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More Than Just a Pretty Face and a Hot Body: Multiple Cues in Mate-Choice

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ABSTRACT. Mate preferences have been well studied in social and evolutionary psychology. In two studies ($N = 490$), using two different measurement techniques, we examined mate preferences for the body and the face in the context of other traits. Results replicated prior research on mate preferences across the sex of the participant and mating duration but clarified the nature of preferences for physical attractiveness. Generally, physical attractiveness was a necessity in short-term mating and for men and traits like kindness were a necessity in long-term mating and for women. Men wanted a short-term mate who had a good body, likely because that body advertises fertility whereas both sexes wanted a mate with a nice face for a long-term mate, which is likely because the face is a cue based on structural properties related to health. Sex and mating-duration differences on preferences for attractive faces and bodies were robust to differences in measurement technique.

Keywords: body, budget-allocation, face, mate preferences, sex differences

WHY DO WE COUPLE WITH CERTAIN PEOPLE? What are the traits that influence mating decisions? Do men and women differ in their preferences? Are there differences across relationship duration? These questions and more have garnered considerable attention in social and evolutionary psychology. There are numerous cues men and women can use to assess the physical attractiveness of mates. Research often focuses on attractiveness cues alone (e.g., Confer, Perilloux, & Buss, 2010) or treats physical attractiveness as a unidimensional

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variable (e.g., Li & Kenrick, 2006). However, mate-choice in the real world likely occurs using multiple cues simultaneously; traits do not occur in a vacuum but co-occur with other traits. In the current study, we replicate mate preferences in physical and psychological traits using two different measurement techniques but also assess the relative value placed in each of physical and psychological traits.

When studying physical attractiveness, two of the most well-studied cues are the body and the face (Confer, Perilloux, & Buss, 2010; Currie & Little, 2009; Perilloux, Webster, & Gaulin, 2010). The body is composed of a number of features that influence attractiveness like waist-to-hip ratio (Singh, 1993) and body fat (Smith, Cornelissen, & Tovee, 2007). The face advertises masculinity/femininity (Little, Jones, Penton-Voak, Burt, & Perrett, 2002), phenotypic quality, and resistance to developmental assaults, pathogens, and environmental stressors (Thornhill & Gangestad, 1994), and facial symmetry is associated with increased cognitive performance, greater genetic heterozygosity, greater fecundity, better health, increased longevity, lower parasite load, and lower rates of depression (Kowner, 2001).

However, most research that has assessed both face and body preferences simultaneously was confined to those two traits alone (Confer, Perilloux, & Buss, 2010; Currie & Little, 2009; Perilloux et al., 2010; Thornhill & Grammer, 1999). Such research has revealed that facial attractiveness and bodily attractiveness are correlated, suggesting both are cues to underlying phenotypic quality (Thornhill & Grammer, 1999). However, because individuals make mate-choice decisions with both physical (e.g., bodily and facial attractiveness) and psychological traits (e.g., kindness, ambitiousness) simultaneously, it would be interesting to know the relative effect of each trait on mate-choice. The present study will allow the research on face/body preferences to be integrated into the larger mate-choice paradigm, but also resemble mate-choice outside of the lab in that it is assessed in concert with other traits.

There are a number of theoretical issues worth considering when assessing multiple cues to mate quality. Like in psychometrics, assessing mate preferences from multiple cues is probably better than using a single cue. This “back up” hypothesis states¹ that preferences in multiple traits function as a way of gathering more reliable data about an individual (Johnstone, 1996). In other words, traits used in mate-choice are imperfect proxies for internal qualities and therefore, the use of multiple cues buffers one from making mate-choices based solely on a single cue. “Seeking evidence of good potential maternal investment in a future mate does little good if there is evidence that her genetic quality is poor” (Perilloux et al., 2010, p. 39). Indeed, just like in psychometrics, the assessment of multiple cues comes with increased costs like time to assess a mate’s quality (Candolin, 2003).

If multiple cues are used in mate-choice, the question arises as to how information from those cues is integrated. It is unlikely a simple Brunswickian lens (Brunswick, 1955) will be effective because a) cues may interact in nonlinear fashions (Kunzler & Bakker, 2001), b) cues may not be available for assessment

at once (Gibson, 1996), c) cues might/might not be traded off against one another (Miller & Todd, 1998), or d) cues may influence the cost of one another (Candolin, 2003). The present study examines not only mate preferences for facially attractive and bodily attractive mates, but also how these preferences are traded off in relation to psychological traits like kindness, sincerity, ambition, social level, and liveliness using an adaptationist paradigm.

Current Study

In our view, it is reasonably clear that the body and the face are two regions individuals focus on when assessing potential mates. We predict men and women will be more similar in their mate preferences in the long-term mating duration than the short-term mating duration because men and women's fitness interests converge in long-term mates and diverge in short-term mates (Li, Bailey, Kenrick, & Linsenmeier, 2002; Li & Kenrick, 2006). We expect men will have a stronger preference than women do for short-term mates who have a nice body because the body may be a cue to current fertility (Singh, 1993) and we expect men to have a stronger preference for long-term mates who have a nice face because a "woman's face provides relatively richer information regarding her reproductive value" (Confer et al., 2010, p. 349). Generally speaking, women's preferences are not expected to differ across mating duration because of women's consistently high obligation to invest in offspring (Buss & Schmitt, 1993) and because men are not being assessed for their fertility, the trait women advertise in their body (Confer et al., 2010).

Because of the important information conveyed regarding fertility in bodily and facial attractiveness we would argue these are "necessities" in mating, especially in the case of short-term relationships. We expect both facial and body attractiveness will be more important in the short-term mating duration than factors like kindness, sincerity, ambition, and social level because these traits are predominantly sought after for long-term mates (Li et al., 2002). Both sexes treat physical attractiveness as a necessity in the context of short-term mates and devalue the degree to which they desire "luxury" traits like kindness (Li & Kenrick, 2006). Last, we expect liveliness will be virtually unimportant in mate-choice when individuals are forced to make tradeoffs in mate preferences (Li et al., 2002). In short, the psychological traits juxtaposed to the physical traits are some of the more noteworthy traits studied in mate preferences research, some being "necessities," some being "luxuries" across mating duration and the sex of the participant.

Study 1

In Study 1, we attempt to compare preferences for mates who have attractive faces and attractive bodies and two psychological traits across the sexes and across

mating duration. When making mating choices individuals have a number of traits simultaneously to use to assess a potential mate's value. We hope to replicate prior work on face and body preferences (Confer et al., 2010) and mate preferences in general (Li et al., 2002).

Participants and Procedures

As part of larger project on mate preferences, volunteers were solicited through fliers posted at a campus health center and the psychology, anthropology, and communication studies buildings on a mid-sized Southwestern U.S. university. Four hundred-one individuals (69% female, 31% male), aged 18 to 52 ($M = 21.67$, $SD = 4.94$) logged onto an online survey that asked them the questions to be discussed below.

Measures

Mate preferences were assessed by asking eight normative questions. Participants were asked the degree to which they desired (1 = *not at all*; 5 = *very much*) the traits of bodily attractiveness, facial attractiveness, sincerity, and ambition in their long-term and short-term mates. These items were interspersed with other items as distracters.

Results and Discussion

First, an overall model was tested using a mixed-design ANOVA composed of participant's sex and mate preferences in long-term and short-term mates, with a within-subjects factor on the mate preferences across durations. There was a main effect in the within-subjects factor ($F(7, 398) = 102.12$, $p < .01$, $\eta_p^2 = .20$) but no main effect of participants' sex ($F = 0.64$). As shown in Table 1, both variables of physical attractiveness were prioritized in short-term mates relative to long-term mates but this effect was strongest in bodily attractiveness. Results are consistent with contentions that men and women prioritize attractiveness in their short-mates relative to long-term mates but value traits like sincerity and ambitiousness in long-term mates (Li et al., 2002; Li & Kenrick, 2006).

There was an interaction of participant's sex and mate preferences across durations ($F(7, 398) = 46.53$, $p < .01$, $\eta_p^2 = .11$). When tests were run separately by mating duration, results revealed the manner in which traits like facial and bodily attractiveness situate in a larger constellation of traits in mate-choice. For the preferences in long-term mates, there was a within-subjects main effect ($F(3, 399) = 158.43$, $p < .01$, $\eta_p^2 = .28$), a between-subjects effect for participant's sex ($F(1, 399) = 9.43$, $p < .01$, $\eta_p^2 = .02$), and an interaction of the two ($F(3, 399) = 42.25$, $p < .01$, $\eta_p^2 = .10$). For the preferences for short-term mates, there was a within-subjects main effect ($F(3, 398) = 50.97$, $p < .01$,

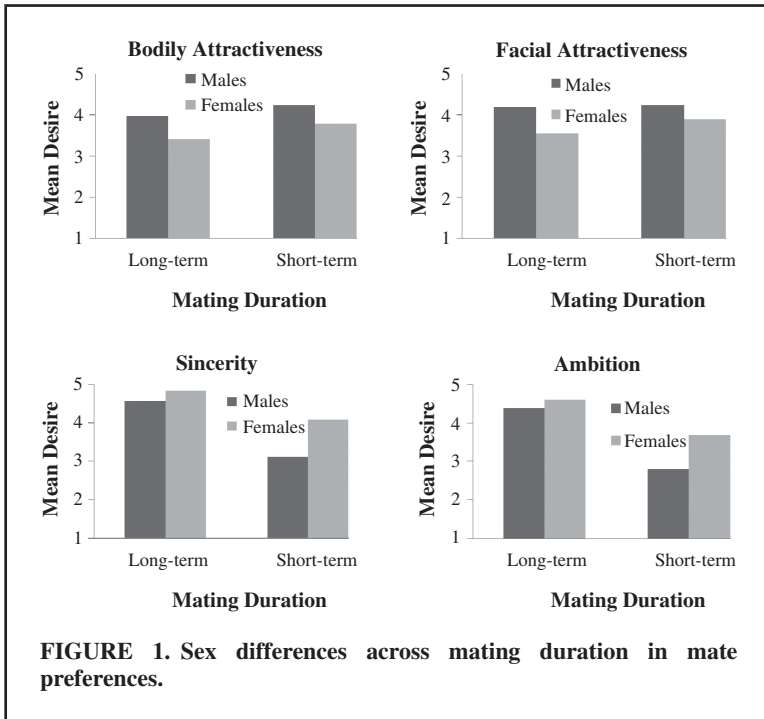
TABLE 1. Descriptive Statistics of Mate Preferences Across Mating Duration for Study 1 and 2

	Long-term	Short-term
Study 1 (<i>N</i> = 401)		
Facial attractiveness	3.76 (0.97)	4.01 (1.04)
Bodily attractiveness	3.60 (0.98)	3.93 (1.08)
Sincerity	4.74 (0.57)	3.80 (1.26)
Ambition	4.54 (0.74)	3.42 (1.35)
Study 2 (<i>N</i> = 90)		
Facial attractiveness	2.17 (1.22)	3.16 (1.50)
Bodily attractiveness	1.89 (1.25)	3.90 (1.70)
Liveliness	1.50 (1.10)	1.03 (1.09)
Kindness	2.72 (1.61)	0.97 (1.15)
Social level	1.72 (1.45)	0.93 (1.10)

$\eta_p^2 = .11$), a between-subjects effect for participant's sex ($F(1, 398) = 12.09$, $p < .01$, $\eta_p^2 = .05$), and an interaction of the two ($F(3, 398) = 49.19$, $p < .01$, $\eta_p^2 = .11$). As shown in Figure 1, men desired both forms of physical attractiveness more than women did across mating durations. In contrast, women's preference for sincerity and ambitiousness were only revealed in the short-term mating duration; suggesting that it is men who lowered their preference for these traits relative to women; women only slightly reducing their preferences for these traits. These are traits that cue to qualities as a long-term partner, the ideal mating duration for women (Li et al., 2002).

Study 2

In Study 1, participants were able to report their preferences in a free fashion. Although Study 1 compares the relative interest participants have in physical and psychological traits in potential mates, without those choices being tied to one another, they may not be particularly realistic. It has been argued the best way to reveal differences in mate preferences is to constrain participants' choices (Li et al., 2002; Li & Kenrick, 2006). It is thought this more accurately reflects real-life decisions in that individuals must make tradeoffs in their mate preferences. That is, given the choice, individuals may want their potential mates to be "10s" on all characteristics. Because this does not reflect genuine mate-choice, participant's choices must be constrained by tying their choices each trait together. Therefore, in Study 2, a budget-allocation study was conducted, forcing participants to reveal their mating priorities.



Method

Participants and Procedure

Ninety² psychology students from a mid-sized university in Southeastern U.S. aged 18 to 41 ($M_{Age} = 21.80$, $SD_{Age} = 4.19$; 21 men, 69 women) were recruited from their psychology courses to participate in a study on mate preferences in exchange for extra credit. Participants were administered the measure described below. Participants were presented with a series of demographics questions. Next, they were presented with two budget-allocation tasks to assess mate preferences. When participants returned the packets, they were thanked and debriefed.

Materials

Participants completed two budget-allocation measures (e.g., Li & Kenrick, 2006). Participants were provided with standardized descriptions of the traits under consideration (i.e., bodily attractiveness, facial attractiveness, liveliness, social level, and kindness). Then, participants were asked to allocate ten mate dollars (i.e., a constrained budget) among those five traits for both long-term and

short-term mates. After each allocation, participants were required to sum their allocations and were instructed it should equal ten. We dropped those participants whose answers did not sum to ten from analysis.

Results and Discussion

The overall model was the same as that used in Study 1. There was a within-subjects main effect ($F(9, 80) = 26.40, p < .01, \eta_p^2 = .75$), but no main effect of participants' sex ($F = 0.47$). As shown in Table 1, facial attractiveness was prioritized in long-term mates but came in second to kindness in long-term mates. In short-term mates, bodily attractiveness soared to the top of the priorities list, followed by facial attractiveness, and trailing far behind were the other traits.

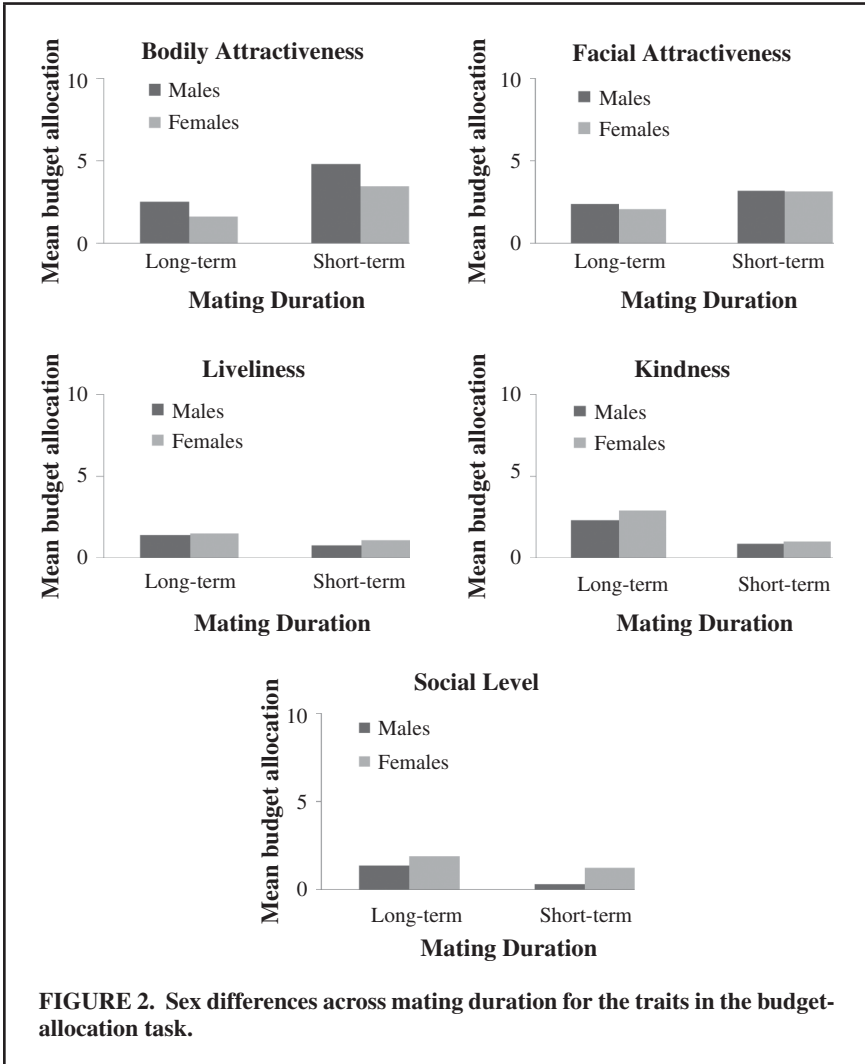
An interaction between the sex of the participant and the within-subjects ratings of preferences was present ($F(9, 80) = 3.69, p < .01, \eta_p^2 = .29$). In order to understand this interaction, we present Figure 2. When only considering allocation for long-term mates, there was a main effect among the within-subjects ratings ($F(4, 85) = 7.18, p < .01, \eta_p^2 = .25$), an interaction of participant sex and allocations ($F(4, 85) = 3.69, p < .05, \eta_p^2 = .12$), but no main effect for participant's sex ($F = 0.00$). When only considering allocation for short-term mates, there was a main effect among the within-subjects ratings ($F(4, 85) = 58.68, p < .01, \eta_p^2 = .73$), an interaction of participant's sex and allocations ($F(4, 85) = 6.73, p < .05, \eta_p^2 = .24$), but no main effect for participant's sex ($F = 0.47$).

Despite there being no main effects for the sex of the participant, it may be that with such a small sample size, power was insufficient to detect a difference in between-subjects analyses. Therefore, we examined the presence of sex differences in mate preferences using t tests: t tests are more liberal tests than F tests because they are directional tests. Indeed, we were able to detect three significant sex differences. Men prioritized bodily attractiveness in long-term ($t(88) = 3.28, p < .01, d = 0.70$) and short-term mates ($t(88) = 3.84, p < .01, d = 0.82$) more than women did. In contrast, women prioritized the social level of their short-term mates more than men did ($t(88) = -4.27, p < .01, d = -0.91$).

Results mirrored those in Study 1. Men prioritized facial attractiveness more than bodily attractiveness in short-term mates but the reverse was true for long-term mates. Again, physical traits were more valued in short-term mates than in long-term mates across the sexes. Psychological traits were more valued in long-term mates than in short-term mates.

General Discussion

In the present study, we have assessed mate preferences (Buss & Schmitt, 1993; Li et al., 2002; Li & Kenrick, 2006) for attractive bodies and faces (Confer et al., 2010; Thornhill & Gangestad, 1994) in the larger context of mate preferences by assessing those preferences along with a number of psychological traits. In addition, we showed how these effects are not localized to one measurement



technique by using two different measurement techniques across the studies. In so doing we have added to the growing body of literature on how multiple cues function in mate-choice and the robustness of those findings.

Our results are highly consistent with prior work. Although we partitioned physical attractiveness into two parts, the results suggest that both function similarly. Each is important in choosing short-term mates. Considerable evidence details the priority men and women place in the physical attractiveness of their short-term mates (Li & Kenrick, 2006). However, it is clear bodily attractiveness

is valued the most of all for short-term mates and most strongly by men. Men who are pursuing a short-term mate may be in the search of traits that signal woman's capability to bear young (Singh, 1993) and care less about qualities that will make her a good long-term mate like kindness (Buss, 1989; Li et al., 2002). Such findings replicate prior work that suggests males prioritized the females' bodies for short-term mates as compared to long-term mates (Confer et al., 2010; Currie & Little, 2009).

It appears as though both sexes want a long-term mate who has an attractive face over an attractive body. The information carried in a face signals developmental stability, resistance to pathogens, and phenotypic quality (Thornhill & Gangestad, 1994). Although facial attractiveness is surely important for short-term mates, it appears to be more valued in long-term mates by both sexes. A body may be more easily changed via diet and exercise whereas the structural traits of the face are resistant to change beyond drastic plastic surgery procedures. Stated another way, the face may be a better or more reliable cue to important phenotypic qualities despite the correlation between having a quality body and face (Thornhill & Moller, 1997). The reliability of a trait is particularly important in long-term mates because it a) may ensure long-term fecundity and health, b) a higher quality mate worthy of long-term investment, and c) may co-occur with other positive traits like liveliness and self-confidence (Fink, Neave, Manning, & Grammer, 2006), which are desired in long-term mates (Li et al., 2002).

This study is not without its limitations. First, both studies utilized exclusively American college students. Although it is customary to use such samples and evidence suggests there is a high degree of agreement between cultures (Buss, 1989), our results should be replicated with a larger and cross-culturally diverse sample. For instance, there is some evidence for differences in mate-choice between participants from different countries (e.g., Penton-Voak, Jacobson, & Trivers, 2004).

Alternatively, we did not present individuals with pictures to evaluate or did not conduct eye-tracker studies to understand mate preferences as others have done (Perilloux, Webster, & Gaulin, 2010; Rupp & Wallen, 2007). We feel we are justified in the use of self-report methodologies because these non-self-report methodologies reveal results consistent with ours and others (Confer et al., 2010; Currie & Little, 2009). Nevertheless, making abstract choices of imagined mates may not be particularly ecologically valid. The present results should be replicated where individuals participate in a live-interaction or a person-perception study.

Realistic mate-choice is done when considering multiple cues. Each cue is a proxy of internal qualities; no direct assessment is available to us. Humans use multiple cues to triangulate on who is a quality mate to get around the problem created by having to assess mate quality through multiple, imperfect cues to quality. Although multiple cues can be costly to assess (Candolin, 2003), making a poor choice in mates, especially for long-term mates and for women in general (Buss & Schmitt, 1993), may be too great to not use multiple cues in assessment.

In addition to demonstrating how face and body preferences are situated in the larger framework of mate preferences, we have also shown the robustness of preferences individuals have in those traits across two methodologies. We encourage future work integrating simultaneous assessment of multiple cues when assessing mate preferences in order to better understand this topic that poets, playwrights, and scholars have spent reams of paper on: who we fall for and why.

NOTES

1. See Holland and Rice (1998) for an alternative approach based on antagonistic co-evolution.
2. The complete sample was composed of 112 individuals. However, a number of them failed to complete the budget-allocation task properly and, therefore, we eliminated them, reducing our sample size by 22.

AUTHOR NOTES

Peter K. Jonason is a Lecturer in Personality or Individual Differences at the University of Western Sydney in Bankstown, NSW, Australia. **Tara Raulston** is affiliated with the University of West Florida. **Ashley Rotolo** is affiliated with Florida State University. The second and third authors appear in alphabetical order, having put in equal effort in this study.

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