

# Attractive Female Romantic Partners Provide a Proxy for Unobservable Male Qualities: The When and Why Behind Human Female Mate Choice Copying

Christopher D. Rodeheffer<sup>1</sup>, Randi P. Proffitt Leyva<sup>1</sup>, and Sarah E. Hill<sup>1</sup>

## Abstract

Previous research indicates that women find men more desirable when they appear to be desired by other women than in the absence of such cues—an effect referred to as female mate choice copying. Female mate choice copying is believed to emerge from a process whereby women use the presence of a man's mate as a cue to his own quality. Here, we test this hypothesis explicitly by examining whether the desirability enhancement effect conferred on men by the presumed interest of an attractive female (a) emerges only when the female is described as being a man's current romantic partner (Experiment 1) and (b) is mediated by women's belief that men partnered to attractive women possess unobservable qualities that women value in their romantic partners (Experiment 2). The results of our two experiments found support for these hypotheses, shedding new light on the processes influencing human female mate choice copying.

## Keywords

female mate choice copying, desirability enhancement effect, women's mate choice, women's mating psychology

Date received: August 27, 2015; Accepted: May 04, 2016

For US\$50 an hour, Meredith, an attractive New York investment banker, can be found sipping cocktails with wealthy men who are looking for a good time. Meredith is not an escort or prostitute, however, as one might surmise based on her job description. Instead, Meredith works for Wingwomen.com, a service aimed at men who want to increase their desirability to women in bars and clubs simply by being seen holding the attention of an attractive woman for the night (Reuters, 2004). Although US\$50 an hour may seem like a steep price to pay for such a service, the company boasts numerous success stories and repeat customers, suggesting that this attraction strategy is an effective one. Indeed, several empirical studies have now verified that this idea is more than just a dating myth. Women tend to find men more desirable when they appear to be romantically linked with an attractive woman, a phenomenon often referred to as female mate choice copying (see, e.g., Bowers, Place, Todd, Penke, & Asendorpf, 2012; Chu, 2012; Dunn & Doria, 2010; Hill & Buss, 2008; Jones, DeBruine, Little, Burriss, & Feinberg, 2007; Little, Burriss, Jones, DeBruine, & Caldwell, 2008; Little, Caldwell, Jones, & DeBruine, 2011; Place, Todd, Penke,

& Asendorpf, 2010; Waynforth, 2007; Yorzinski & Platt, 2010).

Female mate choice copying is a type of nonindependent mate choice in which females observe a romantic or sexual interaction between a male and another female (referred to as the model female) and preferentially choose that male as a mate (Pruett-Jones, 1992). This behavior is believed to emerge from a process in which females use the sexual interest of same-sex conspecifics as a cue to an opposite sex target's mate value (Little et al., 2008; Little, Caldwell, et al., 2011). Mate choice copying—which is also observed in males of some species—is typically understood to benefit the copier by cutting down on the costs associated with mate search. Specifically, copying (a) decreases the amount of time and energy required to find a

<sup>1</sup> Department of Psychology, Texas Christian University, Fort Worth, TX, USA

## Corresponding Author:

Sarah E. Hill, Department of Psychology, Texas Christian University, TCU Box 298920, Fort Worth, TX 76129, USA.

Email: [s.e.hill@tcu.edu](mailto:s.e.hill@tcu.edu)



suitable mate, (b) lessens the risk of predation and injury while doing so, and (c) reduces the inherent risks associated with making poor mating decisions (Gibson & Höglund, 1992; Hill & Ryan, 2006; Höglund, Atalo, Gibson, & Lundberg, 1995; Little, Caldwell, et al., 2011; Pruett-Jones, 1992; Slagsvold, Lifjeld, Stenmark, & Breiehagen, 1988; Stöhr, 1998). Female mate choice copying is widely documented in the animal literature in species such as the guppy (*Poecilia reticulata*), the Japanese medaka (*Oryzias latipes*), the sailfin molly (*P. latipinna*), the sage grouse (*Centrocercus urophasianus*), the Japanese quail (*Coturnix c. japonica*), and is also observed in humans (Dugatkin, 1992; Galef & White, 1998; Gibson, Bradbury, & Vehrencamp, 1991; Grant & Green, 1996; Hill & Buss, 2008; Little et al., 2008; Little, Caldwell, et al., 2011; Place et al., 2010; Schlupp, Marler, & Ryan, 1994).

In the following, we seek to build on what is currently known about female mate choice copying in humans by examining the conditions under which it should occur and whether the effect is mediated by changes in women's beliefs about the target males' unobservable qualities. Together, this research seeks to provide novel insights into the psychology guiding female mate choice copying.

### **Mate Preferences and Mate Choice: How Do Women Discriminate Between High- and Low-Quality Partners?**

Discriminating between high- and low-quality prospective mates can be challenging and costly. This is particularly true for women because of the content of their desires and the potential reproductive repercussions of their choices (desires: Townsend & Levy, 1990; repercussions: Bateman, 1948; Trivers, 1972). Although many of the qualities that women value in their partners can be assessed firsthand based on a man's physical appearance (e.g., height: Sheppard & Strathman, 1989, facial masculinity: e.g., Waynforth, Delwadia, & Camm, 2005; facial symmetry and health: Little, Jones, & DeBruine, 2011)—particularly in the context of short-term mating (e.g., Buss & Schmitt, 1993; Kenrick, Groth, Trost, & Sadalla, 1993; Lucas, Koff, Grossmith, & Migliorini, 2011)—women's long-term and short-term preferences also include a number of qualities that can be relatively difficult to assess based on appearances alone (for notable exceptions see, e.g., Moore, Filippou, & Perrett, 2011; Roney, Hanson, Durante, & Maestriperieri, 2006). For example, there are few appearance-based cues from which a woman can quickly and accurately infer a prospective partner's social status, financial resources, or desire to invest in children. Moreover, as the sex that must obligatorily invest more in reproduction (and therefore for whom the costs of making a bad choice are greater), the benefits of being able to quickly and accurately discriminate between high- and low-quality prospective romantic partners are greater for women than for men. Reproductively speaking, men have less to lose if they miscalculate the presumed quality of a prospective partner than do women.

Given the challenges that women have reliably faced when trying to discriminate between high- and low-quality partners—particularly when coupled with the relatively high costs of inaccuracy—researchers have proposed that women may rely heavily on contextual, social, and behavioral cues when evaluating potential mates. Much empirical work supports this hypothesis. For example, research indicates that women find men to be more attractive when they are shown driving a luxury (i.e., Bentley) compared to a nonluxury car (i.e., older Ford Fiesta; Dunn & Searle, 2010), and when they are wearing expensive, high-status clothes (i.e., Armani suit, Rolex watch) compared to less expensive, lower status attire (i.e., Burger King uniform; Townsend & Levy, 1990). Similar results have been found for contextual cues bearing on a man's willingness to invest in children. For example, research finds that women find men to be more attractive when they are observed interacting favorably with a child compared to when they are observed without a child (Brase, 2006; Guéguen, 2014; La Cerra, 1995; Roney et al., 2006). Women use these indirect cues as a means on inferring the likelihood that a man possesses qualities that they prefer in their romantic partners—such as resource access or the desire to invest in children—that can be difficult to assess based on physical appearances alone.

Is it possible that the desirability enhancement effects found in studies of female mate choice copying (e.g., Bowers et al., 2012; Chu, 2012; Dunn & Doria, 2010; Eva & Wood, 2006; Hill & Buss, 2008; Little et al., 2008; Little, Caldwell, et al., 2011; Place et al., 2010; Waynforth, 2007; Yorzinski & Platt, 2010) might emerge from a similar process? That is, might the observation that another woman desires or has chosen a male target as a mate imply to female observers that he is likely to possess at least some of the unobservable qualities that women most desire in their partners? Although this hypothesis has not been tested explicitly, existing research supports this view. For example, Sigall and Landy (1973) found that men paired with an attractive woman were believed to possess more positive qualities than men who were paired with an unattractive woman. Others have found that people's judgments of opposite sex targets are affected by the presence of an attractive model, but only when choosing a long-term partner, which is a context in which unobservable qualities such as parenting potential and a good personality are paramount (Little et al., 2008). Results such as these suggest that female mate choice copying might emerge from women using the male target's mate to infer the degree to which he possesses unobservable traits that make him a good partner.

In the current research, we sought to test this possibility by examining whether the presence of an attractive female mate leads women to infer that a target male possesses unobservable qualities that women desire in their partners. We tested our hypothesis in two phases. In the first phase (Experiment 1), we examined whether the desirability enhancement effect afforded by a target male's attractive mate depends on the model female being described as the man's current mate. Accordingly, women in Experiment 1 rated the desirability of

men pictured with attractive women who were said to be romantic partners or nonromantic partners (siblings, cousins, or ex-romantic partners). If human female mate choice copying effects emerge from a process whereby women infer a man's possession of desirable qualities based on his having been chosen by an attractive female partner, we should find that the effects only emerge in conditions where the pictured female has chosen—and continues to choose—the male target as her mate. Next (Experiment 2), we explicitly tested whether changes in women's perceptions of a partnered man's desirability are mediated by changes in beliefs about his possession of unobservable qualities that make him a desirable long-term mate (e.g., wealth, ambitiousness, and generosity). These results seek to yield important new insights into the processes that guide human female mate choice copying.

## Experiment 1

Experiment 1 was designed to examine how the perceived relationship between a male target and a model female impacts the desirability enhancement effect observed in studies of female mate choice copying. We hypothesized that the desirability enhancement effect emerges from a process whereby women infer that the target male possesses unobservable, positive qualities that make him a suitable match for his attractive mate. This effect is therefore predicted to be contingent upon women believing that the model female chose the male target as a mate and that the man is sufficiently desirable to maintain her as a romantic partner. Experiment 1 was designed to test this possibility by having women evaluate the desirability of male targets, each of whom was depicted with an attractive female target that was described as being the man's (a) current girlfriend, (b) cousin, (c) adopted sister, or (d) ex-girlfriend. We predicted that the desirability enhancement effect would occur when the attractive woman was described as being the man's current girlfriend but would not occur if the target was described as being a cousin, adopted sister, or ex-girlfriend. We predicted this pattern to emerge because the presence of an attractive female loses its diagnostic value if the couple is not romantically linked or if the couple was once romantically linked but are no longer together.

## Method

### Participants

One hundred and forty eight female college students (37 per condition) participated to fulfill a course research requirement. Participants' ages ranged from 17 to 32 ( $M = 18.92$ ,  $SD = 1.84$ ).

### Design and Procedure

Participants came into a research laboratory in small groups and were seated at individually partitioned computers running Qualtrics experimental software. To minimize suspicion, a cover story was used. Participants were told that they were in

an experiment assessing the effects of seemingly trivial features of one's environment (e.g., ambient lighting, temperature) on how we evaluate others. After answering a small number of questions to add credibility to the cover story (e.g., "How bright is the room you are in?" and "How comfortable is the chair that you are sitting in?"), all participants viewed and rated photos of men paired with attractive women. Via random assignment, participants were told that the pairs of individuals in the photos were romantic partners (experimental condition), adopted siblings, cousins, or former romantic partners. Photographs appeared in randomized order and participants were asked to evaluate the men in the photographs on the several dimensions, including their desirability as a romantic partner. A suspicion probe at the end of the experiment revealed that no participants guessed the true nature of the experiment.

### Target Photographs

Seven target photographs, each depicting an unknown (non-celebrity) male and female side-by-side, were found via Internet searches of publicly available websites. The photos were standardized by the researchers by cropping the images to display the model and target from the waist up. Additionally, all photos contained a model and target displaying pleasant facial expressions, body position (oriented toward the camera), and physical closeness (touching shoulders). Because previous research has found that desirability enhancement is driven by women's perceptions of the model females' attractiveness (Eva & Wood, 2006; Little, Caldwell, et al., 2011; Place et al., 2010; Waynforth, 2007), we chose photographs that featured women above average in attractiveness depicted with men who were of average attractiveness. To ensure our stimuli met these criteria, a separate sample of women ( $N = 30$ ) prerated the attractiveness of the targets in cropped versions of the photos (i.e., the men and women separately). As expected, the men were rated to be relatively average in attractiveness ( $M = 3.43$ ,  $SD = 0.86$ ) and the women were rated as above average in attractiveness ( $M = 4.98$ ,  $SD = 0.67$ ; rated on a 7-point scale; 1 = *very unattractive*, 7 = *very attractive*).

### Desirability Ratings

After viewing the photographs, participants were asked a series of questions about the targets' desirability as a romantic partner. The desirability questions were each rated on a 7-point scale and included "How desirable is this man as a romantic partner?" (1 = *very undesirable*, 7 = *very desirable*), "How attractive is this man?" (1 = *very unattractive*, 7 = *very attractive*), and "In general, how romantically appealing is this man?" (1 = *very unappealing*, 7 = *very appealing*). We used these measures because previous research has found them to be a reliable measure of women's perceptions of a man's desirability as a romantic partner across a range of social contexts (e.g., when depicted alone, with same sex others, or with opposite sex others; Hill & Buss, 2008).

## Results

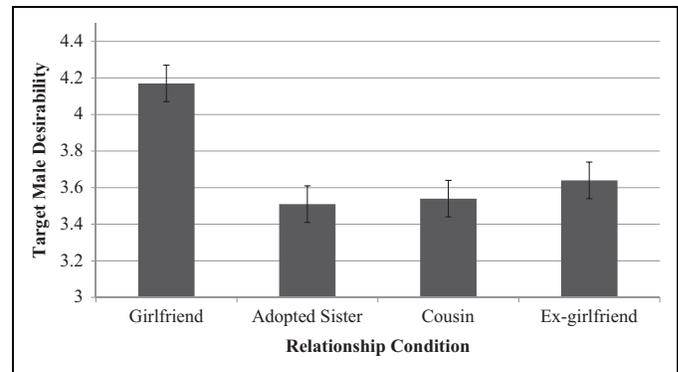
To test the hypothesis that the desirability enhancement effect is contingent on the model female having chosen the target male as a mate, we first created a composite variable of target male desirability by averaging scores on each of the three desirability ratings across the seven male targets to serve as our dependent variable ( $\alpha = .85$ ) and entered it into a one-way analysis of variance with relationship type (girlfriend, adopted sister, cousin, and ex-girlfriend) as the independent variable. The analysis yielded a significant effect of relationship type on women's evaluations of the target men's desirability,  $F(3, 144) = 7.24, p \leq .001$ . As predicted, women rated men as significantly more desirable (Tukey's Honest Significant Difference (HSD)  $ps < .05$ ) in the girlfriend condition ( $M = 4.17, SD = 0.61$ ) than in the (a) adopted sister ( $M = 3.51, SD = 0.70, d = 1.01$ ), (b) cousin ( $M = 3.54, SD = 0.13, d = 1.43$ ), and (c) ex-girlfriend ( $M = 3.64, SD = 0.67, d = 0.83$ ) conditions. The sibling, cousin, and ex-girlfriend conditions did not differ (all  $ps > .85$ ; see Figure 1).

## Discussion

The results of Experiment 1 found that the desirability enhancement effect conferred on men by being paired with an attractive model female is contingent on women's perceptions that (a) the model female has chosen the target male as a mate and (b) the male target is sufficiently desirable to maintain her romantic interest. The desirability enhancement effect did not emerge when the model females were described as being the male targets' adopted siblings, cousins, or former romantic partners. This result is consistent with past research (Eva & Wood, 2006; Little, Caldwell, et al., 2011; Place et al., 2010; Waynforth, 2007) and lends support for the hypothesis that women use the attractiveness of the model female to infer that the target male possesses unobservable qualities that make him an equal, desirable match for his attractive female partner.

## Experiment 2

Experiment 2 was designed to directly test the hypothesis that women infer that partnered male targets possess unobservable, positive qualities that make them desirable mates. Women viewed photographs of men depicted with an attractive romantic partner or photographs that were cropped, so that the men appeared alone. As in Experiment 1, women were asked to evaluate each target's desirability as a romantic partner. Additionally, participants were asked to evaluate each target on nine unobservable traits known to influence men's desirability as a romantic partner (e.g., generosity, intelligence, and wealth). We predicted that women would find men more desirable when shown with an attractive romantic partner compared to when they were shown alone. Further, we predicted that women would rate the paired men as being more likely to possess unobservable qualities that women prioritize in romantic partners. Finally, we predicted that the changes in women's beliefs



**Figure 1.** Target male desirability as a function of relationship condition (Experiment 1). Error bars reflect standard error of the mean.

about the qualities possessed by the paired men would mediate the desirability-enhancement effect.

## Method

### Participants

Ninety-seven female college students served as participants in this experiment (47 viewed male targets alone and 50 viewed male targets with an attractive female, who was described as being the man's current romantic partner). Participants' ages ranged from 17 to 28 years ( $M = 18.91, SD = 1.56$ ), and participation partially fulfilled a course requirement.

### Design and Procedure

After being told the same cover story used in Experiment 1, female participants were randomly assigned to view one of the two sets of seven photographs (same photographic stimuli used in Experiment 1), except with different written descriptions. One set of photos depicted male targets with a model female (described as the target's girlfriend), and the other was comprised of cropped versions of the same photos without the model females. After being randomly assigned to either the together or the alone condition, participants answered the same 3 items used in Experiment 1 to measure the romantic desirability of the male targets. To test our hypothesis that male desirability is augmented because women infer that men with attractive mates rank highly on desirable, unobservable qualities, we also had women report how intelligent, trustworthy, humorous, wealthy, romantic, goal driven, adventurous, generous, and attentive to the needs of others they thought each man was (rated on a 7-point scale). We chose these dimensions because (a) prior research has found that these qualities rank highly among women's preferences for romantic partners and (b) they are qualities that are not easily and readily assessed based on a man's physical appearance alone (Baker & Maner, 2008; Buss, 1989; Buss & Schmitt, 1993; Li, Bailey, Kenrick, & Linsenmeier, 2002; Roney & von Hippel, 2010).

## Results

### Target Desirability

We first examined whether we could conceptually replicate the pattern of results found in Experiment 1 and others' research (Eva & Wood, 2006; Little, Caldwell, et al., 2011; Place et al., 2010; Waynforth, 2007), whereby men are perceived as being more desirable romantic partners when they are depicted with an attractive model female. To test this possibility, we used the same components (previously described in Experiment 1) to create a composite variable for male desirability ( $\alpha = .85$ ) and entered it into an independent samples *t*-test, with condition (pictured as a couple vs. pictured separately) as the independent variable. Consistent with the results from Experiment 1, women who viewed the men in the presence of an attractive model female, labeled as a romantic partner ( $M = 4.10$ ,  $SD = 0.49$ ), rated the male targets to be significantly more desirable than did the women who saw the same men depicted alone ( $M = 3.70$ ,  $SD = 0.63$ ),  $t(95) = 2.97$ ,  $p = .004$ ,  $d = 0.71$ .

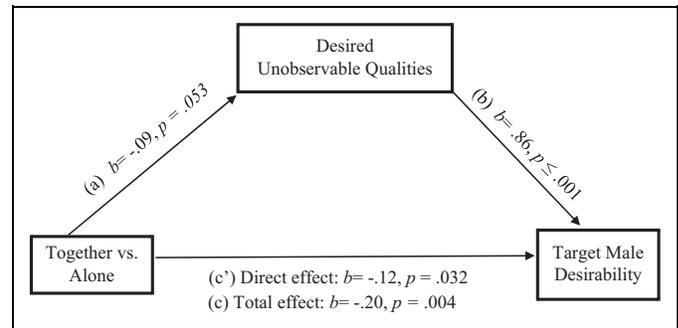
### Unobservable Qualities That Impact Men's Desirability as a Mate

We next tested the prediction that women infer that men pictured with attractive romantic partners possess significantly more positive, unobservable qualities than men pictured alone. To test this, we first created a composite variable by averaging the nine unobservable qualities on which women rated each male target ( $\alpha = .85$ ). We then entered this composite variable as the outcome variable in an independent samples *t*-test, with condition as the independent variable. Consistent with our prediction, female subjects rated men in the couple condition ( $M = 4.93$ ,  $SD = 0.49$ ) higher on these qualities compared to those in the pictured separately condition ( $M = 4.75$ ,  $SD = 0.40$ ),  $t(95) = 1.96$ ,  $p = .051$ ,  $d = 0.40$ .

### Mediation

Lastly, a simple mediation analysis using Preacher and Hayes' (2008) multiple mediation INDIRECT process macro with 5,000 bootstrap resamples and a 95% confidence interval (CI) was performed to determine whether women's evaluations of men's unobservable, desirable qualities mediated the effect of condition on target male desirability. Condition (paired with romantic partner or unpaired) was entered as the independent variable, the composite variable for unobservable qualities was entered as the mediator, and target male desirability was entered as the outcome variable.

Results revealed that there was a significant effect of condition (paired with romantic partner vs. unpaired) on beliefs that men possess desired unobservable qualities (*a* path),  $b = -.09$  ( $SE = .05$ ),  $t = -1.96$ ,  $p = .053$  (see Figure 2). There was also a significant effect of desired, unobservable qualities on target male desirability ratings (*b* path),  $b = .86$  ( $SE = .12$ ),  $t = 7.02$ ,  $p \leq .001$ . Additionally, although the direct effect of condition on target desirability remained significant when the



**Figure 2.** Mediation model for Experiment 2. All path coefficients represent unstandardized regression coefficients. The direct effect coefficient represents the effect of condition on women's ratings of target male desirability after controlling for the mediating influence of women's perceptions of how men rank on desired unobservable qualities (95% CI  $[-.0770, -.0774]$ ).

mediator was included in the model (*c'* path),  $b = -.12$  ( $SE = .06$ ),  $t = -2.18$ ,  $p = .032$ , the coefficient representing the indirect effect of condition on target male desirability through belief that men possessed desired, unobservable qualities, was also significant (*c* path),  $b = -.20$  ( $SE = .07$ ),  $t = -2.96$ ,  $p = .004$  (95% CI  $[-.0770, -.0774]$ ). These results provide evidence that changes in women's perceptions of target men's desirability are partially mediated by changes in women's beliefs about the degree to which the target men possess unobservable, positive qualities.

## Discussion

Experiment 2 provided a direct test of the hypothesis that women perceive men with attractive romantic partners to be more desirable than when depicted alone because women infer such men possess unobservable qualities that women desire in their mates. In addition to replicating the general desirability enhancement effect found in previous research (Eva & Wood, 2006; Little, Caldwell, et al., 2011; Place et al., 2010; Waynforth, 2007) and the first experiment, we found that women's ratings of the male targets on desirable yet unseen qualities partially mediated this effect. That is, women rated men pictured with a physically attractive romantic partner higher on unobservable qualities that women desire in a mate (e.g., resource access, willingness to invest) and, in turn, rated the men as more desirable overall as romantic partners.

## General Discussion

A robust body of research indicates that women find men to be more desirable as romantic partners when they are desired by or romantically paired with an attractive model female (Bowers et al., 2012; Chu, 2012; Dunn & Doria, 2010; Hill & Buss, 2008; Jones et al., 2007; Little et al., 2008; Little, Caldwell, et al., 2011; Place et al., 2010; Waynforth, 2007; Yorzinski & Platt, 2010). However, little experimental research has been done to clarify the underlying mechanisms driving these

effects. Across two experiments, we examined the possibility that the desirability enhancement effect conferred on men by their attractive female mates may reflect a process, whereby women use the presence of a current female mate to infer that he possesses unobservable, positive qualities—such as wealth and intelligence—that make him an appropriate match for his attractive female partner (Buss & Shackelford, 2008).

We conducted two experiments that were designed to test predictions derived from our research hypothesis. Our first experiment tested the prediction that the desirability enhancement effect would only emerge if women believed that the target male (a) was chosen as a mate by the model female and (b) is sufficiently desirable to maintain her romantic interest. This prediction was supported. The presence of an attractive model female only produced a desirability enhancement effect on target men when they were said to be a man's current romantic partner. This effect did not emerge when the attractive women were said to be the men's cousins, adopted siblings, or ex-romantic partners.

Our second experiment provided novel evidence for a potential underlying psychological mechanism driving the desirability-enhancement effect observed in female mate choice copying. Experiment 2 found that when women see a male target with an attractive mate, they infer that he is more likely to possess a number of unobservable, positive qualities that women prioritize when selecting romantic partners. Women rated men more positively on unobservable qualities that influence desirability as a romantic partner (e.g., trustworthiness, wealth) when the men were pictured with an attractive romantic partner compared to when those same men were depicted alone. These ratings mediated the desirability enhancement conferred on men from having an attractive romantic partner. This result suggests that human female mate choice copying might emerge from a process wherein women use the interest of another woman as evidence that a man possesses unobservable qualities that make him a desirable partner. Together, the results of our experiments contribute to the literature on how women use indirect contextual, social, and behavioral cues to evaluate the mate value of prospective romantic partners (Brase, 2006; Dunn & Searle, 2010; La Cerra, 1995; Townsend & Levy, 1990) and women's mating psychology, more broadly (e.g., Buss & Schmitt, 1993; Hill, Rodeheffer, Griskevicius, Durante, & White, 2012; Kenrick & Keefe, 1992; Kenrick, Sadalla, Groth, & Trost, 1990; Kenrick et al., 1993; Li & Kenrick, 2006; Li et al., 2013; Maner & McNulty, 2013).

### Limitations and Future Directions

Because we were specifically interested in the psychological processes that drive female mate choice copying, we did not test our predictions in men. However, research indicates that men also engage in mate choice copying behavior (Little et al., 2008; Little, Caldwell, et al., 2011; Place et al., 2010; Yorzinski & Platt, 2010), making it an important area of research to explicitly test whether the same processes that guide female

mate choice copying also guide male mate choice copying. Indeed, existing research suggests that men's mate choice copying behaviors might be guided by similar changes in beliefs about the degree to which women possess unobservable, positive qualities when observed with an attractive partner. For example, research finds that male mate choice copying behavior is most pronounced in the context of long-term mating (Little et al., 2008), which is a context in which men also emphasize unobservable qualities in their partners (e.g., parenting potential, kindness, and understanding; Buss, 1989). Results such as this suggests that copying behavior in men may emerge from a process similar to that which was observed in women. Future research would benefit from empirically addressing this possibility as well as other hypotheses about the similarities and differences in men's and women's copying behaviors.

Another limitation of the current studies is that we did not assess whether the copying effect was specific to either the long-term or short-term mating context. Instead, we asked our female participants questions that could have been interpreted as making reference to the target male's desirability in either mating context. Future research would benefit from making this distinction, as the current hypothesis makes clear predictions about the mating contexts in which this effect should and should not be observed. Given that women place a greater priority in unobservable qualities—such as kindness, generosity, and resource access—in the context of long-term (compared to short-term) mating, we should find that the effects reported in this article occur most frequently in the context of long-term mating. Although we did not test this prediction explicitly in the current research, it is consistent with others' research, which shows that copying is most pronounced in the context of long-term mating (Little et al., 2008; Waynforth, 2007).

The current studies were also limited in their reliance on self-report measures of desirability. Additional research is needed to examine whether these results translate to changes in mating behavior, with women being more or less likely to pursue mating opportunities with men who have been shown to be able to attract and maintain the romantic interest of attractive women. In spite of these limitations, the current experiments provide needed insight into the mechanisms driving desirability enhancement effects found in studies of human female mate choice copying.

### Conclusion

A large and growing body of research has found evidence suggesting that men can increase their desirability to women simply by being observed holding the attention of an attractive member of the opposite sex. The current results suggest that this desirability-enhancement effect might emerge because women infer that a partnered man must possess unobservable, positive qualities that make him an appropriate match for his attractive mate. As said by Shane Forbes, the 39-year-old founder of Wingwomen.com, "Women are more

attracted to men who have other women surrounding them because they see men with women as having a seal of approval” (Berkowitz, 2004). Getting this seal of approval without having to incur the costs of firsthand mate value assessment decreases the costs of mate search, making it an advantageous strategy for women in some contexts.

### Acknowledgments

We thank Megan Osbourne, Leah Colburn, Holly Pettijohn, Deanna Morrison, and Elyssa Johnson for their research assistance with this project.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

### References

- Baker, M., & Maner, J. (2008). Risk-taking as a situationally sensitive male mating strategy. *Evolution and Human Behavior, 29*, 391–395.
- Bateman, A. J. (1948). Intra-sexual selection in *Drosophila*. *Heredity, 2*, 349–368.
- Berkowitz, E. (2004, October). Are you with him? Why yes, want to date him? *The New York Times*. Retrieved from [http://www.nytimes.com/2004/10/10/fashion/10WING.html?\\_r=0](http://www.nytimes.com/2004/10/10/fashion/10WING.html?_r=0)
- Bowers, R. I., Place, S. S., Todd, P. M., Penke, L., & Asendorpf, J. B. (2012). Generalization in mate-choice copying in humans. *Behavioral Ecology, 23*, 113–124.
- Brase, G. L. (2006). Cues of parental investment as a factor in attractiveness. *Evolution and Human Behavior, 27*, 145–157.
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences, 12*, 1–49.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review, 100*, 204–232.
- Buss, D. M., & Shackelford, T. K. (2008). Attractive women want it all: Good genes, economic investment, parenting proclivities, and emotional commitment. *Evolutionary Psychology, 6*, 134–146.
- Chu, S. (2012). I like who you like, but only if I like you: Female character affects mate-choice copying. *Individual Differences, 52*, 691–695.
- Dugatkin, L. A. (1992). Sexual selection and imitation: Females copy the mate choice of others. *American Naturalist, 139*, 1384–1389.
- Dunn, M. J., & Doria, M. V. (2010). Simulated attraction increases opposite sex attractiveness ratings in females but not males. *Journal of Social, Evolutionary, and Cultural Psychology, 4*, 1–17.
- Dunn, M. J., & Searle, R. (2010). Effect of manipulated prestige-car ownership on both sex attractiveness ratings. *British Journal of Psychology, 101*, 69–80.
- Eva, K. W., & Wood, T. J. (2006). Are all the taken men good? An indirect examination of mate choice copying in humans. *Canadian Medical Association Journal, 175*, 1573–1574.
- Galef, B. G., & White, D. J. (1998). Mate-choice copying in Japanese quail, *Coturnix coturnix japonica*. *Animal Behavior, 55*, 545–552.
- Gibson, R. M., Bradbury, J. W., & Vehrencamp, S. L. (1991). Mate choice in lekking sage grouse revisited: The roles of vocal display, female site fidelity, and copying. *Behavioral Ecology, 2*, 165–180.
- Gibson, R. M., & Höglund, J. (1992). Copying and sexual selection. *Trends in Ecology & Evolution, 7*, 229–232.
- Grant, J. W., & Green, L. D. (1996). Mate copying versus preference for actively courting males by female Japanese medaka (*Oryzias latipes*). *Behavioral Ecology, 7*, 165–167.
- Guéguen, N. (2014). Cues of men’s parental investment and attractiveness for women: A field experiment. *Journal of Human Behavior in the Social Environment, 24*, 296–300.
- Hill, S. E., & Buss, D. M. (2008). The mere presence of opposite-sex others on judgments of sexual and romantic desirability: Opposite effects for men and women. *Personality and Social Psychology Bulletin, 34*, 635–647.
- Hill, S. E., Rodeheffer, C. D., Griskevicius, V., Durante, K., & White, A. E. (2012). Boosting beauty in an economic decline: Mating spending and the lipstick effect. *Journal of Personality and Social Psychology, 103*, 275–291.
- Hill, S. E., & Ryan, M. J. (2006). The role of model female quality in the mate choice copying behavior of sailfin mollies. *Biology Letters, 2*, 203–205.
- Höglund, J., Alatalo, R. V., Gibson, R. M., & Lundberg, A. (1995). Mate-choice copying in black grouse. *Animal Behaviour, 49*, 1627–1633.
- Jones, B. C., DeBruine, L. M., Little, A. C., Burriss, R. P., & Feinberg, D. R. (2007). Social transmission of face preferences among humans. *Proceedings of the Royal Society of London B: Biological Sciences, 274*, 899–903.
- Kenrick, D. T., Groth, G. E., Trost, M. R., & Sadalla, E. K. (1993). Integrating evolutionary and social exchange perspectives: The effects of gender, self-appraisal and individual differences on mate selection criteria. *Journal of Personality and Social Psychology, 64*, 951–969.
- Kenrick, D. T., & Keefe, R. C. (1992). Age preferences in mates reflect sex differences in human reproductive strategies. *Behavioral and Brain Sciences, 15*, 75–133.
- Kenrick, D. T., Sadalla, E. K., Groth, G., & Trost, M. R. (1990). Evolution, traits, and the stages of human courtship: Qualifying the parental investment model. *Journal of Personality, 58*, 97–116.
- La Cerra, M. M. (1995). *Evolved mate preferences in women: Psychological adaptations for assessing a man’s willingness to invest in offspring (Dissertation Abstracts International: Section B: the Sciences & Engineering Mar 1995, 55, 4149; Doctoral dissertation)*. Santa Barbara: University of California.
- Li, N. P., Bailey, J. M., Kenrick, D. T., & Linsenmeier, J. A. W. (2002). The necessities and luxuries of mate preferences: Testing the tradeoffs. *Journal of Personality and Social Psychology, 82*, 947–955.
- Li, N. P., & Kenrick, D. T. (2006). Sex similarities and differences in preferences for short-term mates: What, whether, and why. *Journal of Personality and Social Psychology, 90*, 468–489.

- Li, N. P., Yong, J. C., Tov, W., Sng, O., Fletcher, G. J. O., Valentine, K. A., . . . Balliet, D. (2013). Mate preferences do predict attraction and choices in the early stages of mate selection. *Journal of Personality and Social Psychology, 105*, 757–776.
- Little, A. C., Burriss, R. P., Jones, B. C., DeBruine, L. M., & Caldwell, C. A. (2008). Social influence in human face preference: Men and women are influenced more for long-term than short-term attractiveness decisions. *Evolution and Human Behavior, 29*, 140–146.
- Little, A. C., Caldwell, C. A., Jones, B. C., & DeBruine, L. M. (2011). Effects of partner beauty on opposite-sex attractiveness judgments. *Archives of Sexual Behavior, 40*, 1119–1127.
- Little, A. C., Jones, B. C., & DeBruine, L. M. (2011). Facial attractiveness: Evolutionary based research. *Philosophical Transactions of the Royal Society of London B: Biological Sciences, 366*, 1638–1659.
- Lucas, M., Koff, E., Grossmith, S., & Migliorini, R. (2011). Sexual orientation and shifts in preferences for a partner's body attributes in short-term versus long-term mating contexts. *Psychological Reports, 108*, 699–710.
- Maner, J. K., & McNulty, J. K. (2013). Attunement to the fertility status of same-sex rivals: Women's testosterone responses to olfactory ovulation cues. *Evolution and Human Behavior, 34*, 412–418.
- Moore, F. R., Filippou, D., & Perrett, D. I. (2011). Intelligence and attractiveness in the face: Beyond the attractiveness halo effect. *Journal of Evolutionary Psychology, 9*, 205–217.
- Place, S. S., Todd, P. M., Penke, L., & Asendorpf, J. B. (2010). Humans show mate copying after observing real mate choices. *Evolution and Human Behavior, 31*, 320–325.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891.
- Pruett-Jones, S. (1992). Independent versus non-independent mate-choice: Do females copy each other? *American Naturalist, 140*, 1000–1009.
- Reuters. (2004). *In NY, money can't buy love but gets a foot in the door*. Retrieved from <http://expressindia.indianexpress.com/news/fullstory.php?newsid=38810>
- Roney, J. R., Hanson, K. N., Durante, K. M., & Maestripieri, D. (2006). Reading men's faces: Women's mate attractiveness judgments track men's testosterone and interest in infants. *Biological Sciences, 273*, 2169–2175.
- Roney, J. R., & von Hippel, W. (2010). The presence of an attractive woman elevates testosterone and physical risk taking in young men. *Social Psychological and Personality Science, 1*, 57–64.
- Schlupp, I., Marler, C., & Ryan, M. J. (1994). Benefit to male sailfin mollies of mating with heterospecific females. *Science, 263*, 373–374.
- Sheppard, J. A., & Strathman, A. J. (1989). Attractiveness and height: The role of stature in dating preference, frequency of dating, and perceptions of attractiveness. *Personality and Social Psychology Bulletin, 15*, 617–627.
- Sigall, H., & Landy, D. (1973). Radiating beauty: Effects of having a physically attractive partner on person perception. *Journal of Personality and Social Psychology, 28*, 218.
- Slagsvold, T., Lifjeld, J. T., Stenmark, G., & Breiehagen, T. (1988). On the cost of searching for a mate in female pied flycatchers *Ficedula hypoleuca*. *Animal Behaviour, 36*, 433–442.
- Stöhr, S. (1998). Evolution of mate-choice copying: A dynamic model. *Animal Behaviour, 55*, 893–903.
- Townsend, J. M., & Levy, G. D. (1990). Effects of potential partners' physical attractiveness and socioeconomic status on sexuality and partner selection. *Archives of Sexual Behavior, 19*, 149–164.
- Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man, 1871-1971* (pp. 136–179). Chicago, IL: Aldine.
- Waynforth, D. (2007). Mate choice copying in humans. *Human Nature, 18*, 264–271.
- Waynforth, D., Delwadia, S., & Camm, M. (2005). The influence of women's mating strategies on preference for masculine facial architecture. *Evolution and Human Behavior, 26*, 409–416.
- Yorzinski, J. L., & Platt, M. L. (2010). Same-sex gaze attraction influences mate-choice copying in humans. *PLoS One, 5*, e9115.