The Impact of Reproductive Value and Salience

on Women's Interest in Short-term Mating

during the Ovulation Cycle

by

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Abstract

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The current research tests the assertion that selection may have guided women's mating strategy to increase the probability of conceiving and improve the offspring's chances of survival. Across two experiments, women's sexual interest in short-term mates increased when reproduction was cognitively salient and short-term mates were attractive, and did so as a function of both current conception probability and women's mate status and women's reproductive value. In Experiment 1, conception probability predicted short-term sexual interest, but only when reproduction was experimentally manipulated to be cognitively salient. In addition, although conception probability predicted sexual interest in short-term mates regardless of reproduction salience among single women, conception probability predicted sexual interest among women in long-term sexual relationships only when reproduction was salient. In Experiment 2, women were more sexually interested in attractive than unattractive short-term mates, and the effect was stronger to the degree that women were likely to conceive at the time of the experiment as indicated by days away from ovulation. In addition, replicating results of Experiment 1, although sexual

interest among single women increased with conception probability regardless of short-term mate attractiveness, conception probability predicted sexual interest among women in long-term sexual relationships for the attractive but not the unattractive short-term mate. Findings suggest that women's interest in short-term mating varies in order to capitalize on reproductive success.

Preface

Freud described the sexual life of adult women as a “dark continent” for psychology. Although it is safe to say that psychology has taken on the task of exploring this “dark continent” there is still much work to do. Psychologists have yet to sufficiently address the disparity in the number sexual partners men and women report or fully understand factors that motivate female mating behavior. It is my hope that the current paper will add to what is already known about female strategy and inspire others to dig deeper.

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Theoretical Approaches to Human Mating Strategies

Theoretical approaches to human mating strategies fall into two categories (Regan, 2008). The first category emphasizes how mate preferences are influenced by social forces residing in the contemporary environment. Among these theories are social exchange or equity models. According to this model the process of mate selection resembles a marketplace in which people attempt to maximize their rewards and make social interaction as profitable as possible by exchanging their own assets—beauty, health, intelligence and so on—for desirable attributes in a partner. Another social context perspective is social role theory (e.g. Eagly, 1987). According to this theory people develop expectations for their own and others behavior based on their beliefs about sex-appropriate behaviors and attributes. Social context theorists have identified a variety of social forces that shape human mating behavior including social and cultural scripts, which are normative expectations that define and organize social experience and are used to guide and assess social interactions (Gagnon & Simon, 1973). Consequently, individuals learn prevailing sociocultural "rules" of love, sex and mating from a host of social forces including media, parents and peers, the educational system, religious and political ideologies, legal principle and so forth (Regan, 2008).

The second category focuses on evolutionary forces that arose in the ancient past and that form part of our species heritage. According to Tooby and Cosmides (1992 and 1997) evolutionary models of human mating are derived from theoretical principles of

evolutionary psychology. Evolutionary psychology is concerned with the design of the human we possess to process information. Evolutionary psychologists agree that the human mind was formed through a process of natural and sexual selection as described by Charles Darwin (1871). As a result evolutionary models of mating consider the ways contemporary mating behavior may be influenced by evolved psychological heuristics that were selected because they overcame obstacles to reproduction located in the human ancestral past and therefore maximized reproductive success (Regan, 2008). The current paper is concerned with this latter category of human mating strategies.

The Case for Female Short-term Mating Strategy

Sexual Strategies Theory (SST) postulates that "Because of the lower levels of minimum parental investment incurred by men, short-term mating represents a larger component of men's sexual strategy than of women's" (Buss & Schmitt, 1993, p. 210). Although SST does not suggest that all men are constantly seeking short-term mating opportunities, nor that all women are exclusively long-term maters, this is often how SST has been characterized (Schmitt, Shackelford & Buss, 2001). The problem with this characterization is two-fold. First, it fails to acknowledge that short-term mating among men requires women also willing to engage in short-term mating (Smith, 1984). Second, this characterization fails to recognize that women's sexual interest, like men's, should be predicated on reproductive success. Given that heterosexual short-term mating is ubiquitous, and that by definition it involves women, the goal of the current research was to identify factors that determine women's interest in short-term mates in the context of maximizing their reproductive success.

Central to reproductive success is the process of sexual selection. Sexual selection, as originally proposed by Darwin (1871), refers to the evolution of characteristics that give organisms reproductive advantage, as contrasted with survival. Building on Darwin's (1871) identification of sexual selection in the evolution of humans and other animals, Trivers (1972) proposed that a central driving force behind sexual selection is the degree of parental investment each sex devotes to their offspring. Parental investment is defined as "any investment by the parent in an individual offspring that increases the offspring's chances of surviving (and hence reproducing) at the cost of the parent's ability to invest in other offspring" (Trivers, 1972, p. 139). Humans are like most mammals in that women tend to be the more heavily investing sex. This occurs in part because fertilization, gestation, and placentation are internal within women. Women carry the additional parental investment associated with lactation for as many as several years after the birth of a child, often for up to 4 years in tribal societies (e.g., Shostak, 1981). These forms of investment constrain the number of children a woman can successfully produce; typically the upper bound is about a dozen under optimal conditions, and that upper bound is rarely reached. Men, in contrast, do not bear these forms of heavy parental investment, although they can, may, and often do invest heavily in other ways. The minimum investment by the man is the contribution of his sperm, and men, as a consequence, have a higher ceiling on their potential production of offspring. These sex differences in minimum parental investment, according to Trivers' (1972) theory, suggest that women should be the more selective or discriminating sex with respect to mating partners, whereas men should be less discriminating and be more vigorous in intrasexual competition for mates (Buss & Schmitt, 1993). Trivers proposed

two related links between parental investment and sexual selection: (a) the sex that invests more in offspring should be more choosy or discriminating about who they mate with (intersexual attraction), and (b) the sex that invests less in offspring should compete more vigorously for access to the valuable high-investing members of the opposite sex (intrasexual competition) (Buss & Schmitt, 1993).

Sexual Strategies Theory (SST; Buss & Schmitt, 1993) built on Trivers' theory of parental investment and sexual selection by examining the adaptive problems men and women would have had to overcome to reproduce successfully, hypothesizing that certain psychological adaptations may have evolved to solve key problems of human mating and conducting empirical tests for the presence of adaptive desires in men's short-term mating psychology. SST was widely embraced by theorists not only because it was an extension of the theory of parental investment, but also because it outlined hypotheses that detailed the nature of both long-term and short-term mating psychology within each sex. According to the theory, because men assume less parental obligation than women, short-term mating has become synonymous with male mating strategy.

The benefits of a male short-term mating strategy are obvious and direct. A married man with two children could increase his reproductive success 50% by producing one child through a single casual sexual encounter (Symons, 1979). This is not to imply that male long-term mating is without its benefits. As Buss and Schmitt (1993) point out, long-term mating allows for men to tie up a woman's reproductive effort for years, it is a method of obtaining more attractive and desirable mates, it may take less effort per viable offspring than an exclusive pursuit of short-term mating, it may increase certainty of paternity, and it may be required to fulfill standards imposed by women. The primary

cost of male long-term mating is the loss opportunities for copulations with a greater variety of women that he could have obtained if he were not committed to a long-term relationship (Buss and Schmitt, 1993).

Like male short-term mating, the benefits of female long-term mating are direct. Men may provide women with food, find or defend territories and feed and protect children, provide offspring with opportunities for learning; they may transfer status, power or resources, and may aid offspring in forming reciprocal alliances later in life (Buss, 1989b). Benefits associated with female short-term mating may be less direct and less obvious, at least in light of contemporary sex-typed prescriptive norms and stereotypes (e.g., Eagly and Woods, 1999) which suggest that women more than men occupy roles that demand communal behaviors, domestic behaviors, or subordinate behaviors for successful gender role performance.

In accordance with proponents of sexual selection theory that argue that sex differences in parental investment favor different strategies for reproductive success for men and women, the research that has been conducted concerning female short-term mating has focused most on the Good-Genes Hypothesis. According to the hypothesis, the traits females choose when selecting a mate indicate the male's ability to pass on genes that will increase the survival or reproductive success of her offspring. These traits are attractive because they lead either to successful competition or to success at being preferentially chosen by the opposite sex (Buss & Schmitt, 1993). In humans, facial symmetry may be an indicator of good genes (or may have been so ancestrally). For example, men with lower fluctuating asymmetry (FA) on the island of Dominica are rated by fellow villagers as being more attractive as mates (Gangestad, Thornhill, Quinlan &

Flynn, 2001). Across species on average it has been found that symmetrical individuals experience greater mating success than less symmetrical individuals (Gangestad, Thornhill & Garver-Apgar, 2005). Gangestad and Thornhill (1997) hypothesized that (a) men's number of extra pair copulations (EPC's) would correlate negatively with their fluctuating asymmetry, a measure of the extent to which developmental design is imprecisely expressed, and (b) men's number of times having been an EPC partner of a woman would negatively correlate with their fluctuating asymmetry. In a sample of college heterosexual couples completed a series of questionnaires about their relationship and sexual history, both hypotheses were supported. In addition, men's physical attractiveness independently predicted how often they had been an EPC partner.

Symons (1979) proposed that mated women may benefit from extra-pair copulations (EPC's) by exchanging sex for meat, goods, or services (Resource Accrual Hypothesis); by becoming impregnated by a man with better genes than her regular husband (Better Genes Hypothesis); or by using the sexual intercourse to get rid of a husband (Mate Expulsion Hypothesis) or by acquiring a better one (Mate Switching Hypothesis) (see also Fisher, 1992). Additionally, Symons (1979) noted the possibility of a short-term affair by a woman as a revenge for her husband's affair, presumably functioning as a deterrent to his future affairs (Revenge Hypothesis).

Although both men and women risk contracting sexually transmitted diseases and impairing their long-term mate value by acquiring a social reputation as promiscuous the costs incurred by women pursuing short-term mating strategies are usually likely to be more severe than those incurred by men (Buss & Schmitt, 1993). According to evolutionary theories of mating, more severe reputation damage among women is the

result of the asymmetry between the sexes in confidence in parenthood. Although a woman knows that her offspring is hers, a man cannot ever be sure. Hence, from this perspective, men should disfavor cues that a woman has had multiple sexual partners, which reduces paternal certainty, with the implication that promiscuity among women should decrease their social status (Buss & Schmitt, 1993). In polygynous societies it has been powerful men who are high in status and resource control that can obtain multiple mates (Betzig, 1986). Thus men who are able to gain access to multiple women may be credited with being high in status or resource control. Promiscuity in women may be interpreted (by men and women) as a sign that a woman cannot obtain a long-term mate of high quality who is willing to commit resources and parental investment. Women who pursue a short-term mating strategy generally cannot sequester a man's resources or his willingness to provide such resources reliably (Buss & Schmitt, 1993).

One of the most persuasive arguments that women regularly participate in short-term mating has to do with male jealousy. Over human evolutionary history, both men and women have experienced relationship loss to which jealousy may have evolved as an adaptive solution. Male jealousy is driven by the fact that fertilization and gestation occur internally in females. Although a woman is nearly 100% certain of the maternity of her child, males are almost always less than 100% certain of the paternity of offspring. If male jealousy is related to parental uncertainty, then it should be elicited by cues of sexual infidelity. Jealousy, particularly male jealousy, is the leading cause of spousal battering and homicide worldwide (Daly & Wilson, 1988). Most cross-sex killings involve the killing of a spouse with men far outnumbering women as killers (Daly & Wilson, 1988, Dobash & Dobash, 1979). Men use violence to deter their wives from

adultery or defection, and sometimes the violence inadvertently leads to death (Shackelford, Buss, Weekes-Shackelford, 2003). The existence of male jealousy in such a powerful form at least suggests that EPC's have been a common feature of human history. Although jealous male violence is consistent with any number of other theories of human behavior, research suggests that it functions in part to enhance paternal certainty. Ironically, if ancestral women had never engaged in short-term mating, men could not have evolved the powerful desire for sexual variety (Smith, 1984); that desire, if mating were consensual rather than forced, required the existence of some willing women some of the time (Greiling & Buss, 2000). In contrast, if females are less vulnerable to parental uncertainty, then female jealousy should be less related to sexual infidelity. Indeed, evidence suggests that female jealousy is triggered relatively more by cues of loss of commitment and investment from a man, whereas male jealousy is triggered relatively more by cues of sexual infidelity (Buss, 1996).

Because of the high risks associated with female short-term mating behavior, it is likely that over time women evolved methods, such as deception, of reducing those risks in order to obtain the benefits of short-term mating relationships. Deception involves the intentional misrepresentation of information in order to induce in another person a belief that the deceiver knows to be untrue (e.g. Knapp & Comadena, 1979). Metts (1989) pointed out that as partners move towards greater intimacy with knowledge about each other, they learn what the other wishes to believe, what they will most likely believe and the strategy most likely to facilitate belief. Partners also learn the consequences of telling the truth or lying in various domains of their relationships (Metts, 1989).

Other evidence of female short-term mating has to do with sperm competition. Baker and Bellis (1994) noted that the more time spent apart, the more sperm husbands inseminated into their wives when they finally had sex. Baker and Bellis (1994) attributed the increased sperm to the separation that would have given the woman an opportunity for an extramarital liaison. Sperm competition in humans requires that a woman have sex with more than one man within roughly a 5-day period. The increased sperm increases the odds of crowding out and displacing a competing man's sperm, which is what would be expected if humans had an ancestral history of some casual sex and marital infidelity (Greiling & Buss, 2000). Smith (1984) pointed out that the greater the sperm competition, the larger the testes size relative to body size. The extent to which sperm competition occurred in ancestral human populations would have depended on rates of female sexual infidelity and cuckoldry. Current estimates of worldwide cuckoldry rates range from around less than 1% to more than 30% with a mean of about 4% (Anderson, 2006; Bellis, Hughes, Hughes & Ashton, 2005).

Some of the most debated research on female short-term mating has to do with the discrepancy in the number of sexual partners men and women report. One of the most reliable and perplexing findings from surveys of sexual behavior is that men report substantially more sexual partners than women do (Brewer, 2000). Mathematically, the average number of sexual partners for men and women who engage in short-term mating must be identical (Greiling & Buss, 2000). Every time a man has sex with a woman for the first time, the woman is also having sex with a new partner. Are men lying to inflate their sexual reputations? Are women lying to downplay their sexual experience?

Smith (1992) suggested that some underrepresentation of prostitutes (and other sexually hyperactive women) coupled with some combination of female underreporting and male overreporting seems most plausible explanations discrepancies in the number of sexual partners between men and women. However, there is conflicting information on whether or not sexually hyperactive women could account for the discrepancy. Einon (1994) examined whether the existence of sexually hyperactive women (prostitutes and non prostitutes) accounted for differences in the number of lifetime sexual partners claimed by men (10.5) and by women (3.3). Einon (1994) examined samples collected in Britain and France and found no evidence that there were atypically hypersexual women compared to men. Instead Einon (1994) found greater incidence of hypersexual men who reported extremely large numbers of sex partners. Brewer et al. (2000), on the contrary, found that female prostitutes are underrepresented on surveys due to men's unwillingness to report contact with prostitutes. That study concluded that the underreporting of prostitutes can account for the sex discrepancy in reported numbers of sexual partners.

Hypotheses about the Functions of Women's Sexual Interest

As women are severely limited in the number of ovulatory episodes (in comparison to the amount of sperm men can produce) and women are the more heavily investing sex in terms of parental investment, selection may have guided women's mating selections to increase the probability of conceiving and improve the offspring's chances of survival in ways that reflect women's parental investment (Pillworth, et al. 2004). This research focuses on specialized adaptations in women to guide mating decisions surrounding the time of ovulation. This research further proposes that women's

interest in short-term mating should vary in response to the attractiveness of potential short-term mates, women's mate status and women's reproductive likelihood as the probability of conception increases. As Buss and Schmitt (1993) point out goal-directed and problem-solving nature of human mating behavior and carries no implication that mating strategies are consciously planned or articulated.

The most obvious way women are able to increase the probability of conceiving is to concentrate mating opportunities around the time of ovulation. It is during this time women are most likely to conceive; however, all women are not equally fecund. Younger women are at the beginning or near the peak of their reproductive cycles and therefore have high fecundity. They have the potential to have many more children than older women, nearing the end of their reproductive cycles, and therefore have a higher reproductive value. Older women are less fecund and therefore have a lower reproductive capacity than do younger women; as such older women have lower reproductive value. The current research predicts that younger women are more likely to express greater interest in attractive short-term mates than older women and do so as the probability of conception (ovulation) increases. Literature on aging and sexual activity supports this position.

Hayes and Dennerstein (2005) reviewed community-based studies investigating changes in women's sexual function and sexual dysfunction with age. Electronic databases were searched for published longitudinal and cross-sectional studies investigating changes in sexual function and dysfunction. Although most studies investigating sexual function do not include women under the age of 35, the analysis found that beginning in a woman's late 20s to late 30s women's desire, frequency of

orgasm, and frequency of sexual intercourse decline with age (Hayes & Dennerstein, 2005). Additional support for this position also comes from literature on domestic violence. Shackelford, et al. (2003) found that the probability of a women being murdered by a sexually jealous husband increases as women's age decreases. These findings suggest, women of high reproductive value (younger women) may have greater interest in a short-term mate as the probability of conception increases than women of low reproductive value (older women). Although studies have looked at how women's age affects the likelihood of being selected for long-term or short-term mating (e.g. Buunk et al. 2001 and Young, 2005), studies have not yet investigated how women's age affects women's mating strategy.

Women can also achieve improved offspring survival through sensitivity to the presence of physically attractive males. A substantial body of research, spanning many animal species, has supported the notion that attractive individuals tend to be healthy and in particular free of infectious illness (Milinski & Bakker, 1990; Moller, 1990). If short-term mating interest among women functions in part to maximize reproductive success, and if reproductive success is facilitated by a healthy mate, then women should express greater interest in attractive short-term mates than unattractive short-term mates, and do so as the probability of conception increases. For mated women, extra-pair copulations with attractive males (quality genes) concentrated in the fertile phase of her cycle could lead to the production of offspring of better genetic quality than offspring produced with her long-term mate yet enjoy the investment provided by the long-term mate. Partial support for this hypothesis includes the finding that women with less sexually attractive partners had increased interest in extra-pair desires, particularly at fertile phases of

ovulation (Pillsworth & Haselton, 2006). The current research predicts that women are more likely to express greater interest in attractive short-term mates than unattractive short-term mates and do so as the probability of conception (ovulation) increases.

Pursuing attractive mates is not the only way women can improve the offspring's chances of survival. Enhanced offspring survival or quality can result from the contribution of good genes from the father or from the interaction of compatible genes from the mother and father. Females across a variety of species commonly mate with multiple males and there is evidence that they benefit by producing offspring of higher genetic quality (Foerster, K. et al., 2003). By mating with a variety of males a woman is able to have genetic diversity among her offspring. Individual genetic diversity (heterozygosity) reflects the level of inbreeding and influences survival and fitness in various species. High individual heterozygosity reduces the likelihood that recessive deleterious alleles are expressed, or increases the number of potentially useful gene products (Foerster, K. et al., 2003). Consequently, if women were looking to improve the offspring's chances of survival, this research proposes, they could either pursue attractive mates or diversify their offspring or both. Although women may be particularly interested in attractive men as short-term mates, as ovulation increases women should be interested to in a short-term mating with available males regardless of their attractiveness. This may be especially true for younger women who may be less discriminating than older women because of their higher reproductive value. Their high reproductive value may afford them more opportunities for reproduction than older women. This prediction differs from that of previous researchers in that other studies have not yet begun to look at the Genetic Diversity Hypothesis in humans. The Genetic Diversity Hypothesis is difficult to study

because it can easily be confused with the Good Genes Hypothesis; researchers may be uncertain whether good genes are being pursued vs. compatible genes. To avoid confusion one way researchers could study the Genetic Diversity Hypothesis is to determine if interest in mating exists in the absence of attractive mates. In terms of females short-term mating, if interest in mating does exist in the absence of attractive mates this suggests that women actively pursue compatible genes as well as good genes, from potential mates. The current research also predicts that in the absence of attractive males women are likely to still express interest in unattractive short-term mates and do so as the probability of conception (ovulation) increases.

This paper will investigate how women's age affects women's short-term mating strategy when reproduction is cognitively salient. Because younger women are more reproductively valuable than their older counterparts and therefore more attractive to potential short-term mates it is expected that younger women will show greater interest in short-term mating and be less choosy in picking potential short-term mates across the ovulation cycle compared to older women. The current research will also manipulate male attractiveness to study both the Good Genes Hypothesis and the Genetic Diversity Hypothesis in the context of female short-term mating.

Experiment 1

The current study will investigate how women's age affects women's interest short-term mates when reproduction is cognitively salient by manipulating women's thoughts about potential offspring. Essentially, if in order to improve offspring survival women pursue attractive men, do younger women express differing interest in short-term mates compared to their older counterparts? If so, does manipulating women's thought about potential offspring affect interest in short-terms mates?

Participants were asked to rate their interest in attractive hypothetical short-term mates, shown with images of babies or shown without images of babies, in relation to their likelihood to conceive, as assessed by days away from ovulation. Congruent with research (e.g. Shackelford, et al., 2003) that suggest women's age affects women's willingness to participate in short-term mating, it was hypothesized that when shown with images of babies, younger women would express greater interest in short-term mates than older women, and do so as conception probability increased. In addition, to explore the possibility that such sexual interest is moderated by women's reproductive success, the relationship between women's reproductive value and conception probability was examined in the context of women's mate status.

Method

Procedure

An invitation (see Appendix A) for women to participate in the study was posted on several social networking sites for women on the internet. The social networking sites are places where women go to connect, share advice, find life tools and engage in conversations about pregnancy and parenting, health, food, entertainment, home and garden and beauty and style. The study was accessed through a link and women were randomly assigned to either the baby present condition or the baby not present condition. Pregnant women were discouraged from participating in the study as the ovulation cycle played an important role in the study. Once a prospective participant clicked the link she was presented with an informed consent form (see Appendix B). Once the women agreed to the terms of the consent form they were allowed to proceed with the experiment (Appendices C, D, E, H, I).

The experimental manipulation of short-term mate attractiveness was accomplished in a few tasks involving sexual fantasy with a desirable short-term mate. Participants were first asked questions about qualities in men they found attractive. They were asked to rate on scale of 1 to 5 (1=Completely Does Not Describe; 5=Completely Describes) adjectives (e.g. confident, poor, attractive) in relation to their ideal man. Participants were then asked to imagine themselves on a romantic first date with their ideal man and answer a series of questions about their date (e.g. time of day, activities, expectations) (Appendix C).

Next, in order to help women envision their perfect date the women were shown photos of attractive men and asked to choose one they found most attractive as their ideal

date. The pictures were headshots obtained from the Yahoo! Personals nationwide excluding New York to reduce the likelihood participants could be familiar with the men. Searches were done in major cities and the first 10 pictures that appeared from each city were automatically selected to be judged. Using a scale from 1 (highly unattractive) to 10 (highly attractive) an independent focus group rated over 300 pictures. For this study only pictures rating 9 or 10 were included. In the baby present condition among the photos of attractive men were pictures of babies (4 total) (see Appendix E). In the baby not present condition the women were again shown photos of attractive men but instead of baby photos there were pictures of a set of boots, a pair of sunglasses, a dresser and a set of office chairs (see Appendix D).

Participants were asked to single out the one man they found most attractive. Women were then asked to rate (on a 5 point scale) how likely they would be to kiss on the cheek, tongue kiss, allow him to touch breasts or vaginal area and have a one night stand with the hypothetical date. Before starting this section the participants were warned to expect questions of a highly personal nature. They were reminded that this is a hypothetical date, but they should try to answer as honestly as possible (see Appendix H). Participants were then asked to indicate their sexual orientation, frequency of sexual intercourse, marital status, pregnancy status, date of first day of last period and demographic information (e.g. year born) (see Appendix I), thanked for their participation and given a short debriefing (see Appendix J). The questionnaire was designed to quickly and unobtrusively collect information from participants about their sexual interest in potential short-term mates. The study took approximately twenty minutes to complete. No compensation was offered for participating in the study.

Participants

177 women participated in the study. Responses to questions were voluntary therefore not all participants answered every question. Almost half the women who provided their age were between age 18 and 29 and half between age 30 and 66 (56.2% and 43.8% respectively; n=160; mean=29.7). One hundred and three (61.7%; n=167) women reported having at least one child while sixty-four (38.3%; n=167) women reported having no children. One hundred and twenty-five women ages 18 and 54 provided information that could be used to determine the day of their cycle at the time of the experiment. Eighteen (14.4%; n=125) women had a high probability of ovulation and one hundred and seven (85.6%) had a low probability of ovulation. Fifty-two (29.4%; n=177) were either pregnant at the time of the study or did not provide information to determine their cycle. Women were divided into two categories by mate status—unmated or mated. Women who were not in a long-term relationship were categorized as unmated (26.9%); this included women who were never married, married but separated, divorced or widowed. Women were categorized as mated (73.1%) if they had a long-term partner. This also included women who were never married, married, married but separated, divorced, or widowed with long-term partners.

Results and Discussion

A series of linear regression analyses (see Table 1) were performed to determine whether younger women (aged 18 to 29 years) are more likely to express sexual interest in attractive short-term mates than compared to older women (aged 30 to 66 years) and do so when shown images of babies (reproduction salience), as the probability of conception (ovulation) increases taking into consideration women's mate status. To accomplish this "interest in kissing" scores were regressed on ovulation status (days away from ovulation), main effects for Baby Presence (1=not present, 2=present), Mate Status (1=mated, 2=unmated) and Age (1=younger, 2=older), the two-way interactions, and the three-way interactions. Of the four interest questions only the kissing and tongue kissing variables showed enough variability to allow for tests of the experimental hypotheses. These two variables were combined into one variable "interest in kissing" (mean=3.44, median = 3.50, *SD*= 1.03, α =0.57) by taking the mean. As implied by research suggesting that the ovulation cycle guides women's interest in sexual partners in order to maximize the probability of becoming pregnant (e.g. Pillsworth, Haselton & Buss, 2004), results indicate that conception probability not only predicts sexual interest but does so as a function of reproduction salience.

Hayes & Dennerstein (2005) suggested that women's interest in sexual activity declines with age. Results suggest that women's age did not affect ovulation-related sexual interest, as indicated by a non significant Women's Age X Ovulation interaction, β=-0.124, p=0.19. As seen in Figure 1, there was no difference in sexual interest as days away from ovulation decreased among older women, β=-0.223, p=0.13, and younger

women, β=-0.103, p=0.42. In addition, there was no significant difference in women by age as indicated by a non significant main effect for age, β=-0.050, p=0.53.

The current study suggested that getting women to think about potential offspring would affect women's interest in potential short-term mates. Therefore, it is important to examine whether sexual interest as a function of ovulation and women's age is moderated by reproduction salience (thoughts about potential offspring). The Women's Age X Ovulation interaction was not moderated by Baby Presence (β=-0.141, p=0.13), as seen in Figure 2, and the Baby Presence X Ovulation interaction was significant, β=-0.207, p=0.02. There was no difference in sexual interest, regardless of women's age, among women shown images of babies, β=-0.203, p=0.13, or, women shown decoys, β=-0.070, p=0.585. As indicated by simple slopes analysis, among younger women, viewing images of babies did not affect sexual interest as days to ovulation, β=-0.278, p=0.14. Nor did viewing images of babies affect sexual interest among older women, β=-0.256, p=0.21.

Given that mate status and chronological age are principally independent if generally correlated indices of reproductive status, it is also interesting to examine whether women's mate status moderates effects of reproduction salience and ovulation on sexual interest. A Women's Mate Status X Baby Presence X Ovulation Status interaction was significant, β=-0.221, p=0.02, as depicted in Figure 3, and a Mate Status X Ovulation interaction was marginally significant, β=-0.163, p=0.08. Specifically, however, there was no difference in sexual interest in the short-term mate as conception probability increased whether women were mated, β=-0.112, p=0.31, or unmated, β=-0.195, p=0.26. As indicated by simple slopes analysis, there was also no difference in sexual interest in the short-term mate as conception probability increased among unmated

women who were not shown images of babies, β=-0.032, p=0.84, and mated women who were not shown images of babies, β=-0.259, p=0.27. There was also no difference in sexual interest in the short-term mate as conception probability increased among unmated women who were shown images of babies, β=-0.219, p=0.16, and mated women who were shown images of babies, β=-0.519, p=0.555. A main effect for mate status was non significant, β=-0.049, p=0.53, however, a main effect for Reproduction Salience was significant, β=-0.199, p=0.01.

These findings do not show that interest in the short-term mate was predicted by women's age and ovulation status as demonstrated by a non significant Women's Age X Ovulation interaction. This may be attributable to the lack of variation in male attractiveness in this experiment. As all the images of potential mates were of attractive men, there may not have been enough variation to detect a change in sexual interest as the probability of conception increased. However, this study did demonstrate that interest in the short-term mate was indeed predicted by manipulating women's thoughts about potential offspring demonstrated by a marginally significant Women's Age X Baby Presence X Ovulation, a significant Mate Status X Baby Presence X Ovulation interaction and a significant Baby Presence X Ovulation interaction. This study did not find that interest in the short-term mate was predicted by Mate Status as demonstrated by a marginally significant Mate Status X Ovulation interaction and a non significant mate status main effect. Although significant differences in sexual interest were not found between unmated and mated women these results do support previous studies (e.g. Pillsworth & Haselton, 2006) that suggest mated women will seek attractive males as the

probability of conception increases which could lead to the production of offspring of better genetic quality than offspring produced with a long-term mate.

Experiment 2

The current study was designed to test both the Good Genes Hypothesis and the Genetic Diversity Hypothesis in the context of female short-term mating. In other words, to improve offspring survival do women pursue only attractive mates or do they in the absence of attractive males attempt to diversify their offspring, or both. This study tests whether women are more likely to express greater interest in attractive short-term mates than unattractive short-term mates and do so as the probability of conception (ovulation) increases. As in Experiment 1, participants were asked to rate their interest in either an attractive or unattractive hypothetical short-term mate in relation to their likelihood to conceive, as assessed by days away from ovulation. Congruent with implications that short-term mating interest is determined by reproductive success, it was hypothesized that women would express greater interest in attractive than unattractive short-term mates, and do so as conception probability increased. In addition, to explore the possibility that such sexual interest is moderated by short-term mate attractiveness and conception probability was examined in the context of women's mate status and age.

Method

Procedure

Experiment 2 was promoted and accessed identically to Experiment 1 and women were randomly assigned to either the attractive male condition or the unattractive male condition. (see Appendix A). The study procedure was the same as in Experiment 1 with some minor differences. Women were either assigned to the attractive or unattractive male condition. In the attractive condition participants only viewed images of attractive men (two sets of twelve; 24 photos total). In the unattractive condition participants only viewed images of unattractive men (two sets of twelve; 24 photos total) (see Appendics F and G).

The questionnaire was designed to quickly and unobtrusively collect information from participants about their sexual interest in potential short-term mates.

Participants

175 women participated in the study. Responses to questions were voluntary and some participants did not answer every question. Approximately half the women who provided their age were between age 18 and 29 and half age 30-66 (50.6% and 49.4% respectively; n=164; mean=31.64). One hundred and nine (63.0%; n=173) women reported having at least one child while sixty-four (37.0%; n=173) women reported having no children. One hundred and twenty-nine women ages 18 and 50 provided information that could be used to determine the day of their cycle at the time of the experiment. Forty six women (33.3%; n=128) were either pregnant at the time of the study or did not provide information to determine their cycle; these women were

excluded from the analysis. Approximately 27.6% of the women were unmated and 67.4% mated.

Results and Discussion

As in Experiment 1, of the four interest questions only the kissing and tongue kissing variables showed enough variability to allow for tests of the experimental hypotheses. These two variables were combined into one variable "interest in kissing" (mean= 3.04, median = 3.00, SD =1.06, $\alpha = 0.42$) by taking the mean. A series of linear regression analyses (see Table 2) were performed to determine whether women are more likely to express sexual interest in an attractive but not unattractive short-term mate and do so as the probability of conception (ovulation) increased taking in to consideration women's mate status and age. To accomplish this "interest in kissing" scores were regressed on ovulation status (days away from ovulation), main effects for Male Attractiveness (1=attractive, 2=unattractive), Mate Status (1=mated, 2=unmated) and age (1=younger, 2=older), two-way interactions, and three-way interactions. As implied by theories emphasizing female reproductive strategies (e.g. SST), results indicate that conception probability not only predicts sexual interest in a short-term mate but does so as a function of the reproductive quality of the short-term mate.

The good genes and diversity hypotheses imply that sexual interest should not only increase as the probability of conception increases but should do so especially under conditions that enhances offspring survival or quality (e.g. availability of attractive potential mates). Results indicated that indeed mate attractiveness affected ovulation-related sexual interest, as indicated by a significant Attractiveness X Ovulation interaction, β=-0.179, p =0.04. As seen in Figure 4, although sexual interest increased as days away from ovulation decreased among women who viewed an attractive mate, β=-0.239, p=0.06, it did not among women who viewed an unattractive mate, β=-0.064,

p=0.61. In addition, women generally expressed more sexual interest in attractive than unattractive mates, as indicated by a marginally significant main effect of attractiveness, β=-0.137, p=0.07, and more interest the closer they were to ovulation, as indicated by a main effect of ovulation, β=-0.149, p=0.09.

Previous researchers (e.g. Pillworth and Haselton, 2006) suggest that because women may not be able to acquire men who are both able to provide resources and have good genes, women must sometimes make tradeoffs. One strategy women might pursue is to attract a good provider as a long-term mate and acquire good genes from an affair partner through a short-term mating (Smith, 1984). Therefore, it is also important to examine whether sexual interest as a function of ovulation and short-term mate attractiveness is moderated by long-term mate status. Although the Attractiveness X Ovulation interaction was not significantly moderated by Mate Status, β=-0.090, p=0.31, results depicted in Figure 5 provide suggestive support for the hypothesis. Specifically, although sexual interest increased with conception probability regardless of mate attractiveness among unmated women, β=-0.267, p=0.10, mated women were more choosy, β=-0.127, p=0.24. Specifically, the sexual interest of mated women was greater as days to ovulation decreased if the short-term mate was attractive, β=-0.293, p=0.07, but not if the short-term mate was unattractive, β=-0.013, p=0.93. The Mate Status X Ovulation interaction was nonsignificant, β=-0.036, p=0.69).

Given that mate status and chronological age are principally independent if generally correlated indices of reproductive status, it is also interesting to examine whether women's age moderates effects of attractiveness and ovulation on sexual interest. A Male Attractiveness X Age X Ovulation interaction was nonsignificant, β=-

1.102, p=0.26, as was an Age X Ovulation interaction, β=-0.042, p=0.64. However, as shown in Figure 6, although conception probability predicted sexual interest among younger women, it did not among older women, as indicated by a significant Age X Attractiveness interaction, β = -0.198, p =0.01. As indicated by simple slopes analysis, younger women expressed more sexual interest in the short-term mate as conception probability increased whether he was attractive, β =-0.313, p =0.08, or unattractive, β =-0.321, p=0.07. In contrast, older women's sexual interest was not predicted by conception probability either for the attractive mate, β =-0.031, p=0.87 or the unattractive mate, β=0.143, p=0.46. Main effects for mate status and age were nonsignificant ((β=-0.064, p=0.41; β=0.051, p=0.52; respectively).

These findings show that interest in the short-term mate was indeed predicted by male attractiveness and ovulation status as demonstrated by the significant Male Attractiveness X Ovulation interaction. Women were generally more interested in attractive men than unattractive men; especially the closer they were to ovulation. Interestingly, similar to Pillsworth et al. 2006 who found women with less sexually attractive partners had increased interest in extra-pair desires, particularly at fertile phases of ovulation, this study found that among women in the attractive condition mated women expressed greater interest in short-term mates than non-mated women the closer they were to ovulation. This may suggest that mated women are sensitive to the presence of attractive males with whom they can have short-term mateships with and produce quality offspring—offspring that may potentially be superior to offspring produced with their long-term mates. This study was also demonstrated the effect women's age has on women's interest in short-term mates. Younger women showed greater interest in short-

term mates than their older counterparts the closer they were to ovulation even in the presence of unattractive males! This suggests that younger women are indeed sensitive to their high reproductive value and are therefore may less choosy than older women. These findings may also suggest that women engage in short-term sexual encounters in order to diversify their offspring, thereby creating healthy offspring.

General Discussion

Some may argue that the results found may be artifacts of the social networking sites used in the experiments; that the site used draw in particular types of women (e.g. stay-at-home mothers) and if other sites were used there would be different results. However, it is important to note that unlike social context theories evolutionary mating theories are not based on contemporary social cultural or historical milieu, but rather on changes in inherited traits through successive generations that give organisms reproductive advantage. Consequently, it is expected that attempts to replicate these experiments would have similar results. This does not imply that social context theories lack credibility or are not useful in understanding human mating. It is the author's position that both perspectives compliment one another and add to the greater understanding of human sexual behavior.

Although several studies have reported on female short-mating strategies, this research is important for a variety of reasons. The current research adds to the pool evidence that suggests selection may have guided women's mating strategy to increase the probability of conceiving and improve offspring's chances of survival. This research successfully demonstrated that women's sexual interest in short-term mates varied in response to the attractiveness of potential short-term mates, reproduction salience, women's mate status and women's reproductive value as the probability of conception increases.

This study is also important because of the inclusion of young women. As Hayes and Dennerstein (2005) point out, most studies on investigating sexual function do not include women under the age of 35 years. Although, the current research did not find

strong evidence that younger and older women differ in sexual interest across the ovulation cycle, there was evidence to suggest that the closer younger women were to ovulation the more interested they were in potential short-term mates, compared to older women. This would suggest that younger women want to capitalize on their high reproductive value. That younger women in Experiment 2 were demonstrated this variation in the unattractive male condition may suggest that higher reproductive value affords younger women the luxury of being less choosy than their older counterparts. Considering the lack of research on sexual interest in young women, further still needs to be done to understand how sexual interest in women changes as women age.

The current research successfully increased manipulated reproduction salience, in a way never previously documented (Experiment 1). The effect of presenting some women with images of babies and other with images of decoys was remarkable. Women who were presented with images of babies were particularly interested in short-term mates around the time of ovulation and less interested the farther away they were from ovulation. Interest in short-term mates did not vary among women who were not shown images of babies as days away from ovulation increased. Presenting women with images of babies had the desired effect of having women implicitly take note of their reproductive value.

Across the two experiments, this research demonstrated that as the probability of ovulation increased interest in the short-term mate among mated women increased suggesting that mated women may engage in short-term mating for many of the reasons (e.g. better genes hypothesis) proposed by Symons (1979). These findings are counter to what society expects of married women and reinforce previous suggestions that that

humans have an ancestral history of some casual sex and marital infidelity (Buss, 1996). Further research should further explore nuances of relationship status.

This is the first study to test for the genetic diversity hypothesis in humans. Although it is generally expected that women are interested in attractive mates this study was able to show an increase in sexual interest in potential short-term mates the closer young women were to ovulation in the unattractive male condition (Experiment 2), which may suggest not only are women looking for good genes to enhance offspring survival, women are looking for compatible genes. This corroborates research by Foerster et al. (2003) on non human species that females commonly mate with multiple males and produce offspring of higher genetic quality.

The experiments had several limitations. As the study was conducted through the internet to maintain anonymity there was no way to verify any of the information provided by participants. The study depended on women around the country to provide accurate information about their ovulation status and mate status as well as their age and other information and therefore responses were subject to human error. Also, the studies did not exclude women based on birth control use (which can alter women's ovulation cycles as in the case of birth control pills) or sexual orientation. Another limitation was the difficulty the study had recruiting women who were ovulating. As ovulation occurs in a relatively small window of time many of the women who participated were not close to ovulation.

The relationship between availability and attractiveness of potential short-term mates, women's mate status and women's reproductive value as the probability of

conception increases and interest in sexual partners needs to be investigated further. Is the effect the same for interest in long-term mates?

Table 1

Linear Regression Analyses of Women's Interest in Kissing Experiment 1

Variable	Interest in Kissing					
	N	B	*SE*	*b*	*t*	p
Baby Presence	164	-0.409	0.158	-0.199	-2.589	**0.01**
Age	156	-0.006	0.009	-0.050	-0.623	0.53
Ovulation	121	-0.032	0.022	-0.132	-1.451	0.15
Mate Status	163	-0.114	0.182	0.049	-0.624	0.53
Baby Presence X Ovulation	121	-0.028	0.012	-0.207	-2.304	**0.02**
Age X Ovulation	115	-0.017	0.013	-0.124	-1.328	0.19
Mate Status X Ovulation	120	0.024	0.013	-0.163	-1.798	0.08
Baby Presence X Age X Ovulation	115	0.000	0.000	-0.149	-1.606	0.11
Baby Presence X Mate Status X Ovulation	120	-0.020	0.008	-0.221	-2.463	**0.02**

p<0.05

Table 2

Linear Regression Analyses of Women's Interest in Kissing Experiment 2

Variable	Interest in Kissing					
	N	B	*SE*	*b*	*t*	p
Male Attractiveness	171	-0.291	0.162	-0.137	-1.797	0.07
Age	162	-0.011	0.009	-0.091	-1.157	0.25
Ovulation	125	-0.044	0.026	-0.149	-1.698	0.09
Mate Status	170	0.182	0.180	0.078	1.015	0.31
Male Attractiveness X Ovulation	129	-0.028	0.014	-0.179	-2.051	**0.04**
Age X Ovulation	124	-0.008	0.017	-0.042	-0.464	0.64
Mate Status X Ovulation	128	-0.006	0.016	-0.036	-0.403	0.69
Male Attractiveness X Age X Ovulation	124	0.000	0.000	-0.194	-2.185	**0.03**
Male Attractiveness X Mate Status X Ovulation	123	0.000	0.001	-0.033	-0.363	0.72

p<0.05

Figure 1: Women's interest in kissing potential short-term mates as a function of women's age and ovulation status.

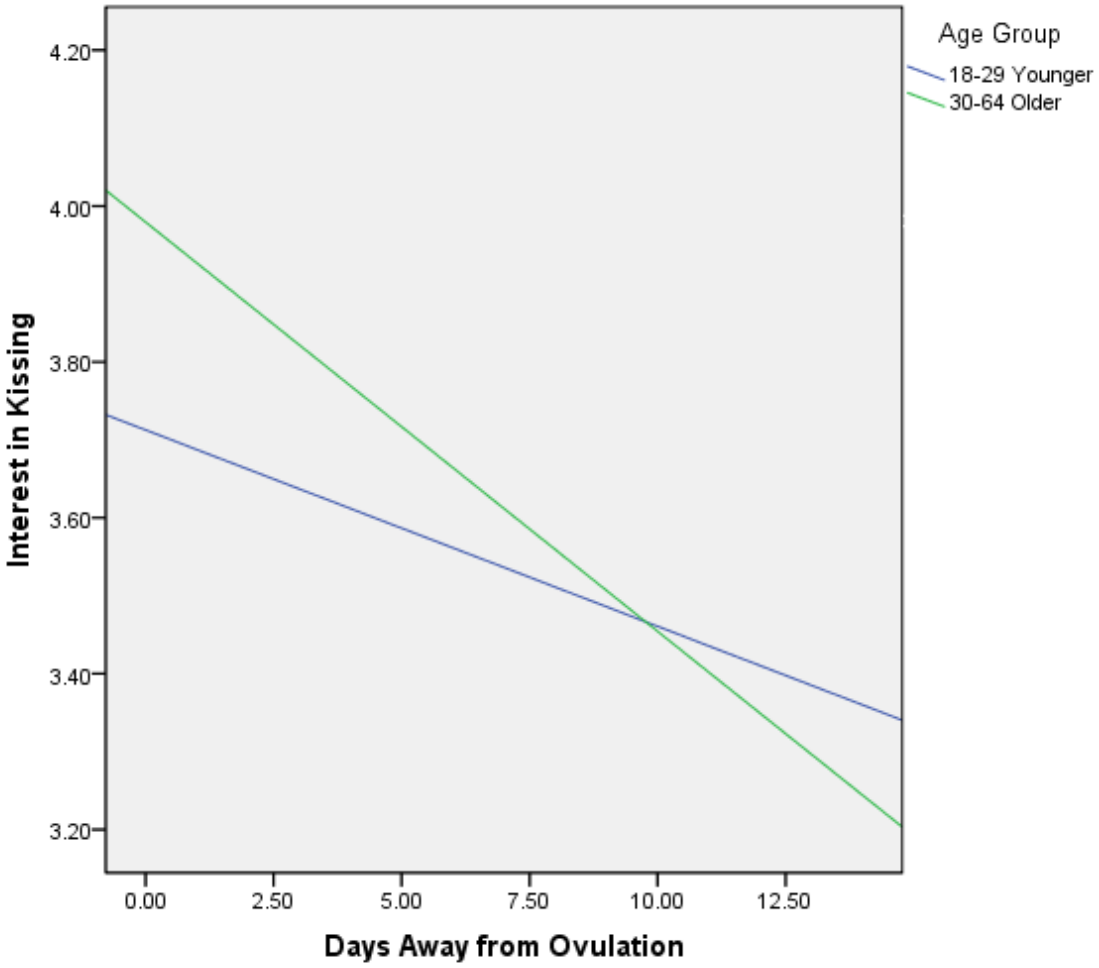


Figure 2: Women's interest in kissing potential short-term mates as a function of women's age, baby presence and ovulation status.

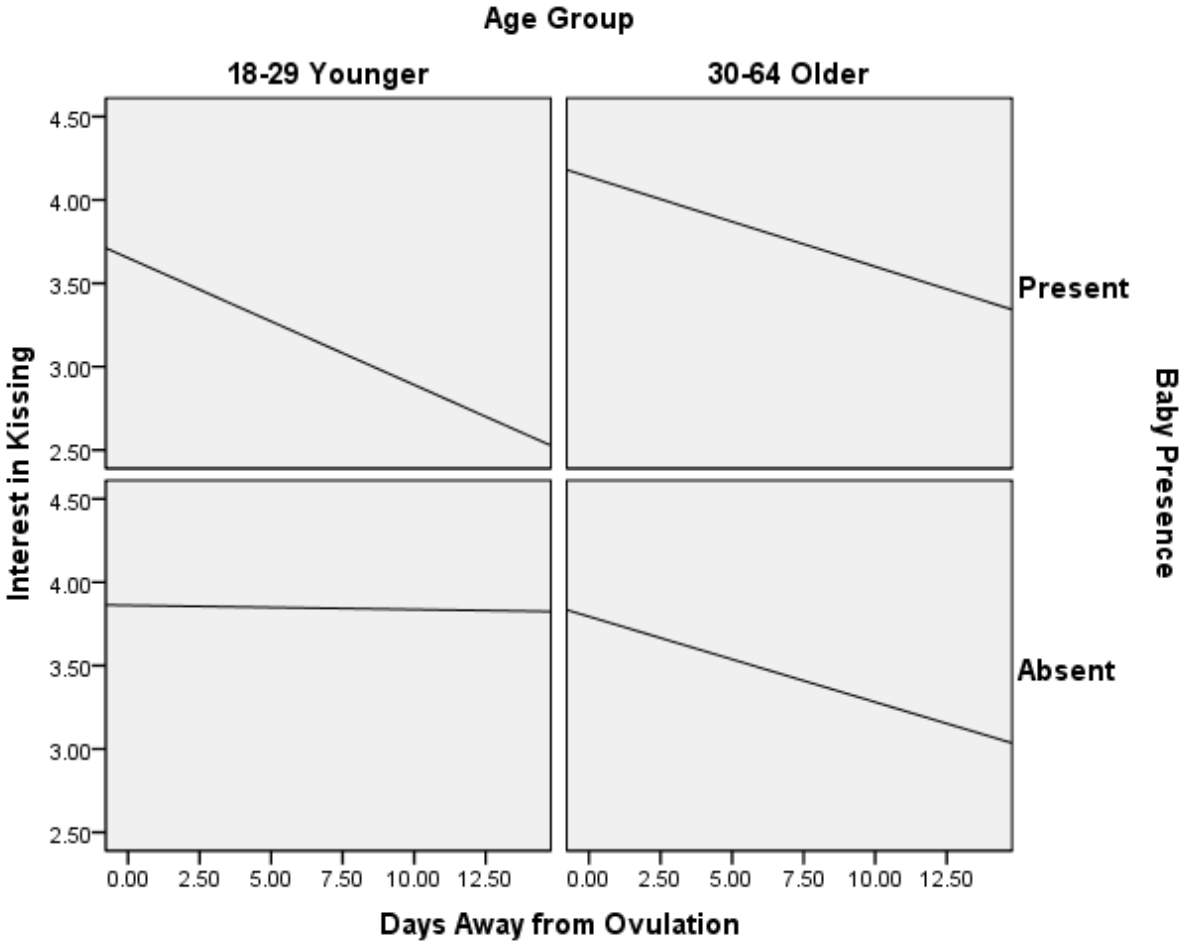


Figure 3: Women's interest in kissing potential short-term mates as a function of women's mate status, baby presence and ovulation status.

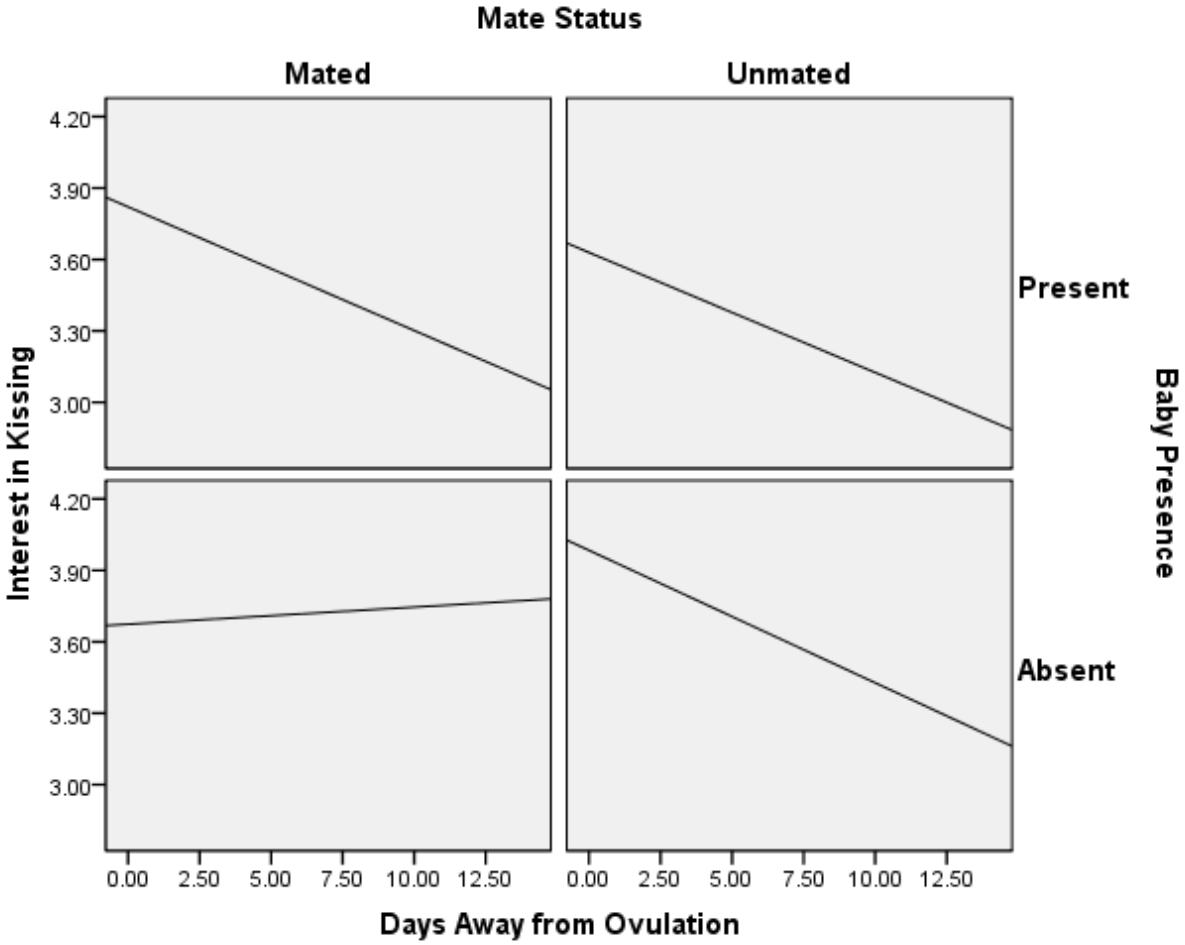


Figure 4: Women's interest in kissing potential short-term mates as a function of male attractiveness and ovulation status.

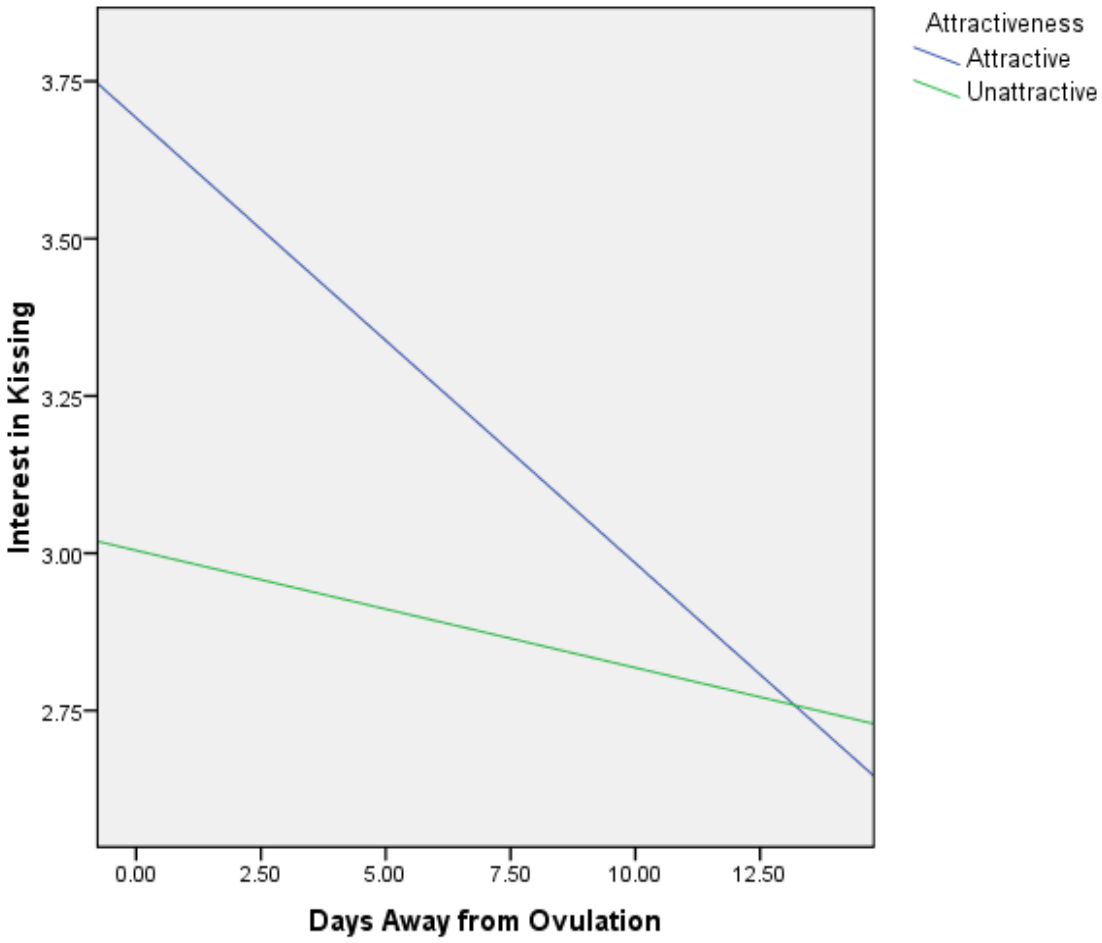


Figure 5: Women's interest in kissing potential short-term mates as a function of male attractiveness, women's mate status and ovulation.

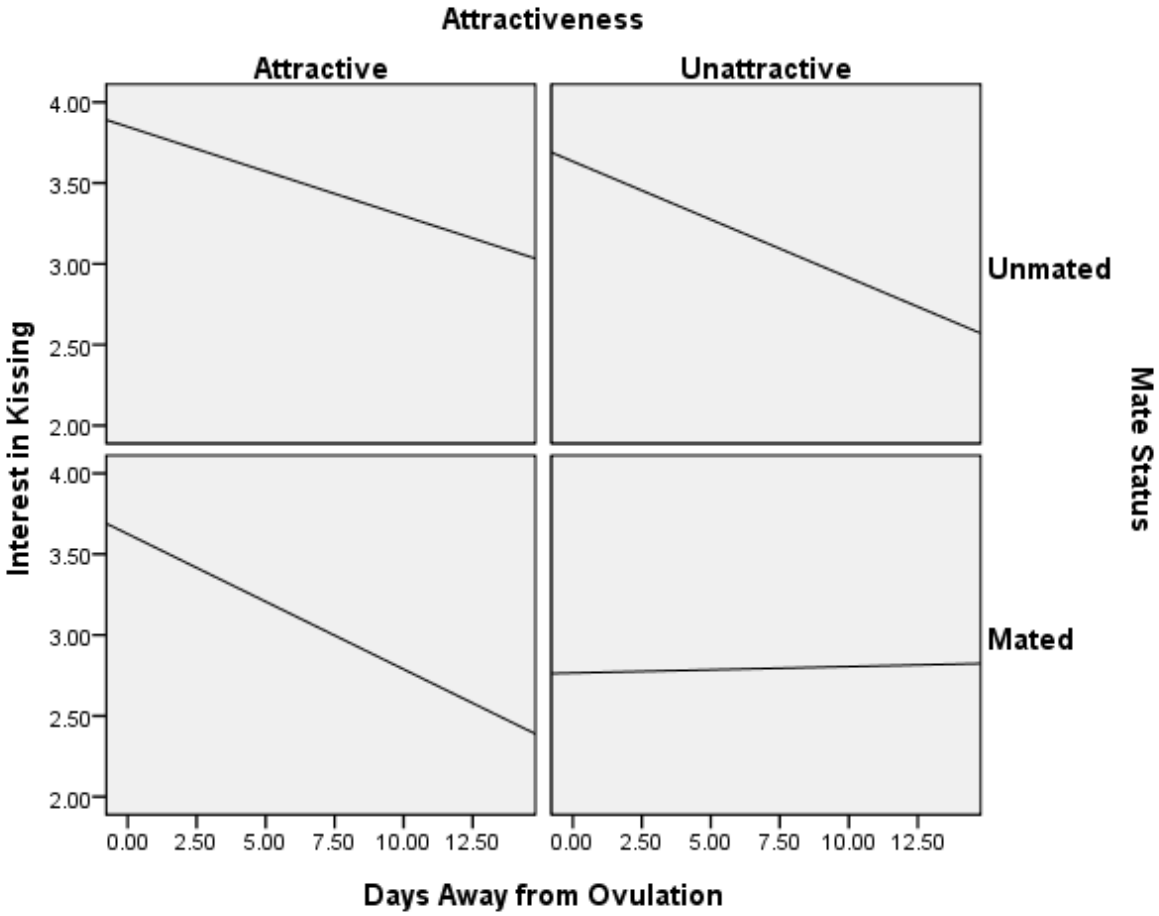
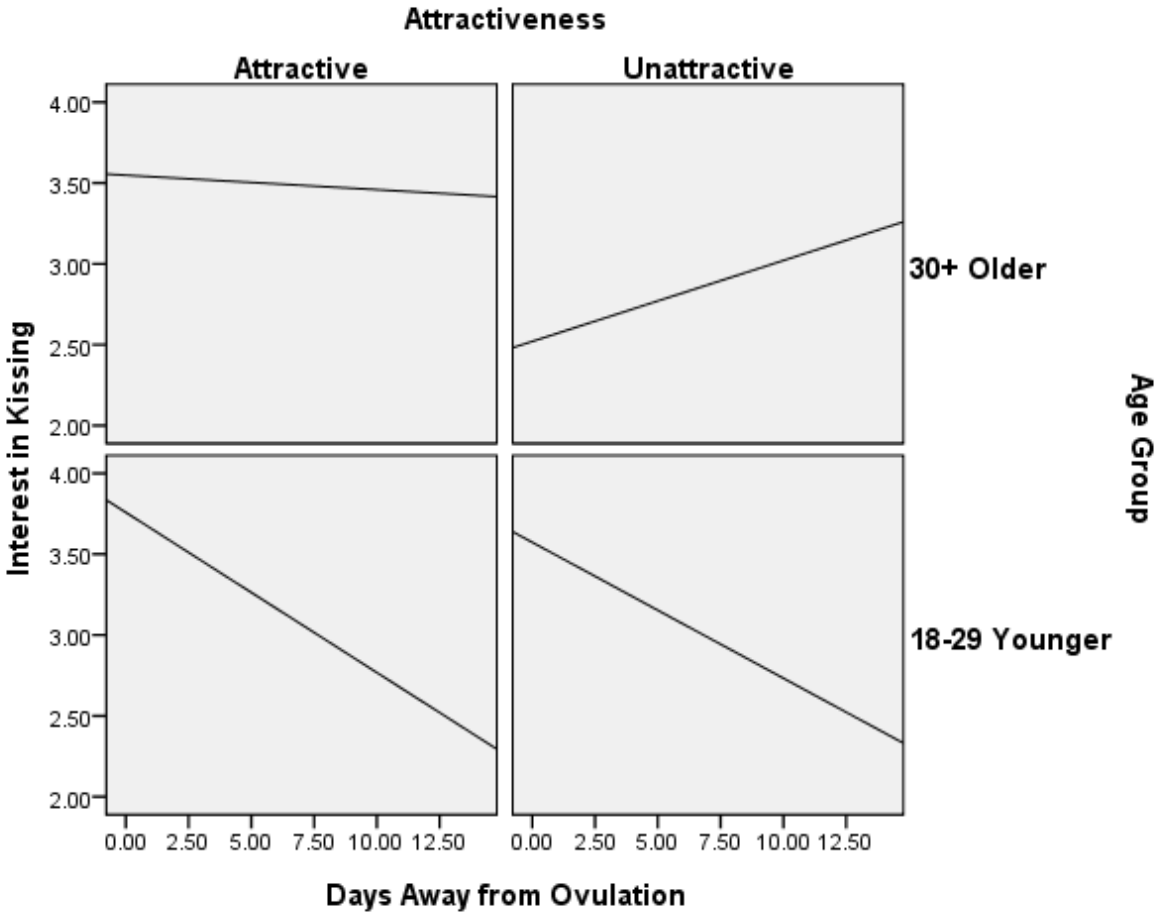


Figure 6: Women's interest in kissing potential short-term mates as a function of male attractiveness, women's age and ovulation.



Appendix A
Survey Invite

Subject: Please participate in my survey

Ladies,

If you are 18 years old or older and you are NOT pregnant you are invited to participate in my survey about human behavior. I need women of all ages, ethnicities and backgrounds to take part.

The survey will take approximately 20 minutes to complete. Please respond honestly and take your time.

Thank you,

Allison

Appendix B
Informed Consent

Please read thoroughly before beginning the experiment.

This is a study about human behavior. You will complete a questionnaire about the type of person you are attracted to and respond to hypothetical questions around a romantic encounter.

Please be aware of the following:

1. The only known risk associated with this study is the possibility that some women—because of past experiences or religious beliefs—may object to the sensitive nature of the questions which include questions about sexual behavior and sexual fantasy. Participation in this study would not be appropriate if you are concerned that this could evoke past trauma or bother you in any way.

2. Your responses will be kept confidential and your name will not be associated with any data that you provide.

3. You are free to decline to answer anything that may make you uncomfortable.

4. You may terminate your participation at any point without penalty.

5. You may request a copy of the consent form for your records.

If you have questions about your rights in this study or would like to request a copy of the consent form you can contact:

Allison Pulizzi, Experimenter, 347-224-1258

Professor Curtis Hardin, Advisor, 718-951-5000 extension 6018,

Professor David Balk, IRB Chair, 718-951-5600 extension 4197.

If your participation in this study does evoke emotional distress and you would like someone to talk to, call the National Institute of Mental Health at 866-615-6464 or go to nimh.nih.gov to learn about mental health resources in your area.

- ☐ Check here that you agree to the terms of this study and understand your rights as a participant.

Appendix C
Introductory Questions

This study interested in the type of man you find attractive. Please answer the following questions as honestly as possible. All responses are confidential.

Please indicate which of the following age ranges most appropriately describes your ideal man:

- ☐ 18-20
- ☐ 21-25
- ☐ 26-30
- ☐ 31-35
- ☐ 36-40
- ☐ 41-45
- ☐ 46+

Which job category most fits with the type of work your ideal man would do for a living? One response only.

- ☐ Administration
- ☐ Advertising, marketing & PR
- ☐ Animal & plant resources
- ☐ Arts, design & crafts
- ☐ Construction & property management
- ☐ Counseling, social & guidance services
- ☐ Economist, statisticians etc
- ☐ Education, teaching & lecturing
- ☐ Engineering
- ☐ Finance, insurance and pensions & actuarial work
- ☐ Health care
- ☐ Hospitality
- ☐ Human resources & employment
- ☐ Information services
- ☐ Information technology
- ☐ Law enforcement & public protection
- ☐ Legal services
- ☐ Leisure, sport & tourism
- ☐ Logistics & transport
- ☐ Management consultancy
- ☐ Manufacturing & processing
- ☐ Natural resources & the environment
- ☐ Publishing, media & performing arts
- ☐ Sales, retail & buying
- ☐ Scientific services
- ☐ Other (Please specify_____)

Using the following grid mark the rating that best describes your ideal man on the characteristics listed. A rating of 1 means the characteristic completely does NOT describe your ideal man. A rating of 5 means the characteristic completely describes your ideal man.

	Completely Does Not Describe				Completely Describes
	1	2	3	4	5
Confident					
Dishonest					
Energetic					
Poor					
Wealthy					
Lazy					
Trustworthy					
Insecure					
Intelligent					
Plain					
Closeminded					
Cheap					
Protective					
Boring					
Successful					
Attractive					

Unproductive					
Humorous					
Inattentive					
Generous					
Antisocial					
Tolerant					
Naive					
	1	2	3	4	5
	Completely Does Not Describe				Completely Describes

Now take a moment to imagine yourself on a romantic first date with you're the man you selected. Once you have an image in your mind about this date, please answer the following questions to help us understand how different women envision romantic encounters. It is important that you answer as honestly as possible. Remember all responses are confidential.

Around what time of day would your date begin? One response only.

- ☐ 12:00 AM to 4:00 AM
- ☐ 4:00 AM to 8:00 AM
- ☐ 8:00 AM to 12:00 PM
- ☐ 12:00 PM to 4:00 PM
- ☐ 4:00 PM to 8:00 PM
- ☐ 8:00 PM to 12:00 AM

What would you like to do on your date? Check all that apply.

- ☐ Stay at home
- ☐ Go to church/temple/mosque/other religious establishment
- ☐ Go to dinner
- ☐ Go to the movies
- ☐ Go to a concert
- ☐ Go to an outdoor event (e.g. street fair)
- ☐ Go to a museum
- ☐ Go sightseeing
- ☐ Go to a play
- ☐ Go horseback riding
- ☐ Go to a hotel
- ☐ Go swimming
- ☐ Go hiking
- ☐ Go bowling
- ☐ Go to a sporting event
- ☐ Take a walk
- ☐ Go dancing
- ☐ Talk
- ☐ Have coffee/tea
- ☐ Go to a bar
- ☐ Go to the library
- ☐ Arts and crafts
- ☐ Other (please specify_____)

How would you dress for this date? One response only.

- ☐ Very sexy—showing lots of skin and/or wearing form-fitting clothing
- ☐ Somewhat sexy—showing some skin or form, but not revealing too much
- ☐ Neither sexy nor dull—casual but stylish

- ☐ Somewhat dull—casual; not very stylish
- ☐ Very dull—not at all stylish; boring

How long would this date last? One response only.

- ☐ 2 hours or less
- ☐ 2 to 4 hours
- ☐ 4 to 6 hours
- ☐ 6 to 8 hours
- ☐ 8 hours or more

How much of a good time would you expect to have on this date?

Extremely Bad			Good		Extremely
1	2	3	4	5	6

On the next page you find photos of men of varying ages and ethnicities. Take a few minutes to carefully study each photo, and then circle the individual you find most attractive. Once you have made a selection move on to the next section.

Appendix D
Experiment 1
Baby Not Present Condition
Set 1





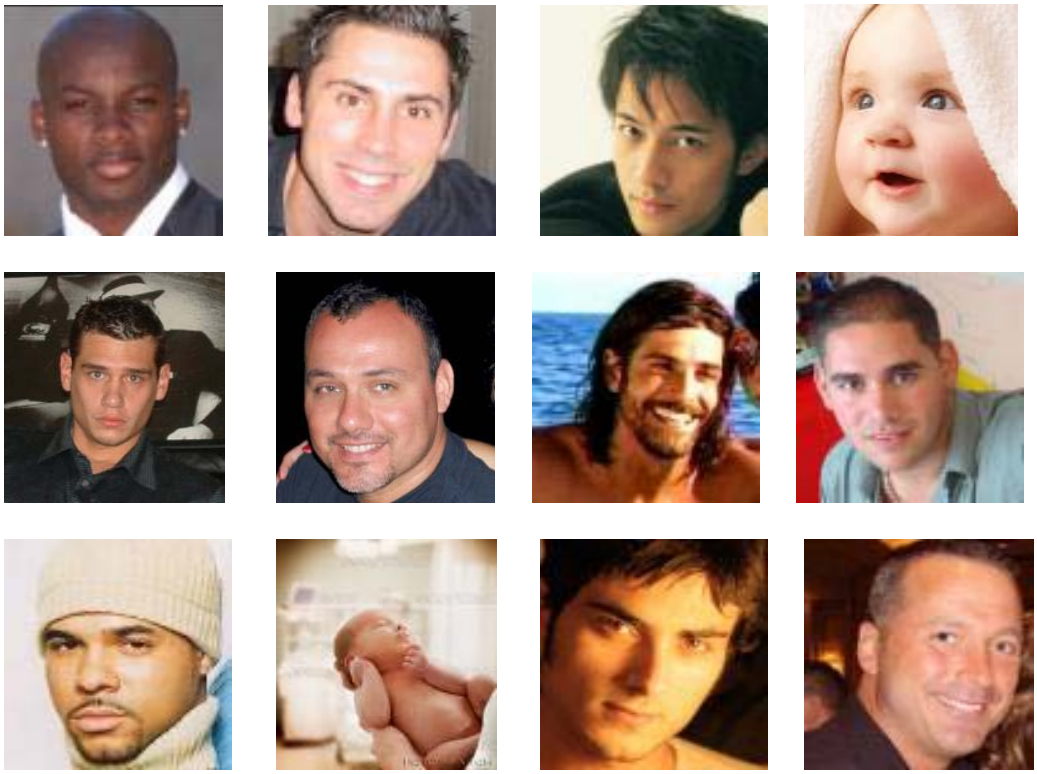




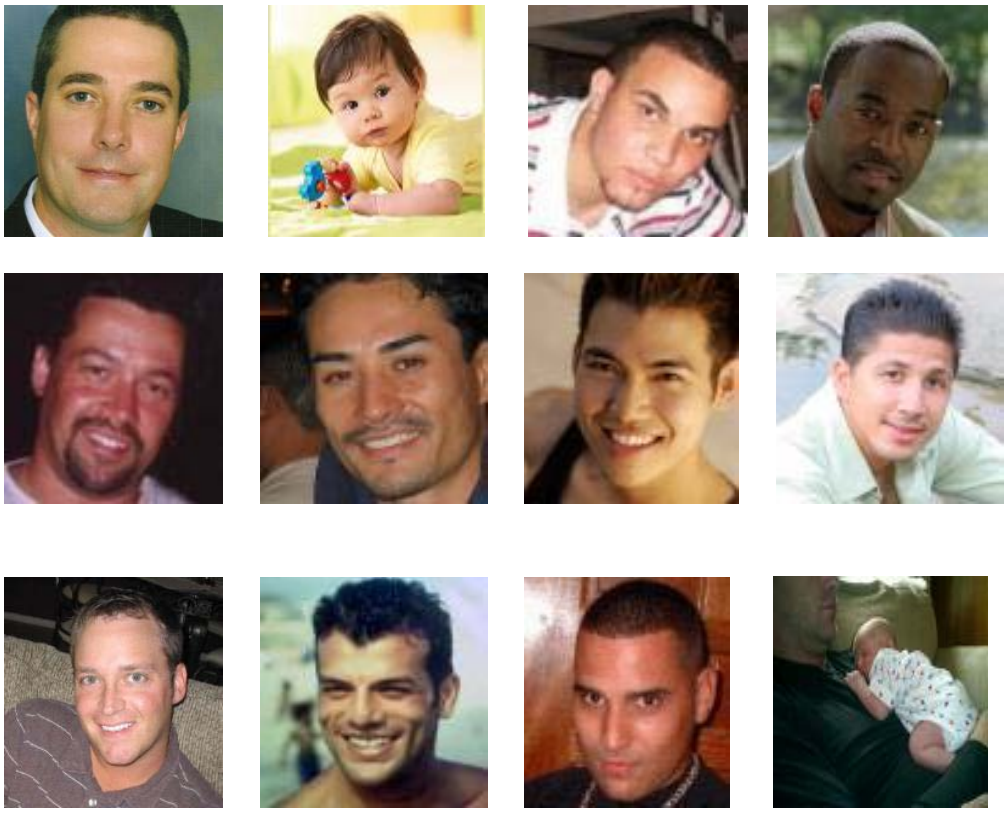



Experiment 1
Baby Not Present Condition
Set 2

Appendix E
Experiment 1
Baby Present Condition
Set 1



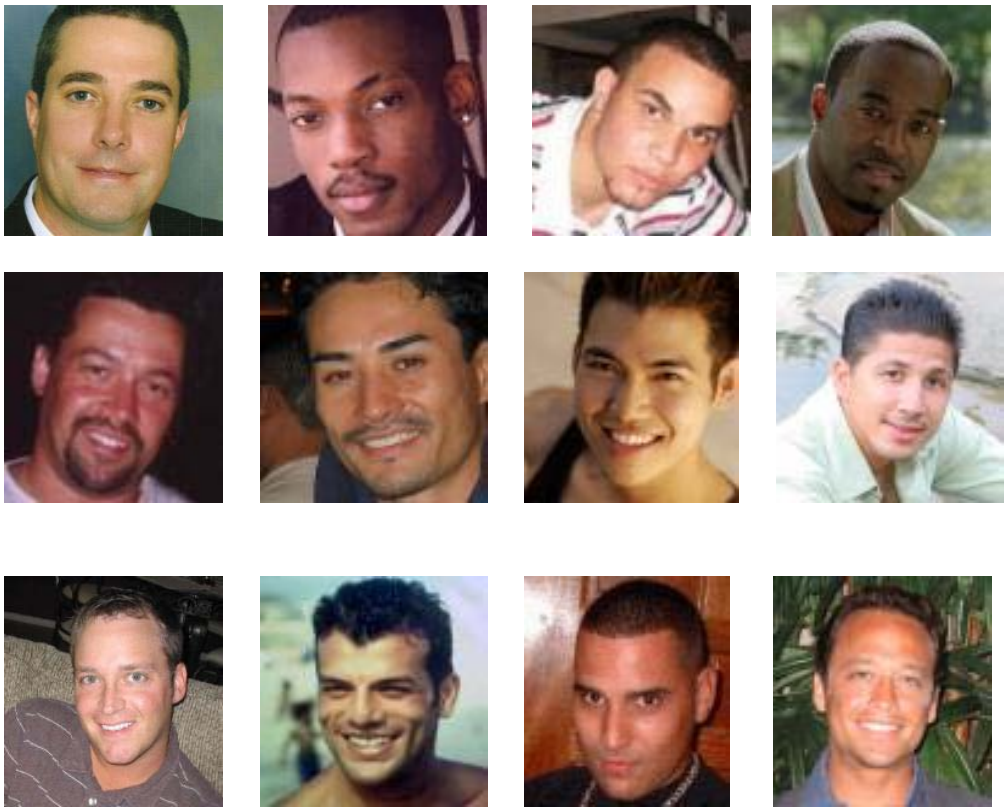
Experiment 1
Baby Present Condition
Set 2



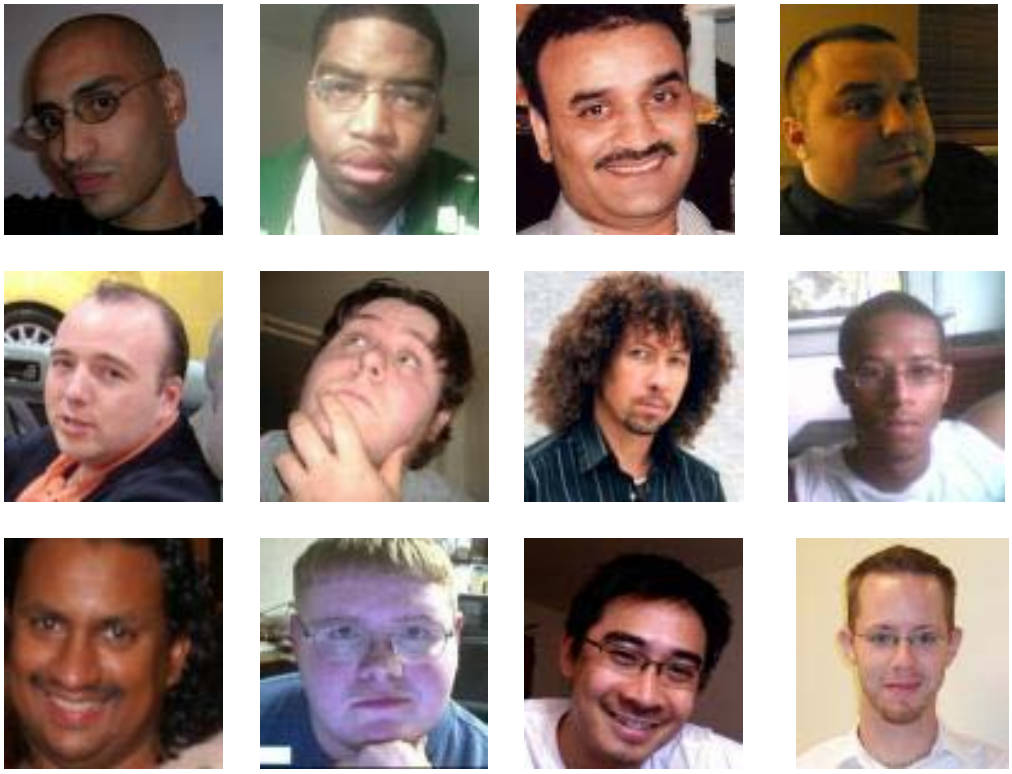
Appendix F
Experiment 2
Attractive Condition
Set 1



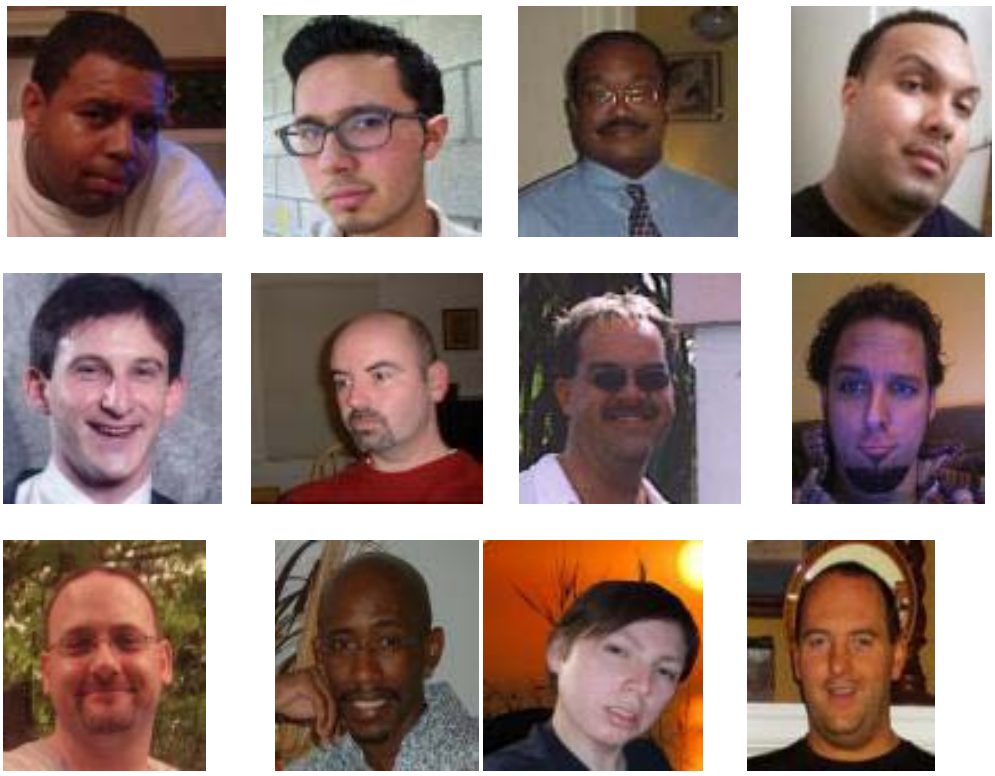
Experiment 2
Attractive Condition
Set 2



Appendix G
Experiment 2
Unattractive Condition
Set 1



Experiment 2
Unattractive Condition
Set 2



Appendix H

The following questions are of a personal nature. Please keep in mind the purpose of this study is to understand the type of men women find attractive. It is important that you answer the following questions as honestly as possible about your hypothetical first date. As before your responses are confidential.

Now envision the man in the photo you selected as the man you are with on your perfect date to answer the following questions. Of course you do not know this person and this is a hypothetical situation. Using the grid below mark an X in the rating that best describes what you would do on your date.

If the opportunity arose, how likely are you to:

	Extremely Unlikely				Extremely Likely
	1	2	3	4	5
Kiss your date on the cheek					
Tongue kiss your date					
Allow your date to touch your breasts or vaginal area					
Have a one night stand (have sexual intercourse)					

If you did have sex on your date, how likely are you to tell:

	Extremely Unlikely				Extremely Likely
	1	2	3	4	5
A friend					
A family member					
A coworker					
A long-term partner					

Appendix I

What is your sexual orientation?

- ☐ Heterosexual woman
- ☐ Bisexual woman
- ☐ Homosexual woman/Lesbian
- ☐ Not sure, questioning sexuality

Approximately how often do you have sexual intercourse?

- ☐ I have never had sexual intercourse
- ☐ Once a day
- ☐ Every other day
- ☐ Twice a week
- ☐ Once a week
- ☐ Once every two weeks
- ☐ Once a month
- ☐ Once every two months or greater

Approximately when was the last time you had sexual intercourse?

- ☐ In the past 24 hours
- ☐ In the past 72 hours
- ☐ In the past week
- ☐ In the past two weeks
- ☐ In the past month
- ☐ In the past two months or less

Are you currently pregnant?

- ☐ Yes
- ☐ No
- ☐ Don’t know/Not sure

What is your relationship status?

- ☐ Single, not dating
- ☐ Single, dating
- ☐ Single, currently in a long-term relationship or engaged
- ☐ Married, living with spouse
- ☐ Married, separated
- ☐ Divorced, not dating
- ☐ Divorced, dating
- ☐ Divorced, currently in a long-term relationship or engaged
- ☐ Widowed, not dating
- ☐ Widowed, dating

- ☐ Widowed, currently in a long-term relationship or engaged

How many children do you currently have? _____

What is your race/ethnicity? Check all that apply.

- ☐ African American/Black
- ☐ Alaskan/Native American
- ☐ Asian/Pacific Islander
- ☐ Caucasian/White
- ☐ Hispanic/Latino
- ☐ Other (Please specify_____)

What year were you born? _____

What was the first day of your last period?

Month_____ Day_____ Year_____

Appendix J
DEBRIEFING
Experiment 1

The study you have just participated in was designed to evaluate women's interests in short-term sexual partners (e.g. one night stands). Human mating literature (Pillsworth, Haselton & Buss, 2004) suggests that the ovulation cycle guides women's interest in sexual partners in order to maximize the probability of becoming pregnant. This study tests whether women's interest in short-term mating varies not only in response to her ovulation cycle but her mate's status and attractiveness in order to capitalize on her ability to reproduce healthy children.

In this study male attractiveness varied from highly attractive to highly unattractive. We hypothesize that by varying male attractiveness we will obtain different levels of interest. Specifically, we anticipate that women who are ovulating should express significantly more interest in a short-term sexual partner than women who are not ovulating, especially if the men are attractive. The goal is not only to broaden literature on human mating by expanding work on female short-term mating strategy, but to have a better understanding of how and why men and women choose their sexual partners.

Please do not discuss this study with anyone else who might also participate in the future. Knowledge about the study may influence their responses, and, essentially invalidate the information obtained from them. (For this same reason, it is important that you tell the experimenter if you knew the details about this study before participating)

If you have any further questions or concerns about this experiment, please feel free to ask the experimenter Allison Pulizzi (pulizzico@msn.com) or contact Professor Curtis D. Hardin (Cdhardin@brooklyn.cuny.edu).

Thank you for your participation.

DEBRIEFING
Experiment 2

The study you have just participated in was designed to evaluate women's interests in short-term sexual partners (e.g. one night stands). Human mating literature (Pillsworth, Haselton & Buss, 2004) suggests that the ovulation cycle guides women's interest in sexual partners in order to maximize the probability of becoming pregnant. This study tests the possibility that women's interest in short-term mating varies not only in response to her ovulation cycle but also her age in order to capitalize on her ability to reproduce and have healthy children.

Participants were randomly assigned to either child-present or child-absent conditions. The child was introduced to determine if women will have greater interest in short-term mates when confronted with symbols of potential offspring. We anticipate that women who are ovulating should express significantly more interest in a short-term sexual partner than women who are not ovulating, especially in the child-present condition. The goal of this research is not only to broaden literature on human mating by expanding work on female short-term mating strategy, but also to have a better understanding of how and why men and women choose their sexual partners.

Please do not discuss this study with anyone else who might also participate in the future. Knowledge about the study may influence their responses, and, essentially invalidate the information obtained from them. (For this same reason, it is important that you tell the experimenter if you knew the details about this study before participating)

If you have any further questions or concerns about this experiment, please feel free to ask the experimenter Allison Pulizzi (pulizzico@msn.com) or contact Professor Curtis D. Hardin (Cdhardin@brooklyn.cuny.edu).

Thank you for your participation.

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