# INTERPERSONAL RELATIONS AND GROUP PROCESSES

# Sex Differences in Mate Preferences Revisited: Do People Know What They Initially Desire in a Romantic Partner?

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In paradigms in which participants state their ideal romantic-partner preferences or examine vignettes and photographs, men value physical attractiveness more than women do, and women value earning prospects more than men do. Yet it remains unclear if these preferences remain sex differentiated in predicting desire for real-life potential partners (i.e., individuals whom one has actually met). In the present study, the authors explored this possibility using speed dating and longitudinal follow-up procedures. Replicating previous research, participants exhibited traditional sex differences when stating the importance of physical attractiveness and earning prospects in an ideal partner and ideal speed date. However, data revealed no sex differences in the associations between participants' romantic interest in real-life potential partners (met during and outside of speed dating) and the attractiveness and earning prospects of those partners. Furthermore, participants' ideal preferences, assessed before the speed-dating event, failed to predict what inspired their actual desire at the event. Results are discussed within the context of R. E. Nisbett and T. D. Wilson's (1977) seminal article: Even regarding such a consequential aspect of mental life as romantic-partner preferences, people may lack introspective awareness of what influences their judgments and behavior.

Keywords: sex differences, mate preferences, speed dating, empathy gap, a priori theories

After decades of research, it is now well established that men and women differ in their reports of the importance of certain characteristics in a romantic partner. Such assessments of *ideal partner preferences* or *mate preferences* have consistently revealed two key sex differences: A greater male (compared with

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female) desire for romantic partners who are physically attractive and a greater female (compared with male) desire for romantic partners who have good earning potential. These findings are frequently (but not always, see Eagly & Wood, 1999) discussed as part of an evolutionary psychological perspective on mate selection, which suggests that men and women possess different evolved, domain-specific psychological adaptations that guide their mate preferences and their romantic-partner choices accordingly (Buss, 1989, 1994; Buss & Kenrick, 1998; Buss & Schmitt, 1993). In the present study, we replicated these ubiquitous sex differences in romantic-partner preferences and attempted to follow them to their anticipated conclusion: sex-differentiated romantic interest in real-life potential romantic partners depending on the partner's physical attractiveness and earning prospects. In fact, the data never pointed toward such a conclusion; instead, they led us on a detour that raised fascinating new questions about the meaning of romantic-partner preferences and shed new light on the processes underlying romantic-relationship initiation.

<sup>&</sup>lt;sup>1</sup> Some evolutionary perspectives also predict that other sex differences will emerge within the domain of human mating, such as the desired age of a mate or interest in short-term sexual relationships (Buss, 1989; Buss & Schmitt, 1993; Kenrick & Keefe, 1992; Symons, 1979). The present report focuses exclusively on the sex differences in the stated importance of physical attractiveness and earning prospects in a romantic partner.

#### Sex Differences in Stated Mate Preferences

The foundation of the modern empirical study of mate preferences dates back to the first half of the 20th century. Sociologist Reuben Hill asked participants to rate the importance of certain qualities in a mate and found that men placed more importance on good looks than did women, whereas women placed more importance on good financial prospects than did men (Hill, 1945). The best-known study of mate preferences in this "stated preference" tradition was published by David Buss (1989), who surveyed 10,047 participants spread across 37 different cultures and documented consistent sex differences in the importance of physical attractiveness and good earning prospects. Buss interpreted these data in an evolutionary framework, appealing largely to Trivers's (1972) parental-investment theory. Buss suggested that (a) men (more than women) value physical attractiveness in a mate because a woman's physical attractiveness confers information about her reproductive value, and (b) women (more than men) value earning prospects in a mate because a woman's offspring are more likely to survive given a man's economic contributions. Many evolutionary psychologists argue that these preferences persist today because they increased the reproductive success of ancestral humans who possessed them, presumably because such preferences facilitated mate choice by directing ancestral men and women to select attractive and successful mates, respectively (see Buss & Schmitt,

These two sex differences in stated mate preferences have withstood a number of additional empirical tests. For example, the differences have proven robust in meta-analyses of the statedpreference paradigm (Feingold, 1990, 1992), in a nationally representative sample (Sprecher, Sullivan, & Hatfield, 1994), and among men and women who anticipated having high incomes (Townsend, 1989; Wiederman & Allgeier, 1992). Other researchers have asked participants to evaluate photographs or descriptions of opposite-sex individuals; the attractiveness of these stimuli affected men's liking more than women's, and the earning prospects of these stimuli affected women's liking more than men's (e.g., Stroebe, Insko, Thompson, & Layton, 1971; Townsend & Wasserman, 1998). In addition, a naturalistic program of research explored the content of personal advertisements (e.g., Harrison & Saeed, 1977), revealing these same sex differences in the mate characteristics sought by ad placers (see meta-analyses by Feingold, 1990, 1992). Finally, recent research investigating online dating has found that (a) men's (but not women's) incomes predicted the number of opposite-sex emails received (Hitsch, Hortaçsu, & Ariely, 2006), and (b) the physical attractiveness of users' online photographs predicted email receipt better for women than for men (Olivola et al., 2007).

Several evolutionary psychologists have also posited that distinct psychological adaptations guide people's behavior in short-term versus long-term romantic relationships; therefore, men and women are likely to value different characteristics in a romantic partner depending on whether they are currently in a short-term or a long-term mating mindset (Buss & Schmitt, 1993). For example, women should be more likely to prefer men who exhibit cues to their genetic fitness (e.g., physical attractiveness) for short-term compared with long-term relationships (Gangestad & Simpson, 2000). Some research has in fact demonstrated that men and women converge in the strength of their preference for physically

attractive individuals in short-term contexts (Kenrick, Groth, Trost, & Sadalla, 1993; Li & Kenrick, 2006; but see Buunk, Dijkstra, Fetchenhauer, & Kenrick, 2002; Regan, Levin, Sprecher, Christopher, & Cate, 2000). Similarly, women tend to prioritize earning prospects when seeking a long-term compared with a short-term partner (Li & Kenrick, 2006). In general, the extant data support those evolutionary perspectives that predict that sex differences in mate preferences will be especially robust when individuals consider a long-term compared with short-term relationship.

All of the above studies have helped build a strong case for the existence of sex differences in mate preferences with respect to physical attractiveness and earning prospects. Although much of the support derives from the stated preferences of men and women as reported on questionnaires or in response to experimental stimuli (e.g., photographs), the personal-ad and online-dating findings suggest that these sex differences continue to emerge in some actual dating contexts. In addition, participants' stated preferences are meaningfully moderated by the short-term versus long-term distinction, as predicted by several prominent evolutionary perspectives (Buss & Schmitt, 1993; Gangestad & Simpson, 2000). Nevertheless, the functional importance of these preferences would be bolstered by demonstrations that they predict what happens when men and women actually meet one another, either in a live dating context or even when considering real-life potential marriage partners. Surprisingly, in prior studies in which the targets of participants' romantic interest were not hypothetical ideals or photographs but rather live, flesh-and-blood human beings, the sex differences in physical attractiveness and earning prospects have proven empirically evasive. We now turn our attention to these curious findings.

# Equivocal Evidence for Sex Differences

If men (more than women) prefer physical attractiveness and women (more than men) prefer earning prospects, this could conceivably result in a marriage "tradeoff" such that attractive women will tend to marry rich men. Two studies are often cited as providing evidence for this hypothesis. In the first, Elder (1969) presented data showing that women's physical attractiveness positively predicted marrying a high-status mate. In the second, Udry and Eckland (1984) found that attractiveness was positively related to household income (but not own income) for women; the reasonable inference is that the additional income is a result of marrying successful husbands. However, it is difficult to draw any firm conclusions from these studies for two reasons. First, neither study examined sex differences in the correlation between attractiveness and spousal earning prospects. Second, attractive people tend to accrue many extra benefits in life, including better occupational success (see meta-analysis by Langlois et al., 2000); therefore, an association between women's attractiveness and men's earning prospects could emerge if attractive people simply marry other attractive people (see Buller, 2005). In other words, it could be the attractiveness of certain men (not their accompanying income and success) that successfully attracts good-looking women. In fact, Stevens, Owens, and Schaefer (1990) assessed the attractiveness and education levels (an indicator of earning prospects) of recently married women and men and indeed found that, after controlling for the fact that attractive women marry attractive men, the apparent association between men's education and women's attractiveness disappeared. In short, there is no strong evidence demonstrating that men and women engage in a marriage tradeoff between physical attractiveness and earning prospects.

Several other creative research paradigms have failed to show that men and women differ in their romantic interest toward opposite-sex others who are physically attractive or have good earning prospects. Speed and Gangestad (1997) asked college students to nominate friends and acquaintances who were romantically popular, who were physically attractive, and who were likely to have future financial success. Results revealed no sex difference in either the (large) correlation between popularity and physical attractiveness or the (negligible) correlation between popularity and future financial success. Recently, researchers have started to investigate romantic preferences using speed-dating (Eastwick & Finkel, in press-b; Finkel & Eastwick, in press; Finkel, Eastwick, & Matthews, 2007), a paradigm in which opposite-sex individuals meet for short dates and then decide whether they would ("yes") or would not ("no") be interested in meeting one another again. Data on individuals ( $M_{\text{age}} = 32 \text{ years}$ , SD = 5.3) who attended professional speed-dating events revealed that (a) income did not make either sex significantly more desirable, and (b) athough men indeed had a strong preference for women with attractive faces, bodies, and a lower body mass index (BMI), women had a similarly strong preference for men with attractive faces, bodies, and an average BMI (Kurzban & Weeden, 2005). Finally, a speed-dating study with graduate-student participants did find that men were more likely than women to "yes" the dates they found physically attractive (Fisman, Iyengar, Kamenica, & Simonson, 2006). Regarding earning prospects, however, women and men did not differ in their likelihood of "yessing" the dates they judged to be ambitious or the dates who came from wealthy hometowns. Especially fascinating are data presented by Iyengar, Simonson, Fisman, and Mogilner (2005) revealing that speed-daters' stated preferences correlated poorly (rs ranging from .00 to .17) with their actual yes/no decisions—we return to this point shortly.

With regard to the importance of physical attractiveness, Feingold's (1990) meta-analysis summarized findings from several different research paradigms, two of which (stated preferences and personal ads) are mentioned above. Although men clearly exhibit a stronger preference for physical attractiveness in these two paradigms, the evidence for the physical-attractiveness sex difference is less robust when participants are actually interacting with a potential partner. Feingold (1990) reported that being physically attractive was (a) positively associated with dating activity more strongly for women than for men but (b) positively associated with the number of opposite-sex interactions per day more strongly for men than for women. Feingold speculated that these findings might actually reflect a sex difference in the strategies that men and women use to initiate a romantic relationship (i.e., attractive men have more interactions because many of their female friends are attempting to initiate a relationship through friendship). Thus, these data do not unambiguously demonstrate a sex difference in the importance of physical attractiveness. Feingold also examined data from seven studies in which men and women actually went on dates with one another (e.g., the well-known "computer dance" study conducted by Walster, Aronson, Abrahams, & Rottmann, 1966). The correlation between romantic liking for and physical attractiveness of one's date was positive for both men and women, but the meta-analyzed sex difference between these correlations was small and not significant. Although Feingold's

(1990) review is often cited as providing clear evidence for the sex difference in the importance of physical attractiveness, a closer look reveals substantial ambiguity in paradigms in which participants actually interact.

# Have Participants Told More Than They Know?

It initially seems strange that the sex differences that emerge so consistently in the literature on stated preferences become so erratic when examining live dating contexts. Fortunately, the extant social psychological literature could shed light on this quandary. One possibility is suggested by the classic Nisbett and Wilson (1977) demonstrations that people are often unable to correctly report how features of a stimulus affect their evaluations of it (known as a "causal judgment"). Their studies revealed that participants do not use true introspection to answer such "why" questions (e.g., "Why do you like this particular pair of stockings?")—they instead defer to their a priori theories about whether a certain feature might plausibly lead to such an evaluation. Although these a priori theories may be correct at times, Nisbett and Wilson made their case by exposing the inaccuracy of participants' theories across a variety of contexts.

Nevertheless, the Nisbett and Wilson (1977) experiments tested preferences and judgments that did not hold tremendous meaning in participants' lives (e.g., stocking preferences). Might something as important as mate selection be subject to their critique? Could mate preferences reflect participants' potentially inaccurate a priori theories about the characteristics they would find appealing in a romantic partner or why they would choose a certain potential mate over another? This suggestion is plausible for three reasons. First, although it may seem odd to equate mate preferences with Nisbett and Wilson's problematic causal judgments, one of the original introspective inaccuracy studies (Nisbett & Bellows, 1977) conceived of physical attractiveness in precisely this way. Physical attractiveness was a reason participants might like or dislike a job candidate in that study, just as it is a reason that participants might like or dislike a potential romantic partner. Second, although several subsequent articles demonstrated that participants were aware of what influenced their judgments when the data were analyzed using alternative statistical procedures (e.g., Smith & Miller, 1978), this awareness typically emerged only when those judgments were made in rapid succession in a controlled laboratory setting (e.g., Wright & Rip, 1981; cf. Wilson, Laser, & Stone, 1982). People still tend to have difficulty reporting what influences their judgments in everyday life; for example, participants demonstrated virtually no insight about how their mood judgments were affected by the amount of sleep they got (Wilson et al., 1982). These difficulties are likely to be compounded in the romantic domain, given how rarely individuals select a romantic partner or must choose among several interested and available partners (compared with how often they sleep!). Third, because mate preferences are typically assessed when a participant is in a state of cool rationality, such preferences may not reflect what inspires actual desire during the emotional throes of romantic attraction. For example, it is easy to imagine an individual acknowledging (while calmly chatting with friends) the benefits of dating an individual who is loyal and reliable but soon thereafter experiencing strong romantic desire in the presence of someone who is unpredictable and exciting. This is an example of a cold-to-hot prospective empathy gap (Ariely & Loewenstein, 2005; Loewenstein, 1996, 2005) and similarly hints that stated mate preferences might not map onto priorities in live dating contexts.

For these three reasons, it is plausible that men and women show consistent sex differences in their stated mate preferences because they are reporting consensual a priori theories about what characteristics in a romantic partner will inspire their interest. If individuals were to report not on hypothetical ideal partners but instead on the actual people they were currently romantically pursuing, it is an open question (based on the previous literature) whether sex differences would emerge—and the a priori theories account presents a strong case for why they may not.

#### The Current Research

To explore how the traditionally sex-differentiated characteristics of physical attractiveness and earning prospects predict initial romantic attraction, we took a broad, panoramic snapshot of participants' romantic lives. Our procedures covered two distinct contexts: (a) a speed-dating event designed specifically for undergraduate students and (b) an intensive one-month follow-up. During this follow up, we examined in detail how participants' potential relationships developed, both with respect to their speed-dating "matches" and with respect to other romantic interests whom participants met outside of speed-dating ("write-ins"). If stated mate preferences serve the function of directing romantic interest, we should confirm the following three hypotheses:

- H1. Sex differences in stated preferences. Men will state that they prefer physical attractiveness in a romantic partner more than women do, and women will state that they prefer earning prospects in a romantic partner more than men do. These established sex differences will be evident in reports of both an ideal partner and an ideal speed-date.
- H2. Sex differences in initiation. Given H1, men (compared with women) will demonstrate greater interest in and pursuit of potential partners they find attractive, and women (compared with men) will demonstrate greater interest in and pursuit of potential partners they judge to have good earning prospects. In addition, as partner preferences differ depending on the degree to which men and women approach potential partners with a short-term versus a long-term mindset, these sex differences might prove especially robust among individuals who are more (rather than less) interested in pursuing a long-term, serious relationship (this short-term/long-term mindset hypothesis is called H2A).
- H3. Individual differences in initiation. A participant who states a preference for physical attractiveness (or earning prospects) in a romantic partner will also demonstrate greater interest in and pursuit of potential partners he/she judges to be physically attractive (or to have good earning prospects). In other words, stated preferences will correlate with in vivo preferences (those revealed within the actual dating context).

However, if stated preferences do not reflect participants' genuine introspective insight but rather their inaccurate a priori theories about what characteristics in a potential partner might inspire their romantic interest, H2, H2A, and H3 might not be confirmed.

One shortcoming of previous live dating research is that those studies have often employed only a single dependent variable (sometimes consisting of only a single item). Of course, there are many intervening steps between meeting someone and forming/maintaining a romantic relationship with that person; these steps include the initial spark of interest, sharing contact information, initiating and enjoying time spent together, feelings of romantic passion, and so forth. Therefore, in the present report, we employ 17 different dependent variables (collectively referred to as relationship-initiation dependent variables) and draw conclusions by meta-analyzing results across these diverse measures.

#### Method

## **Participants**

Using flyers posted around campus and informational e-mails sent to the freshmen, sophomore, and junior class Listservs, we recruited 163 undergraduate students (81 women, 82 men) to participate in a study of romantic-attraction processes, including a speed-dating component (for greater procedural detail, see Finkel et al., 2007). Participants were 19.6 years old on average (SD=1.0 years); 36.2% were freshmen, 38.7% were sophomores, 21.5% were juniors, and 3.7% were seniors. (We recruited seniors less aggressively because they were scheduled to graduate approximately 6 weeks after the events.) The sample was 73.6% White/Caucasian, 10.4% Asian, 5.5% South Asian, 4.3% Hispanic, 2.5% African American, 1.2% Middle Eastern, and 2.5% unreported.

Participants were paid \$5 at the end of the speed-dating event and \$3 for every follow-up questionnaire (out of 10) completed. In addition, those who completed at least 9 of the 10 follow-up questionnaires were paid a bonus of \$10.

# Procedure

Part 1: Pre-event questionnaire. The first part of the study consisted of a 30-min online pre-event questionnaire assessing background variables about the participants. Participants completed this questionnaire 6–13 days before attending a speed-dating event.

Part 2: Speed-dating. The second part of this study consisted of a full-fledged 2-hr speed-dating event at which participants pursued "matches" with opposite-sex participants. Events were modeled loosely on procedures used by professional speed-dating companies and took place in a secluded art gallery located in Northwestern University's student union. Tables and chairs were positioned throughout the room such that each pair of speed-daters could communicate easily with one another while seated a comfortable distance away from other pairs. Nonalcoholic beverages, lighting, and music were selected to make the event elegant and were held constant across all speed-dating events.

Upon each participant's arrival at the event, one research assistant gave him or her a name tag, clipboard, pen, a set of interaction-record questionnaires, and a unique ID (letters for women, numbers for men). The research assistant instructed par-

ticipants to write their ID and first name on their name tag. Next, a second research assistant took a digital photo of the participant and was willing to take additional photos until the participant was happy with one. Once all participants had arrived, the experimenter explained how the speed-dating event would proceed.

For three randomly determined speed-dating events, men remained seated while women rotated from man to man; for the remaining four speed-dating events, women remained seated while men rotated. Each speed-date lasted for 4 min; participants conversed freely during this time. After each speed-date, the experimenter blew a whistle to signal that participants should rotate to the location for their next speed-date. Before beginning this next speed-date, however, participants completed an interaction record about the previous date and jotted notes to themselves to take home. After 2 min passed, the experimenter signaled for participants to complete their interaction records and begin their next 4-min date. Participants dated all opposite-sex individuals present and had between 9 and 13 dates, depending on event attendance. Once all dates had been completed, the experimenter explained to the participants how to complete the matching process and remaining questionnaires.

After the event, participants returned to the speed-dating Web site, where they indicated whether they would be interested in meeting again each person they had speed-dated. Participants clicked "yes" or "no" next to the photograph and ID of each speed-dater. When two speed-daters replied "yes" to one another, this was called a "match"; only matches were later provided with the ability to contact one another (see below). Participants also indicated whether they would allow "missed matches" (speeddaters who had said "no" to the participant but to whom the participant had said "ves") to learn that the participant had said "yes" to them. If the participant allowed this option, the missed match was given the option of changing his/her previous "no" response to a "yes," thus securing an extra match for both the participant and the missed match. In total, 100% of participants completed the matching process, and 54% chose the missedmatches option. Participants generated a total of 206 matching pairs (average number of matches per participant = 2.53, SD =

At 5 p.m. the day following the speed-dating event, participants received an e-mail directing them to a Web site where they could view their matches. The Web site displayed the photograph, ID, and first name of each speed-dater with whom the participant had a match. Participants were also given the ability to change their "no" to a "yes" for any speed-daters who agreed to the missed-matches option described above. After completing a brief post-match questionnaire, participants could then click on a button next to each match's photograph to get to the speed-dating messaging page. Participants could use this page to send a message to a match and to view messages received from that match.

Part 3: Follow-up. Twenty-four hr after they had access to their match information (and 48 hr after the speed-dating event), participants received an e-mail directing them to a Web site where they could complete the first of 10 follow-up questionnaires. They received similar e-mails every 72 hr until the follow-up portion of the study was completed (30 days after the speed-dating event). They were instructed to complete each questionnaire before going to bed that night, although we accepted late questionnaires. Of the 92% of speed-dating participants who elected to take part in the

follow-up portion of the study, 69% completed at least 9 of the 10 questionnaires.

On each of the 10 follow-up questionnaires, participants responded to items about each speed-dating match. In addition, participants were asked to provide the name of anyone else (aside from their matches) whom they considered to be a romantic interest. After providing the name of this "write-in" target, they completed follow-up questions about this individual, in addition to their matches, at each wave. Participants could provide multiple write-in targets; altogether, participants reported on 143 write-ins over the course of the month. Most of the write-ins (78%) attended Northwestern University or lived in the Chicago/Evanston, Illinois area, whereas 20% were currently living or going to school elsewhere in the United States (no information was available for the remaining 2%). According to the participants' reports, the writeins were 20.1 years old on average (SD = 2.0 years), participants had known the write-ins for an average of 380 days (Mdn = 180days), and they had been romantically interested in them for an average of 245 days (Mdn = 68 days). We refer to follow-up questionnaire targets as either a "speed-date/match" or "write-in" to reflect the two different ways a target could be included in the data set. Write-ins are useful because they can address whether any of the follow-up results can be explained away as strange anomalies that are only characteristic of relationships that grow out of a speed-date (see Eastwick & Finkel, in press-b; Finkel et al., 2007). Therefore, data pertaining to write-ins are presented separately from those pertaining to speed-dating matches.

# Materials

All measures included in the present report (except for "yessing") were assessed on four different questionnaires: pre-event, interaction-record, postmatch, and follow-up. The present report focuses on the following three traits that might describe a romantic partner: *physically attractive* (assessed by the items "physically attractive" and "sexy/hot"), *earning prospects* ("good career prospects," "ambitious/driven"), and *personable* ("fun/exciting," "responsive," "dependable/trustworthy," "friendly/nice"). The first two constructs were examined because of their relevance to the literature on sex differences in mate preferences; the third serves as a useful comparison and includes characteristics that both men and women desire in a romantic partner (e.g., Fletcher, Simpson, Thomas, & Giles, 1999; see factor analysis that follows).

Stated mate preferences. Stated mate preferences were assessed in two different ways (ideal partner and speed-date) at two different times (pre-event and Wave 10 follow up). First, as part of the pre-event questionnaire, participants rated the importance of physically attractive ( $\alpha=.83$ ), earning prospects ( $\alpha=.75$ ), and personable ( $\alpha=.71$ ) characteristics in an ideal romantic partner on a scale from 1 (not at all) to 9 (extremely). We refer to these reports as pre-event ideal partner stated preferences.

Given that the present study was inspired by the literature on ideal partner preferences, these pre-event ideal partner reports seemed the most logical measures to use for construct validation. We conducted a factor analysis (principal axis factoring with promax rotation) on the eight items (see above) that were intended to assess the three ideal partner constructs of interest. Inspection of the scree plot revealed a three-factor solution: The two items assessing Physically Attractive loaded primarily on the first factor,

the four items assessing Personable loaded primarily on the second, and the two items assessing Earning Prospects loaded primarily on the third (all factor loadings > .5 with no double loadings).

Of course, an ideal partner preference is context-free, and the principle of attitude–behavior compatibility (Ajzen & Fishbein, 2005) suggests that such a preference would best predict behavior when it refers to the same, specific context in which the behavior will take place. Therefore, also on the pre-event questionnaire, participants received the following instructions: "How much do you think the following characteristics will matter in your decision to 'yes' or 'no' someone after your 4-minute date?" Participants then responded to the identical items reported above that assessed Physically Attractive ( $\alpha = .84$ ), Earning Prospects ( $\alpha = .72$ ), and Personable ( $\alpha = .44$ ) characteristics. We refer to these reports as *pre-event speed-date* stated preferences.

On the tenth and final follow-up questionnaire, participants again reported their ideal romantic partner preferences for Physically Attractive ( $\alpha=.76$ ), Earning Prospects ( $\alpha=.79$ ), and Personable ( $\alpha=.77$ ), just as they had on the pre-event questionnaire. In addition, participants reported the likelihood that Physically Attractive ( $\alpha=.76$ ), Earning Prospects ( $\alpha=.73$ ), and Personable ( $\alpha=.58$ ) characteristics would matter in their decision to "yes" or "no" someone after a 4-min date should they go speed-dating again. These reports are referred to as *Wave 10 ideal partner* and *Wave 10 speed-date* stated preferences, respectively.

Partner characteristics. As part of the interaction record, participants rated on a scale from 1 (not at all) to 9 (extremely) the extent to which they thought each speed-dating partner was characterized by the identical items reported above that assessed Physically Attractive ( $\alpha=.95$ ), Earning Prospects ( $\alpha=.86$ ), and Personable ( $\alpha=.84$ ) characteristics. In addition, on each follow-up questionnaire, participants used a 1–9 scale to rate the extent to which they thought each speed-dating match and write-in was characterized by the items assessing Physically Attractive ( $\alpha=.92$ ), Earning Prospects ( $\alpha=.79$ ), and Personable ( $\alpha=.81$ ) characteristics.

Relationship initiation dependent variables. On a scale from 1 (strongly disagree) to 9 (strongly agree), the interaction record assessed participants' reports of romantic desire for the speed-dating partner ("I really liked my interaction partner," "I was sexually attracted to my interaction partner," and "I am likely to say 'yes' to my interaction partner";  $\alpha = .88$ ) and chemistry with him or her ("My interaction partner and I seemed to have a lot in common," "... seemed to have similar personalities," and "... had a real connection";  $\alpha = .91$ ).

All postmatch questionnaire and follow-up questionnaire relationship-initiation dependent variables were assessed on scales from 1 (*strongly disagree*) to 7 (*strongly agree*). As part of the postmatch questionnaire, participants indicated for each match their level of match *excitement* ("I am extremely excited that I matched with [name]"), their *initiation plans* ("I am very likely to initiate contact with [name]"), and their *initiation hopes* ("I hope that [name] initiates contact with me").

On each of the 10 follow-up questionnaires, participants responded to items pertaining to each speed-dating match and to each write-in. Furthermore, the items about each match/write-in were customized depending on the participants' answer to the following pivot question: "What is the current status of your

relationship with [name]?" Participants were given the following response options to this question: (a) dating seriously, (b) dating casually, (c) friend with romantic potential, (d) acquaintance with romantic potential, (e) friend without romantic potential, (f) acquaintance without romantic potential, (g) no relationship at all. Participants completed the pivot question about each match/write-in every time they completed a follow-up questionnaire. If a participant selected option a, b, c, or d, this match/write-in was considered romantic, and if a participant selected option e, f, or g, this match/write-in was considered nonromantic. If a participant selected option g on two (or more) consecutive waves, no items were assessed for that match/write-in at that wave. A smaller subset of items was required for nonromantic compared to romantic matches/write-ins (for greater detail, see Finkel et al., 2007).

If participants selected either a romantic or a nonromantic response to the pivot question, participants completed an item assessing to what degree this particular match/write-in was someone they wanted to *get to know better* ("I am eager to get to know [name] better"). In addition, if participants responded "yes" that they had "hung out with [name] in person or corresponded with [name] not in person (e-mail, instant messaging, phone, etc.)" since the last time they completed a follow-up questionnaire, they completed a one-item measure of *date initiation* ("For the most part, I was the one to initiate correspondence/hanging out with [name]") and a one-item measure of *date enjoyment* ("Corresponding/hanging out with [name] has been enjoyable").

If participants selected a romantic response to the pivot question, they completed the following additional measures: a five-item measure of romantic passion ("I feel a great deal of sexual desire for [name]," "I think [name] and I have 'soulmate' potential," "I am romantically interested in [name]," "[name] is the only person I want to be romantically involved with," and "[name] always seems to be on my mind";  $\alpha = .84$ ), three items assessing to what extent the participant desired a *one-night stand*, a *casual relation-ship*, and a *serious relationship* with the match/write-in ("I would like to have a one-night stand with [name]," "... a casual relationship with [name]," "... a serious relationship with [name]"), and an item assessing *commitment* to the match/write-in ("I am committed to pursuing/maintaining a relationship with [name]").

Finally, if participants responded "yes" that they had "engaged in any romantic physical contact (kissing or other sexual activities) with [name]" since the last time they had completed a follow-up questionnaire, they completed a one-item measure of *sexual initiation* ("I basically initiated the physical contact with [name]"), a one-item measure of *sexual enjoyment* ("I enjoyed the romantic physical contact with [name]"), and an item assessing to what

<sup>&</sup>lt;sup>2</sup> Although we were dismayed by the low alpha of the Personable index for the speed-date preferences, we included it because the alphas for the Personable ideal-partner preferences and partner characteristics were acceptable. Although dropping the item fun/exciting might have produced a factor more similar to the Warmth/Trustworthiness factor identified by Fletcher et al. (1999), doing so actually reduced all relevant alphas in the present data set. Regardless, changing the Personable factor by dropping this item did not substantially alter the results reported in this article.

extent the physical contact was a *good idea* ("having romantic physical contact with [name] was a bad idea [reverse scored]").<sup>3</sup>

Potential moderator constructs. In the present report, we explore five moderators of H2 and H3. First, we describe the three constructs that were measured at the level of the individual participant (i.e., person-level moderators). Two of these three were intended to address H2A: Perhaps sex differences in the association between the relationship-initiation dependent variables and physical attractiveness or earning prospects will be larger for individuals who are more (compared with less) interested in acquiring a serious romantic relationship (Buss & Schmitt, 1993; Gangestad & Simpson, 2000). The first moderator was desire for a serious relationship (target-general), assessed on the pre-event questionnaire by the item: "These days, how much would you like to have a serious relationship"  $(1 = not \ at \ all, 7 = very \ much)$ . The second moderator is a three-item measure of sociosexuality, a construct that assesses an individual's willingness to engage in short-term sexual relationships (Simpson & Gangestad, 1991). The three items were assessed on the pre-event questionnaire (1 =strongly disagree, 7 = strongly agree) and were selected from the original Simpson and Gangestad (1991) inventory: "Sex without love is okay," "I would have to be closely attached to someone (both emotionally and psychologically) before I could feel comfortable and fully enjoy having sex with him or her" (reverse scored), and "I can imagine myself being comfortable and enjoying 'casual' sex with different partners" ( $\alpha = .86$ ). The third was self-perceived mate value and was assessed on the pre-event questionnaire (1 =  $strongly\ disagree$ , 7 =  $strongly\ agree$ ) by the items "I am a desirable dating partner," "In general, I tend to have many options for romantic partners," and "Members of the opposite sex that I like tend to like me back" ( $\alpha = .68$ ). We used this construct to probe H3: Perhaps individuals are more likely to demonstrate interest in and pursue potential partners who approximate their ideals to the extent that they are high (or perhaps low) in selfperceived mate value.

In the present report, we explored two additional moderators that were assessed on the follow-up questionnaire about each match/write-in classified as romantic (i.e., target-specific moderators). The first is desire for a serious relationship (targetspecific), which also serves as one of the relationship-initiation dependent variables (see above). The second is partner-specific attachment anxiety, assessed by the items "I need a lot of reassurance that [name] cares about me," "I worry that [name] doesn't care about me as much I care about him/her," and "I feel uncertain about [name]'s true feelings for me" ( $\alpha = .80$ ). This construct represents the uncertainty and need for reassurance that individuals often experience in romantic relationships. Elsewhere (Eastwick & Finkel, in press-a), we have explored this construct in detail and argued that it is a common experience during the early stages of a romantic relationship. For the purposes of the present report, we hypothesized that partner-specific attachment anxiety could foster an empathy gap (Loewenstein, 2005) between participants' stated preferences (which they likely reported in a "cool" cognitive state) and the characteristics that actually inspire their passion for potential romantic partners. For simplicity, the analyses for the two target-specific moderators were conducted on the dependent variable romantic attraction ( $\alpha = .87$ ); this DV is an average of the seven romantic-initiation dependent variable items (the five items encompassing passion, the get to know better item, and the com*mitment* item), which (a) were necessarily assessed for that match or write-in at that wave and (b) were not obviously redundant with either moderator (e.g., the *one-night stand* and *casual relationship* items).

Analysis strategy. We used multilevel data-analytic strategies to examine the present data (Kenny, Kashy, & Bolger, 1998; Raudenbush & Bryk, 2002). Data collected prior to the follow-up questionnaires have a two-level structure: Measures assessed about each speed-date/match (Level 1) are nested within participant (Level 2). Data collected on the follow-up questionnaires have a three-level structure: Measures assessed on each of the 10 follow-up questionnaires (Level 1) are nested within each match/ write-in (Level 2), which are nested within participant (Level 3). For example, a participant who was a "friend with romantic potential" with two different matches for all 10 follow-up questionnaires would provide 20 different associations between partner characteristics and passion (10 for each match). All analyses were carried out in SAS with either the NLMIXED procedure (to predict "yessing" using logistic regression) or the MIXED procedure (for all remaining dependent variables). The intercept was permitted to vary randomly at Level 2 and Level 3 (where applicable). All variables were left unstandardized (unless indicated otherwise); participant sex was coded male = -.5, female = .5.

#### Results

# Stated Mate Preferences

Table 1 presents means for stated mate preferences separately by sex. In line with H1, the expected sex differences emerged. On the pre-event questionnaire, men (more than women) reported that the characteristic physically attractive was important in an ideal romantic partner and would matter in their decision to say yes to a speed-date. In addition, the same sex difference emerged 1 month later when participants again reported these ideal partner and speed-date stated preferences. The sex differences for physically attractive were medium to large in size (mean d = -.55), according to Cohen's (1992) conventions. In addition, women (more than men) estimated on the pre-event questionnaire that the characteristic earning prospects was important in an ideal romantic partner and would matter in their decision to say yes to a speed-date. One month later, this sex difference was marginally significant for participants' reports of an ideal partner but did not reach significance for the speed-date stated preferences. The sex differences for earning prospects were small to medium in size (mean d = .35). As expected, men and women did not differ in the importance they ascribed to personable characteristics, either in an ideal romantic partner or on a speed-date (mean d = .07).

#### Sex Differences in Relationship Initiation

H2 states that sex differences should emerge in the partner characteristics that predict relationship initiation. First, we would expect that finding a potential romantic partner physically attractive should better predict relationship initiation for men than for

<sup>&</sup>lt;sup>3</sup> Responses to these three items are only reported for write-ins, because participants rarely reported engaging in romantic physical contact with a fellow speed-dater.

Table 1
Sex Differences in Stated Mate Preferences Among Speed-Daters

		Partici	pant sex				
	Male		Female		Sex difference		
Stated preference	M	SD	M	SD	t	df	d
Physically attractive							
Pre-event ideal partner	8.04	1.10	7.18	1.31	$-4.52^{***}$	156	-0.71
Pre-event speed-date	7.78	1.08	7.00	1.60	$-3.64^{***}$	140	-0.57
Wave 10 ideal partner	8.01	0.81	7.62	1.22	$-2.02^{*}$	109	-0.36
Wave 10 speed-date	7.64	1.20	6.90	1.46	$-2.85^{**}$	110	-0.54
Earning prospects							
Pre-event ideal partner	6.91	1.53	7.73	1.36	3.61***	161	0.57
Pre-event speed-date	4.42	1.96	5.05	2.19	$2.47^{*}$	161	0.30
Wave 10 ideal partner	7.34	0.96	7.72	1.03	$1.93^{\dagger}$	109	0.38
Wave 10 speed-date	5.12	1.94	5.42	1.93	0.79	110	0.16
Personable							
Pre-event ideal partner	8.10	0.73	8.10	0.71	0.01	161	0.00
Pre-event speed-date	7.03	1.06	7.21	1.09	1.05	161	0.17
Wave 10 ideal partner	8.12	0.68	8.20	0.74	0.60	109	0.11
Wave 10 speed-date	7.21	0.94	7.20	1.27	0.06	110	0.01

Note. ns ranged from 45 to 82 men and from 66 to 81 women. On a 1–9 scale, higher numbers indicate greater stated importance of physically attractive, earning prospects, or personable characteristics in an ideal romantic partner or in the hypothetical decision to "yes" someone after a 4-min date. Variables were assessed both before the speed-dating event and at the 10th follow-up wave (1 month later). d = difference between the male and female means divided by the pooled standard deviation.

p < .10. p < .05. p < .01. \*\*p < .001. \*\*p < .001. \*\*\*p < .001. \*\*\*p < .001.

women. To test this hypothesis, we regressed the relationship-initiation dependent variables (one at a time) onto *physically attractive* judgments separately for reports of speed-dating partners/matches and write-ins and separately for men and women. The *Bs* representing the associations between *physically attractive* and each dependent variable are presented separately by sex in the first four columns of Table 2. For dependent variables assessed prior to the follow-up questionnaire (above the dashed line), *physically attractive* judgments were assessed on the interaction record, whereas for dependent variables assessed on the follow-up questionnaire (below the dashed line), *physically attractive* judgments were assessed at the same follow-up wave.

Overall, participants' judgments of a potential romantic partner's physical attractiveness positively and significantly predicted the relationship-initiation dependent variables. In addition, for each dependent variable, the significance of the difference between the male and female Bs was tested by the interaction term in a supplementary regression analysis that entered physically attractive, participant sex, and their interaction as predictors (Cohen, Cohen, West, & Aiken, 2003). Sporadic sex differences emerged for physically attractive (see bolded Bs in Table 2); for example, men were more likely than women to initiate correspondence/ hanging out with matches they found physically attractive (.35 vs. .10), whereas women were more likely than men to enjoy corresponding/hanging out with matches they found physically attractive (.22 vs. .11). A count of these sex differences reveals two cases in which the B was significantly more positive for men and three cases in which the B was significantly more positive for women out of 25 pairs of male/female regression Bs.

To gain a formal, less impressionistic sense of the big picture, we calculated the overall effect size r for the association between *physically attractive* and the relationship-initiation variables (see bottom of Table 2). We calculated these correlations using meta-

analytic models that included each relationship-initiation variable as a random effect and participant sex as a fixed effect (Cooper & Hedges, 1994; Konstantopoulos & Hedges, 2004). For example, each of the 28 speed-date/match Bs (see first two columns in Table 2) was first standardized and then weighted by the reciprocal of its variance (calculated from the Huber-White sandwich standard error);  $^4$  the intercept given by the model is the average r, and the fixed effect for sex indicates the average size of the sex difference across the DVs. This same procedure was implemented separately for speed-dating partners/matches and write-ins. In general, physical attractiveness predicted relationship initiation quite well: Correlations were .43 (men) and .46 (women) for reports of speeddating partners/matches and .26 (men) and .31 (women) for reports of write-ins.5 Finally, the size of the sex difference (i.e., the fixed effect of sex in the meta-analytic model, similar to the effect size q, which can be interpreted like a correlation, see Cohen, 1992) is presented in the final row of Table 2. For both speed-dating partners/matches and write-ins, the sex difference was nonsignificant. Descriptively speaking, both sex differences were extremely small (r = .03, p = .673, and r = .05, p = .499, for speed-dating)partners/matches and write-ins, respectively) and, if anything,

<sup>&</sup>lt;sup>4</sup> For "yessing," the *B* estimate given by NLMIXED was first converted to a  $d(B \times \sqrt{3/\pi})$  and then to an  $r(\sqrt{d^2/d^2 + 4})$ , and finally the variance of this correlation was calculated with the formula  $(1 - r^2)^2/(N - 2)$  (Haddock, Rindskopf, & Shadish, 1998; Rosenthal, 1994).

<sup>&</sup>lt;sup>5</sup> Note that the smaller effect size for write-ins compared with matches is probably because of differences in variables assessed for these two kinds of targets; many of the largest effects were found for dependent variables assessed either on the interaction record or the postmatch questionnaire (which did not apply to write-ins), and effects for the eight dependent variables assessed for both matches and write-ins are roughly comparable in size.

Table 2
Associations (Regression Bs) Between Partner Characteristics and Relationship-Initiation Dependent Variables

		Physically	attractive			Earning	prospects			Perso	onable	
	Speed-da	te/match	Wri	te-in	Speed-da	ite/match	Wri	ite-in	Speed-d	ate/match	Wri	te-in
Dependent variable	♂ B	♀ <i>B</i>	♂ B	♀ <i>B</i>	$\vec{\circ}$ B	♀ <i>B</i>	$\eth B$	♀ <i>B</i>	♂ B	♀ <i>B</i>	♂ B	♀ <i>B</i>
Interaction record												
Romantic desire	.76***	.74***			.49***	.29***			.90***	.95***		
Chemistry	44***	.51***			.50***	.32***			.89***	1.02***		
"Yessing"	1.01***	.80***			.44***	.17***			.94***	1.11***		
Postmatch												
Excitement	.49***	.44***			$.14^{\dagger}$	.17*			.28**	.37***		
Initiation plans	.44***	.41***			.07	.16*			.10	.38***		
Initiation hopes	.40***	.48***			.00	.20**			.00	.38***		
Follow-up (all)												
Get to know better	.46***	.39***	.48***	.37***	.27***	.28***	.34***	.23***	.64***	.60***	.56***	.44***
Date initiation	.35***	.10	.09	.18*	.20*	.06	.16 <sup>†</sup>	.24*	.10	-07	.07	16
Date enjoyment	.11 <sup>†</sup>	.22***	.35***	.37***	.22**	.31***	.30***	.26***	.63***	.65***	.77***	.64***
Follow-up (romantic)						.51	.50	.20	.03			.01
Passion	.31***	.39***	.30***	.43***	.13*	.16*	.08	$.10^{\dagger}$	.27**	.26***	.31***	.39***
One-night stand	07	.28***	14	.07	.01	$25^{*}$	.16 <sup>†</sup>	$19^{*}$	$26^{\dagger}$	$23^{*}$	09	.09
Casual relationship	.26***	.42***	.12	.05	.20**	.25*	.09	12	.32**	.32**	32**	.06
Serious relationship	.58***	.37***	.41***	.43***	.26**	.17	.27**	.07	.40**	.23*	.65***	.39***
Commitment	.28**	.45***	.32**	.41***	.12	.14	01	.20*	.31*	.40***	.39**	.48***
Follow-up (sexual)	.20	.43	.52	.71	.12	.17	.01	.20	.51	.40	.37	.40
Sexual initiation			.22	.31*			.19	.03			.08	.37*
Sexual enjoyment			.36***	.33***			.11	.10			.17	.14
Contact good idea			.27	.42**			.44*	.53***			.14	.66***
Overall r	.43***	.46***	.26***	.31***	.19***	.16***	.16**	.18**	.29***	.32***	.25***	.27***
Sex difference r	.0:	3		)5		.04		02		03	.0	

Note. Regression Bs indicate the relationship between physically attractive, earning prospects, or personable partner characteristics and 17 relationship-initiation dependent variables (each characteristic was regressed separately). Partner characteristics were measured on a 1–9 scale with higher numbers indicating greater presence of the characteristic in the partner. Relationship-initiation dependent variables were measured on a 1–7 scale, except for romantic desire and chemistry, which were measured on a 1–9 scale, and "yessing," which is coded 1 for yes and 0 for no. Bs in the speed-date/match column were calculated on potential partners whom the participants met while speed-dating; Bs in the write-in column were calculated on potential partners whom the participants met independently of speed-dating. Bolded Bs indicate a significant or marginally significant sex difference; the bolded B is always the more positive of the two. Partner characteristics (physically attractive, earning prospects, personable) were assessed either at the speed-dating event (above the dashed line) or at each follow-up wave (below the dashed line). The overall r row indicates the meta-analyzed effect size r across all Bs reported in the column. The sex difference r row indicates the size of the difference between men's reports ( $\mathcal{C}$ ) and women's reports ( $\mathcal{C}$ ); a negative r indicates that the characteristic was a stronger determinant of men's romantic interest.

\* p < .10.

\* p < .05.

\*\* p < .05.

\*\* p < .01.

\*\* p < .05.

\*\* p < .00.

trending such that physical attractiveness was a more important determinant of *women's* relationship initiation. Although physical attractiveness appears to predict romantic interest in the early stages of potential relationships, we found no evidence for sex differences in its importance.

H2 also suggests that finding a potential romantic partner to have good earning potential should better predict relationship initiation for women than for men. The four middle columns of Table 2 present the associations between participants' judgments of *earning prospects* and each dependent variable separately by sex and separately for speed-dating partners/matches and write-ins. Overall, participants' judgments of a potential romantic partner's earning prospects positively and significantly predicted the relationship-initiation dependent variables. Again, sporadic sex differences emerged for *earning prospects* (see bolded *Bs* in Table 2); surprisingly, at the event itself, men seemed especially interested (compared with women) in the speed-dating partners they felt had good earning prospects. A count of these sex differences across the 25 pairs of male/

female regression Bs reveals five cases in which the B was significantly more positive for men and one case in which the B was significantly more positive for women. Again, more formally, we calculated the overall r for the association between earning prospects and relationship initiation using the same meta-analytic procedures described above. As displayed at the bottom of Table 2, earning prospects predicted relationship initiation, although the correlations were smaller than those found for physically attractive: Correlations were .19 (men) and .16 (women) for reports of speed-dating partners/matches and .16 (men) and .18 (women) for reports of write-ins. Again, there were no significant sex differences in these overall associations; the difference between the male and female rs were again descriptively very small (r = -.04, p = .480, and r = .02, p =.825, for speed-dating partners/matches and write-ins, respectively), with one trending in the male direction and one trending in the female direction. Although earning prospects did positively predict romantic interest, again we found no evidence for sex differences in the importance of this variable.

Finally, for comparative purposes, we examined the relationship between personable characteristics and the relationship-initiation variables, although we would not expect to find systematic sex differences in these associations. The final four columns of Table 2 present the associations between participants' judgments of personable and each dependent variable separately by sex and separately for speed-dating partners/matches and write-ins. Overall, participants' judgments of a potential romantic partner's personable characteristics positively and significantly predicted the relationship-initiation dependent variables. Three sex differences (out of 25) emerged for *personable* in the female direction (see bolded Bs in Table 2). Again, we calculated the overall r for the association between *personable* and relationship initiation using the same meta-analytic procedures described previously. As displayed at the bottom of Table 2, personable predicted relationship initiation moderately well: Correlations were .29 (men) and .32 (women) for reports of speed-dating partners/matches and .25 (men) and .27 (women) for reports of write-ins. As expected, there were no significant sex differences in these overall associations (r = .03, p = .714, and r = .02, p = .812, for speed-dating)partners/matches and write-ins, respectively).

The preceding analyses revealed that participants' own judgments of the physical attractiveness and earning prospects of potential romantic partners predicted their romantic interest in those partners equally well for men and women. However, it could still be true that men (compared with women) are more romantically interested in objectively attractive potential partners and that women (compared with men) are more romantically interested in objectively ambitious potential partners. To explore this possibility, we obtained several alternative measures of partner characteristics. Because each speed-dater was rated by 9-13 other speeddaters on the characteristics physically attractive, earning prospects, and personable, we could create consensus ratings of these three characteristics for each target by averaging these 9–13 judgments. Interrater reliabilities for these judgments were strong: The physically attractive reliability was  $\alpha = .92$ , the earning prospects reliability was  $\alpha = .77$ , and the personable reliability was  $\alpha = .79$ .

For each analysis presented in the "speed-date/match" columns of Table 2, these consensus ratings were substituted in place of the subjective *physically attractive*, *earning prospects*, and *personable* judgments (no consensus ratings were available for write-ins). Using the same meta-analytic procedure reported above, we calculated overall *rs* that describe the association between each target's consensus characteristics and participants' reports on the relationship-initiation dependent variables with respect to that target. Overall *rs* and sex-difference *rs* are presented in the first three rows of Table 3. *Physically attractive*, *earning prospects*, and *personable* consensus ratings were positively and significantly associated with the relationship-initiation dependent variables for both men and women. As with the subjective judgments, however, the sex differences in these associations were small and nonsignificant.

All speed-daters had their photographs taken at the speed-dating event, affording an additional measure of physical attractiveness. Six independent coders (three women and three men) rated each photo on physical attractiveness ( $\alpha = .76$ ); for each analysis presented in the first two columns of Table 2, these coder ratings were substituted in place of the subjective attractiveness judgments

Table 3
Overall Associations Between Alternative Measures of Partner
Characteristics and Relationship-Initiation Dependent Variables

Independent variable	Male $r$	Female $r$	Sex difference r
Consensus physically			
attractive	.27***	.29***	.02 (p = .714)
Consensus earning prospects	.13***	.14***	.01 (p = .817)
Consensus personable	.14***	.13***	01 (p = .817)
Coder-rated physical			•
attractiveness	.14**	.17***	.03 (p = .612)
Hometown average income	$08^{**}$	02	.06 (p = .134)

*Note.* Male and female r columns present the meta-analyzed effect size r between the independent variable (calculated with respect to speed-dates/matches only) and all relationship-initiation dependent variables (see Table 2) for male and female participants, respectively. The sex difference r column indicates the size of the difference between men's reports and women's reports; a negative r indicates that the characteristic was a stronger determinant of men's romantic interest.

\*\* p < .01. \*\*\* p < .001.

(photos were not taken of write-ins, so no coder-ratings were available). As shown in the fourth row of Table 3, the overall meta-analyzed *r*s for men and women were again positive and significant, but as with the subjective physical-attractiveness judgments, the sex difference was again small and nonsignificant.

Finally, similar to an analysis conducted by Fisman et al. (2006), we used the 2000 census data (United States Census Bureau, 2000) to calculate the natural log of the median income of each participant's hometown (hometown was reported by zip code on the pre-event questionnaire). For each analysis presented in the fifth and sixth columns of Table 2, these ratings were substituted for the subjective earning-prospects judgments (no hometown zip codes were assessed for write-ins, so no income measure was available for these targets). As shown in the fifth row of Table 3, women demonstrated neither greater nor lesser romantic initiation toward men who were from wealthy hometowns, and men appeared to dislike women from wealthy hometowns, although this correlation was small (r = -.08). As with the subjective earning-prospects judgments, the sex difference was nonsignificant (r = .06, p = .06) .134). Taken together, these five auxiliary analyses suggest that men and women did not differ in how these alternative measures of partner characteristics inspired their romantic interest, which is the same pattern of results revealed by participants' own subjective judgments (see Table 2). (We explore H2A regarding participants' short-term versus long-term orientations in the Moderator Construct Analyses section below.)

### Individual Differences in Relationship Initiation

Considering that male and female participants differed in how important they rated physical attractiveness and earning prospects in an ideal partner and an ideal speed-date (H1), how is it that no sex differences emerged when predicting relationship-initiation variables from these same characteristics (H2)? This intriguing null finding suggests the possibility that stated ideal partner preferences may have been unrelated to what actually inspired romantic interest in the live dating context of this study (see also Iyengar et al., 2005). Therefore, we examined H3: If some participants reported an especially strong preference for a certain partner

Table 4
Correlations Between Participants' Romantic Desire, Chemistry, and "Yessing" Bs and Stated Preferences for Physically Attractive

Variable	Romantic desire <i>B</i>	Chemistry B	"Yessing" B	Pre-event ideal partner	Pre-event speed-date	Wave 10 ideal partner	Wave 10 speed-date
Romantic desire B	_	.62***	.24**	.02	.07	04	01
Chemistry B	.62***	_	.16*	02	03	10	08
"Yessing" B	.24**	.16*	_	.10	.12	.02	.00
Pre-event ideal partner	.03	.07	.09	_	.62***	.68***	.55***
Pre-event speed-date	.02	.06	.14	.61***	_	.60***	.62***
Wave 10 ideal partner	08	06	.06	.68***	.61***	_	.55***
Wave 10 speed-date	.00	.00	.01	.55***	.67***	.70***	_

*Note.* Romantic desire, chemistry, and "yessing" *B*s were calculated for each participant across all 9–13 of his/her speed-dates. Stated-preference items were assessed on a 1–9 scale with higher numbers indicating greater self-reported importance of *physically attractive* in an ideal romantic partner or in the hypothetical decision to "yes" someone after a 4-min date. Stated preferences were assessed both before the speed-dating event and at the 10th follow-up wave (1 month later). Stated preferences above the diagonal were within-person centered; stated preferences below the diagonal were left as their raw values.

 $p \le .05$ .  $p \le .01$ .  $p \le .001$ .

characteristic (e.g., physically attractive), did those same participants also demonstrate especially strong romantic interest in and pursuit of those romantic partners they judged to possess that characteristic? The context of the speed-dating event provides a rare opportunity to examine this individual-differences hypothesis; because participants met between 9 and 13 potential romantic partners at an event, we can assign each participant a unique B for how well his/her judgments of physically attractive (or earning prospects, or personable) predicted his/her reports of romantic desire, chemistry, or likelihood of "yessing" across all dates. If the stated preferences have predictive validity, a participant who stated that physical attractiveness was important in an ideal romantic partner or a speed-date should have shown a strong association (i.e., a large B) between judgments of his/her dates' physical attractiveness and his/her romantic desire for, chemistry with, and likelihood of "yessing" those dates. In other words, a participant's stated preferences and the in vivo preferences revealed by his/her own individual Bs should be positively correlated.

Tables 4, 5, and 6 present all correlations among participants' individual Bs (romantic desire, chemistry, and "yessing") and his/her stated preferences (ideal partner and speed-date, both preevent and Wave 10) for physically attractive, earning prospects, and personable, respectively. There are two ways of scoring stated preferences in these analyses: Stated preferences can be withinperson centered (i.e., the raw, 1–9 values minus the participant's mean rating across all traits, also called an ipsative measure), or they can be left as their raw values. A high value for a withinperson centered stated preference indicates that the participant claimed to value that trait more than he/she values other traits, whereas a high value for a raw stated preference indicates that the participant claimed to value that trait more than other participants did. Because both approaches are meaningful, we present the within-person centered correlations above the diagonal and the raw-values correlations below the diagonal in Tables 4, 5, and 6. (Of course, the correlations among the three Bs do not change whether they are below or above the diagonal.)

Across Tables 4, 5, and 6, the three *B*s correlated significantly with one another. For example, if a participant tended to romantically desire those dates he found physically attractive, he also tended to experience chemistry with those same dates he found

attractive (r = .62, p < .001; see Table 4). Also, the four statedpreference assessments (both within-person centered and raw values) correlated highly with one another. If a participant reported a strong ideal partner preference before the event for someone with good earning prospects, she was more likely than other participants to also report a preference for such a partner while speed-dating (r = .52, p < .001), and at the Wave 10 follow-up as an ideal partner (r = .53, p < .001), and while speed-dating (r = .39, p < .001) .001; see Table 5). However, the correlations between the Bs (in vivo preferences) and the stated-preference measures (both withinperson centered and raw values) were small: Out of 72 correlations, only 2 were significant and positive and 1 was actually significant and negative. For example, participants who reported at pretest that they would be more likely to say yes to a date who they felt was personable were in fact not significantly more likely to say yes to those dates (r = .05, p = .578; see Table 6). In summary, although participants' stated preferences were consistent across four different assessments, and although participants' in vivo preferences were consistent within a live dating context (i.e., the B correlations), participants' stated preferences were unrelated to their in vivo preferences.

Tables 4, 5, and 6 present results aggregated across sex; however, it is possible that this presentation could obscure sex differences in these correlations. To test for sex differences, we conducted regressions that predicted each variable in Tables 4, 5, and 6 from one of the remaining six variables in that table, participant sex, and their interaction. (We report this analysis on the withinperson centered stated preferences to keep the presentation manageable, but our conclusions were identical when we used the raw-values preferences.) Because the interaction with sex may

 $<sup>^6</sup>$  Bs for "yessing" could not be computed for participants who said "yes" (n=6) or "no" (n=3) to all dates. Also, because a B for "yessing" is the natural log of an odds ratio, a number of large outliers emerged; participants who had "yessing" Bs beyond Tukey's inner fences (Myers & Well, 1995; Tukey, 1977) were considered missing (n=12) for physically attractive, 15 for earning prospects, 25 for personable). Even with the inclusion of these outliers, however, none of the 24 nonsignificant correlations between a stated preference and the "yessing" Bs in Tables 4, 5, and 6 (the correlations of interest) became significant.

Table 5
Correlations Between Participants' Romantic Desire, Chemistry, and "Yessing" Bs and Stated Preferences for Earning Prospects

Variable	Romantic desire <i>B</i>	Chemistry B	"Yessing" B	Pre-event ideal partner	Pre-event speed-date	Wave 10 ideal partner	Wave 10 speed-date
Romantic desire B	_	.71***	.59***	.07	.09	.03	03
Chemistry B	.71***	_	.48***	.11	.13	.13	02
"Yessing" B	.59***	.48***	_	.04	.08	.07	.12
Pre-event ideal partner	.14	.16*	.07	_	.53***	.60***	.41***
Pre-event speed-date	.10	.16*	.08	.52***	_	.44***	.53***
Wave 10 ideal partner	.13	.15	.09	.53***	.38***	_	.47***
Wave 10 speed-date	.03	.03	.18	.39***	.53***	.44***	_

*Note.* Romantic desire, chemistry, and "yessing" *B*s were calculated for each participant across all 9–13 of his/her speed-dates. Stated-preference items were assessed on a 1–9 scale with higher numbers indicating greater self-reported importance of *earning prospects* in an ideal romantic partner or in the hypothetical decision to "yes" someone after a 4-min date. Stated preferences were assessed both before the speed-dating event and at the 10th follow-up wave (1 month later). Stated preferences above the diagonal were within-person centered; stated preferences below the diagonal were left as their raw values.

differ depending on which variable is considered the independent variable and which is considered the dependent variable, we examined all possible regression combinations, giving a total 42 regressions for each of the three tables. For *physically attractive*, only 3 of these 42 regressions revealed a sex interaction (at  $p \le .05$ ), for *earning prospects*, only 4 of these 42 regressions revealed a sex interaction, and for *personable*, only 6 out of these 42 regressions revealed a sex interaction. Furthermore, only 1 of these 13 sex-differentiated correlations was between a B and a stated preference (the correlations of interest), and this correlation remained nonsignificant for both men and women. Therefore, we find little evidence to suggest that the sexes differ in how well their stated preferences correlate with their in vivo preferences.

Finally, we subjected the three in vivo preferences and the four within-person centered stated preferences (separately for Physically Attractive, Earning Prospects, and Personable) to a factor analysis to more formally test whether in vivo and stated preferences reflect two independent factors. (Again, results do not change appreciably when using the raw-values preferences.) The results of these three factor analyses (principal axis factoring with promax rotation) are presented in Table 7. In all three cases, two-factor solutions were suggested by parallel analyses (Hum-

phreys & Montanelli, 1975; see also Fabrigar, Wegener, MacCallum, & Strahan, 1999) in which the eigenvalues of the actual data are compared with eigenvalues of an equivalently sized set of random data. As expected, for all three sets of preferences, the three in vivo preferences loaded on one factor and the four stated preferences loaded on the other. Furthermore, the promax rotation is oblique and therefore permits the factors to be correlated; however, as shown in Table 7, the correlation between the two factors was generally quite weak across the three sets of preferences.

# Similarity Effects?

It is plausible that participants' awareness of their own standing on these partner characteristics (*physically attractive*, *earning prospects*, and *personable*) inhibited the pursuit of their ideals. In other words, stated preferences may have failed to correlate with in vivo preferences not because participants' stated preferences were inaccurate, but instead because they anticipated rejection to the degree a partner outshined them on a particular characteristic. To explore this possibility, we conducted a series of regression equations with the following form:

Table 6
Correlations Between Participants' Romantic Desire, Chemistry, and "Yessing" Bs and Stated Preferences for Personable

Variable	Romantic desire <i>B</i>	Chemistry B	"Yessing" B	Pre-event ideal partner	Pre-event speed-date	Wave 10 ideal partner	Wave 10 speed-date
Romantic desire B	_	.59***	.39***	.14	.04	.09	.02
Chemistry B	.59***	_	.25**	02	.08	$20^{*}$	07
"Yessing" B	.39***	.25**	_	03	06	01	10
Pre-event ideal partner	04	.05	.14	_	.35***	.52***	.25**
Pre-event speed-date	13	.05	.05	.32***		.44***	.51***
Wave 10 ideal partner	05	12	.06	.49***	.35***	_	.47***
Wave 10 speed-date	07	.05	.08	.18*	.48***	.47***	_

*Note.* Romantic desire, chemistry, and "yessing" *B*s were calculated for each participant across all 9–13 of his/her speed-dates. Stated-preference items were assessed on a 1–9 scale with higher numbers indicating greater self-reported importance of *personable* in an ideal romantic partner or in the hypothetical decision to "yes" someone after a 4-min date. Stated preferences were assessed both before the speed-dating event and at the 10th follow-up wave (1 month later). Stated preferences above the diagonal were within-person centered; stated preferences below the diagonal were left as their raw values.

 $p \le .05.$  \*\*\*  $p \le .001.$ 

 $p \le .05.$   $p \le .01.$   $p \le .001.$ 

Table 7
Factor Loadings of Participants' Romantic Desire, Chemistry, and "Yessing" Bs and Stated Preferences

	Physically	attractive	Earning	prospects	Personable	
Variable	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
In vivo preferences						
Romantic desire B	.04	.89	11	.86	.11	.80
Chemistry B	06	.69	.04	.81	10	.63
"Yessing" B	.04	.21	.08	.71	04	.52
Stated preferences						
Pre-event ideal partner	.78	.06	.79	.06	.53	.04
Pre-event speed-date	.74	.02	.75	03	.66	.08
Wave 10 ideal partner	.82	06	.67	.01	.73	07
Wave 10 speed-date	.71	.00	.62	03	.56	09
Factor correlation	r = .01		r = .09		r = .02	

Note. Loadings of .2 and above are bolded. Stated preferences are within-person centered.

$$\begin{split} DV_{ij} &= \gamma_0 + \gamma_1 SelfChar_i + \gamma_2 PartnerChar_{ij} \\ &+ \gamma_3 StatedPref_i + \gamma_4 (PartnerChar_{ij} \times StatedPref_i) + e_{ij}, \end{split} \tag{1}$$

where SelfChar<sub>i</sub> is person i's self-rating on a characteristic (physically attractive, earning prospects, or personable, assessed on the pre-event questionnaire on a scale from 1–9), PartnerChar<sub>ij</sub> is person i's interaction-record rating of speed-dating partner j on that characteristic, StatedPref<sub>i</sub> is the average of person i's four within-person centered stated preferences (ideal partner and speed-date from both the pre-event questionnaire and the Wave 10 follow-up questionnaire) for that characteristic, and DV<sub>ij</sub> is person i's romantic desire, chemistry, or yes/no decision regarding speed-dating partner j. We regressed each of these three dependent variables on each of the three characteristics (nine total regressions).

To examine similarity effects, we conducted each of the nine regressions twice, as suggested by Griffin, Murray, and Gonzalez (1999): once for all reports in which participants scored higher than their speed-dating partner (SelfChar $_i$  > PartnerChar $_{ij}$ ) and once for all reports in which participants scored lower (SelfChar $_i$  < PartnerChar $_{ij}$ ). If  $\gamma_2$  is positive when SelfChar $_i$  > PartnerChar $_{ij}$ , this would indicate that participants desired similarity on that characteristic. Furthermore, stated-preference effects could emerge after accounting for these similarity effects: A positive PartnerChar $_{ij}$  × Stated-Pref $_i$  interaction would indicate that having a strong stated preference leads participants to either (a) strongly deselect partners who fall below them on that characteristic or (b) strongly select partners despite the fact that they lie above them on that characteristic.

None of the nine regressions revealed any evidence that participants desired similarity. Whether speed-dating partners scored below or above the participant on a characteristic, participants significantly liked the partner more to the extent that he/she possessed greater levels of that characteristic (all  $\gamma_2$ s were positive; ts > 2.68). Furthermore, none of the PartnerChar $_{ij} \times$  Stated-Pref $_i$  interactions were both positive and significant ( $p \le .05$ ), although two were  $p \le .10$  and negative and three were  $p \le .10$  and positive. These analyses suggest that participants did not experience inhibited romantic interest in speed-dating partners who exceeded them on a characteristic; on the contrary, higher physical attractiveness, earning prospects, or personable ratings

were consistently romantically inspiring regardless of self ratings, and stated preferences did not play a consistent role in moderating these effects.

#### Moderator Construct Analyses

At this point, the data suggest a disconnect between the characteristics that participants claim to prefer in a romantic partner and the characteristics that participants actually value in a live dating context. To get a better sense of what might or might not be accounting for the effects reported above, we conducted several theoretically sensible moderational analyses.

Desire for a serious relationship (target-general). Some prominent evolutionary theories (Buss & Schmitt, 1993; Gangestad & Simpson, 2000) would suggest that the null results for H2 (missing sex differences) are not meaningful without considering participants' short-term versus long-term mating orientations. After all, several previous reports have suggested that men's and women's ideal partner preferences change depending on whether they are considering a short-term or long-term relationship (e.g., Li & Kenrick, 2006). Therefore, we explored H2A: Might sex differences in the associations between the relationship-initiation dependent variables and physical attractiveness or earning prospects have emerged for participants who were more (compared with less) interested in having a long-term relationship? If so, we would expect to consistently find significant Partner Characteristic × Sex × Desire for a Serious Relationship (Target-General) interactions predicting the relationship-initiation dependent variables. We tested whether this three-way interaction was significant for every male/female pair of Bs displayed in Table 2 (with

<sup>&</sup>lt;sup>7</sup> This three-way interaction tests whether any sex difference in the association between a partner characteristic and romantic interest is smaller for participants who experienced low compared with high desire for a serious relationship. Given ambiguities in the previous literature (e.g., Kenrick et al., 1993, vs. Li & Kenrick, 2006), we did not specifically hypothesize whether the sex differences would be reduced, nonexistent, or reversed for participants experiencing low desire for a serious relationship. Indeed, the three-way interaction could detect any of these patterns, and all of them would support prominent evolutionary models of mating (Buss & Schmitt, 1993; Gangestad & Simpson, 2000); we therefore tested for three-way interactions across all relevant moderator analyses.

the exception of those pertaining to the dependent variables *desire* for a serious relationship/casual relationship/one-night stand, which are theoretically ambiguous in this case). In other words, we explored 11 possible three-way interactions in which speed-dating matches served as targets and 8 possible three-way interactions for the write-ins for each partner characteristic.

For the characteristic physically attractive, H2A predicts that these three-way interactions will be negative. That is, the two-way Physically Attractive × Desire for a Serious Relationship (Target-General) interaction (which tests whether physically attractive better predicts the dependent variable among individuals more compared with less interested in a serious relationship) should be more positive for men than for women. However, out of 11 possible three-way interactions for the speed-dating matches, 0 were significant and negative and 1 was actually significant and positive (i.e., the two-way interaction was more positive for women). Out of eight possible three-way interactions for the writeins, two were significant and negative and two were significant and positive. For the characteristic earning prospects, H2A predicts that these three-way interactions will be positive. That is, the two-way Earning Prospects × Desire for a Serious Relationship (Target-General) interaction (which tests whether earning prospects better predicts the dependent variable among individuals more compared with less interested in a serious relationship) should be more positive for women than for men. Only 1 out of 11 possible three-way interactions for the speed-dating matches was significant and positive, and one out of eight possible three-way interactions for the write-ins was actually significant and negative (i.e., the two-way interaction was more positive for *men*). Finally, H2A would not necessarily predict the emergence of significant three-way interactions for the characteristic personable. In this case, 1 out of 11 possible three-way interactions was significant (and positive) for the speed-daters, and three out of eight possible three-way interactions were significant (and positive) for the writeins. In short, these analyses did not reveal compelling evidence that the sex differences predicted by H2 emerged more strongly for participants who were especially interested in acquiring a serious romantic relationship.

Sociosexuality. Sociosexuality refers to the degree to which individuals are willing (unrestricted) or unwilling (restricted) to engage in short-term, sexual relationships (Simpson & Gangestad, 1991). Again, we examined H2A: It is possible that sex differences in Table 2 might emerge for individuals at the restricted (low) compared with the unrestricted (high) end of the sociosexuality scale. To explore this possibility, we conducted analyses identical to those reported above for desire for a serious relationship (targetgeneral). (Note that the predicted direction of effects reverses for sociosexuality because of how the items are scored.)

None of the 11 Physically Attractive  $\times$  Sex  $\times$  Sociosexuality interactions was significant for the speed-dating matches, and two of the eight possible three-way interactions for the write-ins were significant and negative (i.e., the opposite of the predicted direction). For the characteristic *earning prospects*, 0 of the 11 possible three-way interactions was significant for the speed-dating matches, and for the write-ins, 1 was significant and negative (the predicted direction) and 1 was significant and positive (the opposite of the predicted direction). For the characteristic *personable*, 1 out of 11 possible three-way interactions was significant (and negative) for the speed-dating matches, and one out of eight

possible three-way interactions was significant (and negative) for the write-ins. Again, the data did not suggest that the sex differences predicted by H2 emerged more strongly for participants who were less (compared with more) willing to engage in short-term, sexual relationships.

Desire for a serious relationship (target-specific). We also explored whether one of the relationship-initiation dependent variables, desire for a serious relationship, could serve as a moderator of the effects reported in Table 2. Because participants completed this item with regard to a specific target, it provides a more focused test of H2A than does the general, person-level desire-for-aserious-relationship item. However, because this target-specific desire-for-a-serious-relationship measure was assessed on each follow-up questionnaire for matches/write-ins classified as romantic (see Method section), it cannot be used to predict many of the relationship-initiation dependent variables (e.g., those assessed at the level of the target, such as "yessing"). For simplicity, we examined whether the three-way Partner Characteristic × Sex × Desire for a Serious Relationship (Target-Specific) interaction significantly predicted the amalgamated dependent variable romantic attraction, which was made up of all the romantic-initiation items that had to be available at each follow-up wave for each match or write-in classified as romantic (see Method section).

For the characteristic *physically attractive*, this three-way interaction was marginally significant and positive (the opposite of the predicted direction) for matches and was marginally significant and negative (the predicted direction) for write-ins. For the characteristics *earning prospects* and *personable*, the three-way interactions did not reach marginal significance for either speed-dating matches or write-ins. In total, we did not find compelling evidence for H2A using this target-specific desire-for-a-serious-relationship item. (Null or inconsistent results also emerged when we examined the moderational role of the two target-specific variables that assessed desire for a casual relationship and desire for a one-night stand.)

An astute reader might notice that in the first two columns of Table 2, *physically attractive* predicts desire for a one-night stand more strongly for women than for men but predicts desire for a serious relationship more strongly for men than for women. This pattern is consistent with H2A, and indeed, the Physically Attractive × Sex interaction is significant if used to predict the difference between these two items (serious minus one-night stand). However, the Physically Attractive × Sex interaction is not significant for the write-ins, and neither of the Earning Prospects × Sex interactions is significant. Oddly, the Personable × Sex interaction is significant for the write-ins; the sex-differentiated pattern is especially pronounced in this case but is not consistent with H2A. In short, one of the four predicted interactions was significant, and one of the two nonpredicted interactions was significant.

Finally, it is worth noting that the three moderators used above to test H2A all demonstrated healthy variability in this sample. Desire for a serious relationship (target-general) had a mean of 5.0 (SD=1.6), sociosexuality had a mean of 3.2 (SD=1.8), and desire for a serious relationship (target-specific) had a mean of 4.8 (SD=1.8); across matches and write-ins). The range of all three variables included the entire 1-7 scale, and none had any outliers outside of Tukey's inner fences (Myers & Well, 1995; Tukey, 1977). It is also unlikely that all participants had solely short-term romantic goals in mind: For speed-dating matches, participants

were most interested in a casual relationship (M=5.08), followed by a serious relationship (M=3.89), and were least interested in a one-night stand (M=3.20; all three means differ significantly at p<.001). For write-ins, participants were most interested in a serious relationship (M=5.39), followed by a casual relationship (M=5.14), and were again least interested in a one-night stand (M=3.10; all three means differ significantly at p<.03). In sum, the data suggest that participants' short-term versus long-term orientations had no bearing on our failure to confirm H2 in this study.

Partner-specific attachment anxiety. We also conducted an exploratory analysis examining whether partner-specific attachment anxiety (e.g., Eastwick & Finkel, in press-a) might serve as a moderator of the effects presented in Table 2. We hypothesized that participants might show traditional sex differences on the characteristics that predict the relationship-initiation variables when they are *not* feeling particularly anxious or uncertain about what a potential romantic partner thinks of them. In other words, anxiety could be one emotion that fosters an empathy gap (e.g., Loewenstein, 2005) between the cool, rational mindset in which stated preferences are typically reported and the desire participants feel toward a real-life potential romantic partner. Perhaps it is easier to compare a target's qualities with some ideal romanticpartner template (a template which typically differs by sex) when one is not preoccupied with thoughts about whether that target is romantically interested in the self.

To illustrate, imagine a male participant who is not caught up in the throes of anxiety with respect to a certain physically attractive female target, yet he still remains romantically interested in her and recognizes that she is an "objectively" good catch. It is easy to imagine that, in such a nonanxious state, men (compared with women) might be more inspired by a target's physical attractiveness and women (compared with men) might be more inspired by a target's earning prospects. However, as participants report increasing levels of partner-specific attachment anxiety, the traditional sex differences should become attenuated. This hypothesis suggests that a three-way Partner Characteristic × Sex × Partner-Specific Attachment Anxiety interaction should emerge for the traditionally sex-differentiated characteristics physically attractive and earning prospects but not for personable in predicting romantic attraction. (We use this amalgamated dependent variable again because partner-specific attachment anxiety, like desire for a serious relationship [target-specific], was assessed only for matches/ write-ins classified as romantic.)

For the characteristic *physically attractive*, this three-way interaction was marginally significant and positive for matches; this suggests that, as predicted, *physically attractive* was a better predictor of romantic interest for men (compared with women) at low rather than high levels of partner-specific attachment anxiety. However, the three-way interaction did not achieve significance for the write-ins. For the characteristic *earning prospects*, the three-way interaction was marginally significant and negative for matches and significant and negative for write-ins; this suggests that, as predicted, *earning prospects* was a better predictor of romantic interest for women (compared with men) at low rather than high levels of partner-specific attachment anxiety. Finally, for the characteristic *personable*, the three-way interaction was not significant for either matches or write-ins, as expected.<sup>8</sup> Although we view these results as preliminary and we await future research

before drawing definitive conclusions, it is possible that the uncertainty or anxiety often associated with developing relationships may attenuate traditional sex differences in the characteristics that men and women consider important in a romantic partner.

H3 moderation. Finally, we attempted to identify significant moderators of the 72 stated/in vivo correlations presented in Tables 4, 5, and 6. For example, it is plausible that participants showed greater correspondence between their stated and in vivo preferences to the extent that they were interested in having a long-term, serious relationship or to the extent that they had a restricted sociosexual orientation (these H3 moderational analyses can only be conducted with moderators measured at the level of the individual participant). If this were true, we would expect to find that desire for a serious relationship (target-general) positively interacted (and sociosexuality negatively interacted) with stated preferences to predict in vivo preferences. Separately for these two possible moderators, we conducted two regressions for each of the 72 correlations (total regressions per moderator = 144), once with the stated preference serving as the dependent variable and once with the in vivo preference serving as the dependent variable (just as above when we explored sex differences in these correlations). The interaction of desire for a serious relationship (target-general) and these preferences was never significant and positive (the predicted direction) and was actually significant and negative in two cases. In addition, sociosexuality was only a significant and negative (the predicted direction) moderator in 1 of these 144 regressions; it was never significant and positive. Therefore, it appears unlikely that participants' desire for a serious relationship or their sociosexuality orientation were factors that could explain why their stated and in vivo preferences were uncorrelated.

We also explored the possibility that self-perceived mate value could moderate these 72 stated/in vivo correlations. Two patterns are plausible. For one, perhaps stated and in vivo preferences correlated poorly in this study because participants with low mate value felt they had little to offer in the dating arena and were therefore more likely to express interest in real-life potential partners who fell short of their stated ideal. On the other hand, perhaps individuals with high mate value possessed unrealistic ideals regarding romantic partners, and it would therefore be the low-matevalue participants who would be in a position to select partners who approximated their attainable ideals. The first hypothesis predicts that self-perceived mate value will positively interact with stated preferences to predict in vivo preferences (and vice versa), and the second hypothesis predicts that these interactions will be negative. Again, we conducted 144 regressions. The interaction of self-perceived mate value and these preferences was never significant and positive, and in nine cases (6% of the analyses), the interaction was significant and negative. We therefore find little consistent evidence that participants' self-perceived mate value (i.e., their own general self-assessment of success with the oppo-

<sup>&</sup>lt;sup>8</sup> Of the three marginal or significant three-way interactions involving partner-specific attachment anxiety, only the following two-way simple slope of interest was reliable: The Physically Attractive × Sex interaction was significant and positive for individuals scoring one standard deviation above the mean on partner-specific attachment anxiety (e.g., *physically attractive* predicted romantic attraction better for women than for men at high levels of anxiety). Thus, the present results do not allow for definitive conclusions about the precise pattern of these interactions.

site sex) significantly inhibited or augmented the pursuit of their ideals at the speed-dating event.

Table 8 briefly summarizes the outcomes of each of the analyses reported in this article that tested a possible explanation for our failure to confirm H2 and H3.

#### Discussion

In the present study, we examined how participants' judgments of potential romantic partners' physical attractiveness, earning prospects, and personable characteristics predicted the romantic interest they felt toward those individuals. We advanced three hypotheses: Given that (a) participants demonstrated traditional stated-preference sex differences on the characteristics physically attractive and earning prospects, data should have revealed (b) sex differences in the associations between those characteristics and romantic interest in potential partners and (c) meaningful correlations between stated preferences and in vivo preferences revealed at the speed-dating event. The latter two hypotheses were unsupported. First, although physical attractiveness, good earning prospects, and personable characteristics were all positively and significantly associated with romantic interest, the data revealed no evidence of sex differences in these associations. We were also unable to find any evidence that these missing sex differences were related to participants' long-term versus short-term orientations, as might be predicted by some prominent evolutionary theories (e.g., Buss & Schmitt, 1993). Second, stated preferences were largely independent of in vivo preferences: For example, a participant who claimed to value physical attractiveness highly in a romantic partner was not significantly more likely than other participants to like, feel chemistry with, or say "yes" to the dates he found physically attractive.

These data offer support for the idea that mate preferences as reported in the typical stated-preference paradigm might reflect

participants' a priori theories about the characteristics of a person that might inspire their romantic interest (Nisbett & Wilson, 1977; see Sprecher, 1989, for a similar perspective). Recall one Nisbett and Wilson (1977) example: Some participants watched a film while distracted by a noisy power saw and claimed that the noise negatively affected their impression of the film. In fact, participants who watched the movie without the distraction did not rate the film any more favorably. Although the power saw seemed like a plausible explanation for participants' dislike of the film, it actually had no discernable impact. Similarly, participants' stated mate preferences might overweight (or underweight) factors that seem like plausible (or implausible) reasons for liking one particular romantic partner more than another. If indeed participants' stated preferences derive from such plausibility judgments in lieu of genuine introspection, this could explain why they failed to predict judgments and behavior in this study.

It may initially seem absurd that something as important as one's mate preferences (as opposed to beliefs about distracting power saws) might merely reflect a priori theories constructed from naïve plausibility judgments. One possible resolution to this puzzle is that stated mate preferences may be subject to the empathy gap (Loewenstein, 2005) if one's preferences are reported coolly and rationally without fully accounting for the affect that often characterizes romantic processes. According to this theoretical perspective, we might expect that a priori theories will play a role in partner selection in the instances when participants somehow elude the powerful affect often associated with romantic attraction. In the present study, we found suggestive evidence that traditional sex differences in relationship initiation emerged for participants reporting low (compared with high) levels of one indicator of such affect: partnerspecific attachment anxiety.

However, the a priori theories and (closely related) empathygap accounts are not the only plausible interpretations of the

Table 8
Plausible Explanations for the Failure to Confirm Hypotheses 2 and 3

Alternative explanation	Supported?
For missing sex differences (Hypothesis 2)	
• Sex differences might emerge using consensus or objective measures of partner characteristics	Unsupported
<ul> <li>Sex differences might emerge for participants who are more (compared to less) interested in a serious relationship in general</li> </ul>	Unsupported
<ul> <li>Sex differences might emerge for participants who have a restricted (compared to an unrestricted) sociosexual orientation</li> </ul>	Unsupported
<ul> <li>Sex differences might emerge for participants reporting high (compared to low) interest in a serious relationship with a specific partner</li> </ul>	Unsupported
<ul> <li>Sex differences might emerge for participants reporting low (compared to high) levels of partner-specific attachment anxiety</li> </ul>	Modestly supported
For poor correlation of stated and in-vivo preferences (Hypothesis 3)	
<ul> <li>Participants might exhibit diminished interest in partners who exceeded their self-ratings on a particular characteristic (i.e., they anticipated rejection)</li> </ul>	Unsupported
<ul> <li>Correlations might be stronger for participants who are more (compared to less) interested in a serious relationship in general</li> </ul>	Unsupported
<ul> <li>Correlations might be stronger for participants who have a restricted (compared to an unrestricted) sociosexual orientation</li> </ul>	Unsupported
<ul> <li>Correlations might be stronger for participants who are especially high (or especially low) in self-perceived mate value</li> </ul>	Unsupported

present data. For example, the closed field of eligible partners at the speed-dating event itself might have inspired individuals not to act on their preferences but rather to simply pursue the best of the available options. Individual preferences might exert more of an influence in an open-field situation in which participants are not guaranteed a face-to-face interaction with all the desirable individuals present. Nor does the a priori theories account suggest that stated mate preferences are not worthy of empirical study. Quite the contrary, the present results highlight new research possibilities that will facilitate a better understanding of (a) when and how romantic-partner ideals impact partner selection and (b) how those ideals come to be sex differentiated in the first place. Below, we explicate some of these possibilities and highlight what the present work does and does not say about the processes underlying romantic-partner selection.

# Alternative Explanations, Limitations, and Future Directions

Comparison with previous literature. Although on the surface it appears anomalous that these data revealed no evidence of sex differences in the importance of physical attractiveness and earning prospects, the results are actually quite consistent with previous findings. As reported in the introduction section, other studies have found that physical attractiveness is a similarly strong determinant of men's and women's desirability in speed-dating (Kurzban & Weeden, 2005) and regular dating (Feingold, 1990) contexts. Kurzban and Weeden (2005) and Fisman et al. (2006) did not find a significant sex difference in the (weak) effect of income (or hometown income) on speed-daters' desirability; we, too, found weak effects for this variable and no significant sex difference. Iyengar et al. (2005) also reported small correlations between speed-daters' stated preferences and their "yessing" Bs, very similar to those reported here. In an article that specifically explored sex differences in a speed-dating context, Fisman et al. (2006) reported that men were more likely than women to say "yes" to a speed-dating partner they found to be physically attractive. In fact, our data showed this same sex difference (see Table 2, third row, first vs. second columns), but we would hesitate to conclude that this sex difference alone demonstrates that physical attractiveness is more important to men. It does suggest that men may be more eager than women to obtain the contact information of a physically attractive other, but as illustrated by our range of dependent variables, exchanging contact information is merely one step on the road to relationship initiation. The fact that this particular sex difference reverses at other points in the process (e.g., feeling chemistry, date enjoyment) recommends employing a range of dependent variables as investigators to further unravel how partner characteristics impact the process of selecting a romantic partner. Last, although we found no evidence that participants preferred similarity on these particular characteristics, other researchers have in fact had similar difficulty uncovering similarity effects (especially on physical attractiveness) in live dating contexts (Walster et al., 1966, cf. Berscheid, Dion, Walster, & Walster, 1971).

Moreover, we are not the first to recommend examining whether participants' stated mate preferences predict their interest in real-life romantic partners. The sex difference in the preferred age of one's mate has enjoyed such validation: For example, Buss (1989)

reported substantial correlations between national averages of men's and women's preferences for a younger/older mate and national statistics on age difference at marriage (see also Kenrick & Keefe, 1992). At this time, it is unclear why preferences for characteristics such as physical attractiveness or earning prospects in a mate operate differently in live romantic contexts compared with age preferences. Future reports that directly compare the functional role of preferences for romantic partners' characteristics and for romantic partners' age (perhaps at different points in women's ovulatory cycles; e.g., Haselton & Miller, 2006) are sure to reveal fascinating insights.

Sample considerations. The participants in this sample were all undergraduate students at a medium-sized private university in the midwestern United States. In addition, all participants were willing to go speed-dating, an activity that probably does not appeal to everyone (cf. Eastwick & Finkel, in press-b; Finkel et al., 2007). It would be a tremendous stretch from the current data to suggest that physical attractiveness or earning prospects are never associated with sex-differentiated romantic interest in actual dating partners. Our sample may have been especially egalitarian; sex differences might have emerged had our sample been composed of participants with more traditional values or perhaps socialites actively striving to date individuals who closely approximate the cosmopolitan ideal. However, the most important threat to the generalizability of the present sample was successfully dodged: Traditional sex differences did emerge on the ideal partner and speed-date stated preferences. This sample may have been unusual in various ways, but it was not unusual in this key respect. In fact, because these are bright, motivated college students who probably enjoy introspecting about their romantic lives, it is reasonable to suggest that the individual-differences hypothesis (H3) was probably especially likely to receive support in this sample. The fact that these students seemed to have little introspective access to their own romantic-partner preferences does not bode well for less psychologically curious individuals. And although it may be true that college students are less likely than adults to have figured out what they want in a romantic partner, this work was intended to address previous studies on sex differences, the better part of which employed college student samples. Nevertheless, firm conclusions await replication across diverse samples.

One aspect of this sample leaves open a strong form of a hypothesis originally advanced by Li, Bailey, Kenrick, and Linsenmeier (2002): It may be that the characteristics that are considered necessities (as opposed to luxuries) in a mate are especially sex differentiated. For example, if women consider earning prospects to be a necessity in a mate, they may be especially unwilling (compared with men) to consider a potential partner who falls below some acceptable threshold on this trait. Because all of the men in this sample were attending a respectable university, it is possible that all the men exceeded this threshold. Thus, the present data show that men and women do not differ in their earning-prospects preference once this threshold is met but cannot establish whether there are sex differences in the threshold itself. This necessities-versus-luxuries interpretation, however, is unlikely to

<sup>&</sup>lt;sup>9</sup> Of course, the write-in targets came from an open field of eligible partners, and we did not find evidence for sex differences among those data (i.e., H2 was unsupported). Nevertheless, we could only directly test H3 using the in vivo preferences calculated at the speed-dating event.

apply to physical attractiveness, as it would be difficult to argue that all of our participants were above some minimal standard on this dimension.

Mate selection versus mate retention. An emerging body of research has recently demonstrated that romantic-partner ideals are important within established romantic relationships (Fletcher & Simpson, 2000). For example, romantic partners who idealize one another are less likely to break up (Murray, Holmes, & Griffin, 1996), and participants report greater satisfaction with their present relationship to the extent that their partner matches their ideals (Fletcher et al., 1999). Although the present report casts some doubt on the notion that mate preferences serve the function of mate selection, this extant research on ideals suggests that mate preferences may instead serve the function of mate retention. Although this selection/retention distinction is surely not a strict dichotomy, it allows for the possibility that at moments of deliberative choice during the course of one's relationship (e.g., whether to marry one's partner), an individual might compare his or her partner to a set of ideal preferences and decide whether or not the relationship is worth continuing (Fletcher & Simpson, 2000; Gagné & Lydon, 2004). It is certainly plausible that traditional measures of stated mate preferences (e.g., Hill, 1945) might predict mate retention—this may indeed be how such preferences play a functional role.

Two pieces of evidence will be critical to confirm this materetention hypothesis. First, the mate-retention account suggests that sex differences should emerge in how the characteristics physically attractive and earning prospects are associated with relationship dissolution. We know of no data indicating that (a) men are more likely than women to end a relationship with a partner who is judged unattractive or (b) women are more likely than men to end a relationship with a partner who is judged to have poor earning prospects, but these hypotheses are certainly reasonable and testable. Second, for understandable reasons, studies that have examined the role of partner ideals in established romantic relationships typically assess participants' ideals after they are already in a relationship. Although it would certainly be difficult to assess ideals before participants meet a long-term romantic partner, such a procedure would avoid the problem of participants' ideals becoming "contaminated" by the characteristics of a current partner. In fact, one recent study indeed found that participants changed their ideals such that they placed more importance on the positive characteristics of their current romantic partner, even after dating for only a few months (Fletcher, Simpson, & Thomas, 2000). Research that explores whether partner ideals (a) predict sex differences in relationship dissolution and (b) persist before, during, and after the initiation of a relationship will be critical for the argument that mate preferences serve the function of mate retention.

Accuracy and awareness. We cannot establish definitively that participants are wholly unaware of the qualities that initially appeal to them in a romantic partner. The strongest evidence for such a claim in the present data set comes from the speed-date preferences, which required participants to report what qualities would appeal to them on a 4-min date. Even this focused set of items failed to predict participants' judgments and behavior reliably (see Tables 4, 5, and 6). (These results also suggest that the problem of attitude compatibility, Ajzen, 2005, does not explain why stated mate preferences failed to translate into sex differen-

tiated romantic interest.) On the other hand, our participants were likely aware that characteristics such as physical attractiveness have a positive (as opposed to negative) impact on their liking for someone. A distinction raised by Wilson and Gilbert (2003) in their review of the affective-forecasting literature is perhaps relevant: People are generally good at predicting the *valence* of their emotions but make interesting and systematic errors when predicting the *intensity* of their emotions. Had we assessed unappealing characteristics in this study, our participants' predictions might have been accurate regarding valence (I like reliability and dislike laziness) but inaccurate regarding intensity (I like reliability more than I like physical attractiveness). To be sure, this conjecture will require additional research.

#### Conclusions and Future Directions

What role do mate preferences play in the process of early romantic-relationship development? The implicit and consensual answer has until now been simple: Preferences guide behavior by directing men and women to select and pursue whatever potential romantic partner most closely approximates their typically sex-differentiated ideals. Support for this account had been demonstrated in paradigms in which participants were provided with written or visual stimuli (e.g., personal ads, photos), but support was less robust once participants interacted with flesh-and-blood potential romantic partners. In the present study, we took a comprehensive snapshot of participants' romantic lives in an effort to improve understanding of how exactly people go about the process of romantic-partner selection. Our efforts revealed no discernable functional role for mate preferences in determining whom participants desired and pursued for a romantic relationship.

We have suggested that participants' stated mate preferences may reflect their a priori theories about the characteristics of a potential romantic partner that will inspire their interest—in other words, people do not truly know what they desire in a romantic partner. However, there are two related interpretations of the current data that are decidedly less extreme: Participants' stated mate preferences may have validity (e.g., they predict mate retention), but participants either (a) do not compare a potential romantic partner with an ideal until after a relationship has begun or (b) do attempt such a comparison but it is flawed in some respect. We hope that these possibilities will inspire future research and shed new light on the processes underlying romantic-partner selection.

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