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Kind toward whom? Mate preferences for personality traits are target specific

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Abstract

Previous mate preference studies indicate that people prefer partners whose personalities are extremely kind and trustworthy, but relatively nondominant. This conclusion, however, is based on research that leaves unclear whether these traits describe the behavior a partner directs toward oneself, toward other classes of people or both. Because the fitness consequences of partners' behaviors likely differed depending on the classes of individuals toward whom behaviors were directed, we predicted that mate preferences for personality traits would change depending on the specific targets of a partner's behavioral acts. Consistent with this, two experiments demonstrated that people prefer partners who are extremely kind and trustworthy when considering behaviors directed toward themselves or their friends/family, but shift their preferences to much lower levels of these traits when considering behaviors directed toward other classes of individuals. In addition, both sexes preferred partners who direct higher levels of dominance toward members of the partner's own sex than toward any other behavioral target category, with women preferring levels of dominance toward other men as high as — or higher than — levels of kindness and trustworthiness. When asked to rate traits for which the behavioral target was left unspecified, furthermore, preferences were very similar to self-directed preferences, suggesting that previous trait-rating studies have not measured preferences for partners' behaviors directed toward people other than oneself. These findings may provide a basic contribution to the mate preference literature via their demonstration that ideal standards for romantic partners are importantly qualified by the targets of behavioral acts.

Keywords: Dominance; Human mating; Ideal standards; Mate preference; Mate selection; Personality traits

1. Introduction

The human mate preference literature includes a large number of studies that have sought to identify the personality traits possessed by the ideal romantic partner. These studies have generally converged in finding that people report preferring traits related to kindness and trustworthiness above all other aspects of personality (e.g., Botwin, Buss & Shackelford, 1997; Buss et al., 1990; Buss & Barnes, 1986; Cottrell, Neuberg & Li, 2007; Ellis, Simpson & Campbell, 2002; Fletcher, Simpson, Thomas & Giles, 1999; Kenrick, Groth, Trost & Sadalla, 1993; Kenrick, Sadalla, Groth & Trost, 1990; Li, Bailey, Kenrick & Linsenmeier, 2002; Li & Kenrick, 2006; Pillsworth, 2008; Regan, Levin, Sprecher, Christopher & Cate, 2000). When forced to make trade-offs among various desirable attributes, the differential value of these traits becomes even more pronounced (Fletcher, Tither, O'Laughlin, Friesen & Overall, 2004; Li et al., 2002; Li & Kenrick, 2006), to the point that Li et al. (2002) concluded from their findings that "people may desire as kind a mate as possible" (p. 953). In addition, despite theoretical reasons to believe that women should prefer intrasexually dominant men (e.g., Sadalla, Kenrick & Vershure, 1987; Snyder, Kirkpatrick & Barrett, 2008), both sexes self-report much lower preferences for dominance-related traits than for traits related to kindness and trustworthiness (Botwin et al., 1997; Fletcher et al., 1999; Kenrick et al., 1990, 1993). Based on these findings, then, the extant self-report literature suggests that people who are highly kind and trustworthy — but also relatively nondominant — should be the most attractive romantic partners of both sexes.

A potentially important ambiguity in the previous literature, however, concerns how subjects interpret terms

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such as "kind" and "dominant" with respect to the targets of behavioral acts that exemplify these traits. When someone rates the importance of "kindness" in a potential mate, do they have in mind kindness directed specifically toward themselves or toward other classes of individuals as well? Notice that different individuals will be considered the most attractive depending on answers to such questions — someone who is highly altruistic toward strangers may be the most desirable mate on a target-general interpretation of kindness, for instance, but on a self-directed interpretation even someone who is relatively unkind toward many classes of people may still be highly desirable as a mate if they selectively direct high levels of kindness toward their romantic partners. Likewise, it is entirely possible that people may prefer that their partners direct opposite patterns of behavior toward different classes of individuals (e.g., dominant behaviors toward unrelated rivals but nondominant or even subordinate behaviors toward self and family). If true, such target-specific mate preferences could fundamentally challenge accepted conclusions regarding the most preferred traits in an ideal partner by demonstrating that preferences are importantly qualified by the targets of behavioral acts.

From an adaptationist perspective, furthermore, it can be predicted a priori that mate preference mechanisms should be sensitive to the targets of behavioral acts since the fitness consequences of partners' behaviors likely varied dramatically depending on the classes of individuals toward whom behaviors were directed (e.g., kindness directed toward self vs. toward strangers). This prediction presupposes an evolutionary history of individuals treating different classes of targets differently enough that behaviors directed toward one class of individuals did not fully predict behaviors directed toward other classes. A large body of theory and data within behavioral biology supports this supposition, though, as data supporting inclusive fitness theory (Hamilton, 1964), reciprocal altruism/social exchange theory (Cosmides, 1989; Trivers, 1971) and theories of animal conflict (Archer, 1988) all demonstrate selective delivery of fitness costs and benefits toward different classes of individuals. Observing a chimpanzee sharing food with close kin or a prospective sexual consort would not allow one to accurately infer high levels of generalized altruism in that individual, for example, nor would it likely be valid to observe a pattern of aggression directed toward a status rival and then infer a tendency of that individual to aggress against his mate or offspring. With respect to humans in particular, furthermore, research in personality psychology has demonstrated that an individual's pattern of trait-exemplifying behaviors exhibited toward one type of person can be a poor predictor of those same behaviors exhibited toward other types of people (e.g., Fleeson, 2008; Shoda, Mischel & Wright, 1994). Assuming that such target-specific personality profiles were a recurrent feature of human social behavior, mate evaluation mechanisms should be sensitive to the specific targets of behavioral acts.

1.1. The present research

This research provides the first empirical tests of whether mate preferences for personality traits show adaptive patterns of variability across targets of distinct functional significance. Similar to previous studies, subjects were asked to evaluate personality trait terms for the extent to which they describe the behavior exhibited by their ideal romantic partner. In contrast to previous studies, however, the targets of those patterns of behavior were specified as either (1) oneself, (2) one's close friends and family, (3) other members of the ideal partner's same sex or (4) other members of the subject's same sex. These behavioral target categories were selected for two main reasons. First, ancestral humans would likely have interacted with members of each of these categories on a regular basis (e.g., Kelly, 1995). Second, as argued below, the fitness consequences of a mate's behaviors would have differed in important ways when directed toward these different categories of individuals.

As initial tests of target-specific mate preferences, we assessed subjects' preferences for kindness, trustworthiness and dominance in a prospective partner. 'Kindness' refers to behaviors that deliver material resources or other forms of social support to another at a cost to oneself, or that communicate one's willingness to do so (see Li et al., 2002). 'Trustworthiness' refers to a tendency to adhere to stated intentions and to honor commitments over time (see Cottrell et al., 2007; Fletcher et al., 1999). Finally, 'dominance' refers to behaviors that employ forceful or competitive tactics in order to promote desired outcomes and/or achieve status in a social hierarchy (see Sadalla et al., 1987; Snyder et al., 2008). In what follows, we describe the theoretical rationales underlying our hypotheses regarding how preferences for behaviors exemplifying these trait categories should differ across distinct behavioral targets.

1.1.1. Preferences for a partner's behavior directed toward oneself

When considering a partner's behaviors directed toward oneself, both sexes should prefer partners who are extremely high on kindness and trustworthiness and low on dominance. This is because a partner who is very kind and trustworthy toward oneself can be expected to deliver material resources and other forms of social support consistently over time and to refrain from engaging in extra-pair affairs (e.g., Buss & Schmitt, 1993; Cottrell et al., 2007; Li et al., 2002). Conversely, as noted by a number of authors, dominant behaviors directed toward oneself may result in fitness costs via physical injury or coercion into action against one's interests (e.g., Ellis, 1992; Jensen-Campbell, Graziano & West, 1995; Snyder et al., 2008). For these reasons, the profile of the ideal romantic partner's self-directed behavior should constitute a conceptual replication of the pattern typically reported in the extant literature when the targets of behavior are left unspecified.

1.1.2. Preferences for a partner's behavior directed toward one's close friends and family

The personality profile describing the ideal partner's behavior directed toward one's close friends and family should differ minimally from that for self-directed behavior. This is because individuals will generally have many overlapping fitness interests with friends and family members due either to genetic relatedness (Hamilton, 1964) or to long-term cooperative relationships that produce gains in trade and/or provide insurance against periods of infirmity or resource scarcity (e.g., Sugiyama, 2004; Tooby & Cosmides, 1996). People are therefore expected to value the welfare of friends and family very highly, which in turn predicts preferences for their romantic partners to exhibit high kindness and trustworthiness, but relatively low dominance, toward these individuals.

1.1.3. Preferences for a partner's behavior directed toward others

When considering a partner's behavior directed toward people outside the pair-bond who are neither friends nor family members, we predict that both sexes will prefer lower levels of kindness and trustworthiness than they prefer when considering behaviors directed toward themselves or toward friends and family. This is because a partner's overall resource provisioning within a pair-bond should be a function of two factors: (1) how many resources she/he possesses; and (2) what percentage of those resources are allocated toward a partner and offspring as opposed to elsewhere (Botwin et al., 1997; Ellis, 1998; Li et al., 2002). If kind and trustworthy behaviors are those that deliver resources to others at some cost to one's own interests, it follows that a partner who is extremely kind and trustworthy toward people outside the pair-bond will end up in possession of fewer resources that could be invested in a mate and offspring (see Axelrod, 1984; Cosmides, 1989). This does not imply that people should prefer mates who are particularly *un*kind or *un*trustworthy toward others in the community at large, since being seen as such would likely have reduced an individual's value as a partner for social exchanges (e.g., Cottrell et al., 2007; Price, 2006) and reduced the inclination of others to provide social support to that individual's family in times of need (Gurven & Hill, 2009). It does, however, imply that the preferences for extremely high levels of these traits reported in the extant literature will not be found when the targets of such behaviors are specified as individuals who are outside the subject's network of close friends and family.

In addition, we predict that women will prefer partners who exhibit relatively high levels of dominance toward men who are not members of the woman's network of friends and family. Intrasexual dominance may have predicted ancestral men's ability to deliver a number of reproductive benefits as a mate, including differential access to resources (e.g., Sadalla et al., 1987; Snyder et al., 2008), ability to protect a family from hostile or exploitative others (e.g., Buss & Schmitt, 1993; Ellis et al., 2002), and perhaps even genes that would have increased the phenotypic quality of offspring (e.g., Gangestad, Garver-Apgar, Simpson & Cousins, 2007). As such, women may find dominant behaviors directed toward other men attractive even if such behaviors are unattractive when directed toward other classes of individuals. Consistent with this possibility — and contrary to the self-report literature — studies that have employed behavioral displays as stimuli have found that intrasexual dominance can increase men's mate attractiveness (Gangestad et al., 2007; Jensen-Campbell et al., 1995; Sadalla et al., 1987), especially when these behaviors are exhibited in explicitly competitive contexts (Snyder et al., 2008). Because these same studies did not find that intrasexual competitiveness increased women's mate attractiveness, we made no explicit predictions regarding whether men would exhibit a target-specific mate preference for dominant behaviors directed specifically toward other women.

1.1.4. Summary of hypotheses

A few basic statistical predictions can be derived from the above arguments. First, when comparing within traits across behavioral target categories, preferences for kindness and trustworthiness should be higher when considering behaviors directed toward self and friends/family than when considering behaviors directed toward other classes of individuals. In addition, women should prefer that men direct higher levels of dominance toward men who are not members of a woman's network of close friends and family than toward other classes of individuals. When comparing across traits within behavioral target categories, on the other hand, both sexes should generally place higher importance on kindness and trustworthiness than on dominance in a potential partner, with the exception of women considering men's behavior toward other men (who are not friends/family). Because of the potential benefits of a male partner's dominance over intrasexual rivals, we predicted that women would prefer levels of dominance at least as high as kindness and trustworthiness when considering a mate's behavior toward other men.

2. Experiment 1

As an initial test of the target-specificity hypothesis, the first experiment compared mate preferences for kindness, trustworthiness and dominance across two behavioral target conditions: (1) when behaviors are directed toward self, and (2) when behaviors are directed toward other members of the ideal partner's same sex. Significant effects across these two broad categories could then justify testing more narrowly defined target classes.

2.1. Methods

2.1.1. Subjects

Fifty-eight women (mean age=18.90, S.D.=1.28) and 73 men (mean age=19, S.D.=1.23) enrolled in undergraduate

courses at the University of California, Santa Barbara (UCSB) participated for partial course credit.

2.1.2. Operational definitions of trait constructs

The selection of trait terms to operationalize kindness, trustworthiness and dominance was guided by a review of previous trait-rating studies (e.g., Botwin et al., 1997; Cottrell et al., 2007; Kenrick et al., 1990). The traits included were those nominated unanimously by the authors and two graduate students as exemplars of the trait dimensions on the basis of the conceptual definitions presented in Section 1.1. The following items operationalized the trait dimensions in unit-weighted composite scales:

- *Kindness*: affectionate, considerate, generous, gentle, helpful, kind, sensitive, supportive, sympathetic, thoughtful. (α=.89 for toward self; .89 for toward others.)
- *Trustworthiness*: committed, dependable, devoted, honest, loyal, reliable, sincere, trustworthy. (α=.88; .85.)
- *Dominance*: aggressive, assertive, bold, brave, competitive, dominant, leader, powerful, strong, take-charge, tough. (α=.87; .91.)

The alpha reliabilities associated with each trait composite support the conclusion that the nominated traits do in fact form cohesive constructs.

2.1.3. Materials and procedure

Subjects were instructed to rate each trait term for both (1) the behavior the ideal romantic partner would direct toward oneself (toward-self condition) and (2) the behavior the ideal romantic partner would direct toward other members of the ideal partner's same sex (toward same-sex others condition). Ratings were made on a seven-point scale with the following anchors: 1=less than the average man (woman), 4=same as the average man (woman) and 7=more than the average man (woman). All traits were rated in one behavioral target condition before rating the same traits in the other behavioral target condition, with survey order counterbalanced across participants. Individual trait terms appeared in a scrambled order and were not organized by the broader trait composites. Surveys were completed in groups of 1–10 same-sex individuals.

2.2. Results

Ratings were first analyzed in a 2 (rater sex: men, women)×2 (behavioral target: self, same-sex others)×3 (trait: kindness, trustworthiness, dominance) mixed ANOVA, with behavioral target and trait entered as repeated measures. A significant interaction between trait and behavioral target demonstrates that the behavioral target manipulation had distinct effects across the different trait types ($F_{2,\ 258}$=118.59, p<.001 η^2=.48), and a three-way interaction between sex, trait and behavioral target further indicates that the Trait×Target interaction differed for men and women ($F_{2,\ 258}$=5.80, p=.01, η^2=.05). Planned comparisons using dependent samples t tests were next performed to test whether these interactions were generated by patterns that support the a priori hypotheses.

2.2.1. Differences in trait preferences across behavioral targets

Results presented in Table 1 demonstrate that both sexes, as predicted, preferred higher levels of kindness and trustworthiness when considering a partner's behaviors directed toward self than when considering behaviors directed toward other members of the partner's same sex. Also as predicted, women preferred higher levels of dominance when considering behaviors directed toward other men than when considering behaviors directed toward self. Although not predicted in advance, men's dominance preferences showed the same pattern as women's preferences, with higher levels of dominance preferred when considering behaviors directed toward other women than when considering behaviors directed toward self.

2.2.2. Preferred personality profiles within each behavioral target category

Fig. 1 visually depicts the personality profiles preferred within each behavioral target category. As predicted, when considering a partner's behavior directed toward self, both sexes preferred a personality profile characterized by much higher levels of kindness and trustworthiness than dominance (all t's>8.62, all P's<.001, d's=1.71–2.96), thus conceptually replicating the general pattern reported in the extant literature.

Table 1
Experiment 1: Personality trait preferences by sex of rater and behavioral target

Trait	Sex of rater	Behavioral target		Effect of behavioral target
		Self	Same-sex others	
Kindness	Women	5.92 (.68)	4.88 (.95)	t_{57}=8.20, d=1.27**
	Men	5.69 (.63)	5.18 (.54)	t_{72}=6.63, d=.87**
Trustworthiness	Women	6.48 (.47)	5.48 (1.0)	t_{57}=7.29, d=1.36**
	Men	6.20 (.57)	5.35 (.67)	t_{72}=10.79, d=1.37**
Dominance	Women	4.73 (.71)	5.15 (.74)	t_{57}=3.45, d=.42*
	Men	4.25 (.82)	4.56 (.86)	t_{72}=4.06, d=.31**

Means are presented within each cell and standard deviations are in parentheses. Comparisons were conducted with dependent samples t tests.
* p<.01.
** p<.001.

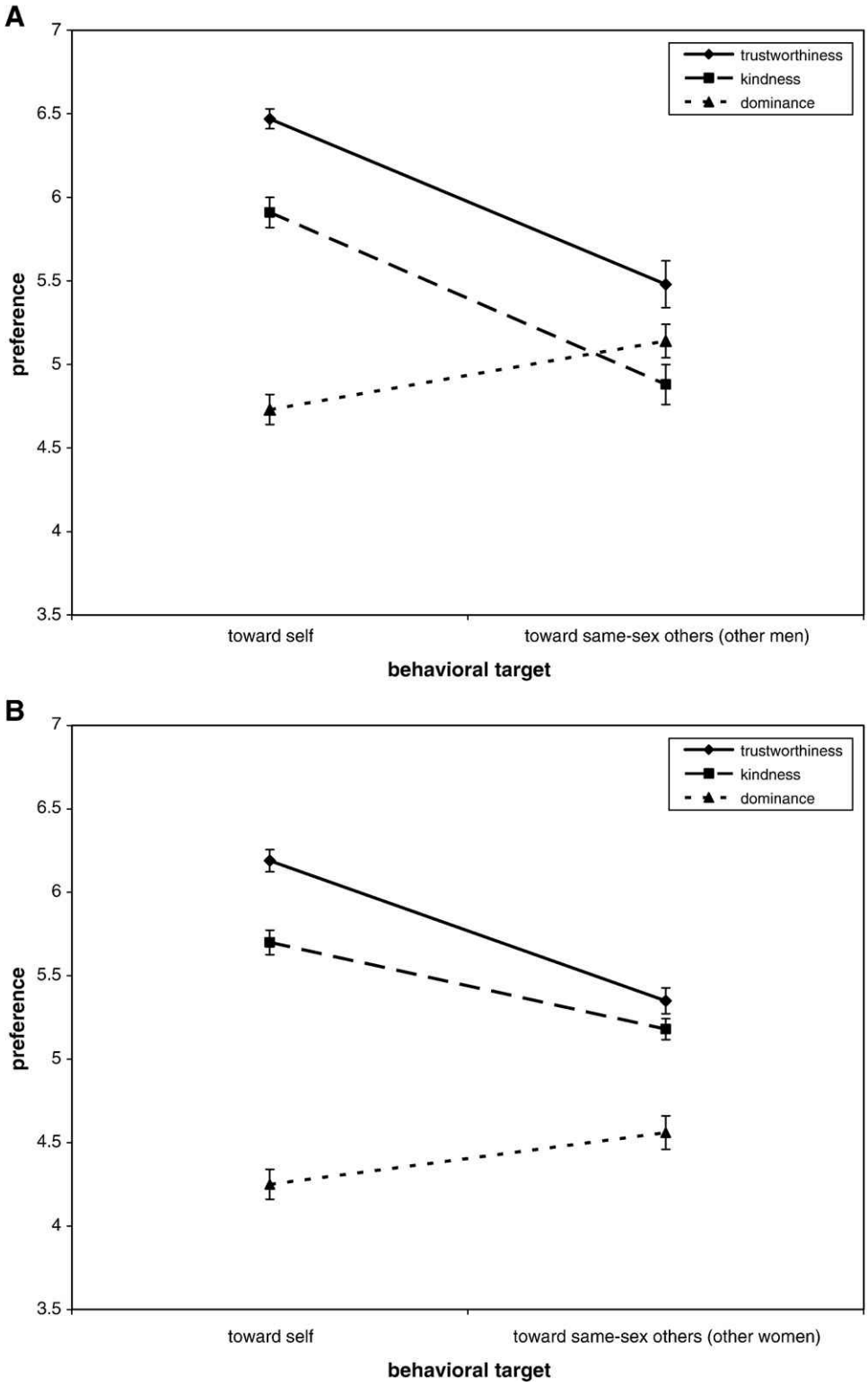

Fig. 1. Mean trait preferences from Experiment 1 (±1 S.E.) graphed by behavioral target condition. (A) Women's preferences. (B) Men's preferences.

When considering behaviors directed toward other members of the ideal partner's same sex, however, the preferred profiles shifted from those for self-directed behaviors in ways that were consistent with predictions. Women preferred a partner whose personality profile was characterized by nonsignificantly higher levels of dominance than kindness (t_{57}=1.63, p=.11, d=.27), although they still preferred slightly higher levels of trustworthiness than

dominance (t_{57}=2.05, p=.05, d=.38). Men's preferred profile was still characterized by lower levels of dominance than either kindness (t_{72}=5.8, p<.001, d=.62) or trustworthiness (t_{72}=6.75, p<.001, d=1.03), but the relative within-target differences were smaller in magnitude than those observed for self-directed behavior.

2.3. Discussion

The results from Experiment 1 support the proposition that preferences for a romantic partner's trait-exemplifying behaviors vary adaptively across different types of behavioral targets. Preferences for very high levels of kindness and trustworthiness were found only when the target of behavior was specified as oneself, and more moderate levels were preferred when subjects considered behaviors directed toward other members of the ideal partner's same sex. Although both men and women preferred much higher relative levels of kindness and trustworthiness than levels of dominance when the target of behaviors was oneself, this pattern changed dramatically for women rating men's behaviors toward other men, in which case women preferred levels of dominance at least as high as levels of kindness (see Fig. 1A). The present results may actually underestimate the size of this preference shift, furthermore, since the same-sex others rating condition did not explicitly exclude individuals who might be friends or family members of the subjects. Experiment 2 included an expanded list of target categories in order to make such distinctions more explicit.

3. Experiment 2

The primary purpose of Experiment 2 was to test replication of Experiment 1 while employing a more comprehensive list of behavioral target categories. To this end, subjects reported preferences for a partner's behavior directed toward oneself, toward one's own close friends and family, toward other members of the ideal partner's same sex and toward other members of the subject's same sex, respectively. In addition, subjects were instructed that the latter two 'other' categories did not include family or friends of either member of the pair-bond.

A second goal of this experiment was to place the present findings in the context of previous studies of mate preferences for personality traits, none of which have specified the targets of the traits under consideration. Experiment 2 thus included an additional rating condition, completed prior to arrival at the laboratory, which left the target of the traits under consideration unspecified. Ratings in the toward-self condition of Experiment 1 were very similar to findings in previous mate preference studies, suggesting that subjects imagine self-directed behaviors when behavioral targets are left unspecified. The design of Experiment 2 will allow a more direct test of this possibility via a comparison of the same subjects' preferences when behavioral targets are unspecified vs. when they are explicitly defined.

3.1. Methods

3.1.1. Subjects

Fifty-six women (mean age=18.59, S.D.=.89) and 54 men (mean age=18.9, S.D.=1.25) enrolled in undergraduate courses at UCSB participated for partial course credit.

3.1.2. Materials and procedure

Subjects rated the same trait terms from Experiment 1 for "how much it would describe your ideal partner's behavior" on a 1–7 scale, where 1 was "not descriptive of your ideal partner's behavior" and 7 was "very descriptive of your ideal partner's behavior." In the unspecified target condition, subjects simply rated the traits without further instruction. In the other conditions, subjects were asked to imagine (1) the behavior the ideal romantic partner would direct toward oneself (toward-self condition); (2) the behavior the ideal romantic partner would direct toward the subject's close friends and family members (toward friends and family condition); (3) the behavior the ideal romantic partner would direct toward other members of the partner's same sex who are not close friends or family of either member of the pair-bond (same-sex others condition); and (4) the behavior the ideal romantic partner would direct toward other members of the subject's same sex who are not close friends or family of either member of the pair-bond (opposite-sex others condition).

Subjects were directed to a secure website to complete the unspecified target condition, and these ratings were made 1–5 days before the laboratory session at which the target-specific preferences were measured. On the day of the laboratory session, subjects completed each of the four target-specific rating conditions in a random order, with the presentation of individual trait terms also randomized via a computer program. Ratings were completed in private computer cubicles in groups of up to 10 same-sex individuals.

Each of the 15 trait preference composite variables (three traits×five conditions) possessed adequate reliability (all α's>.91).

3.2. Results

Ratings were first analyzed in a 2 (rater sex: men vs. women)×4 (behavioral target: self, friends and family, same-sex others, opposite-sex others)×3 (trait: kindness, trustworthiness, dominance) mixed ANOVA, with behavioral target and trait entered as repeated measures. A significant interaction between trait and behavioral target demonstrates that the behavioral target manipulation had distinct effects across the different trait types ($F_{6,\ 648}$=93.59, p<.001, η^2=.46), and a three-way interaction between sex, trait and behavioral target further indicates that the Trait×Target interaction differed for men and women ($F_{6,\ 648}$=14.96, p<.01, η^2=.12). As in Experiment 1, planned contrasts were next performed to test whether these interactions were generated by patterns that support our a priori hypotheses.

3.2.1. Differences in trait preferences across behavioral targets

Fig. 2 demonstrates that, as predicted, preferences for kindness and trustworthiness were higher when behavioral targets were self or friends/family than when behavioral targets were other individuals outside either partner's network of friends and family. A priori contrasts confirmed significantly higher preferences for both kindness

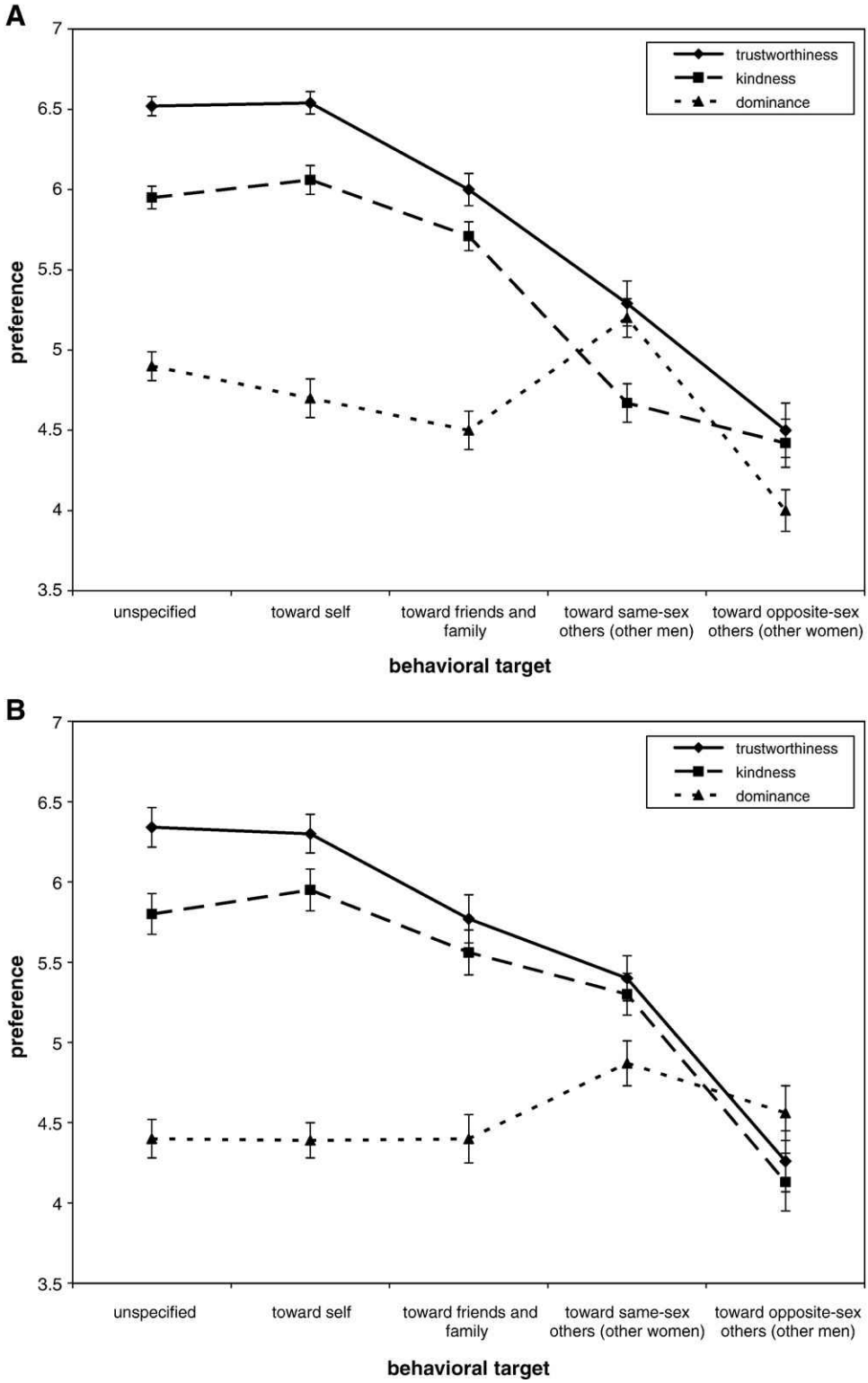

Fig. 2. Mean trait preferences from Experiment 2 (±1 S.E.) graphed by behavioral target condition. (A) Women's preferences. (B) Men's preferences.

Table 2
Experiment 2: Personality trait preferences by sex of rater and behavioral target

Trait	Sex of rater	Behavioral target				
		Unspecified	Self	Friends and family	Same-sex others	Opposite-sex others
Kindness	Women	5.95 (.95)a	6.06 (.68)a	5.71 (.68)b	4.67 (.92)c	4.42 (1.12)c
	Men	5.80 (.89)a	5.95 (.95)b	5.56 (1.05)a	5.30 (.98)c	4.13 (1.32)d
Trustworthiness	Women	6.52 (.47)a	6.54 (.57)a	6.00 (.78)b	5.29 (1.07)c	4.50 (1.26)d
	Men	6.34 (.87)a	6.30 (.91)a	5.77 (1.07)b	5.40 (1.02)c	4.56 (1.26)d
Dominance	Women	4.90 (.71)a	4.70 (.88)b	4.50 (.92)c	5.20 (.89)d	4.00 (.94)e
	Men	4.40 (.87)a	4.40 (.83)a	4.40 (1.07)a	4.87 (1.04)b	4.56 (1.26)a

Mean preferences are presented within each cell and standard deviations are in parentheses. Means with different subscripts *within a row* are significantly different at the $p<.05$ level as determined by planned comparisons using dependent samples t tests; degrees of freedom were 55 for women and 53 for men (except for those comparisons involving men's unspecified preferences, which had 48 degrees of freedom because five men failed to complete the online survey).

($F_{1,\ 109}$=215.28, $p<.001$, d=1.37) and trustworthiness ($F_{1,\ 109}$=223.35, $p<.001$, d=1.43) for the combined self and friends/family conditions vs. the combined same- and opposite-sex others conditions (these contrasts did not interact with rater sex and thus were collapsed across all raters). Table 2 presents the full set of pairwise contrasts between behavioral target categories for these traits; although not specifically predicted, a number of other comparisons were significant, such as moderately stronger preferences for kindness and trustworthiness directed toward self vs. toward friends and family.

Fig. 2A also demonstrates that, as predicted, women rated dominance most desirable when considering men's behaviors directed toward other men, and the pairwise contrasts presented in Table 2 demonstrate that dominance ratings in the 'same-sex others' condition were significantly higher than ratings in each of the other conditions. Although not predicted, but replicating Experiment 1, men also expressed stronger preferences for dominance when evaluating women's behavior toward other women as compared to each of the other target categories (Table 2).

3.2.2. Preferred personality profiles within behavioral target categories

Inspection of Fig. 2 demonstrates that, as predicted, when considering a partner's behavior directed toward either self or friends/family, both sexes expressed much stronger preferences for kindness and trustworthiness than for dominance (all t's>8.50, all P's<.001, d's=1.07–2.55). When considering a partner's behavior directed toward others who are neither friends nor family, however, the preferred profiles shifted radically in ways that were consistent with predictions. Importantly, for a partner's behavior directed toward other men, women preferred a profile characterized by significantly higher levels of dominance than kindness (t_{55}=3.40, p=.001, d=.59) and similar levels of dominance and trustworthiness (t_{55}=.60, p=.55, d=.08). Male subjects still preferred that their partners treat other women with higher kindness and trustworthiness than dominance (both t_{53}'s>2.95, both P's<.005, d's=.40–.51), but these differentials were not nearly as large as those for behavior directed toward self or friends/family. For a partner's behavior directed toward members of the same sex as the raters, both sexes preferred fairly low levels of all three traits, with women preferring lower dominance than kindness or trustworthiness (both t_{55}'s>2.74, both P's<.01, d's=.42–.45), and men preferring slightly higher dominance than kindness or trustworthiness (both t_{53}'s>1.73, both P's<.10, d's=.23–.35).

3.2.3. Are unspecified trait preferences similar to self-directed preferences?

In brief, yes. Inspection of Fig. 2 demonstrates that, for both sexes, the pattern of trait ratings was very similar across the toward-self and unspecified conditions. As can be seen in Table 2, there were only two cases (of six total comparisons) where unspecified preferences differed significantly from self-directed preferences (for men's ratings of kindness and women's ratings of dominance), and in these cases the effect sizes of the differences (d's<.30) were relatively small compared to the other between-target differences reported above. These comparisons confirm that preference ratings of unspecified trait terms correspond closely to those for self-directed behavior.

4. General discussion

The present research provides the first direct evidence that mate preferences for personality traits differ depending on the targets of trait-exemplifying behaviors. Both sexes preferred very high levels of kindness and trustworthiness only when considering behaviors directed toward self or close friends and family, and much lower levels of these traits when considering behaviors directed toward other classes of individuals. Conversely, both sexes preferred partners who direct higher levels of dominance toward other members of the partner's same-sex (who are not friends/family) than toward any of the other behavioral target categories; women in Experiment 2, furthermore, even preferred partners with higher levels of dominance than kindness when considering behaviors directed toward other men. These findings may represent an important extension of the human mate preference literature via their demonstration

that ideal standards for romantic partners are not monolithic, but instead exhibit patterns in which people prefer that their partners behave differently toward functionally distinct classes of individuals.

Since subjects provided ideal ratings that were not constrained by trade-offs among traits or targets, they could have reported preferences for very high levels of kindness and trustworthiness across all of the behavioral target conditions; that subjects nonetheless selectively preferred high levels of these traits when considering behaviors directed toward self and friends/family suggests that people may actively prefer that their partners not be too kind or too trustworthy toward other classes of individuals. Preferences for partners who are only moderately kind toward people other than oneself and one's close associates may reflect ancestral selection pressures against forming mating relationships with individuals whose high levels of generalized altruism led them to give up resources that could have been invested in a partner and offspring. Moderate levels of kindness and trustworthiness toward group members in general may be necessary to maintain social exchange relationships (Cottrell et al., 2007; Gurven & Hill, 2009), however, and our results confirmed preferences for partners who were at least moderately kind and trustworthy even toward individuals outside the subject's network of friends and family. In sum, our findings suggest that people may prefer partners who are extremely kind and trustworthy with respect to themselves and their close associates, but only as high on these traits toward others as is necessary to maintain beneficial social exchange relationships.

In both studies, women, but not men, preferred relative levels of dominance at least as high as relative levels of kindness when considering a partner's behavior directed toward other members of the partner's same sex. Women preferred partners who exhibit approximately equal levels of dominance and kindness toward other men when it was left ambiguous whether the 'same-sex other' category included male friends and family members (Experiment 1), but then preferred higher levels of dominance than kindness when it was made explicit that these behavioral target categories did not overlap (Experiment 2). In conjunction with the larger pattern of target specificity in women's dominance preferences, these findings suggest that women prefer partners who strategically target their dominant behaviors toward male rivals, but who refrain from behaving too dominantly toward the woman herself or toward her friends and family.

These results pertaining to women's dominance preferences are somewhat at odds with results of previous trait rating studies, which have always reported that women prefer substantially higher levels of kindness and trustworthiness than dominance (Botwin et al., 1997; Fletcher et al., 1999; Kenrick et al., 1990, 1993). On the other hand, these findings are consistent with those of studies that have presented behavioral cues of dominance to women, which have found that dominance displays toward other men can increase a man's attractiveness (Gangestad et al., 2007; Jensen-Campbell et al., 1995, Sadalla et al., 1987). Thus, in demonstrating that women prefer partners who exhibit relatively high dominance *selectively* toward other men, the present study helps to resolve an empirical discrepancy between studies that have operationalized traits in different ways. This pattern of target-specific dominance preferences complements results reported by Snyder et al. (2008), who demonstrated that women prefer low dominance in most circumstances, but prefer higher dominance when such behavior is appropriate or necessary in the current social context (e.g., an explicitly competitive interaction). In sum, women's mate preferences for dominance may be so highly context specific that trait rating studies that do not specify contextual factors may largely mischaracterize the effects of dominance on men's attractiveness.

Although not predicted, men in both experiments preferred partners who direct higher levels of dominance toward other women than toward any other class of targets. It is possible that men in ancestral environments may have benefited from having partners who were dominant within female status hierarchies. Campbell (2004) has emphasized the theoretical and empirical reasons to believe that the behavioral tactics of women's status competition may be qualitatively distinct from those employed by men. For instance, women may employ indirect forms of aggression such as information warfare rather than threats of physical force in pursuit of intrasexual status. Insofar as such tactics influence the distribution of resources within groups, they may inflict costs on subordinate women and direct benefits to those who are more dominant. Dominance within female status hierarchies has very large reproductive consequences in some nonhuman primate species (e.g., Saltzman, Digby & Abbott, 2009), and research in a hunter-horticultural society suggests that women may successfully inflict reputational damage on intrasexual rivals via indirect forms of aggression such as derogatory gossip (Rucas et al., 2006). Future research could address this topic more thoroughly by identifying the specific reproductive benefits men may accrue through their female partners' intrasexual dominance (e.g., direct material resources, access to child-care from other women, etc.).

The results of Experiment 2 demonstrate that mate preferences for unspecified personality traits are very similar to preferences expressed when the target of behavior is defined as oneself. This suggests that previous mate preference studies have essentially measured preferences for self-directed behavior, but have neglected preferences for a partner's behavior directed toward other classes of people. This is not to say that these studies were not primarily intended to measure self-directed preferences (they may well have been), but does suggest that the target-specific approach adopted here adds new information to this literature by revealing preferences for partners' behaviors directed toward people other than oneself.

A potential limitation of the present research is that the specific behavioral acts that exemplify personality traits are

unknown. An interesting possibility for future research could entail the use of perceptual cues to infer target specificity in personality preferences. For example, the same videotaped behavioral act might elicit very different mate attractiveness ratings depending on the identity of the target toward whom it was directed. Such a research program might address both the perceptual markers of personality trait terms and the role of target specificity in determining attraction to specific personality profiles.

In conclusion, the present studies provide the first evidence that mate preferences for personality traits depend on the functional significance of the classes of individuals toward whom trait-exemplifying behaviors are directed. The results qualify a number of prevailing tenets in the mate preference literature and suggest that mate evaluation mechanisms contain criteria that pertain not only to a partner's behaviors, but also to the social contexts within which those behaviors are expressed. Future work could build upon this demonstration of target specificity in order to more fully characterize the evolved design features of human mate evaluation mechanisms.

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