples considered having sex with someone he viewed as desirable after knowing them for less than 1 Week.

Sex differences in the desire for sexual variety, originally reported in Buss and Schmitt (1993) and replicated in the larger sample of Study 1, were further documented in an older and more sexually experienced sample in Study 2. Once again, among evolutionary theories of human mating, the pluralistic theories such as SST seem most capable of accounting for the observed sex differences in the desire for sexual variety.

Study 3: The Desire for Sexual Variety as Perceived by the Opposite Sex

Studies 1 and 2 employed self-report measures of short-term mating desires to test the three predictions from SST. Potentially, the sex differences from those studies derived not from actual desires for sexual variety but rather from sex differences in the tendency to admit a desire for sexual variety. That is, women may have felt societal pressures not to report an interest in sexual variety, and men may have for some reason felt the need to over-report their short-term mating desires. Although previous research suggests that in the context of anonymous surveys such response biases are largely attenuated (Andersen & Broffitt, 1988; Catania, McDermott, & Pollack, 1986), we conducted an additional study to address these concerns. In Study 3, we used observer-reports of men and women's interest in sexual variety to counter the limitations inherent to self-report methodologies.

Method

Sample. Study 3 included 24 men and 26 women from a medium-sized private university in Illinois. This sample will be referred to as the "Observer" sample, and the average age of participants was 20.5 years. Members of this sample participated in the study for extra-credit in a psychology course and were primarily middle-class and Caucasian.

Procedure. We had the Observer sample complete a packet of measures adapted from Buss and Schmitt (1993) that were slightly different from those described in Study 1. In this study, the participants did not complete the Currently Seeking measure. In addition, the Time Known measure ranged from 1 Minute to 5 Years, instead of 1 Minute to 10 Years; and participants had to rate the extent to which they perceived that "the average or typical" person of about their age and of the opposite sex would consent to sex after having known someone over different periods of time. Finally, the Number of Partners measure completed by the Observer sample also asked what the participants believed that the "average or typical" person of the opposite sex would desire in terms of the ideal number of sexual partners over different time periods. The rating scales of the Number of Partners and Time Known measure completed by the Observer sample were identical to those used in Studies 1 and 2.

Results and discussion

According to the opposite sex, do men prefer more sexual partners than women? The second prediction from SST was that men will desire larger numbers of sexual partners than women. To evaluate the replicability of the self-report findings from Buss and Schmitt (1993) using observer-report methods, we examined the extent to which men and women differed in their personal per-

Table 3. *Sex differences in the number of partners desired based on observer-reported perceptions of the opposite sex*

	Trimmed Means			Medians		
Time	Men	Women	*t*	Men	Women	χ^2
1 Month	2.0	1.0	3.26**	1.8	1.1	4.36*
	(1.2)	(0.5)		(1.0)	(0.6)	
6 Months	3.6	1.6	3.22**	2.9	1.8	9.70**
	(2.9)	(0.6)		(1.7)	(1.3)	
1 Year	6.0	2.2	3.17**	4.7	2.4	9.11**
	(5.5)	(0.9)		(3.3)	(0.8)	
2 Years	9.5	3.4	2.63**	7.0	3.3	5.34*
	(10.6)	(1.8)		(4.0)	(1.3)	
3 Years	13.8	4.1	2.18*	9.2	3.7	4.11*
	(20.6)	(2.5)		(6.0)	(1.9)	
4 Years	15.8	5.0	2.40*	11.0	4.1	4.08*
	(20.9)	(3.2)		(7.9)	(2.4)	
5 Years	17.6	5.7	2.52*	14.3	5.2	4.08*
	(21.8)	(3.5)		(9.5)	(2.7)	
10 Years	20.3	6.7	2.70**	16.5	6.3	4.08*
	(23.4)	(3.6)		(11.5)	(2.7)	
20 Years	21.9	7.3	2.77**	18.0	7.3	4.08*
	(24.5)	(3.9)		(12.7)	(2.9)	
30 Years	24.2	7.9	2.94**	18.5	8.5	6.75**
	(25.8)	(4.1)		(15.4)	(3.3)	
Lifetime	27.5	9.9	2.94**	25.3	10.0	5.34*
	(27.6)	(5.3)		(19.3)	(4.7)	

Note: Means reported in this table were trimmed means (Rosenthal & Rothnow, 1991) from a sample of 22 men and 22 women. The standard deviation of each mean is reported in parentheses below the mean. The *t*-values represent the significance of sex differences between trimmed means. The medians reported were interpolated from the distributions of 24 men and 26 women. The Interquartile Range (*Q*) for each distribution is presented in parentheses below each median. The χ^2 statistics were computed using the Median Test command from SPSS; uninterpolated medians were used in the Median Tests. * = $p < .05$, ** = $p < .01$.

ceptions of the short-term mating desires of the opposite sex. As displayed in the first two columns of Table 3, the significant sex differences in the desire for multiple sexual partners found in the Original, Undergraduate, and Mature samples were replicated in the Observer sample. Using trimmed means, with a sample of 22 men and 22 women, women observed that the average man wants 27.5 sexual partners over his lifetime, whereas men observed that the average woman wants 9.9. As shown down the right side of Table 3, the medians for men and women also were significantly different at every time interval. For example, over a participant's lifetime the median man was perceived to desire 25.3 sexual partners, whereas the median woman was perceived to desire 10.0.

We examined whether the opposite-sex perceptions of the number of partners desired by men and women were significantly different from one. The number of partners men were perceived to desire was significantly higher than one for all time periods, except 1 Month. The median number of partners perceived to be desired by men in their lifetime was 25.3. Unlike in the Undergraduate and Mature samples, the number of partners perceived to be desired by men in a lifetime was multi-modal and more than one. The first mode in men was 5, with 100% of women perceiving that men have a desire for more than one mating partner in a lifetime. The number of partners women were perceived to desire was significantly higher than one for all time periods. Again, unlike the previous samples

the number of partners in a lifetime was multi-modal, with the first mode at 5 and 100% of men perceiving that women have a desire for more than one mating partner in a lifetime.

According to the opposite sex, do men require less time before consenting to sex than women? The third prediction from SST was that men will be willing to engage in sexual intercourse after less time has elapsed than will women. The pattern of responses found in the Original, Undergraduate, and Mature samples were replicated in the Observer sample, as were the sex differences in the likelihood of consenting to sex at various time intervals. As shown in Table 4, there were two exceptions to this replication. First, for the time periods of 2 and 5 Years, the Observer sample did not provide significant sex differences in the likelihood of consenting to sex. In the Original sample, no sex differences were found at the 5-Year interval as well. Second, among the Observer ratings both men and women believed members of the opposite sex would consent to sex more quickly than the Original, Undergraduate, and Mature samples indicated. For example, women observed the average man would consent to sex with someone he viewed as desirable after only 1 Evening, but the average Undergraduate male reported that he would consent to sex only after more than 1 Week had elapsed in knowing the person. Although men and women perceived the opposite sex to be more receptive to short-term sex than self-reports would indicate, the sex differences between men and women replicated using observer-reported data sources. Overall, the Time Known and Number of Partners findings of Buss and Schmitt (1993) were replicated using the observer-report sample in Study 3.

Table 4. *Sex differences in the time needed before consenting to sex across three samples*

	Undergraduate Sample			Mature Sample			Observer Sample		
Time	Men	Women	*t*	Men	Women	*t*	Men	Women	*t*
1 Hour	−1.6	−2.8	14.66***	−0.9	−2.6	6.51***	−0.2	−2.1	3.97***
	(2.0)	(0.7)		(2.4)	(1.1)		(2.1)	(1.1)	
1 Evening	−1.1	−2.7	15.98***	−0.4	−2.3	6.71***	0.6	−1.7	4.84***
	(2.1)	(1.0)		(2.4)	(1.5)		(2.0)	(1.4)	
1 Day	−1.0	−2.6	16.71***	−0.2	−2.2	6.78***	0.7	−1.5	4.64***
	(2.2)	(1.1)		(2.4)	(1.5)		(2.0)	(1.3)	
1 Week	−0.3	−2.3	18.31***	0.3	−1.8	6.93***	1.2	−0.4	3.35**
	(2.2)	(1.4)		(2.2)	(1.8)		(1.9)	(1.5)	
1 Month	0.5	−1.5	13.80***	0.9	−1.0	5.86***	2.0	0.4	3.95***
	(2.2)	(1.8)		(2.2)	(2.1)		(1.4)	(1.4)	
3 Months	1.1	−0.7	13.80***	1.3	−0.3	4.85***	2.2	1.0	3.70***
	(2.0)	(2.0)		(2.1)	(2.2)		(1.0)	(1.3)	
6 Months	1.6	0.1	11.57***	1.7	0.4	4.20***	2.3	1.4	3.25**
	(1.8)	(2.0)		(1.9)	(2.0)		(1.0)	(1.0)	
1 Year	2.0	0.9	8.95***	2.0	1.1	3.25***	2.4	1.9	2.03*
	(1.5)	(1.9)		(1.7)	(1.9)		(0.9)	(0.7)	
2 Years	2.2	1.4	6.95***	2.0	1.3	2.96**	2.2	1.9	0.96
	(1.3)	(1.7)		(1.6)	(1.9)		(1.2)	(1.1)	
5 Years	2.1	1.8	3.43***	2.2	1.6	2.24*	2.0	1.9	0.28
	(1.4)	(1.5)		(1.5)	(1.7)		(1.5)	(1.5)	

Note: Means were calculated based on the responses of 339 men and 710 women from the Undergraduate sample, 83 men and 109 women from the Mature sample, and 24 men and 26 women from the Observer sample. The standard deviation of each mean is reported in parentheses below the mean. The *t*-values represent the significance of sex differences between means. * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Study 4: The Desire for Sexual Variety Linked to Psychological Traits

From Studies 1 through 3, it appears that a substantial number of people express desires for short-term mating. Many men and women actively seek short-term mates, require little time before consenting to sex, and ideally desire multiple mating partners at various time periods in the future. It is also clear from the present studies that men, on average, tend to desire sexual variety and short-term mating experiences more than women. Although heterosexual men and women must, on average, behaviorally engage in short-term relationships at the same rate given equal sex-ratios (Symons, 1979), the psychological desire for sexual variety when pursuing short-term sex seems primarily a male phenomenon. This is true regardless of the sample, the data source, or the statistical techniques used to evaluate this prediction. Most pluralistic theories that explain human mating strategies as naturally diverse and variable both within and between the sexes are fully capable of accounting for this finding.

For example, people may behaviorally pursue different mating strategies depending on their own mate values, the local sex-ratio, and other ecological sources of information (see Buss, 1994; Gangestad & Simpson, 2000; Low, 2000). According to SST (Buss & Schmitt, 1993), between-sex variability in the context of short-term mating exists because the male short-term psychology is designed to be dominated by the desire for sexual variety, whereas female short-term psychology is designed to be guided by desires for men who possess superior levels of status, resources, or genetic quality. Theories that posit a monomorphically designed mating strategy among humans (e.g., Fisher, 1992; Miller & Fishkin, 1997; Zeifman & Hazan, 1997) may find it more difficult to account for the magnitude of sex and individual differences found in the desire for sexual variety. If human beings have been designed to pursue only one mating strategy, why is there so much mating diversity, and why are men and women significantly different when it comes to the desire for sexual variety?

According to Miller and Fishkin (1997), one explanation of the observed set of pluralistic findings might be that all humans are naturally designed to be long-term mating strategists, but that modern environments have caused large numbers of people in our samples to have experienced unstable forms of child development: "We would argue that although short-term mating strategies may be fall-out from a failure of humans to interface with their adapted for environments, seeking a long-term mate for a close enduring relationship is based in universal design features (i.e., part of our evolutionary heritage)" (p. 228–229). Thus, "current behavioral variability, including differences between men and women, may well be the result of relatively modern differences in the social environments encountered by humans that were not present in the Pleistocene era" (p. 199). In other words, modern parenting and socialization practices, with boys presumably receiving less "adapted for" parenting and socialization than girls, may have precipitated the sex and individual differences in desires for sexual variety evident in Studies 1 through 3.

If this were the case, those individuals who responded to the Time Known and Number of Partner measures with more desire for sexual variety may possess a trait-like tendency toward short-term mating anchored in an interpersonal history of poor parental attachment. It has been documented that people who possess insecure attachment styles also tend to possess attributes suggestive of a short-term mating strategy, such as engaging in one night stands and feeling a lack of trust with their current dating partners (Brennan & Shaver, 1995; Simpson, 1990). Moreover, children who possess secure attachment styles seem to mature into monogamous adults (Hazan & Zeifman, 1999).

If short-term mating is deeply rooted in developmental dysfunction, then both insecure attachment and the desire for sexual

variety should be further associated with broad indexes of adult psychological dysfunction. Theoretically, insecure children develop a negative sense of themselves and a negative sense of others (Bartholomew & Horowitz, 1991). Consistent with the original ethological model of attachment proposed by Bowlby (1969/1982), these negative "internal working models" of attitudes toward oneself and others then persist into adulthood. Eventually, a basic lack of self-worth and fundamental distrust of others causes high levels of anxiety and an avoidance of interpersonal closeness (Simpson, Rholes, & Nelligan, 1992). Indeed, those who possess insecure attachment styles as adults are at higher risk for a broad range of social psychological pathology, including affective, antisocial, and borderline personality disorders (for a review see Dozier, Stovall, & Albus, 1999). In this view, short-term mating is one consequence of a fundamental failure in our normative long-term attachment system, a failure that should have profound and widespread consequences for reproduction, mental health, and social psychological functioning.

Other attachment theorists have posited that a short-term mating psychology may result from key developmental experiences but have focused on the limited relationship between attachment and short-term mating, as well as the potential adaptive nature of insecure attachments (e.g., Kirkpatrick, 1998). These pluralistic "life-history" approaches emphasize the facultative, context-dependent nature of our species-typical attachment system, a system that may contribute, at times, to *functional* short-term mating desires (Burton, 1990; Chisholm, 1996). Lancaster (1989), for example, has speculated that short-term mating may be functional for women in cultures where their pool of viable long-term partners becomes restricted. Others have provided detailed rationale for how insecure attachment styles may be manifestations of an opportunistic, short-term reproductive strategy (Draper & Harpending, 1982). Belsky (1999) notes that insecure attachment styles "can be expected to be short-term in nature, and . . . may foster early and frequent conceptions (or at least would have done so in some EEAs)" (p. 155).

In this view, insecure attachment styles may lead to unstable romantic relationships, but this specific form of relationship functioning may have been adaptive in many instances in our ancestral past. Today, when insecure attachment develops into short-term mating, this may be what is most adaptive in a given reproductive context; this is what our attachment system is designed to do (Belsky, 1999; Chisholm, 1996). In addition, insecure attachment is seen as only one contributing factor to the development of short-term mating, along side other factors such as the local pathogen prevalence, operational sex-ratio, and the relative mate value of mating participants (Buss & Schmitt, 1993; Gangestad & Simpson, 2000). Thus, short-term mating may be related to some forms of relationship instability but may prove generally unrelated to the broad levels of psychological dysfunction associated with insecure attachment. Short-term mating need not be psychologically nor reproductively maladaptive according to the pluralistic view of attachment.

One way to evaluate the relative merit of these countervailing positions on the desire for sexual variety, the pursuit of short-term mating strategies, and the relative functionality of differing attachment styles would be to formally examine the empirical linkages between these constructs and measures of psychological health and interpersonal functioning, especially those variables outside of the specific realm of romantic relationships (since short-term mating can be operationally defined as romantic relationship "dysfunction"). As Belsky (1999) notes, what little research has been done on this topic tends to support pluralistic attachment approaches: "Although no research on the sequelae and correlates of attachment (in childhood or adulthood) has been stimulated by such a life history perspective, data that have been gathered on mating and parenting are rather consistent with such theorizing" (p. 254). Still, no research has speci-

fically examined whether the desire for sexual variety, per se, is related to the chronic pursuit of short-term mating strategies, insecure attachment styles, and psychological health in ways that differentiate among pluralistic and monomorphic positions on basic human mating strategies.

If it were found that the desire for sexual variety and insecure attachment were strongly and similarly linked to poor mental health and general social dysfunction, then monomorphic theories that claim short-term mating is primarily the maladaptive aftermath of insecure attachment would merit serious consideration. However, if the desire for sexual variety and insecure attachment were not similarly related to mental health and social dysfunction, the perspective of monomorphic monogamy as our natural mating system would not be supported. Instead, evidence would be provided that short-term mating may be a functional mating strategy, relatively independent of the nonrelationship psychopathology broadly associated with insecure attachment. Study 4 was conducted to examine the degree to which the desire for sexual variety is linked to the chronic pursuit of short-term mating strategies and adult romantic attachment styles and whether the desire for sexual variety is further associated with indexes of basic mental health and social functioning.

Method

Sample. The participants in this study were 68 men and 99 women from a medium-sized private university in Illinois. Members of the sample participated for extra credit in human sexuality or motivation courses, and were primarily middle-class and Caucasian.

Procedure. All participants were presented with a packet of measures entitled "The Personality and Sexuality Anonymous Questionnaire Study." The packet first contained the Time Known and Number of Partners measures used in the preceding studies. Participants then completed a measure designed to assess whether the desire for sexual variety is related to trait-like levels of short-term mating. This was the Sociosexual Orientation Inventory (SOI: Simpson & Gangestad, 1991), a standard instrument used to assess long-term versus short-term mating strategies. A second measure was included to assess attachment styles, the Relationship Questionnaire (Bartholomew & Horowitz, 1991).

Six basic psychological indexes that have been shown to be related to mental health and social functioning were then completed by the participants. First, a measure of global personality traits (Goldberg, 1992) was administered. This measure contains two scales strongly related to psychological health—Neuroticism and Openness to Experience. The Neuroticism scale is positively related to virtually all personality disorders and susceptibilities to disease (Costa & Widiger, 1994; Strack & Lorr, 1994) and is conceptually anchored in anxiety, depression, and vulnerability to stress. Openness to Experience, on the other hand, is positively related to self-awareness, creativity, and depth of emotional experience (McCrae & Costa, 1997), all indicators of psychological health and adjustment. A measure of erotophobia-erotophilia known as the Sexual Opinion Survey (Fisher, Byrne, White, & Kelley, 1988) was then completed. Erotophilia has long been associated with physically and psychologically healthy sexual attitudes and behavior (Fisher et al., 1988). A measure of healthy sexual attitudes (e.g., willingness to use condoms) was also administered (Gough, 1973). A measure of self-esteem called the California Self-Evaluation Scales (Phinney & Gough, 1984) was completed by the participants. In some studies, low levels of self-esteem have been associated with psychological ill-health, poor social skills, and sexual permissiveness (Baumeister, 1997; Perlman, 1974). Finally, a measure of social desirability called the Marlowe-Crowne Social Desirability Scale (Crowne, 1979) was administered. High levels of social desirability have recently been linked with the tendency to distort one's social self-presentation in a way indicative of relatively severe psychopathology (see Robins & John, 1997).

Results and discussion

The patterns of sex differences found in Studies 1 through 3 were replicated in Study 4. Men expressed a desire for significantly larger numbers of sex partners at various points in the future than did women. Men required significantly less time to elapse before consenting to sex than did women. For economy of presentation purposes, overall composite scores for the Number of Partners and Time Known measures were created. Each composite score consisted of the mean average score across the time intervals within each measure. The *t*-tests for sex differences on all measures and composite scores of sexual variety desires, sociosexuality, and attachment are presented along the diagonal of Table 5.

Is the desire for sexual variety linked with short-term mating tendencies and insecure attachment? As seen in Table 5, the composites of desire for sexual variety correlated positively with chronic short-term mating as indexed by the SOI (Simpson & Gangestad, 1991), with high scores indicating a more short-term, unrestricted mating orientation. Among both men and women, sociosexuality correlated significantly with the Number of Partners composite and with the Time Known composite. In other words, those who possessed an unrestricted sociosexual orientation desired larger numbers of sex partners over time and required less time before consenting to sex. It appeared, therefore, that current desires for sexual variety as measured with the Number of Partners and Time Known composite scores were significantly related to the more chronic pursuit of short-term mating strategies.

Previous research has indicated that those who follow a short-term mating strategy tend to possess insecure attachment styles (e.g., Simpson, 1990). We confirmed that adult attachment styles were significantly related to mating strategies, especially among men. For example, men who possessed an unrestricted sociosexual orientation and those who preferred to have large numbers of sexual partners tended to have dismissive attachment styles. For women, those who reported a restricted sociosexual orientation tended to exhibit a secure attachment style. Women who reported that they would require more time before consenting to sex tended to exhibit a fearful attachment style. Although Study 4 provided evidence that the desire for sexual variety is moderately related to dispositional levels of short-term mating strategies and somewhat related to insecure attachment styles, it remains unclear whether this concert of variables represents maladaptive dysfunctions of our natural long-term mating system or viable alternative mating strategies.

Are desires for sexual variety, short-term mating strategies, and adult attachment styles linked with indexes of psychological well-being? As seen in Table 6, we found that desires for sexual variety and sociosexuality were largely unrelated to indexes of mental health. Among men and women, those who expressed desires for sexual variety did not possess low self-esteem, emotional instability, low openness to experience, or distort their self-presentations in a socially desirable manner. Indeed, men who preferred larger numbers of sex partners, $r(66) = +0.29, p < .05$, and possessed unrestricted sociosexual orientations, $r(66) = +0.31, p < .01$, tended to have *higher* self-esteem. Those men likely to consent to sex with someone after knowing them for a short period of time were more emotionally stable, and men who desired sexual variety were more likely to be open to new experiences, a trait associated with being intellectual, cultured, and self-aware (McCrae & Costa, 1997)—all indicators of positive life adjustment. Men and women who reported that they would have sex more quickly than others tended to report higher levels of erotophilia, a known correlate of sexual health and well-being (Fisher et al., 1988), and short-term oriented men reported that they would be willing to follow safe sex practices.

Overall, the results from Study 4 suggest

Table 5. *Intercorrelations and sex differences among the desire for sexual variety, sociosexuality, and adult romantic attachment styles in Study 4*

	The Desire for Sexual Variety			Attachment Styles			
	Number of Partners	Time Known	Sociosexuality	Secure	Dismis.	Preocc.	Fearful
Number of partners	(4.58***)	.53***	.44***	−.25*	.26*	.02	.31**
Time known	.08	(9.49***)	.39***	−.15	.03	.12	.04
Sociosexuality	.31**	.27**	(5.48***)	−.09	.29*	−.05	.16
Secure	−.02	−.11	−.20*	(−2.41*)	−.34**	−.34**	−.52***
Dismissive	.05	−.01	.08	−.19	(1.61)	.03	.12
Preoccupied	.04	−.13	.13	−.23*	−.24*	(2.26*)	.32**
Fearful	−.04	−.33***	−.01	−.35***	.15	.19	(0.86)

Note: Correlations reported above the diagonal were based on the responses of 68 men; correlations reported below the diagonal were based on the responses of 99 women. The *t*-tests for sex differences in scale means are represented along the diagonal, with positive *t*-values indicating men scored higher on the scale and negative *t*-values indicating women scored higher on the scale. * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Table 6. *The desire for sexual variety, sociosexuality, and adult romantic attachment styles correlated with psychological well-being and sexual health*

	The Desire for Sexual Variety						
	Number of Partners	Time Known	Sociosexuality	Attachment Styles: Secure	Dismis.	Preocc.	Fearful
Psychological Well-Being							
Self-esteem:							
Men	.29*	.10	.31**	.05	.16	−.17	−.11
Women	.04	−.01	−.13	.05	.16	−.31**	.06
Emotional stability:							
Men	.13	.26*	.16	.05	.09	−.14	−.26*
Women	.09	−.01	−.14	.10	.26**	−.28**	−.08
Openness to experience:							
Men	.33**	.29*	.19	.05	.14	.15	−.03
Women	−.12	−.16	−.12	.06	−.23*	.11	−.01
Social desirability:							
Men	−.08	−.06	−.06	−.34**	.24*	.28*	.23
Women	.02	−.16	.00	−.03	−.30**	.16	.00
Sexual Health							
Erotophilia:							
Men	.47***	.47***	.53***	−.10	.35**	.15	.09
Women	.05	.29**	.25**	−.25**	−.17	.02	−.11
Safe sex practices:							
Men	.10	.31**	.41***	−.11	.21	.14	−.23
Women	−.11	−.08	−.09	.21*	.14	−.17	.04

Note: Analyses based on 68 men and 99 women from Study 4. * = $p < .05$, ** = $p < .01$, *** = $p < .001$

that the desire for short-term sexual variety was not indicative of psychological dysfunction or poor mental health. If anything, it was indicative of positive mental health, at least among men. This apparent sex difference may be explained by the fact that men, but not women, who actively seek sexual variety are pursuing and to some degree satisfying (based on unrestricted behavioral SOI scores) a key tactical objective of their short-term mating strategy (Buss & Schmitt, 1993). However, with our current methods it is difficult to pinpoint whether pursuing sexual variety leads to feelings of psychological health in men, or whether those men who are psychologically healthy tend to pursue short-term mating via sexual variety.

The relationships between attachment styles and psychological health corroborated previous research showing that insecure attachment is associated with poor mental health and social dysfunction. Women who were preoccupied did tend to possess low self-esteem, $r(97) = -0.31, p < .01$. Women who were emotionally unstable tended to possess preoccupied, but not dismissive, attachment styles. Men who were low on secure attachment, high on dismissive, and high on fearful, as well as women who were low on dismissive, also tended to distort their self-presentation in a socially-desirable manner. Finally, women who were low on secure attachment and men who were dismissive tended to possess unhealthy sexual attitudes.

This overall portrait of short-term sexual desire and romantic attachment seems to suggest that, although short-term desires and insecure attachments are weakly related to one another, the dysfunctional mental health aspects of insecure attachment are completely unrelated to short-term mating desires. In other words, whereas attachment and short-term mating may overlap conceptually and empirically, the social and mental dysfunction components of insecure attachment appear not to overlap with short-term desires for sexual variety. Thus, the pivotal finding of Study 4 is that, in normal samples of people, there appears to be no systematic link between the desire for sexual variety and the basic indexes of mental and social dysfunction that typify insecure attachment. In men, the short-term mating desire for sexual variety may actually be linked to positive aspects of mental health.

These findings appear to contradict the perspective that short-term mating represents a maladaptation of the singular long-term mating system in humans. Although it seems possible that extremely abusive and unstable juvenile environments may cause some forms of insecure attachment that intersect with promiscuity and short-term mating, it may be legitimate to view such cases as alternative mating strategies, especially suited to unstable reproductive environments (e.g., Ellis, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999; Lancaster, 1989). Clearly, more data will be needed to disentangle the issue of whether insecure attachment is a definitive cause of short-term mating strategies, whether it simply tends to coincide with particular forms of short-term mating, or whether it is a functionally independent system for regulating negative affect in interpersonal relationships (see Schmitt, 2001). The results from the present study, however, confirm that although insecure attachment styles are linked to poor mental health, attachment-related mental dysfunction is largely independent of the more basic desire for sexual variety and the pursuit of short-term mateships.

Are attachment styles more important than gender in explaining short-term mating desires? It has been argued that environmental factors such as parental caregiving and attachment styles are more important than gender in explaining extant short-term mating desires (Miller & Fishkin, 1997, p. 225). That is, the reason men may more actively seek short-term mates is because they have poorer relationships with their parents and develop more insecure attachment styles as adults than do women, not because men are strategically designed to seek sexual variety when pursuing short-term mates. We attempted to conceptually replicate previous findings that showed once attachment styles were accounted for, neither gender

nor interactions of gender and attachment significantly predicted short-term mating desires (Miller & Fishkin, 1997). We were unable to replicate these findings using our present set of measures. In fact, we found that gender predicted short-term mating desires after attachment styles were partialed out, but attachment styles did not predict short-term mating after gender was partialed out. This was true when predicting the Number of Partners composite, the Time Known composite, and SOI scores.

One possibility for this replicatory failure is that Miller and Fishkin (1997) tried to predict short-term mate seeking and included retrospective measures of parental caregiving in their analyses, whereas we did not. Even so, the likely possibility that gender interacts with parental caregiving and attachment formation early in life (i.e., the emergent adaptations of developing boys may evoke parental environments that cause harsh socialization and insecure attachment; see Geary, 1998 for a review) makes it extremely difficult to make definitive claims about the superiority of environmental factors over gender in explaining the desire for sexual variety. Instead, we would caution as noted above that more data will be needed to disentangle the issue of how insecure attachment is causally associated with short-term mating strategies (see also Kirkpatrick, 1998). The limited conclusion we can make based on Study 4 is that any empirical overlap that exists between insecure attachment and short-term mating is unrelated to the poor mental health frequently associated with insecure attachment.

General Discussion

The purpose of this research was to test four key predictions from Sexual Strategies Theory (SST) that differentiate it from competing theories of human mating. Evidence from four studies confirmed the SST predictions that men actively seek short-term mating relationships more than women, men prefer larger numbers of sexual partners than women, men require less time to elapse before consenting to sex than do women, and the desire for sexual variety results from a dispositional short-term mating tendency that does not flow from poor mental health or social dysfunction. The first three findings proved to be robust across samples differing in age. They proved robust across samples differing in geographical location. They proved robust across different methods. And they proved robust when various statistical procedures were used to control for the influence of outliers and distributional skewness. These findings support the proposition that, although men and women both have short-term mating as one component of their menu of mating strategies, men clearly differ from women in their short-term desire for sexual variety.

These findings may have important implications for romantic processes in close relationships. First, sex differences in the desire for sexual variety may help to explain some recurring forms of sexual conflict, such as conflict over the frequency of sexual intercourse (Buss, 1989; Hurlbert & Apt, 1994). Second, improving our understanding of why the sexes differ in short-term sexual desire may have important implications for sex and marital therapy (Kaplan & Sager, 1971; Verhulst & Heiman, 1988). We have presented a portrait of romantic functioning that suggests poor relationship outcomes may result from a mismatch of strategic interests and not from unhealthy relationship dynamics, per se. That is, those individuals that are insecurely attached and suffer relationship instability and a lack of closeness may be pursuing a strategic sexuality that is individually functional but yields poor long-term relationship outcomes. Future research on the elicitors of this functional short-term strategizing (e.g., Gangestad & Simpson, 2000) may help identify when relationship instability results from interpersonal difficulties and when relationship instability is to be expected as part of an individual's reproductive strategy. Again, an important contribution of this research is that the desire for sexual variety seems unrelated to psychological dysfunction and may well be an alternate mating

strategy grounded in a long history of reproductive success.

Previous research on sex differences in romantic relationships essentially corroborates our main empirical findings. For example, the findings that men relax their minimum mate preference standards in short-term mating contexts implies that they are more interested in carrying out short-term relationships (Kenrick et al., 1990). The finding that men seek extra-marital affairs more than women (Buss, 2000; Laumman et al., 1994) bolsters the notion that men seek short-term relationships more than women. The fact that gay men have affairs more than do lesbians (Blumstein & Schwartz, 1983) also corroborates our finding that men seek short-term mates more than women. Prediction 1 from SST was strongly supported in the current set of studies, and many other findings provide a powerful confluence of evidence that men seek short-term mating, in almost all its forms, more than women.

Research showing that men more than women sexually fantasize about multiple sex partners (Ellis & Symons, 1990) supports Prediction 2 from SST that men prefer larger numbers of sex partners than women, as does the fact that men seek out more prostitutes than women (Bess & Janus, 1976), that gay men have more numerous sex partners than lesbians (Ruse, 1988), and that men consume more pornography containing multiple partners (Malamuth, 1996). Again, it is not that women never seek nor fantasize about short-term mating. Women's romance novels, for example, are among the highest selling books in the world and often contain stories of women engaged in short-term mating (Ellis & Symons, 1990). However, this form of short-term mating usually does not involve sex with a variety of partners. Instead, such novels typically center around men who have high status or possess desirable genetic qualities, attributes that women adaptively prefer in short-term mates (Buss & Schmitt, 1993; Ellis, 1992).

Research showing that men more than women perceive sexual interest from strangers (Abbey, 1982), find first dates more attractive and fall in love more quickly (Rubin, Peplau, & Hill, 1981), and anticipate greater willingness to engage in short-term sex (Surbey & Conohan, 2000) all corroborate Prediction 3 from SST. If women desired sexual variety and required less time before consenting to sex, they, too, should tend to perceive sexual interest from strangers, fall in love quickly, and anticipate great willingness to engage in short-term sex. Based on the accumulated evidence, generally women do none of these things. The findings that men prefer more sexually permissive dates than women (Oliver & Sedikides, 1992), that men but not women have their short-term romantic desires experimentally elicited by interacting with a sexually accessible target of the opposite sex (Schmitt, Couden, & Baker, 2001), and that men actually do consent to sex with strangers more often than women (Clark & Hatfield, 1989) support our findings that men's short-term mating psychology is based, in part, on the tendency to require little time to elapse before consenting to sex.

The above findings testify to the fact that short-term mating is a fundamental component of the human sexual strategy repertoire. If it were true that short-term matings were essentially abnormal deviations from our common human nature, then Blumstein and Schwartz's (1983) finding that "virtually all gay men have other sexual partners" (p. 275), whereas "for lesbians, sex outside the relationship is often an isolated event" (p. 277) would suggest that most gay men are insecurely attached and on an emotional-developmental trajectory toward short-term mating. We consider the validity of such a characterization of gay men to be highly dubious. Research suggests that gay men are, in fact, very similar to heterosexual men in their mating psychology (Bailey, Gaulin, Agyei, & Gladue, 1994; Weinrich, 1987), including a short-term mating psychology guided by the desire for sexual variety as outlined by SST. The reason gay men are more actively engaged in short-term mating than lesbians is likely because their mating partners are other men, who

also have a short-term psychology guided by normal desires for a large number of sexual partners not because most gay men are interpersonally and emotionally insecure.

These findings, in conjunction with those of researchers studying different contexts of human mating (Clark, Shaver, & Abrahams, 1999; Regan, 1998), in different cultures (Knodel, Low, Saengtienchai, & Lucas, 1997; Walter, 1997), and using different research methods (Hassebrauck, 1998; Speed & Gangestad, 1997; Weiderman & Dubois, 1998), including experimental designs (Schmitt, Couden, & Baker, 2001), appear to flatly contradict several alternative theories of human mating that have been proposed over the past decade. First, the findings falsify theories that postulate that men and women are monomorphic with respect to their mating strategies. Men and women clearly differ in the prominence of the short-term component of their mating strategies, whether assessed through the expressed desire for casual sex, the number of partners they want, or the time needed to elapse before consenting to sex. Theories that posit sexually monomorphic mating strategies (e.g., Fisher, 1992; Miller & Fishkin, 1997; Silverstein, 1996) cannot easily account for these data.

Second, the findings falsify theories that postulate that women and men alike have evolved solely and exclusively for long-term committed mating (e.g., Miller & Fishkin, 1997; Zeifman & Hazan, 1997). The number of partners desired in a lifetime exceeds one for both sexes, even when outliers are removed, when medians rather than means are examined and when different methods are used to assess this desire. Theoretically, men could not express their desire for short-term mating if there were no willing women (Greiling & Buss, 2000). Given the costs to women associated with short-term mating (e.g., untimely pregnancy, reputational damage), it would be surprising if women recurrently engaged in short-term mating unless they reaped adaptive benefits that outweighed the costs. Evidence is cumulating that women do reap predictable benefits from short-term mating in certain contexts (Gangestad & Thornhill, 1997), that short-term reproductive strategies exist in many different cultures (Draper & Harpending, 1982), and that humans possess physiological adaptations indicative of short-term mating strategies (Baker & Bellis, 1995; Møller, 1988). Thus, at times some women and men may adaptively select casual sex from their mating menu in certain contexts. Neither all men nor all women can be accurately described as designed for exclusive long-term monogamy.

Both sexes appear to have evolved short-term and long-term sexual strategies, as posited by SST (Buss & Schmitt, 1993) and many other pluralistic approaches to human mating (e.g., Gangestad & Simpson, 2000). Theoretical attempts to simplify this complex account by positing either that the sexes are identical in their mating strategies or that humans have only a singular long-term mating strategy cannot account for the cumulative empirical findings. Often in social science, theories are insufficiently-responsive to empirical findings. In the current case, the findings on the various components of the desire for sexual variety are sufficiently robust and consistent that theories inconsistent with them need to be substantially modified or jettisoned.

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