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The Role of Active Assortment in Spousal Similarity

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Abstract

Previous research has established the existence of active assortment, that is, a preference for similarity in a potential mate. Few studies, however, have directly related mate preferences to dyadic similarity by examining them in the same participants. We collected both similarity and mate preference data in two studies: undergraduate students ($N = 519$) and newlyweds ($N = 335$). In both studies, women placed a higher value on desirable personality characteristics (e.g., higher Conscientiousness and Agreeableness, lower Neuroticism) than did men. Nevertheless, our data also provided strong evidence of consensual mate preferences: Men and women both desired partners who were agreeable, conscientious, emotionally stable, intelligent, and physically attractive; furthermore, participants desired partners who were better (e.g., more agreeable and attractive) than they were. In contrast, attitudinal variables such as religiousness and political orientation displayed much weaker consensus but showed significant dyadic similarity in both samples; similarity coefficients for personality tended to be positive, but lower. Finally, analyses revealed a direct link between actual and desired similarity: Couples displayed the strongest similarity on those variables for which participants expressed the strongest preference for similarity. Our findings strongly suggest that active assortment is partly responsible for dyadic similarity.

Many studies have examined similarity (i.e., "Do birds of a feather flock together"?) versus complementarity (i.e., "Do opposites attract"?) in spousal characteristics. This research addresses the basic issue of *assortative mating*, which can be defined as the nonrandom coupling of individuals based on their resemblance to one another on one or more characteristics (Buss, 1984; Watson et al., 2004). Similarity (or *positive assortment*) can be established through significant positive correlations between a husband's score and a wife's score on the same characteristic (e.g., between a wife's Openness and her husband's Openness); conversely, complementarity (or *negative assortment*) is demonstrated when spousal scores are negatively correlated.

Prior Evidence of Spousal Similarity

Overview

Researchers have examined similarity versus complementarity on a wide range of variables, including attitudes, abilities, personality traits, physical characteristics, values, and psychopathology. Overall, the accumulated evidence overwhelmingly supports the existence of positive assortment, with very little evidence of complementarity (e.g., McCrae et al., 2008; Rammstedt & Schupp, 2008; Watson et al., 2004).

Attitudes

However, some variables consistently yield stronger similarity correlations than others. For example, wives and husbands generally are quite similar on measures of political and religious attitudes. Several older studies obtained spousal correlations ranging from .42 to .74 on indicators of political conservatism, radicalism, religiosity, and church attendance (D'Onofrio, Eaves, Murrelle, Maes, & Spilka, 1999; Feng & Baker, 1994; McCrae, 1996; Nagoshi, Johnson, & Honbo, 1992). More recently, in a large newlywed sample ($N = 276$), Watson et al. (2004) found strong spousal similarity on multiitem scales assessing religiousness ($r = .75$) and political conservatism ($r = .63$). Similarly, Humbad, Donnellan, Iacono, McGue, and Burt (2010) obtained a similarity correlation of .49 on traditionalism. Finally, Kandler, Bleidorn, and Reimann (2012) presented evidence of moderate spousal similarity on left versus right political orientation.

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Abilities

Spouses show more moderate positive assortment on general intelligence and other cognitive abilities. In a meta-analysis of the early literature, Bouchard and McGue (1981) reported an overall similarity correlation of .33 for intelligence across 16 studies. Subsequent analyses also have tended to find evidence of similarity on ability measures, although the individual correlations have ranged widely from slightly negative to approximately .50 (e.g., Buss, 1984; Nagoshi et al., 1992; Tambs, Sundet, & Berg, 1993; Watson et al., 2004). To some extent, these inconsistent results may be attributable to the specific abilities that are assessed: Findings suggest that positive assortment may be particularly strong for verbal ability and somewhat weaker for perceptual speed and spatial ability (Mascie-Taylor, 1989; Watkins & Meredith, 1981; Watson et al., 2004).

Personality Traits

Personality traits have yielded similarity correlations that tend to be positive, but generally they are only low to moderate in magnitude, rarely exceeding .35 (Botwin, Buss, & Shackelford, 1997; Buss, 1984; Chen, Luo, Yue, Xu, & Zhaoyang, 2009; Feng & Baker, 1994; Lykken & Tellegen, 1993; Mascie-Taylor, 1989; Nagoshi et al., 1992; Watson, Hubbard, & Wiese, 2000). In their newlywed sample, for example, Watson et al. (2004) obtained similarity correlations ranging from only −.06 (Extraversion) to .32 (Openness) on the Big Five personality traits. In a very large sample of German couples ($N = 6{,}157$), Rammstedt and Schupp (2008) found moderate spousal similarity on Openness ($r = .33$), Conscientiousness ($r = .31$), and Agreeableness (.26), but weaker assortment on Neuroticism ($r = .16$) and Extraversion ($r = .11$). Finally, in a cross-cultural analysis across four countries, McCrae et al. (2008) obtained weak evidence of assortment at the general domain level, but stronger similarity for specific traits; facets of Openness and Agreeableness displayed the strongest spousal similarity, with a few coefficients even exceeding .40.

Explanations for Spousal Similarity

Convergence

Although positive assortment is well established, the mechanisms underlying spousal similarity are less clear. There are at least four possible explanations for observed similarities between wives and husbands. First, similarity may reflect *convergence*, that is, the tendency for spouses to become more alike over time. Although there are some data establishing significant convergence on personality traits and emotional characteristics (e.g., Gonzaga, Carter, & Buckwalter, 2010; Rammstedt & Schupp, 2008), the overall evidence is relatively weak and inconsistent (Humbad et al., 2010; McCrae et al., 2008; Watson et al., 2004). Consequently, convergence cannot completely account for observed similarities; indeed, Gonzaga et al. (2010) reported that spouses already displayed significant similarity even before they had met.

Social Homogamy

The other three explanations all are based on the assumption that partners already are at least somewhat similar when they first meet. The second explanation is that spousal similarity reflects passive, indirect influences due to *social homogamy*. These indirect influences reflect a variety of effects due to social background, socioeconomic status, and the social environment (Botwin et al., 1997; Eaves, Fulker, & Heath, 1989; Nagoshi & Johnson, 1994; Reynolds, Baker, & Pederson, 2000; Tambs et al., 1993; Watson et al., 2004). One particularly important source of indirect effects is *propinquity*, that is, the simple fact that people may be more likely to meet—and spend time with—those who resemble them on certain characteristics, such as age and intelligence. Propinquity effects embody the classic observation that "mating requires meeting." Significant social homogamy effects have been established for a number of variables, including education, intelligence, and political beliefs (e.g., Nagoshi & Johnson, 1994; Nagoshi, Johnson, & Ahern, 1987; Reynolds et al., 2000; Tambs et al., 1993); to date, however, there is no evidence that they play an important role in producing observed similarities in personality.

Market Forces

Third, similarity correlations may reflect what relationship theorists refer to as *market forces* (Buss & Barnes, 1986; Buss & Shackelford, 2008; Furnham, 2009; McCrae et al., 2008; Wood & Brumbaugh, 2009). Market forces should be particularly powerful when there are strong consensual preferences for certain mate characteristics. When consensus is strong, individuals who possess high levels of the desired characteristic are dealing from a position of strength in the romantic marketplace and are free to choose others who possess similar levels of that variable. For example, as we discuss in greater detail subsequently, Agreeableness-related traits are highly desired in potential long-term partners; consequently, as Wood and Brumbaugh (2009) put it, "Disagreeable individuals will be expected to attract fewer partners, forcing them to settle for less desirable mates (in this case, other disagreeable individuals)" (p. 1226).[1]

Active Assortment

Finally, similarity correlations may be due to *active assortment*. Active assortment represents direct effects due to differential mating preferences; that is, active assortment is

established when it can be shown that people prefer to marry those who resemble them on a particular characteristic. The current studies were explicitly designed to test the viability of active assortment as an explanation for dyadic similarity. We review the evidence regarding mate preferences in the following section; as we will see, the available data do suggest a potentially important role for active assortment in spousal similarity.

Evidence for Mate Preferences

Sex Differences

The extensive literature on mate preferences yields three basic types of evidence. First, studies based on evolutionary theory have emphasized the fact that men and women show clear, consistent differences in their mate preferences. Specifically, men place a somewhat higher value on youth, physical attractiveness, and other potential cues signifying fertility, whereas women assign greater importance to social status, industriousness, earning potential, and other variables related to resource acquisition (Buss, 1989; Buss & Barnes, 1986; Buss & Shackelford, 2008; Chang, Wang, Shackelford, & Buss, 2011; Furnham, 2009; Li, Valentine, & Patel, 2011). These differences are highly robust and have been found in a wide range of cultures (Buss, 1989; Chang et al., 2011; Li et al., 2011).

Consensual Preferences

Despite these important sex differences, there also is clear evidence that women and men both prize certain qualities. For instance, Buss and Barnes (1986) had male and female participants rank the desirability of 13 characteristics in a potential mate. Women and men both ranked *kind and understanding*, *exciting personality*, and *intelligent* as the three most desirable characteristics; overall, the correlation between the male and female rankings was .93. Similarly, Buss et al. (1990) reported a Spearman rank-order correlation of .87 between female and male mate preference ratings across 37 cultures. Finally, Todosijević, Ljubinković, and Arančić (2003) obtained mate preference ratings on 60 variables. In both men and women, the three most highly prized characteristics were *sincerity*, *faithfulness*, and *tenderness*; both sexes also expressed strong preferences for traits such as *reliability*, *communication*, *passion*, and *carefulness*. Thus, both sexes value characteristics such as Agreeableness, Conscientiousness, emotional stability, and intelligence (see also McCrae et al., 2008; Stone, Shackelford, & Buss, 2012). In contrast, Buss and Barnes (1986) and Chang et al. (2011) each reported that women and men both ranked *religious* as the least desirable characteristic in a romantic partner; we return to this finding subsequently.

Active Assortment

Finally, people prefer to marry those who resemble them, at least on certain characteristics (Buss, 1987; Figueredo, Sefcek, & Jones, 2006; Furnham, 2009). For example, Figueredo et al. (2006) examined self-ratings and ideal romantic partner ratings on the traits comprising the Five-Factor Model of personality. They obtained the strongest evidence of *desired similarity* (i.e., positive correlations between self-ratings and ideal partner ratings on the same trait) on Openness, with correlations of .81 and .54 in Studies 1 and 2, respectively; desired similarity correlations for the other traits were lower but still significant and positive, ranging from .24 to .73. In addition, Figueredo et al. (2006) reported analyses comparing mean self-ratings and ideal partner ratings on these traits. In both studies, participants desired a romantic partner who was more agreeable, more conscientious, more extraverted, and less neurotic than they were (there were no differences on Openness in either study). Overall, they concluded that their results demonstrated evidence of *aspirational assortative mating*—that is, people ideally prefer partners with trait characteristics that are similar to—but better than—those that they themselves possess.

Although these data clearly demonstrate the existence of active assortment, they are limited in one important way, in that very few studies have directly related mate preferences to actual spousal similarity; put differently, we currently lack evidence directly linking mate preferences and spousal similarity on the same variables and in the same participants. One notable exception is Botwin et al. (1997), who examined both desired similarity and actual similarity on the Big Five traits in 59 dating couples and 107 newlywed couples. Replicating the results of other studies, they reported moderate to strong desired similarity correlations (coefficients in the self-ratings ranged from .20 to .63) but obtained little evidence of actual dyadic similarity in personality (only one of 10 similarity correlations was significant in the self-ratings). Thus, their data do little to clarify how expressed preferences may be responsible for the significant similarity that has been reported in other studies.

More generally, based on the current evidence, it is difficult to determine the extent to which mate preferences are related to—and can account for—actual similarities in romantic couples. The basic goal of the current studies was to fill this gap by examining both similarity and mate preferences in young adult and married couple samples. Specifically, we explicated the role of active assortment in dyadic similarity by examining them together in the same participants.

The Current Research

We examined a wide range of individual differences. The assessed variables included measures of personality (e.g., the Big Five), attitudes (e.g., religiosity, patriotism), physical attributes (e.g., physical attractiveness), and ability (e.g., rated intelligence) and were selected to tap a broad range of similarity correlations and mate preferences. We report results on two samples: Study 1 presents findings from a large sample of young adults, which includes a subsample of currently dating

couples; Study 2 reports data on newlywed couples. This two-sample design allows us to replicate our key findings across participants at different stages of romantic relationships.

We made four predictions related to mate preferences. First, consistent with previous research (Buss, 1989; Chang et al., 2011; Li et al., 2011), we expected to find significant sex differences, with men expressing a stronger preference for physical attractiveness, and women assigning greater weight to Conscientiousness-related characteristics (e.g., reliable, hardworking) that are linked to earning potential and resource acquisition. Despite these differences, however, our second hypothesis was that men and women would show largely similar preferences: Both sexes should desire mates with consensually valued characteristics such as Agreeableness, Conscientiousness, emotional stability, and intelligence (Buss et al., 1990; Todosijević et al., 2003). Third, based on the findings of Buss and Barnes (1986) and Chang et al. (2011), we expected to find less consensus—and, consequently, lower overall preference scores—on attitudinal variables such as religiosity and political orientation; rather than being consensually valued, preferences for these variables should be tightly linked to the participant's own level of the dimension (e.g., liberals should be attracted to other liberals, whereas conservatives should prefer other conservatives). Fourth, following Figueredo et al. (2006), we expected to find evidence of aspirational assortative mating—that is, people ideally should prefer partners with trait characteristics that are similar to, but better than, those that they themselves possess (e.g., higher Agreeableness and Conscientiousness, lower Neuroticism).

We had two general hypotheses related to the similarity between romantic partners. First, we expected to find moderate to strong positive assortment on attitudinal variables such as religiosity and liberalism-conservatism; based on previous evidence (see Watson et al., 2004), these types of characteristics should show the strongest overall levels of similarity in romantic couples. Second, we predicted that personality traits would display weaker levels of assortment, with correlations that are largely positive but only low to moderate in magnitude.

Finally, one unique aspect of our data is that we are able to link *actual similarity correlations* (e.g., between a wife's self-rated religiosity and a husband's self-rated religiosity) directly to *desired similarity correlations* (e.g., between a wife's self-rated religiosity and her expressed preference for religiosity in an ideal romantic partner) on the same variables. Although this link has not been examined in previous research, we expected to find a significant positive association between these two sets of coefficients. More specifically, we expected attitudinal variables to yield stronger (a) actual similarity correlations and (b) desired similarity correlations than personality characteristics. Put differently, we hypothesized that the observed similarity between romantic partners would be significantly associated with expressed preferences for similarity. This, then, would provide clear support for the role of active assortment in dyadic similarity.

STUDY 1

Method

Participants and Procedure. The participants ($N = 519$) were young adults who were recruited in two different ways. The first subsample consisted of 388 undergraduate students (131 men, 256 women, 1 unspecified) enrolled in an introductory psychology course at the University of Iowa. They completed the study in partial fulfillment of a course research exposure requirement.

The second subsample consisted of 69 currently dating couples; to be eligible for the study, participants had to be in a current romantic relationship that had begun within the last six months. Participants were recruited through announcements in various psychology courses at the University of Iowa, through an advertisement printed in the *Daily Iowan* newspaper, and through posters displayed around the Iowa City/Coralville area. Students received extra course credit for their participation; nonstudents were paid for completing the study. We report results here on 131 participants (66 men, 65 women) with complete self-report and mate preference data; this represents 62 couples and seven single individuals. Their mean age was 22.0 years ($SD = 3.3$ years).

All participants came into our laboratory and completed the study in small-group sessions. The dating couples came in together, but were physically separated from one another to ensure that their responses were made independently.

Measures. Participants rated themselves and also characterized their ideal romantic partner on three different measures. First, they completed the full 30-item version of the Descriptive Choices Questionnaire (DCQ; see Beer & Watson, 2008). The DCQ was designed to assess a broad range of individual differences variables (including attitudes, physical attributes, ability, and personality characteristics) that have been examined in previous studies of spousal similarity and mate preferences. Each item consists of two adjectives representing opposing poles of the dimension (e.g., "conservative (A) vs. liberal (B)"; "uncreative (A) vs. creative (B)"; the full set of items is provided in Table 1). The self-ratings began with the common stem "I would describe myself as . . ."; the mate preference ratings used "My ideal romantic partner is . . ." as the initial stem. For both sets of ratings, participants responded to each item on a 7-point scale (1 = *completely like A*, 4 = *equally like A and B*, 7 = *completely like B*).

Second, participants completed the Big Five Inventory (BFI; John & Srivastava, 1999). The BFI contains eight-item scales assessing Neuroticism and Extraversion, a 10-item Openness scale, and nine-item measures of Agreeableness and Conscientiousness. The self-ratings used the stem "I see myself as someone who . . ."; the mate preference ratings used the modified stem "My ideal partner is someone who . . .". All ratings were made on a 5-point Likert scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). Coefficient alphas in the self-ratings ranged from .77 (Agreeableness) to .88 (Extra-

version), with a median value of .81; alphas in the ideal partner ratings ranged from .73 (Extraversion) to .84 (Openness), with a median value of .78.

Third, participants were assessed using the trait version of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS contains two 10-item scales consisting of adjectives that describe emotional states relevant to either general positive affect (e.g., *active*, *excited*, *interested*, *alert*) or negative affect (e.g., *nervous*, *upset*, *irritable*, *guilty*). In the self-rating version, participants were asked to rate the "extent to which you generally feel or act this way" using a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). The mate preference version was the same, except that participants were asked to describe "to what extent you imagine your ideal partner would generally feel or act this way." Coefficient alphas for the Negative Affect scale were .83 and .85 for the self-ratings and ideal partner ratings, respectively. Alphas for the Positive Affect scale were .83 and .79 for the self-ratings and ideal partner ratings, respectively.

Results and Discussion

Overall Mate Preferences. Table 1 presents mean ideal partner ratings for all Study 1 variables, both in the overall sample and separately by sex. The values are presented as percentage of maximum possible (POMP) scores, an intuitive metric that facilitates comparisons across variables with different response formats (Cohen, Cohen, Aiken, & West, 1999; see also Srivastava, John, Gosling, & Potter, 2003). A POMP score is a linear transformation of any raw metric into a scale where 0 indicates the minimum possible score and 100 represents the maximum possible score. In the case of the DCQ, for instance, this involved first transforming the item responses to a 0–6 scale, such that 1 = 16.67%, 2 = 33.33%, 3 = 50.0%, and so on. In order to demonstrate the existence of consensual preferences more clearly, we rekeyed certain variables so that all POMP scores are reported in the preferred direction.[2] Consequently, the Table 1 values have an actual possible range of 50% (which reflects a complete lack of consensus; neither of the options was preferred over the other) to 100% (which represents complete consensus; one characteristic is universally preferred over the other).

Table 1 Study 1: Mean POMP Scores for Ideal Partner Ratings

Variable	Overall	Men	Women	Difference
DCQ Items				
Undependable vs. reliable	91.4	89.6	92.5	–2.9*
Unkind vs. kind	91.1	92.3	90.3	2.0
Skeptical vs. trusting	89.0	86.2	90.7	–4.5**
Unintelligent vs. intelligent	85.2	84.4	85.8	–1.4
Stingy vs. generous	83.1	79.8	85.1	–5.3**
Unintellectual vs. intellectual	82.3	80.6	83.4	–2.8
Shallow vs. deep	81.5	80.6	82.0	–1.4
Unattractive vs. physically attractive	80.3	82.3	79.0	3.3
Pessimistic vs. optimistic	78.6	77.3	79.5	–2.2
Unimaginative vs. imaginative	77.6	77.6	77.6	0.0
Unadventurous vs. adventurous	77.0	75.9	77.8	–1.9
Lazy vs. hardworking	76.8	72.0	79.6	–7.6**
Uncreative vs. creative	75.6	77.2	74.6	2.6
Non-athletic vs. athletic	75.0	70.5	77.7	–7.2**
Not curious vs. intellectually curious	74.9	76.1	74.2	1.9
Unsophisticated vs. sophisticated	73.0	73.2	72.8	0.4
Impractical vs. practical	69.2	66.2	71.0	–4.8**
Stubborn vs. flexible	68.3	68.2	68.5	–0.3
Not aware vs. politically aware	67.1	64.5	66.8	–4.3*
Serious vs. fun-loving	64.7	64.0	65.2	–1.2
Unrefined vs. refined	64.6	62.9	65.7	–2.8
Cautious vs. spontaneous	63.0	63.7	62.6	1.1
Not patriotic vs. patriotic	62.4	60.9	63.3	–2.4
Not spiritual vs. spiritually oriented	60.0	56.8	61.9	–5.1*
Non-religious vs. religious	59.3	54.7	62.3	–7.6**
Conservative vs. liberal	57.4	56.9	57.6	–0.7
Untraditional vs. traditional	56.1	54.6	57.0	–2.4
Not strict vs. morally strict	55.4	56.2	54.9	1.3
Thrifty vs. extravagant	54.8	54.2	55.2	–1.0
Prefers familiarity vs. novelty	50.3	53.6	48.3	5.3**
Trait Scales				
(Low) Negative Affectivity	90.9	88.8	92.1	–3.3**
Agreeableness	86.5	82.9	88.7	–5.8**
(Low) Neuroticism	81.4	79.2	82.7	–3.5**
Conscientiousness	78.0	75.2	79.7	–4.5**
Positive Affectivity	77.7	75.9	78.8	–2.9**
Extraversion	74.1	71.0	75.9	–4.9**
Openness	70.4	71.2	70.0	1.2

Note. $N = 519$ (Overall), 197 (Men), 321 (Women). POMP = percentage of maximum possible; DCQ = Descriptive Choices Questionnaire. For DCQ items, the pole listed second represents the keyed direction in the POMP score.
*$p < .05$. **$p < .01$.

Table 1 indicates that our predictions regarding sex differences were only partially confirmed. As expected, women expressed a stronger preference for Conscientiousness-related characteristics (e.g., DCQ ratings of reliable and hardworking; BFI Conscientiousness) than men. More generally—and consistent with the findings of Botwin et al. (1997)—women placed a somewhat higher value on desirable personality characteristics (i.e., higher Agreeableness, Extraversion, and positive emotionality; lower Neuroticism/negative emotionality) than did men; it is interesting to note, however, that there were no sex differences on BFI Openness, the Big Five domain that is most closely linked to attitudinal variables such as political orientation (McCrae, 1996). In addition, women expressed a stronger preference for mates who were religious (mean difference = 7.6%) and athletic (mean difference = 7.2%). Contrary to prediction, however, men did not rate physical attractiveness more highly, although the scores were in the predicted direction (mean difference = 3.3%).

Sex differences tended to be small in magnitude, however, and it is clear that women and men generally value the same types of characteristics in their romantic partners. Indeed, as is shown in Table 2, the mean POMP scores of women and men correlated .96 with each other across the 37 assessed variables. Thus, supporting our second prediction, we see clear evidence of consensual mate preferences: Participants of both sexes

Table 2 Studies 1–2: Correlations Among Key Variables

Variable	1	2	3	4	5
1. Mean POMP Scores (Men)	—	**.96****	–.80**	–.81**	–.71**
2. Mean POMP Scores (Women)	**.96****	—	–.71**	–.75**	–.62**
3. Desired Similarity *r*s (Men)	–.50**	–.41*	—	**.89****	.86**
4. Desired Similarity *r*s (Women)	–.64**	–.56**	**.80****	—	.80**
5. Actual Similarity *r*s	–.32	–.21	.38*	.44**	—

Note. Correlations based on Study 1 variables ($N = 37$) are shown below the diagonal; correlations based on Study 2 variables ($N = 17$) are displayed above the diagonal. All individual correlation coefficients were subjected to an *r*-to-*z* transformation before computing these vector correlations. Convergent correlations between men and women are boldfaced. POMP = percentage of maximum possible.
*$p < .05$. **$p < .01$.

valued romantic partners who were high in Agreeableness (e.g., DCQ ratings of kind, trusting, and generous; BFI Agreeableness), Conscientiousness (e.g., DCQ ratings of reliable; BFI Conscientiousness), physical attractiveness, and intelligence (e.g., DCQ ratings of intelligent and intellectual), and who were low in Neuroticism/negative emotionality (e.g., PANAS Negative Affect; BFI Neuroticism; DCQ ratings of optimistic); mean POMP scores in the overall sample were 78% or greater on all of these variables. In contrast—and consistent with our third hypothesis—the six core attitudinal variables (viz., patriotic, spiritually oriented, religious, liberal, traditional, and morally strict) displayed much weaker consensus in these data: In the overall sample, mean scores on these variables ranged from only 55.4% to 62.4%.

Self–Ideal Partner Comparisons. Our final prediction regarding mate preferences was that participants should prefer partners with trait characteristics that are similar to—but better than—those that they themselves possess. Table 3 provides a partial test of this hypothesis by presenting comparisons between the mean self-ratings (also expressed as POMP scores) and ideal partner ratings in the overall sample. Consistent with our prediction, the ideal romantic partner was characterized as being more agreeable (13.4% difference on the BFI), conscientious (12.7%), extraverted (12.6%), and euthymic (i.e., higher positive emotionality/lower negative emotionality; differences ranged from 13.2% on PANAS Negative Affect to 26.5% on BFI Neuroticism) than the participants themselves; a significant but much smaller difference was observed for BFI Openness (1.6%). Moreover, significant self–ideal partner differences were observed on 26 of the 30 (86.7%) DCQ items; the strongest effects were observed on ratings of flexible (18.1%), physically attractive (15.5%), optimistic (13.2%), hardworking (12.1%), politically aware (11.5%), trusting (11.3%), spontaneous (9.5%), and athletic (8.3%).

Table 3 Study 1: Mean Self-Rated Versus Ideal Romantic Partner POMP Scores

Variable	Ideal Partner *M*	Self *M*	Difference
DCQ Items			
Stubborn vs. flexible	68.3	50.2	18.1**
Unattractive vs. physically attractive	80.3	64.8	15.5**
Pessimistic vs. optimistic	78.6	65.4	13.2**
Lazy vs. hardworking	76.8	64.7	12.1**
Not aware vs. politically aware	67.1	55.6	11.5**
Skeptical vs. trusting	89.0	77.7	11.3**
Cautious vs. spontaneous	63.0	53.5	9.5**
Non-athletic vs. athletic	75.0	66.7	8.3**
Unadventurous vs. adventurous	77.0	69.9	7.2**
Unkind vs. kind	91.1	84.7	6.4**
Prefers familiarity vs. novelty	50.3	44.1	6.2**
Uncreative vs. creative	75.6	69.4	6.1**
Unimaginative vs. imaginative	77.6	71.5	6.1**
Stingy vs. generous	83.1	77.3	5.8**
Undependable vs. reliable	91.4	85.6	5.8**
Not spiritual vs. spiritually oriented	60.0	54.7	5.2**
Unintellectual vs. intellectual	82.3	77.2	5.1**
Unintelligent vs. intelligent	85.2	80.5	4.7**
Unsophisticated vs. sophisticated	73.0	68.3	4.7**
Unrefined vs. refined	64.6	60.4	4.2**
Not strict vs. morally strict	55.4	51.8	3.7**
Shallow vs. deep	81.5	77.9	3.7**
Impractical vs. practical	69.2	65.6	3.6**
Non-religious vs. religious	59.3	56.2	3.1**
Serious vs. fun-loving	64.7	62.2	2.5**
Thrifty vs. extravagant	54.8	52.5	2.3**
Not curious vs. intellectually curious	74.9	73.7	1.3
Conservative vs. liberal	57.4	56.9	0.5
Not patriotic vs. patriotic	62.4	61.9	0.5
Untraditional vs. traditional	56.1	56.5	–0.4
Trait Scales			
(Low) Neuroticism	81.4	54.9	26.5**
Agreeableness	86.5	73.1	13.4**
Positive Affectivity	77.7	64.4	13.3**
(Low) Negative Affectivity	90.9	77.7	13.2**
Conscientiousness	78.0	65.3	12.7**
Extraversion	74.1	61.4	12.6**
Openness	70.4	68.8	1.6**

Note. $N = 519$. POMP = percentage of maximum possible; DCQ = Descriptive Choices Questionnaire. For DCQ items, the pole listed second represents the keyed direction in the POMP score.
*$p < .05$. **$p < .01$.

In contrast, the attitudinal variables tended to show very weak effects; indeed, ratings for liberal (0.5%), patriotic (0.5%), and traditional (–0.4%) displayed the smallest overall differences and failed to reach significance. The effects for morally strict (3.7%) and religious (3.1%) also were quite small. These results suggest that in contrast to the pattern observed for personality and ability, participants simply prefer similarity on these attitudinal variables.

Actual Similarity. Table 4 (final column) presents actual similarity correlations (e.g., between a man's and a woman's

Table 4 Study 1: Desired Similarity Correlations and Actual Similarity Correlations

Variable	Desired Similarity			Actual Similarity
	Overall	Men	Women	
DCQ Items				
Non-religious vs. religious	.78	.78	.79	.37
Conservative vs. liberal	.77	.71*	.82*	.33
Not patriotic vs. patriotic	.68	.71	.67	.40
Untraditional vs. traditional	.61	.58	.63	.32
Not spiritual vs. spiritually oriented	.57	.60	.54	.13
Serious vs. fun-loving	.53	.53	.54	.06
Not strict vs. morally strict	.52	.52	.53	.07
Thrifty vs. extravagant	.52	.45	.57	–.04
Prefers familiarity vs. novelty	.51	.60*	.41*	–.03
Shallow vs. deep	.51	.56	.46	–.08
Not aware vs. politically aware	.46	.62*	.40*	.04
Unsophisticated vs. sophisticated	.46	.50	.45	–.20
Skeptical vs. trusting	.46	.54*	.36*	–.03
Lazy vs. hardworking	.44	.50	.37	.43
Unadventurous vs. adventurous	.43	.39	.48	.06
Unimaginative vs. imaginative	.43	.47	.40	–.26
Stingy vs. generous	.43	.45	.38	–.06
Impractical vs. practical	.42	.39	.44	–.02
Unrefined vs. refined	.42	.36	.46	.16
Non-athletic vs. athletic	.39	.41	.44	.14
Uncreative vs. creative	.39	.33	.44	–.09
Pessimistic vs. optimistic	.38	.39	.36	.06
Unintellectual vs. intellectual	.35	.43	.31	–.31
Cautious vs. spontaneous	.34	.30	.37	–.22
Not curious vs. intellectually curious	.34	.34	.33	.04
Undependable vs. reliable	.34	.39	.30	–.09
Stubborn vs. flexible	.32	.31	.33	.16
Unintelligent vs. intelligent	.27	.28	.26	.26
Unattractive vs. physically attractive	.23	.19	.27	.06
Unkind vs. kind	.15	.36*	.10*	.00
Trait Scales				
Openness	.68	.68	.67	.04
Agreeableness	.58	.62	.51	.15
Positive Affectivity	.50	.49	.51	.08
Conscientiousness	.46	.43	.45	.13
Extraversion	.46	.39	.47	–.11
Negative Affectivity	.44	.41	.48	.04
Neuroticism	.27	.31	.31	.26

Note. For desired similarity correlations, $N = 519$ (Overall), 197 (Men), 321 (Women). For actual similarity correlations, $N = 62$. DCQ = Descriptive Choices Questionnaire. Desired similarity correlations $\geq |.15|$ are significant at $p < .05$. Actual similarity correlations $\geq |.26|$ are significant at $p < .05$.
*Correlations differ from one another at $p < .05$.

self-rated religiousness) in the subsample of dating couples (accordingly, $n = 62$ for these analyses). These results partially supported our hypotheses. As expected, several of the attitudinal variables displayed significant dyadic similarity; these included ratings of patriotism ($r = .40$), religiousness ($r = .37$), conservatism-liberalism ($r = .33$), and traditionalism ($r = .32$). Thus, consistent with previous studies, participants had formed romantic relationships with partners who resembled them on these variables (e.g., liberals tended to be dating other liberals). In contrast, however, the coefficients for spirituality ($r = .13$) and moral strictness ($r = .07$) were weak and nonsignificant.

As expected, coefficients for personality characteristics tended to be positive, but lower. Significant positive assortment was observed on DCQ ratings of hardworking ($r = .43$) and intelligence ($r = .26$), as well as on BFI Neuroticism ($r = .26$). The couples also showed significant *negative* assortment on DCQ ratings of unintellectual-intellectual ($r = -.31$) and unimaginative-imaginative ($r = -.26$), findings that were unexpected and are difficult to explain.

Desired Similarity. To what extent does this observed similarity reflect active assortment—that is, expressed preferences for similarity in a partner? Table 4 addresses this question by reporting desired similarity correlations (e.g., between a participant's self-reported religiousness and his or her rating of religiosity in an ideal partner) in the overall sample, as well as separately for men and women. We begin by noting that women and men produced largely similar data. Only five variables had correlations that differed significantly across the sexes; moreover, as is shown in Table 2, the desired similarity coefficients for men and women correlated .80 with each other across the 37 assessed variables. Consequently, in discussing these results, we will emphasize correlations based on the overall sample.

Supporting our hypothesis, the attitudinal variables produced the strongest evidence of active assortment in these data. Across the 30 DCQ items, the five highest desired similarity coefficients all involved attitudinal variables: religiousness ($r = .78$), conservatism-liberalism ($r = .77$), patriotism ($r = .68$), traditionalism ($r = .61$), and spirituality ($r = .57$). In contrast, personality-related variables (e.g., hardworking, generous, spontaneous, reliable) tended to display substantially weaker correlations. Nevertheless, it is important to point out that all of the DCQ correlations in the overall sample were both (a) positive and (b) significant. Thus, consistent with previous evidence, our data broadly support the existence of positive assortment, with no evidence that complementarity is desired in a romantic partner.

The trait scales exhibited a largely similar pattern. Openness—which, as noted earlier, is the Big Five domain that is most closely linked to attitudinal variables such as political orientation—demonstrated the strongest evidence of desired similarity ($r = .68$) in these data. Again, however, all of the other desired similarity correlations were significant and positive.

Finally, a comparison of Tables 1 and 4 reveals a very interesting pattern: The variables showing the strongest consensus (as indicated by high POMP scores) tended to display the weakest desired similarity, and vice versa. We quantified this observation by correlating (a) the Table 1 POMP scores with

(b) the desired similarity correlations in Table 4 separately for men and women. As shown in Table 2, these correlations all were significant and negative, ranging from −.41 to −.64. This pattern makes good intuitive sense. It reflects the fact that on variables such as religiousness and political orientation, people clearly desire very similar partners, which weakens consensus in the POMP scores; conversely, strong consensual preferences (e.g., on variables such as Conscientiousness) will attenuate desired similarity correlations. Thus, in the context of mate preferences, we can divide variables in two idealized types: those on which everyone values the same characteristic (e.g., reliability, kindness, intelligence) versus those on which people desire similarity (e.g., religiousness, political orientation).

Desired Versus Actual Similarity. Next, we examined the crucial issue of whether mate preferences are directly related to observed dyadic similarity by correlating the (a) actual similarity correlations and (b) desired similarity correlations for each variable. As shown in Table 2, actual similarity correlations were significantly positively related to desired similarity coefficients in both men ($r = .38$) and women ($r = .44$) across the 37 assessed variables. In other words, we see the greatest dyadic similarity on those variables on which participants expressed the strongest preference for similarity. Of course, correlational analyses cannot establish causality; nevertheless, these results provide suggestive evidence that active assortment is a mechanism that is at least partly responsible for observed similarity.

Moderated Multiple Regression. Finally, we suggested earlier that the Study 1 variables could be divided into two basic types: those on which everyone values the same characteristic versus those on which people desire similarity. This argument further suggests that active assortment (assessed as the correlation between the desired similarity and actual similarity coefficients) is more important for variables on which there is less consensus (as indexed by lower POMP scores). We tested this possibility using moderated multiple regression. Specifically, we used the mean POMP scores in the ideal partner ratings (i.e., column 1 in Table 3) and the desired similarity correlations (i.e., column 1 in Table 4) to predict the actual similarity correlations (i.e., column 4 in Table 4) for each variable (thus, $N = 37$ for these analyses). We entered the two main effects in Step 1, followed by the centered interaction term in Step 2. The interaction term was significant ($t = -2.16$, $p < .05$), establishing the existence of a moderator. Consistent with our argument, these results indicated that the association between desired similarity and actual similarity was stronger for variables with lower POMP scores.[3]

Summary. The Study 1 results generally supported our predictions. As expected, women placed a higher value on desirable personality characteristics (e.g., higher Conscientiousness and Agreeableness, lower Neuroticism) than did men; however, the predicted difference on physical attractiveness failed to emerge. More generally, our data provided strong evidence of consensual mate preferences: Participants of both sexes desired partners who were agreeable, conscientious, emotionally stable, intelligent, and physically attractive. In contrast, attitudinal variables displayed much weaker consensus. Finally, participants desired partners who were better (e.g., more agreeable, more attractive, less neurotic) than they were.

Our similarity data were broadly consistent with previous research. As expected, attitudinal variables such as religiousness and political orientation showed significant similarity; coefficients for personality tended to be positive and lower. Subsequent analyses revealed a direct link between actual and desired similarity: Couples were most similar on those variables for which participants showed the strongest preference for similarity. Thus, our findings suggest that active assortment is at least partly responsible for dyadic similarity.

The Study 1 data are limited in two key ways. First, the couples were involved in relatively new dating relationships; consequently, these results might not generalize to longer-term romantic relationships. Second, the sample size for our actual similarity analyses ($n = 62$) was relatively small. Study 2 addresses these limitations by examining these same associations (on a reduced set of variables) in a larger sample of married couples.

STUDY 2

Method

Participants and Procedure. Newlywed couples were identified through court records of recent marriage licenses for Johnson County, Iowa, and were invited to participate through the mail. We obtained the names and addresses of approximately 2,094 newlywed couples from these records. Letters with postage-paid postcards were sent to these couples inviting their participation in a study of attitudes and behaviors relevant to marriage; 202 couples completed the study (9.6% participation). However, mate preference data were not collected from all participants. We report results here on 335 participants (166 men, 169 women) with complete self-report and mate preference data; this represents 148 couples and 39 single individuals.[4]

Participants ranged in age from 20 to 80 ($M = 32.0$ years). Most participants were Caucasian (80%). The largest percentage had a 4-year college degree (36.1%), followed by 1–3 years of college (25.7%), master's degree or comparable (12.2%), high school degree (11.3%), PhD or comparable (3.0%), postdoctorate education or certification (.3%), and grade school (.2%). Most participants were employed at least part-time (80.3%), and 7.8% reported being unemployed. The majority of participants reported a current religious affiliation of Christian (61.8%), followed by agnostic or atheist (13.4%), Jewish (1.2%), Islam (.3%), and "other" (14.6%; missing data resulted in percentages totaling less than 100).

Spouses reported knowing one another an average of 6.2 years (range = 0.75–42.25 years) and having dated an average of 4.1 years (range = .25–19 years). Spouses had been married nine months on average at the time of participation. Most (72.8%) participants had not been previously married. The majority (77.8%) of spouses had lived together prior to marrying. Most spouses did not have children (70.7%) at the time of assessment. Each participant received $55.00 for completing the study.

All participants came into our laboratory; they completed the study in small-group sessions that consisted of one to four couples at a time and lasted for approximately two hours. Participants completed several questionnaires about themselves, their spouses, and their ideal romantic partners; participated in an interactive task as a couple; and took part in a computer-rating task. Couples were seated together in a room for the questionnaire portions of the study but were physically separated from one another to ensure that responses were made independently.

Measures. Participants rated themselves and also characterized their ideal romantic partner on two measures. First, they were assessed on the same versions of the BFI that were described in Study 1. Coefficient alphas in the self-ratings ranged from .75 (Agreeableness) to .86 (Extraversion), with a median value of .83; alphas in the ideal partner ratings ranged from .72 (Extraversion) to .86 (Openness), with a median value of .81.

Second, participants completed self-ratings and ideal partner ratings on a reduced 12-item version of the DCQ (the retained items are presented in Table 5). To minimize participant burden, this abbreviated version of the instrument focused primarily on the non-personality variables (i.e., attitudes, physical attributes, intelligence) to reduce overlap with the BFI.

Table 5 Study 2: Mean POMP Scores for Ideal Partner Ratings

Variable	Overall	Men	Women	Difference
DCQ Items				
Unintelligent vs. intelligent	84.7	82.7	86.7	–4.0*
Unattractive vs. physically attractive	75.6	76.8	74.4	2.4
Stingy vs. generous	74.7	72.8	76.5	–3.7
Not spiritual vs. spiritually oriented	67.1	64.5	69.7	–5.3*
Not aware vs. politically aware	66.9	65.1	68.6	–3.6
Non-athletic vs. athletic	66.7	66.1	67.4	–1.3
Not strict vs. morally strict	60.7	59.7	61.7	–2.0
Non-religious vs. religious	59.7	56.8	62.4	–5.6
Not patriotic vs. patriotic	57.7	57.9	57.4	0.5
Extravagant vs. thrifty	55.3	56.8	53.8	3.0
Untraditional vs. traditional	54.6	56.2	53.1	3.2
Conservative vs. liberal	54.5	51.7	57.3	–5.6
BFI Scales				
Agreeableness	86.0	84.0	88.0	–4.0**
Conscientiousness	81.1	78.5	83.7	–5.2**
(Low) Neuroticism	80.5	78.3	82.6	–4.3**
Openness	71.7	71.6	71.8	–0.2
Extraversion	69.5	69.3	69.7	–0.4

Note. $N = 335$ (Overall), 166 (Men), 169 (Women). POMP = percentage of maximum possible; DCQ = Descriptive Choices Questionnaire; BFI = Big Five Inventory. For DCQ items, the pole listed second represents the keyed direction in the POMP score.
*$p < .05$. **$p < .01$.

Results and Discussion

Overall Mate Preferences. Table 5 presents mean ideal partner ratings for the Study 2 variables, both in the overall sample and separately by sex. Before considering specific aspects of these results, it is important to note that the overall pattern of mate preferences closely replicates the Study 1 data. We quantified this observation by correlating the mean male and female POMP scores from Study 1 (see Table 1) with the corresponding Study 2 values displayed in Table 5 (these analyses are based on the 17 variables common to the two studies). These correlations were .93 and .90 in men and women, respectively, establishing a very strong level of convergence across the two studies.[5]

Replicating the results of Study 1, our predictions regarding sex differences were only partially confirmed. Once again, women placed a somewhat higher value on desirable personality characteristics (i.e., higher Agreeableness and Conscientiousness; lower Neuroticism) than did men. No sex differences were observed on BFI Openness or Extraversion, however; thus, this effect was limited to markers of the Alpha superfactor in the Big Two model of personality (Markon, Krueger, & Watson, 2005). In addition, women expressed a stronger preference for mates who were spiritually oriented (mean difference = 5.3%) and intelligent (mean difference = 4.0%). As in Study 1, men did not rate physical attractiveness more highly, although the scores were in the predicted direction (mean difference = 2.4%).

Supporting our second prediction, we again see clear evidence of consensual mate preferences in these data. In fact, the mean POMP scores of women and men correlated .96 with each other across the 17 assessed variables (see Table 2). Replicating the results of Study 1, participants of both sexes valued romantic partners who were agreeable (overall mean POMP score = 86.0), intelligent (84.7), conscientious (81.1), physically attractive (75.6), and low in Neuroticism (80.5). In contrast—and consistent with our third hypothesis—attitudinal variables displayed much weaker consensus in these data: In the overall sample, mean scores for ratings of patriotic, religious, liberal, traditional, and morally strict ranged from only 54.5% to 60.7%; spirituality, however, was somewhat more valued, with an overall mean score of 67.1.

Self–Ideal Partner Comparisons. Table 6 presents comparisons between the mean self-ratings and ideal partner ratings in the overall sample. Supporting our prediction, the

Table 6 Study 2: Mean Self-Rated Versus Ideal Romantic Partner POMP Scores

Variable	Ideal Partner *M*	Self *M*	Difference
DCQ Items			
Unattractive vs. physically attractive	75.6	64.4	11.2**
Non-athletic vs. athletic	66.7	58.4	8.4**
Stingy vs. generous	74.7	68.8	5.9**
Not aware vs. politically aware	66.9	61.9	5.0**
Unintelligent vs. intelligent	84.7	81.1	3.6**
Not spiritual vs. spiritually oriented	67.1	65.5	1.6
Non-religious vs. religious	59.7	58.2	1.4
Conservative vs. liberal	54.5	54.4	0.0
Not strict vs. morally strict	60.7	61.7	−1.0
Untraditional vs. traditional	54.6	55.6	−1.0
Not patriotic vs. patriotic	57.7	59.3	−1.6
Extravagant vs. thrifty	55.3	59.0	−3.6**
BFI Scales			
(Low) Neuroticism	80.5	55.4	25.1**
Agreeableness	86.0	72.3	13.6**
Extraversion	69.5	59.2	10.4**
Conscientiousness	81.1	72.0	9.1**
Openness	71.7	67.4	4.2**

Note. $N = 335$. POMP = percentage of maximum possible; DCQ = Descriptive Choices Questionnaire; BFI = Big Five Inventory. For DCQ items, the pole listed second represents the keyed direction in the POMP score.
*$p < .05$. **$p < .01$.

Table 7 Study 2: Desired Similarity Correlations and Actual Similarity Correlations

Variable	Desired Similarity			Actual Similarity
	Overall	Men	Women	
DCQ Items				
Conservative vs. liberal	.82	.80	.84	.49
Not patriotic vs. patriotic	.78	.75	.81	.45
Non-religious vs. religious	.75	.69*	.79*	.44
Untraditional vs. traditional	.73	.71	.75	.25
Not strict vs. morally strict	.67	.67	.67	.10
Not spiritual vs. spiritually oriented	.56	.62	.48	.25
Not aware vs. politically aware	.55	.56	.58	.20
Extravagant vs. thrifty	.52	.49	.57	.00
Stingy vs. generous	.48	.46	.49	.10
Non-athletic vs. athletic	.46	.57	.42	.30
Unintelligent vs. intelligent	.36	.31	.42	.01
Unattractive vs. physically attractive	.18	.10	.26	.03
BFI Scales				
Openness	.66	.65	.67	.33
Agreeableness	.41	.37	.44	−.07
Conscientiousness	.39	.46*	.25*	.07
Extraversion	.34	.27	.40	.07
Neuroticism	.15	.11*	.33*	−.13

Note. For desired similarity correlations, $N = 335$ (Overall), 166 (Men), 169 (Women). For actual similarity correlations, $N = 148$. DCQ = Descriptive Choices Questionnaire; BFI = Big Five Inventory. Desired similarity correlations $\geq |.15|$ are significant at $p < .05$. Actual similarity correlations $\geq |.20|$ are significant at $p < .05$.
*Correlations differ from one another at $p < .05$.

ideal romantic partner again was characterized as being substantially less neurotic (25.1% difference) and as more agreeable (13.4%), extraverted (12.6%), and conscientious (9.1%) than the participants themselves; consistent with the Study 1 results, Openness showed a relatively small difference (4.2%) in these analyses. The strongest DCQ effects were on ratings of physically attractive (11.2%) and athletic (8.4%); significant but smaller differences were found for generous (5.9%), politically aware (5.0%), and intelligent (3.6%). Finally, participants actually preferred a mate who was slightly less thrifty (a −3.6% difference) than they were.

In contrast, all six attitudinal variables showed very weak and nonsignificant effects, with differences ranging from only 1.6% (spirituality) to −1.6% (patriotism). As in Study 1, these results indicate that participants simply prefer similarity on these attitudinal variables.

Actual Similarity. Table 7 (final column) presents actual similarity correlations in the 148 couples with complete data. It again is noteworthy that these coefficients display a similar pattern to that observed in Study 1. As before, we quantified this observation by correlating the dyadic similarity correlations from Studies 1 and 2 across the 17 common variables. This correlation was .48 ($p < .06$, two-tailed), establishing a moderate level of convergence.

Consistent with prediction, most of the attitudinal variables displayed significant dyadic similarity in Study 2: Particularly strong correlations were observed for conservatism-liberalism ($r = .49$), patriotism ($r = .45$), and religiousness ($r = .44$); traditionalism ($r = .25$) and spirituality ($r = .25$) produced weaker—but still significant—correlations. Moral strictness ($r = .10$), however, failed to show significant similarity between spouses.

As expected, coefficients for the remaining variables tended to be positive, but lower. The only other DCQ variables to exhibit significant spousal similarity were athleticism ($r = .30$) and political awareness ($r = .20$). Among the BFI scales, only Openness ($r = .33$) showed significant spousal similarity; all of the other coefficients were quite low, ranging from −.13 (Neuroticism) to .07 (Conscientiousness and Extraversion). Overall, therefore, the Study 2 data largely supported our hypotheses.

Desired Similarity. The desired similarity correlations (e.g., between a woman's self-reported thriftiness and her rating of thriftiness in an ideal partner) in Study 2 closely replicated the findings of Study 1 (see Table 7). In fact, the Study 2 coefficients had correlations of .82 (men) and .88 (women) with the corresponding values in Study 1, establishing a very strong level of convergence. Not surprisingly, therefore, women and men again produced largely similar data. Only three variables had correlations that differed significantly across the sexes; moreover, as shown in Table 2, the desired similarity coefficients for men and women correlated .89 with each other across the 17 assessed variables.

Supporting our hypothesis, the attitudinal variables clearly produced the strongest evidence of active assortment in these data. Indeed, in the overall sample, six variables had desired similarity correlations greater than .60; this included BFI Openness ($r = .66$) and five DCQ attitudinal variables (for conservatism-liberalism, $r = .82$; for patriotism, $r = .78$; for religiousness, $r = .75$; for traditionalism, $r = .73$; for moral strictness, $r = .67$). Spirituality ($r = .56$), political awareness ($r = .55$), and thriftiness ($r = .52$) also exhibited relatively strong evidence of active assortment. Coefficients for the remaining variables were lower (ranging from .15 to .48), but were positive and significant. Thus, consistent with previous evidence (including Study 1), our data broadly support the existence of positive assortment.

Finally, replicating the findings of Study 1, the variables showing the strongest consensus (as indicated by high POMP scores) tended to display the weakest evidence of desired similarity, and vice versa. The correlations between (a) the Table 5 POMP scores and (b) the desired similarity coefficients in Table 7 all were strongly negative, ranging from −.71 to −.81 (see Table 2). Thus, we again see evidence of two types of mate preferences: those variables on which everyone values the same characteristic (e.g., Agreeableness, Conscientiousness, emotional stability, intelligence) versus those on which people desire similarity (e.g., religiousness, political orientation).

Desired Versus Actual Similarity. As in Study 1, we correlated (a) the actual similarity correlations and (b) the desired similarity correlations for each variable. As shown in Table 2, spousal similarity correlations were strongly positively related to desired similarity coefficients in both men ($r = .86$) and women ($r = .80$) across the 17 assessed variables. Compared to the Study 1 results, these data indicate a much stronger link between mate preferences and similarity; the difference between the Study 2 and Study 1 correlations was significant for men ($z = 2.71$, $p < .01$), but only approached significance for women ($z = 1.84$, $p < .07$).[6] Thus, we see the greatest spousal similarity on those variables on which participants expressed the strongest preference for similarity. These results strongly suggest that active assortment is a mechanism that is at least partly responsible for observed similarity in spouses.

GENERAL DISCUSSION

Summary of Results

Mate Preferences. Our mate preference data yielded three key results. First, although previous studies have reported that women and men generally value similar qualities in romantic partners (e.g., Buss & Barnes, 1986; Buss et al., 1990; Todosijević et al., 2003), these findings have been overshadowed by the existence of theoretically meaningful sex differences that are highly robust across cultures (Buss, 1989; Chang et al., 2011; Li et al., 2011). Consistent with previous research (e.g., Botwin et al., 1997), we found that women placed a higher value on desirable personality characteristics than men; it is interesting to note, moreover, that the strongest, clearest differences emerged on markers of the Alpha superfactor in the Big Two model of personality (Markon et al., 2005); that is, women expressed a stronger preference for mates who were agreeable, conscientious, and non-neurotic. Nevertheless, our data also provided very strong evidence of consensual mate preferences; most notably, the mean ideal partner POMP scores of men and women correlated .96 with each other in both Study 1 and Study 2 (see Table 2). Thus, participants of both sexes desired partners who were agreeable, conscientious, emotionally stable, intelligent, and physically attractive.

Second, replicating the findings of Figueredo et al. (2006), our data demonstrate the existence of aspirational assortative mating: People ideally prefer partners with trait characteristics that are similar to—but better than—those that they themselves possess. In terms of the Five-Factor Model, the strongest effects were observed for Neuroticism in both studies: Participants expressed a preference for mates who were much less neurotic than they were (mean POMP differences = 26.5 and 25.1 in Studies 1 and 2, respectively). Moderate effects also were found for Agreeableness, Conscientiousness, and Extraversion, with mean differences ranging from 9.1 to 13.6 across the two samples. Among the Big Five, only Openness showed a small effect (1.6 in Study 1, 4.2 in Study 2; here, participants basically preferred mates who were similar to them).

Many of the DCQ items also showed significant self–ideal partner differences in these analyses. Participants expressed a desire for mates who were more flexible (a difference of 18.1 in Study 1), physically attractive (mean differences of 15.5 and 11.2 in Studies 1 and 2, respectively), and athletic (mean differences of 8.3 and 8.4, respectively) than they were. In contrast, they preferred mates who were only slightly more intelligent (mean differences of 4.7 and 3.6, respectively) than they rated themselves. Finally, similar to Openness, participants wanted mates who were very similar to them on the attitudinal variables. For instance, ratings of conservatism-liberalism yielded differences of only 0.5 and 0.0 in Studies 1 and 2, respectively; similarly, ratings of patriotism produced differences of only 0.5 and −1.6, respectively. Thus, our data extend those of Figueredo et al. (2006) by establishing the boundaries of this aspirational effect.

Third, the design of our studies allowed us to examine directly the association between consensual mate preferences and active assortment. Consequently, we were able to show that they are inversely related; that is, the variables showing the strongest consensual mate preferences (as indicated by high ideal partner POMP scores) tended to have the weakest desired similarity correlations, and vice versa. In Study 1, the correlations between the (a) ideal partner POMP scores and (b) desired similarity correlations ranged from −.41 to −.64; these associations were even stronger in Study 2, ranging from −.71 to −.81. Thus, in the context of mate preferences, we can divide variables in two basic types. The first type consists of variables on which virtually everyone values the same characteristic

(e.g., Conscientiousness, Agreeableness, intelligence, physical attractiveness); these variables tend to show very high POMP scores in the ideal partner ratings and relatively low desired similarity correlations. The second type includes variables on which people desire similarity (e.g., religiousness, political orientation, traditionalism, patriotism); these variables have high desired similarity correlations, but relatively low ideal partner POMP scores. As discussed earlier, this pattern makes good intuitive sense: Strong, consensual preferences can be expected to attenuate active assortment, whereas the existence of strong preferences for similarity will reduce consensus regarding ideal mates.

Mechanisms Underlying Dyadic Similarity. The basic goal of our studies was to explicate the role of active assortment in dyadic similarity by examining them together in the same participants. Our data strongly suggest that active assortment is at least partly responsible for observed similarity. In Study 1, we found that the actual similarity correlations were significantly positively related to desired similarity coefficients in both men ($r = .38$) and women ($r = .44$). In Study 2, the parallel values were .86 and .80, respectively, establishing a very strong link between actual and desired similarity. Thus, we see the greatest dyadic similarity on those variables on which participants displayed the strongest preference for similarity.

The role of active assortment was clearest in the assessed attitudinal variables. It is noteworthy that the same four variables—liberalism, religiosity, patriotism, and traditionalism—had the strongest desired similarity correlations in both Study 1 (*r*s ranged from .61 to .78) and Study 2 (*r*s ranged from .73 to .82). These same variables also produced significant actual similarity correlations in both Study 1 (*r*s ranged from .32 to .40) and Study 2 (*r*s ranged from .25 to .49). It therefore seems reasonable to suggest that similarity on these variables is due—at least in part—to the participants' desire for similarity.

We must emphasize, however, that our data cannot rule out other proposed mechanisms for similarity, such as social homogamy or market forces. For example, the significant similarity correlations on these attitudinal variables may be at least partly attributable to indirect effects related to propinquity; for instance, by frequently attending religious services, highly religious people may be more likely to meet—and spend time with—those who are similar to them in religiosity. Indeed, related to this, Nagoshi and Johnson (1994) reported evidence of a significant social homogamy effect on a measure of radicalism-conservatism.

We also obtained significant similarity correlations on other variables, and mechanisms other than active assortment are likely to be even more important in explaining them. For example, ratings of athleticism showed significant spousal similarity in Study 2 ($r = .30$), even though this variable yielded relatively weak desired similarity correlations in both Study 1 ($r = .39$) and Study 2 ($r = .46$). Spousal similarity on this variable could be due to propinquity (e.g., athletic men and women are more likely to meet by spending time at fitness centers), market forces (e.g., because athleticism is consensually desirable, nonathletic men are forced to settle for nonathletic women), or even convergence (e.g., an athletic spouse motivates his or her partner to become more physically fit). Further research is needed to separate out the influences of these various mechanisms.

LIMITATIONS AND FUTURE DIRECTIONS

Our studies have several strengths. Most notably, we examined both mate preferences and dyadic similarity on the same variables in two relatively large samples. Consequently, we were able to clarify the role of active assortment in similarity. Our data established that the greatest dyadic similarity is observed on those variables on which participants displayed the strongest preference for similarity. In addition, our design allowed us to establish a significant inverse association between consensual mate preferences and desired similarity.

Nevertheless, our findings are limited in three key ways. First, as already noted, our design does not allow us to rule out the operation of other proposed mechanisms for similarity. For instance, because both of our studies were cross-sectional, we were unable to conduct direct tests of convergence. In addition, there are data indicating that people in stable dating relationships adjust their ideal mate preferences over time to match the qualities they perceive in their romantic partner (Fletcher, Simpson, & Thomas, 2000; Murray, Holmes, & Griffin, 1996). Thus, given the nature of our design, we cannot rule out the possibility that perceived partner characteristics might have influenced the ideal partner ratings of our participants.

Second, our findings are limited to a single culture; indeed, all of our participants were living in the state of Iowa when they completed these studies. Although certain types of mate preferences have been shown to be highly robust across a wide range of cultures (see Buss, 1989; Chang et al., 2011; Li et al., 2011), it is possible that aspects of our results are idiosyncratic to this particular culture and would not replicate elsewhere (Chen et al., 2009). In this regard, the contemporary United States is a deeply polarized culture that reflects widely divergent—and, at times, clearly antagonistic—views related to religion, politics, morality, and the importance of traditional values. This may have the effect of magnifying the importance of active assortment and dyadic similarity on these types of attitudinal variables. Put differently, active assortment may play a weaker role on these types of variables in cultures that are more religiously and politically homogeneous. This is a very interesting issue for future research.

Third, to address the basic questions that motivated these studies, we needed to compute desired similarity correlations. It therefore was preferable to use the same response format in obtaining both self- and ideal partner ratings. With regard to

the latter, however, the approach we used has one potential disadvantage, namely, that it does not force raters to make hard choices by prioritizing those mate characteristics that are most important to them. Put differently, our methodology allowed participants to rate a wide range of characteristics (e.g., Agreeableness, Conscientiousness, intelligence, physical attractiveness) as highly desirable in an ideal partner. Consequently, in comparison to other methods such as rankings (e.g., Buss & Barnes, 1986; Chang et al., 2011) and budget allocation ratings (e.g., Li et al., 2011), our assessment strategy may have served to reduce the magnitude of sex differences, which would explain why we failed to find significant differences between men and women on the importance of physical attractiveness in a romantic partner. In particular, by forcing raters to prioritize, the budget allocation method (in which a fixed amount of "mate dollars" is allocated across all rated variables) appears to be quite sensitive to sex differences in mate preferences (Li et al., 2011). It will be informative for future studies to test the influence of format effects directly by assessing mate preferences using a number of different methodologies.

In conclusion, our studies have extended the existing evidence in this area by examining both active assortment and dyadic similarity on the same variables and in the same participants. Clearly, however, much work remains to be done. We hope that our studies stimulate further investigation into the important links between actual and desired similarity.

Notes

1. It should be noted, however, that disagreeableness is associated with certain characteristics—such as callousness, deceitfulness, and manipulativeness—that can facilitate an effective, exploitative short-term mating strategy, particularly in men (Clark & Watson, 2008; Jonason, Li, Webster, & Schmitt, 2009).

2. The one exception involved ratings of novelty seeking. As can be seen in Table 1, men showed a slight preference toward novelty (53.6), whereas the mean rating for women was tipped in the direction of familiarity (48.3). We keyed this variable in the direction of novelty, so that the mean rating was slightly greater than 50 in the overall sample.

3. We reran these analyses on the reduced set of variables ($n = 17$) in Study 2. There was no evidence of moderation in these analyses ($t = -0.10$, *ns*).

4. We obtained the same basic results when the analyses were restricted to the couples with complete data ($n = 296$).

5. One variable—extravagant versus thrifty—was keyed differently in the two studies. Specifically, the Study 1 participants showed a slight preference for extravagance in their romantic partners (see Table 1), whereas the older Study 2 participants leaned slightly in the direction of thriftiness in their mates (see Table 5). In computing these correlations, we used the Study 2 keying for both sets of scores.

6. Similar results were obtained when the Study 1 correlations were recomputed on the 17 variables common to both studies; the Study 2 correlation was higher than the Study 1 correlation in men ($r = .39$, $z = 2.07$, $p < .05$), but not in women ($r = .42$, $z = 1.50$, *ns*).

References

Beer, A., & Watson, D. (2008). Personality judgment at zero acquaintance: Agreement, assumed similarity, and implicit simplicity. *Journal of Personality Assessment*, **90**, 250–260.

Botwin, M. D., Buss, D. M., & Shackelford, T. K. (1997). Personality and mate preferences: Five factors in mate selection and marital satisfaction. *Journal of Personality*, **65**, 107–136.

Bouchard, T. J., Jr., & McGue, M. (1981). Familial studies of intelligence: A review. *Science*, **212**, 1055–1059.

Buss, D. M. (1984). Marital assortment for personality dispositions: Assessment with three different data sources. *Behavior Genetics*, **14**, 111–123.

Buss, D. M. (1987). Selection, evocation, and manipulation. *Journal of Personality and Social Psychology*, **53**, 1214–1221.

Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, **12**, 1–49.

Buss, D. M., Abbott, M., Angleitner, A., Asherian, A., Biaggio, A., Blanco-Villasenor, A., et al. (1990). International preferences in selecting mates: A study of 37 cultures. *Journal of Cross-Cultural Psychology*, **21**, 5–47.

Buss, D. M., & Barnes, M. (1986). Preferences in human mate selection. *Journal of Personality and Social Psychology*, **50**, 559–570.

Buss, D. M., & Shackelford, T. K. (2008). Attractive women want it all: Good genes, economic investment, parenting proclivities, and emotional commitment. *Evolutionary Psychology*, **6**, 134–146.

Chang, L., Wang, Y., Shackelford, T. K., & Buss, D. M. (2011). Chinese mate preferences: Cultural evolution and continuity across a quarter of a century. *Personality and Individual Differences*, **50**, 678–683.

Chen, H., Luo, S., Yue, G., Xu, D., & Zhaoyang, R. (2009). Do birds of a feather flock together in China? *Personal Relationships*, **16**, 167–186.

Clark, L. A., & Watson, D. (2008). Temperament: An organizing paradigm for trait psychology. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 265–286). New York: Guilford Press.

Cohen, P., Cohen, J., Aiken, L. S., & West, S. G. (1999). The problem of units and the circumstances for POMP. *Multivariate Behavioral Research*, **34**, 315–346.

D'Onofrio, B. M., Eaves, L. J., Murrelle, L., Maes, H. H., & Spilka, B. (1999). Understanding biological and social influences on religious affiliation, attitudes, and behaviors: A behavior genetic perspective. *Journal of Personality*, **67**, 953–984.

Eaves, L. J., Fulker, D. W., & Heath, A. C. (1989). The effects of social homogamy and cultural inheritance on the covariances of twins and their parents: A LISREL model. *Behavior Genetics*, **19**, 113–122.

Feng, D., & Baker, L. (1994). Spouse similarity in attitudes, personality, and psychological well-being. *Behavior Genetics*, **24**, 357–364.

Figueredo, A. J., Sefcek, J. A., & Jones, D. N. (2006). The ideal romantic partner personality. *Personality and Individual Differences*, **41**, 431–441.

Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000). Ideals, perceptions, and evaluations in early relationship development. *Journal of Personality and Social Psychology*, **79**, 933–940.

Furnham, A. (2009). Sex differences in mate selection preferences. *Personality and Individual Differences*, **47**, 262–267.

Gonzaga, G. C., Carter, S., & Buckwalter, J. G. (2010). Assortative mating, convergence, and satisfaction in married couples. *Personal Relationships*, **17**, 634–644.

Humbad, M. N., Donnellan, M. B., Iacono, W. G., McGue, M., & Burt, S. A. (2010). Is spousal similarity for personality a matter of convergence or selection? *Personality and Individual Differences*, **49**, 827–830.

John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102–138). New York: Guilford Press.

Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2009). The Dark Triad: Facilitating a short-term mating strategy in men. *European Journal of Personality*, **23**, 5–18.

Kandler, C., Bleidorn, W., & Riemann, R. (2012). Left or right? Sources of political orientation: The roles of genetic factors, cultural transmission, assortative mating, and personality. *Journal of Personality and Social Psychology*, **102**, 633–645.

Li, N. P., Valentine, K. A., & Patel, L. (2011). Mate preferences in the US and Singapore: A cross-cultural test of the mate preference priority model. *Personality and Individual Differences*, **50**, 291–294.

Lykken, D. T., & Tellegen, A. (1993). Is human mating adventitious or the result of lawful choice? A twin study of mate selection. *Journal of Personality and Social Psychology*, **65**, 56–68.

Markon, K. E., Krueger, R. F., & Watson, D. (2005). Delineating the structure of normal and abnormal personality: An integrative hierarchical approach. *Journal of Personality and Social Psychology*, **88**, 139–157.

Mascie-Taylor, C. G. (1989). Spouse similarity for IQ and personality and convergence. *Behavior Genetics*, **19**, 223–227.

McCrae, R. R. (1996). Social consequences of experiential openness. *Psychological Bulletin*, **120**, 323–337.

McCrae, R. R., Martin, T. A., Hrebícková, M., Urbánek, T., Boomsma, D. I., Willemsen, G., et al. (2008). Personality trait similarity between spouses in four cultures. *Journal of Personality*, **76**, 1137–1163.

Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The self-fulfilling nature of positive illusions in romantic relationships: Love is not blind, but prescient. *Journal of Personality and Social Psychology*, **71**, 1155–1180.

Nagoshi, C. T., & Johnson, R. C. (1994). Phenotypic assortment versus social homogamy for personality, education, attitudes, and language use. *Personality and Individual Differences*, **17**, 755–761.

Nagoshi, C. T., Johnson, R. C., & Ahern, F. M. (1987). Phenotypic assortative mating vs. social homogamy among Japanese and Chinese parents in the Hawaii Family Study of Cognition. *Behavior Genetics*, **17**, 477–485.

Nagoshi, C. T., Johnson, R. C., & Honbo, K. A. (1992). Assortative mating for cognitive abilities, personality, and attitudes: Offspring from the Hawaii Family Study of Cognition. *Personality and Individual Differences*, **13**, 883–891.

Rammstedt, B., & Schupp, J. (2008). Only the congruent survive—Personality similarities in couples. *Personality and Individual Differences*, **45**, 533–535.

Reynolds, C. A., Baker, L. A., & Pedersen, N. L. (2000). Multivariate models of mixed assortment: Phenotypic assortment and social homogamy for education and fluid ability. *Behavior Genetics*, **30**, 455–476.

Srivastava, S., John, O. P., Gosling, S. D., & Potter, J. (2003). Development of personality in early and middle adulthood: Set like plaster or persistent change? *Journal of Personality and Social Psychology*, **84**, 1041–1053.

Stone, E. A., Shackelford, T. K., & Buss, D. M. (2012). Is variability in mate choice similar for intelligence and personality traits? Testing a hypothesis about the evolutionary genetics of personality. *Intelligence*, **40**, 33–37.

Tambs, K., Sundet, J. M., & Berg, K. (1993). Correlations between identical twins and their spouses suggest social homogamy for intelligence in Norway. *Personality and Individual Differences*, **14**, 279–281.

Todosijević, B., Ljubinković, S., & Arančić, A. (2003). Mate selection criteria: A trait desirability assessment study of sex differences in Serbia. *Evolutionary Psychology*, **1**, 116–126.

Watkins, M. P., & Meredith, W. (1981). Spouse similarity in newlyweds with respect to specific cognitive abilities, socioeconomic status, and education. *Behavior Genetics*, **11**, 1–21.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, **54**, 1063–1070.

Watson, D., Hubbard, B., & Wiese, D. (2000). Self-other agreement in personality and affectivity: The role of acquaintanceship, trait visibility, and assumed similarity. *Journal of Personality and Social Psychology*, **78**, 546–558.

Watson, D., Klohnen, E. C., Casillas, A., Simms, E. N., Haig, J., & Berry, D. S. (2004). Match makers and deal breakers: Analyses of assortative mating in newlywed couples. *Journal of Personality*, **72**, 1029–1068.

Wood, D., Brumbaugh, C. C. (2009). Using revealed mate preferences to evaluate market force and differential preference explanations for mate selection. *Journal of Personality and Social Psychology*, **96**, 1226–1244.