

## Sex Differences in Long-Term Mating Preferences

David P. Schmitt

Brunel University London

David M. Buss

University of Texas at Austin

According to Sexual Strategies Theory (Buss & Schmitt, 1993), our species comes equipped with specialized mate preference adaptations. Some mate preference adaptations are designed for *long-term mating*, and many of those are designed to motivate men and women to pursue long-term mateships differ in different ways.

### *Women's Specialized Long-Term Mating Psychology*

Evolutionary psychologists have hypothesized women possess long-term mate preferences for cues to a man's *ability* and *willingness* to devote resources to her and their offspring (Buss, 1989; Ellis, 1992). Such cues include a man's status and prestige which, depending on culture, may involve hunting ability, physical strength, or other locally-relevant attributes, as well as his ambition, work ethic, intelligence, social dominance, and age. Several lines of evidence support the hypotheses about women's long-term mate preference adaptations, including self-reported mate preference surveys, reactions to experimental manipulations, ethnographic evidence from pre-industrial cultures, examinations of marital mate choice, and evidence from men's courtship effectiveness and associated fertility outcomes.

Using self-report surveys, Buss and Barnes (1986) were among the first to test whether women (more than men) prefer cues related to a man's ability and willingness to devote resources. They documented women more strongly prefer long-term mates who have a good earning capacity ( $d = -.82$ ), are a college graduate ( $d = -.60$ ), and possess intelligence ( $d = -.19$ ). In 1992, Feingold meta-analytically reviewed the extant literature (including 32 independent samples) on self-reported mate preferences and found sex differences were prevalent across college students and community samples with women more greatly desiring socioeconomic status ( $d = -.69$ ), ambition ( $d = -.67$ ), and intelligence ( $d = -.30$ ) in potential long-term mates.

Numerous additional investigations have since replicated these basic sex differences in long-term mate preferences among college students (Buss & Schmitt, 1993; Buunk et al., 2002; Kenrick et al., 1993; Regan, 1998; Regan & Berscheid, 1997).

In 1994, Sprecher examined mate preferences across a nationally-representative sample of the United States and found women, more than men, valued a long-term mate who had a steady job ( $d = -.73$ ), earned more than they did ( $d = -.49$ ), was highly educated ( $d = -.43$ ), and was older by 5 years ( $d = -.67$ ). In a 2001 cross-generational analysis of identical mate preference questionnaires administered to Americans from 1939 to 1996, both men and women increased valuing the attribute good financial prospects and decreased valuing ambition/industriousness, though the degree of sex differences in these items largely persisted in strength across more than 50 years (Buss et al., 2001).

Cross-culturally, Buss (1989) found across 37 cultures that women, more than men, universally desired a slightly older long-term mate. Buss also documented sex differences in preferences for good financial prospects were nearly universal (97%), and sex differences in preferences ambition/industriousness were prevalent (78%). Others have replicated these cross-cultural findings, documenting sex differences in resource-related mate preferences for good financial prospects, social status, ambition, and slightly or somewhat older age as *pancultural* universals across 100% of more than 50 studied nations (Lippa, 2007; Zentner & Mitura, 2012).

An additional source of evidence regarding women's hypothesized preferential emphasis on men's ability and willingness to devote resources comes from studies involving reactions to randomly assigned scenarios or actual real-life interactions with randomly assigned experimental confederates. Townsend and Levy (1990) exposed samples of women (undergraduates and law students) to photographic slides of men and had the women rate how likely they would be to

date, engage in short-term mating, or engage in long-term relationships with the men. Men's physical ornamentation in the slides was experimentally manipulated to provide cues to high status (i.e., men wore a blazer and Rolex watch), moderate status (i.e., white t-shirt), or low status (i.e., Burger King outfit). The photographs further contained either a physically attractive man or a homely man. Across samples, Townsend and Levy repeatedly found women preferred to mate with homely/high-status men much more than handsome/medium-or-low-status men, and these effects were most pronounced when women considered the men as *long-term* mates.

Sadalla (1987) had participants view videos of experimental confederates (either men or women) engaging in same-sex encounters within which they were randomly assigned to act as either high in dominance (i.e., upright posture, shoulders straight, move with ease and confidence) or low in dominance (i.e., smiled a lot to appease others, averted their eyes a lot, avoid invading personal space). Women who viewed the videos found high dominance men much more attractive than low dominance men, whereas men did not find high dominance women attractive (see also Ahmetoglu & Swami, 2012).

In a real-world test of women's mate preferences for status, Guéguen and Lamy (2012) conducted a naturalistic experiment to evaluate whether women's reactions to a request for their phone number were affected by men's apparent status (in this case, driving different types of cars). Women approached by a man driving an expensive Audi A5 Ambition Luxury gave their number to the man 23% of the time. Women approached by a man driving a mid-priced Renault Mégane gave their number 13% of the time. Women approached by a man driving a 15-year-old Renault 5 Super Campus (worth only a few hundred dollars) gave their number 8% of the time. Women's preferences for resource-related cues appear to affect their real-world mating behavior.

Another test of women's long-term mate preferences for men's ability and willingness to provide resources comes from examining whether the preferences disappear or become sharply attenuated when women have ample resources of their own, as predicted by the structural powerless hypothesis (Buss & Barnes, 1986) and traditional social role theory (Eagly & Wood, 1999). It could be women prefer cues to men's ability and willingness to provide resources, but only because women are structurally denied access to resources in a particular culture (Buss, 1989). Addressing this alternative explanation, Townsend (1989) found women in medical school are *more* selective of a future mate's financial status, not less. Regan (1998) found as women's mate value goes up, so does their insistence on men's high status and resources (i.e., they "want it all"; see also Buss & Shackelford, 2008). Having higher status and resource-related traits appears not to attenuate women's mate preferences for men's ability and willingness to provide resources.

Most studies of real-world *marital* choice find women, but not men, tend to marry partners higher than average in terms of status and resource-related traits (men with well-below average status and resources are more often shut out of the mating market altogether); and women, but not men, tend to marry partners who are older—a potential cue to his accrued status and resource levels (Kenrick & Keefe, 1992; Perusse, 1994; Trivers, 1985). Lichter, Anderson, and Hayward (1995) found this effect was particularly conspicuous when men are especially plentiful (due to male-biased sex ratios). Thus, women's long-term mate preferences do appear to drive their actual choices in the context of marriage.

In pre-industrial cultures, men's status and hunting ability, and where applicable wealth, are often linked to increased fertility (Betzig, 1986; Hurtado & Hill, 1992; Smith, 2004). Wealth is also linked to increased fertility among men, but not women, in modern cultures (Cashdan, 1996;

Mealey, 1985; Nettle, 2008). Height, a cue to physical health and interpersonal dominance, is a key factor in both women's long-term mate choice and men's long-term courtship and fertility success (Fink et al., 2007; Nettle, 2002; Stulp et al., 2013). Pawlowski, Dunbar, and Lipowicz (2000) found childless men were 1.25 inches shorter than men with children, and women rate 5'11" as ideal height for partner, but 80% of men's personal ads list their height as 6' or more (Kenrick, 1990). Other masculine traits preferred by women have also been linked to increased fertility in men (e.g., deeper voice; Apicella, Feinberg, & Marlowe, 2007). Some evolutionary psychologists view men's status and dominance contests as more about intimidating other men than about fulfilling women's desires (Puts, 2010). Men's long-term mating psychology matters, as well, when it comes to courtship and fertility.

#### *Men's Specialized Long-Term Mating Psychology*

According to Sexual Strategies Theory (Buss & Schmitt, 1993), men have evolved preferences for cues to youth, health, and genetic quality as these provide signals of a woman's fertility status (i.e., odds of conceiving *currently*) and potential reproductive value (i.e., number of children a woman could have *into the future*). Consequently, men are expected to desire physical features indicative of a woman's relatively youthful age (e.g., neotonous face, full lips, clear and glowing skin, clear and wide eyes, small chin, lustrous and long hair, good muscle tone; Sugiyama, 2005), to desire physical features indicative of high-fertility estrogen levels (e.g., high femininity in face, voice, finger lengths, and a .7 waist-to-hip ratio of body fat distribution), and to desire physical features indicative low genetic mutation load (e.g., facial and bodily symmetry). Additionally, men should preferentially desire attributes that indicate a woman would not be unfaithful in a long-term partnership (deleteriously affecting paternity

certainty), has good parenting skills, and would have a compatible personality (Buss & Schmitt, 1993).

One source of evidence for evaluating these hypothesized preferences comes from self-report surveys that ask men and women to rate, rank, or nominate what they prefer in long-term mates. In 1986, Buss and Barnes found men ranked physical attractiveness as more important in long-term mating than women do ( $d = .92$ ). Feingold (1990) conducted a meta-analysis of self-reported mate preferences surveys and confirmed men prefer physical attractiveness in potential long-term mates more than women do (overall  $d = .54$ ). Numerous studies since have replicated these basic sex differences in long-term mate preference for physical attractiveness (Buss & Schmitt, 1993; Buunk et al., 2002; Kenrick et al., 1993; Regan, 1997). Buss (1989) surveyed long-term mate preferences *across 37 cultures* and found men prefer younger women as long-term mates in 100% of cultures, and men preferred “good looks” in potential long-term mates more than women did across 34 of 37 cultures (92%). In no cultures did women prefer physical attractiveness significantly more than men did in long-term mates.

In explaining cross-cultural variation in the size of sex differences in preferences for physical attractiveness, Gangestad, Haselton, and Buss (2006) showed women's and men's mate preferences for good looks are closely linked to local pathogen levels, with good looks being more important in high pathogen cultures, even after controlling for income, geographical region, and latitude (see also, Little et al., 2007). Lippa (2007) found sex differences in long-term mate preferences for good looks were a *pancultural universal*, evidenced in 100% of 53 nations, with an average effect size of  $d = .55$ . Zentner and Mitura (2012) found sex differences in long-term mate preferences for good looks were a *pancultural universal* across 100% of 10 nations, and counter-intuitively sex differences were *larger* as sociopolitical gender equality increased

across nations, with low sociopolitical gender equality nations displaying smaller sex differences ( $d = .24$ ) compared to medium ( $d = .43$ ) or high sociopolitical gender equality nations ( $d = .51$ ). This last finding suggests increased sociopolitical gender equality in a nation does not reduce the size of sex differences in mate preferences. If anything, sociopolitical gender equality increases psychological sex differences (Schmitt, 2015).

Sprecher (1994) examined long-term mate preferences in representative sample of the USA and found men, more than women, especially value good looks ( $d = .65$ ) and younger age ( $d = .99$ ). In a review of mate preferences changes in the USA across 57 years, Buss et al. (2001) found both men and women have increased the relative importance they place in physical attractiveness in long-term mates. However, men's increased ranking of good looks (from 14<sup>th</sup> place in 1939 to 8<sup>th</sup> place in 1996) was greater than women's increased ranking (from 17<sup>th</sup> place in 1939 to 13<sup>th</sup> place in 1996). It seems the relative emphasis that men, relative to women, place on physical attractiveness has at least persisted, if not grown, across American generations.

Many hypothesized sex differences in mate preferences persist across developmental age, as well. As men and women get older, sex differences in age preferences become *more* intense. Kenrick and Keefe (1992) found men at age 25 prefer to marry a woman who is about four years younger, with minimum acceptable age of 20 and a maximum age of 30. Women at age 25 would marry a man who is between 25 and 35, ideally about four years older. At age 65, however, men would marry a woman between the ages of 50 and 60 (ideally about 10 years younger), whereas at 65 women still want an older man, between 65 and 75 years old. Similarly, Shwarz (2012) surveyed 21,245 single people between 18 and 65 (average age = 31) and found men valued physical attractiveness and relative youth more than women, regardless of age or education level. There is one revealing caveat to the youthful desires of men, however. Kenrick



et al. (1996) documented that teenage men prefer a mate who is a little older, which was explained as men's preferences being sculpted to desire the highest fertility women (women in their 20s). It is not the case that men simply want someone similar, or perhaps a little younger. Men's long-term preferences for age are anchored by the actual peak fertility levels of women. Finally, studies that have examined long-term versus short-term mate preferences have documented that men's heightened preferences for physical attractiveness and youth are specific to long-term mating.

An additional source of evidence regarding men's hypothesized emphasis on fertility-related cues such as youth and physical attractiveness in long-term mates comes from studies involving personal responses to randomly assigned scenarios or actual real-life interactions with randomly assigned experimental confederates. Meta-analyses of experimental interactions show men react more positively than women do when they personally interact with a highly attractive opposite-sex partner (effect size in men  $d = 1.23$ ; effect size in women half as large,  $d = .61$ ; Feingold, 1990). Cues related to relative youth and high fertility also show evidence of special design in men's mate preferences. Schaefer (2006) showed men exposed to targets with feminine faces or voices react to those women with greater feelings of attraction. Johnston and Franklin (1993) had male participants morph female faces until they achieved an "ideal" face. The final female face had geometric proportions indicative of a 14-year-old girl. Many of these cues to youth and fertility are universally valued by men across cultures and time periods (Cunningham, 1995; Jones, 1995; Langlois, 2000). Men across most cultures, for example, prefer feminized faces and body shapes indicative of high estrogen (Perrett et al., 1998; Singh 1995). Men across most cultures prefer waist-to-hip ratios in women that are linked with adaptive estrogen levels and higher fertility (Singh, 1993), a preference finding documented even among blind men feeling

mannequins (Karremans, 2010). It appears many of these specific cues to youth and fertility activate domain-specific areas of men's brains (Thornhill, 1999), especially in the nucleus accumbens (Platek & Singh, 2010). One caveat to this is that in cultures with frequent warfare the need for more masculine sons may attenuate the preference for a feminine waist-to-hip ratio (Cashdan, 2008). Moreover, cultural variations in disease prevalence, paternal investment, and visual experiences can predictably moderate mate preferences for adaptive physical attributes (see Pisanski & Feinberg, 2013).

Behaviorally, when men are experimentally exposed to physically attractive women they react by being more likely to value money, experience greater ambition, are more creative, and are willing to take more risks (Roney, 2006). Conversely, just holding \$2,000 in one's hands elicits in men, but not women, stronger desires to mate with a physically attractive partner (Yong, 2012). Men told they were making phone call to a woman lowered their voice (a feature women typically find attractive; Puts, 2005), but only if the woman was portrayed in a picture as highly physically attractive (Hughes, 2010). Men also give bigger tips to women if they are physically attractive, younger, have larger breasts, and smaller body size (Lynn, 2009), buy bigger engagement rings for younger women than older women (Cronk, 2007), and are more likely pay for dinner if their date is physically attractive (with no such effects seen in women; Stirrat, 2011).

If men's preference for physical attractiveness in long-term mates is a psychological adaptation, physically attractive women should tend to have more children (assuming no modern confounds such as contraception use). In a study of 88 postmenopausal Austrian women from a rural community, among those who did not use contraception in their lifetime, higher objective symmetry, facial femininity, and overall physical attractiveness were linked to having more

children (Pflüger et al., 2012). Women who have lower testosterone (Barrett et al., 2012) and higher estrogen (Law Smith et al., 2012) tend to be more feminine and have fertility-linked traits such as wanting more children. Women who, in their grade school photos, are judged more physically attractive have higher lifetime fertility (attractive women had 11% more children than those who were unattractive; Jokela, 2010) and are more likely to be married (Harper, 2000). Hill and Hurtado (1996) found physically attractive women among the foraging Ache foragers also have higher lifetime fertility. In a study of women who do not use contraception, physically attractive women were found to have more children (Pflüger et al., 2012). These results provide supportive evidentiary breadth for viewing men's preferences for long-term mates who are physically attractive as evolved psychological adaptations.

Perhaps the strongest test of the existence of long-term mate preference adaptations comes from analyzing actual marriages, especially who marries whom and how reproductively valuable those choices are over the long run. Most studies have found that men, more than women, tend to marry younger partners who are closer to peak fertility (Kenrick & Keefe, 1992; Perusse, 1994). As men age, this mate preference mechanism results in newly married men marrying younger and younger women (Kenrick, 1990). In the United States, the average man's first marriage is to a woman who is three years younger, the average man's second marriage is to a woman who is five years younger, and the average man's third marriage is to a woman who is eight years younger (Guttentag & Secord, 1983). In a study of the wealthiest 400 people in the United States, wealthy men tend to be married to someone seven years younger, and among second marriages wealthy men are married to someone 22 years younger, on average (Pollet et al., 2013). Wealthy women's spouses, in contrast, did not differ in age from the general population of the United States. In Sweden, a retrospective look at marriages in the 1800s found the average

man's second marriage was to a woman 11 years younger (Guttentag & Secord, 1983). Also in Sweden, men who marry first wives who are six years younger have the highest levels of lifetime fertility (Fieder & Huber, 2007). Long-term mate preferences for youth appear to pay men actual dividends in the currency of reproductive success.

As noted earlier, men who have higher social status tend to emphasize physical attractiveness more in potential long-term mates. Researchers have found men with more masculine or male-typical psychologies tend to prefer feminized female faces (Smith, 2010), as do men who consider themselves more attractive to the opposite sex (Burriss, Welling, & Puts, 2011; Kandrik & DeBruine, 2013), and those who have high testosterone (Welling et al., 2008). When men can afford to, they insist on physically attractive mates. Gay men and heterosexual men show very similar long-term mate preferences with physical attractiveness being critical to both (Bailey et al., 1994), suggesting that mate preference adaptations for physical attractiveness are specific to the psychology of the desirer (men), not the biological sex of the target of desire (whether men or women).

### *Conclusion*

Several lines of evidence confirm the existence of women's and men's long-term mate preference adaptations, including self-reported mate preference surveys, reactions to experimental manipulations, historical records, ethnographic evidence from pre-industrial cultures, examinations of actual mate choice, and evidence from courtship effectiveness and associated fertility outcomes.

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