Journal of Personality and Social Psychology
2005, Vol. 88, No. 2, 304–326

Copyright 2005 by the American Psychological Association
0022-3514/05/$12.00 DOI: 10.1037/0022-3514.88.2.304

Assortative Mating and Marital Quality in Newlyweds: A Couple-Centered Approach

Shanhong Luo and Eva C. Klohnen
University of Iowa

Using a couple-centered approach, the authors examined assortative mating on a broad range of variables in a large (N = 291) sample of newlyweds. Couples showed substantial similarity on attitude-related domains but little on personality-related domains. Similarity was not due to social homogamy or convergence. The authors examined linear and curvilinear effects of spouse similarity on self and observer indicators of marital quality. Results show (a) positive associations between similarity and marital quality for personality-related domains but not for attitude-related domains, (b) that similarity on attachment characteristics were most strongly predictive of satisfaction, (c) robust curvilinear effects for husbands but not for wives, (d) that profile similarity remained a significant predictor of marital quality even when spouses' self-ratings were controlled, and (e) that profile-based similarity indices were better predictors of marital quality than absolute difference scores.

Why do two individuals choose to be with each other rather than with one of many other potential partners? Is there a systematic pattern in human mate selection (i.e., assortative mating)? And if there is, does nonrandom selection influence relationship quality? For decades, much psychological research has been devoted to answering these questions. This research on assortative mating has typically been framed in terms of the similarity (or positive assortment) versus complementarity (or negative assortment) of partners' characteristics. That is, do "birds of a feather flock together" or do "opposites attract"? This research has also almost exclusively taken a *variable-centered approach* (VCA); that is, researchers compute a correlation between husbands' and wives' scores on the same characteristic (e.g., extraversion, intelligence) across all couples in a particular sample. A sizable positive correlation is interpreted as evidence for similarity, whereas a sizable negative correlation is considered as evidence for complementarity (or opposites). Two basic findings have emerged from this variable-centered research: On the whole, there is consistent evidence for similarity but very little evidence for opposites. However, the degree of similarity observed depends on the particular individual-difference domain studied, with romantic partners showing strong similarity in age, political, and religious attitudes; moderate similarity in education, general intelligence, and values; and little or no similarity in personality characteristics (for reviews, see Klohnen & Mendelsohn, 1998; Watson et al., 2004).

However, the VCA has some important limitations, and we therefore believe that assortative mating cannot be fully understood if researchers rely only on the VCA. First, this approach can only be applied to study couple similarity on a single characteristic, such as extraversion, extrinsic values, and so forth. It cannot provide any information on how similar partners are in terms of more global, overarching individual difference domains, such as partners' overall personality, value system, attitudes, and so on. Second, a variable-centered (i.e., an assortative mating) correlation is computed between husband and wife scores on a specific characteristic across all participants in a sample and thus characterizes the sample rather than each couple. That is, it can tell us whether husbands' and wives' scores on a specific characteristic tend to vary with each other in a given sample, but it does not tell us whether any specific couple is similar or not.

Third, relationship researchers are often interested in whether couple similarity (or complementarity) is predictive of relationship outcomes, such as satisfaction and quality. This has been a difficult question to examine using the VCA, because the assortative mating correlations do not provide an index of similarity for each couple. Specifically, even though the degree of assortative mating in a sample can be assessed and evaluated by computing such variable-centered correlations, researchers interested in testing whether couple similarity is associated with relationship quality have to compute an additional index of similarity that characterizes each couple rather than the sample. To accomplish this, most previous research has computed absolute difference scores or interaction terms based on husbands' and wives' individual scores. However, both of these methods have been criticized. Although the meaning of difference scores may appear to be obvious and intuitive, it is impossible to correctly interpret a correlation between difference scores and an outcome measure without also examining the relations of the components of the difference scores to the outcome. One way to accomplish this is to enter the absolute difference score after the two main effect terms (husband and wife scores) have been entered into a multiple regression equation (as recommended by Kenny, 1988). However, the absolute difference score will still be confounded with its component scores if they have unequal variances (Griffin, Murray, & Gonzalez, 1999). The other method by which couple similarity has been assessed is by

We thank David Watson for his collaboration on the Iowa Marital Assessment Project (IMAP) and Alex Casillas, Mary Choe, Elizabeth Gray, Jeffrey Haig, Daniel Heller, John Humrichouse, Ericka Nus Simms, and all of the IMAP staff for their help in the data collection for this project. This research was supported by National Institute of Mental Health (NIMH) Grant 1-R03-MH068395-01 to Eva C. Klohnen and NIMH Grant 1-R01-MH61804-01 to Diane Berry.

Correspondence concerning this article should be addressed to Shanhong Luo or Eva C. Klohnen, Department of Psychology, E11 Seashore Hall, University of Iowa, Iowa City, IA 52242-1407. E-mail: shanhong-luo@uiowa.edu or eva-klohnen@uiowa.edu

entering the interaction term after the couple's (husband's and wife's) individual scores have been entered. However, although a significant interaction does indicate that the effect of one spouse's self-ratings depends on the level of the other spouse's ratings, it does not necessarily indicate the presence of a similarity effect. The only way to determine whether a similarity interpretation is warranted is by graphing the interaction and by carefully evaluating its meaning (Griffin et al., 1999; Kenny & Cook, 1999).

The Couple-Centered Approach to Assortative Mating

Given the just discussed limitations of the VCA, we believe that taking a couple-centered approach (CCA) to examine some of the long-standing assortative mating questions may provide an important new perspective (e.g., Caspi & Herbener, 1990; Klohnen & Mendelsohn, 1998). In contrast to the VCA, which focuses on variables (i.e., on specific characteristics or traits) as the unit of analysis, the CCA focuses explicitly on couples. That is, the CCA is concerned with how similar each husband and wife pair is in terms of their profiles of responses across a number of responses (i.e., items). More specifically, in the CCA we compute a profile similarity index for every couple by correlating each husband's and wife's responses across all items on a given domain or characteristic. Thus, we can compute a profile similarity index for every husband and wife pair across responses on either an overarching individual difference domain (such as attitudes, values, personality), or across a smaller set of responses that tap a specific dimension or characteristic (e.g., across all items assessing extraversion, avoidance, ego-resiliency, etc.). The former similarity indices assess romantic partners' overall similarity in terms of broader individual difference domains, whereas the latter indices capture partners' similarity in terms of more specific and narrow subdomains.

On a conceptual level, couple-centered profile correlations capture each couple's similarity in terms of their organization (or patterning) of responses. That is, profile similarity captures the relative importance or centrality each member of a couple accords to a broad range of attributes, such as attitudes, values, behavioral tendencies, and so on. So, for example, if one is interested in assessing how similar a couple is in terms of their value system, a profile correlation computed for a particular husband and wife pair would capture the degree to which partners agree in terms of the relative importance they accord to a broad range of values; that is, it captures the degree to which partners agree, for example, that "friendship" and "family life" are more important than "power" and "wealth." If one is interested in determining the degree of similarity of a couple in terms of personal attributes, the profile similarity correlation would capture the degree to which both partners of a couple are, for example, relatively more "sociable," "talkative," and "assertive" than they are "punctual," "efficient," and "neat." Given this conceptual meaning of profile similarity indices, one can readily see that this type of similarity index is quite sensitive to the varying degrees of agreement (i.e., similarity) and disagreement (i.e., dissimilarity) that may exist between husbands and wives in terms of any given set of attributes. These examples also highlight the considerable amount of information that is taken into consideration and thus precisely captured by profile similarity correlations.

Absolute value difference scores, on the other hand, are typically computed by subtracting one spouse's score on a particular dimension from the other spouse's score and then taking the absolute value of this difference. Accordingly, difference scores capture the degree to which husband and wife pairs have similar "levels" of a given domain. Note that difference scores are computed on the overarching "scale level" rather than on the individual "item level"; that is, they completely ignore agreement (or disagreement) on the many specific responses on which the scale level scores are based, thus discarding a substantial amount of information that is captured by profile similarity correlations. A final important difference between profile-based and difference-score-based similarity is in the type of information that is conveyed by each. Absolute value difference scores can only range from zero, indicating that partners have equal levels of an attribute, to some positive number, indicating that partners have different levels of that characteristic. Profile correlations, however, can range from being highly positive, indicating similarity, to being close to zero, indicating neither similarity nor dissimilarity, to being negative, indicating opposites or complementarity. Given these differences in what the two similarity indices capture and convey, it is quite possible that they might show a differential pattern of correlations with other variables of interest, such as relationship outcomes, relationship length, and so on.

In sum, we believe that taking a CCA to assortative mating has the potential to extend previous variable-centered work in several ways. First, using the CCA, we are able to examine the similarity between each husband and wife pair on broad, overarching domains as well as on characteristics that are more narrow and specific. Second, the couple-centered spouse similarity index is a characteristic of each couple, not of the whole sample; this enables us to examine the variability in spouse similarity across couples and to test whether spouses are, on average, indeed similar to each other or not. Third, these similarity indices can be readily related to other variables, such as spouses' background variables (e.g., age, educational level, etc.), relationship length, and relationship quality; this enables us to examine some of the most central assortative mating hypotheses, including the social homogamy and convergence hypotheses, as well as the similarity–satisfaction link, much more directly and powerfully than has been possible using the VCA.

Previous Couple-Centered Research on Assortative Mating and the Current Study

To date, only four studies have taken a CCA to test assortative mating, and the results from these studies are inconsistent: Whereas two of the studies reported low but consistently positive assortment (Caspi & Herbener, 1990; Thiessen, Young, & Delgado, 1997), the other two did not find any evidence for assortment (Glicksohn & Golan, 2001; Klohnen & Mendelsohn, 1998). This inconsistency is not surprising in light of the limited scope of these studies and several important methodological differences among them. First, the four studies examined assortative mating on only a few individual difference domains: Two studies examined similarity in terms of general personality using the California Q-Sort; however, one study used observer-based ratings (Caspi & Herbener, 1990), whereas the other examined self-ratings (Klohnen & Mendelsohn, 1998). Another study examined extraversion, neuroticism, psychoticism, and sensation seeking (Glicksohn & Golan, 2001). The fourth study investigated a number of psychological and physical characteristics generated by the researchers (Thiessen

et al., 1997). Second, the type and quality of the measurement of these individual difference domains has varied considerably among the studies (e.g., the use of single- vs. multi-item indicators, self-reports vs. observer ratings, established instruments vs. questions designed for the specific study at hand). Third, the sample sizes of these studies were generally small (ranging from 36 to 75 couples), thus limiting the generalizability and replicability of results.

Fourth, because individuals—on average—tend to be more similar to each other than dissimilar because of shared cultural values, social desirability, and response biases (e.g., Cronbach, 1955; Klohnen & Mendelsohn, 1998), it is necessary to carefully evaluate the actual degree of similarity when taking a CCA. The four published studies varied considerably in the specific approaches they took to assess the observed similarity of couples. Caspi and Herbener (1990) repeatedly drew 100 random samples from the pool of all available random couple similarities and counted the number of trials for which the mean of the profile similarity correlations in the random couple sample was greater than the mean in the real couple sample; no statistical tests were conducted. Thiessen et al. (1997) did not specify how they constructed randomly paired couples, but they report having performed *t* tests to compare the similarity correlations of the real couples to those of random couples. Klohnen and Mendelsohn (1998) examined all possible random pairings in their sample and then ranked the similarity of every participant to his or her actual partner relative to the participant's similarity to each of the other opposite-sex participants; they then conducted chi-square tests on these ranks. Glicksohn and Golan (2001) performed one randomization procedure, pairing each male participant with one random female participant; they did not conduct any statistical tests but inspected the data visually instead. Given the limitations of this small number of couple-centered studies conducted to date, as well as their considerable methodological differences, it is difficult to draw any definitive conclusions about assortative mating using the CCA.

The current research was designed to address the limitations of both the existing couple-centered and variable-centered studies and to extend assortative mating research in several ways. First, in the current study we assessed a very broad range of individual-difference domains. Second, we explicitly included measures of domains that (a) capture the major components of personality, attitudes, and values; (b) are well established; (c) can be assessed validly and reliably; (d) have been shown to have important implications for intra- and interpersonal functioning; and (e) are well known and of interest to a broad range of researchers and theorists. To assess similarity on the major components of personality, we included measures of the Big Five personality dimensions, affectivity, attachment and working model dimensions, emotion expression, ego-resiliency, and disinhibition. To assess attitudinal and background similarity, we included measures of political attitudes, a broad range of values, and religiosity. Third, to ensure that our findings were replicable and generalizable and that our analyses had enough power to detect small but reliable effects, we studied couple-centered assortment in a large (N = 291) sample of newlywed couples. Studying newlyweds ensures (as much as possible) that all of the couples had a similarly serious commitment to each other at the time they participated in this study and that differences in the length of marriage could not influence the findings. Finally, to evaluate the extent of actual couple similarity, we constructed a large number of randomly paired couples (approximately 29,000) to establish a base against which the real couple similarity could be compared using one-sample *t* tests.

Our broad assessment of the major individual-difference domains allowed us to compare couple similarity across the whole range of domains. Research using the VCA has found strong evidence for assortment on attitudes and values but weak or no evidence for similarity on personality (e.g., Botwin, Buss, & Shackelford, 1997; Caspi & Herbener, 1993; Watson et al., 2004). We believe that this is a substantive finding, indicating that people do indeed end up with romantic partners who are similar to them in terms of their attitudes and values but not in terms of personality. We thus predicted that we would replicate this pattern of findings using a CCA. In fact, this would be an important replication, because it would provide evidence that even though the CCA and VCA are conceptually and methodologically distinct, both should nonetheless capture fundamental aspects of spouse similarity and should thus provide convergent evidence with regard to the most basic assortative mating findings.

Assortative Mating Questions to Be Examined via a Couple-Centered Approach

Active Assortment Versus Social Homogamy

If couples show assortment on certain domains, is the assortment due to partners' mating preferences (i.e., active assortment), or is it an artifact of partners' shared social background (i.e., social homogamy)? The logic behind the idea of social homogamy is that people may be more likely to meet, spend time with, and thus become romantically involved with those who share a similar background, such as individuals with similar age, socioeconomic status, and education. If people who share a similar background also tend to be similar in terms of other individual-difference domains, such as personality, values, and attitudes, then spouses might not be similar on those domains because they have actively selected each other for that reason but because of passive assortment due to their shared background. In other words, observed spouse similarity may primarily reflect influences of social homogamy and not of active selection.

On the whole, variable-centered research has found very little evidence that is supportive of the social homogamy hypothesis (e.g., Botwin et al., 1997; Mascie-Taylor & Vandenberg, 1988; Watson et al., 2004). Couple-centered research to date has not yet examined the social homogamy hypothesis. We predict that social homogamy should not play an important role in explaining assortment, because even among people who share some aspects of their personal backgrounds (e.g., their religious affiliation, educational level, age), there will nevertheless be substantial differences among them on other individual-difference domains (e.g., such as their values, attitudes, and personality). Moreover, even within a given group of individuals, a person will find him- or herself attracted to some individuals but not to others; thus, there is substantial room for idiosyncratic selection. Given that each couple obtains a similarity index for all of the assessed individual difference domains, we can directly test whether spouses' similarity in terms of a range of background variables (age, education, ethnicity, religious affiliation, and occupation) can predict spouse similarity on other domains. Given the broad range of domains we assess, we can also test whether social homogamy effects may be

more pronounced for some individual-difference domains than for others. Specifically, if there were any evidence for social homogamy effects, we would expect to find them for value and attitudinal similarity, because such variables are probably somewhat more closely tied to aspects of individuals' personal backgrounds.

Initial Assortment Versus Convergence

Another possibility is that any couple similarity we observe may not be due to partners' initial selection of each other but might instead be due to convergence over time. That is, spouses might become more similar over time. Moreover, it is possible that this convergence effect may be stronger for more malleable characteristics (e.g., attitudes, values) than for less malleable ones (e.g., personality). Variable-centered research to date has tended to find minimal evidence for convergence (e.g., Buss, 1984; Feng & Baker, 1994; Watson et al., 2004), as did the two couple-centered studies that have examined this issue to date (Caspi & Herbener, 1993; Glicksohn & Golan, 2001).

Because we studied newlyweds who had been married, on average, for only about 5 months, it is highly unlikely that differences in the length of marriage itself would account for any differences in couple similarity. However, the newlywed couples in this sample varied substantially in the length of their premarital relationships (ranging between 1 and 30 years). We were therefore able to test whether relationship length was predictive of couple similarity. Taking advantage of the profile-based similarity indices we had for each couple for every domain, we could directly test for convergence effects by predicting domain-specific couple similarity from relationship length. Because profile-based similarity captures the relative importance or centrality of a broad range of attributes rather then relying on capturing similarity by one overarching difference score, profile similarity may be more sensitive to partners becoming more similar over time. However, in spite of this more sensitive similarity index, we believe that any observed similarity is not primarily due to convergence but to selection of partners in the earlier stages of relationship development. If there is any evidence for convergence at all, we would expect to find it on the more malleable attitudinal domains rather than the more stable personality domains. This prediction is based on the findings that broad-based personality characteristics, like the ones we studied here, show substantial continuity over time (e.g., Costa & McCrae, 1994; Helson & Klohnen, 1998; Klohnen & Bera, 1998). Moreover, previous research has suggested that couples' shared experiences play an important role in maintaining the same degree of similarity rather than increasing spouse similarity over time (Caspi, Herbener, & Ozer, 1992).

Similarity and Relationship Quality

Does greater similarity predict better relationship quality? This is probably one of the most intriguing and complex questions relationship researchers have attempted to answer since they began studying assortative mating patterns. Note that this is an important question to examine irrespective of whether there is evidence for above chance similarity or not. This is because what is essential for an association between similarity and relationship satisfaction is variability in couple similarity, not above chance similarity. In spite of the importance of this question, it is also a difficult question to answer. Findings from research in the variable-centered tradition suggest that spouse similarity (indicated by absolute difference scores) does show some small associations with satisfaction indicators (e.g., Blum & Mehrabian, 1999; Eysenck & Wakefield, 1981; Robins, Caspi, & Moffitt, 2000; Russell & Wells, 1991). However, further analyses tend to show that neither the difference-score-based similarity nor the interaction-based similarity make substantial contributions to predicting satisfaction when husbands' and wives' scores on the corresponding dimension are also included as predictors (e.g., Eysenck & Wakefield, 1981; Robins et al., 2000; Russell & Wells, 1991; Watson et al., 2004). The two couple-centered studies that have examined the similarity–satisfaction link have obtained contradictory results: Whereas one study found a moderate association (Caspi & Herbener, 1990, using only observer-based measures), the other did not (Glicksohn & Golan, 2001, using only self-report-based measures). Given the limitations of past research on the topic, including less than optimal testing for similarity effects (Griffin et al., 1999; Kenny & Cook, 1999), the relatively narrow range of individual-difference domains studied, the limited aspects of relationship quality assessed, and the small sample sizes used, the inconsistent findings that have been obtained are not surprising.

In light of the issues just reviewed, the current study was able to uniquely address several questions concerning the link between spouse similarity and satisfaction: First, the CCA enables us to directly test whether couples' profile similarity is predictive of husbands' and wives' satisfaction; there is no need to compute any additional indices. Second, given that we assessed a wide range of individual-difference domains, we were also able to examine whether similarity on some domains was more important to relationship satisfaction than similarity on other domains. Third, we explicitly tested the predictive power of profile-based similarity compared with that of difference-score-based similarity in accounting for marital satisfaction. Given that profile indices capture the degree of similarity between spouses' overall response organization rather than capturing similarity by one global absolute value difference score, we expected profile-based similarity to be a better predictor of satisfaction than difference scores. Fourth, we assessed various aspects of relationship quality, including indicators of satisfaction and happiness as well as of disagreement and conflict. Moreover, to eliminate any potential confound due to shared method variance, we not only assessed self-report-based relationship quality indicators, but we also derived an observer index based on codings of two videotaped interaction tasks.

Finally, we hypothesized that spouse similarity should predict greater marital satisfaction, because similarity should help to increase compatibility and to reduce conflict in the daily life of couples. However, there are reasons to question whether this association is strictly linear in nature, and we therefore also tested for curvilinear effects. First, recall that profile similarity correlations not only capture degrees of similarity (as difference scores do) but that they also capture varying degrees of dissimilarities; that is, they can also capture whether partners are opposite (complementary) on a set of attributes. This affords us the unique opportunity to test whether complementarity on certain attributes may also have positive consequences on marital quality, as some researchers have suggested (e.g., Cattell & Nesselroade, 1967; Kerckhoff & Davis, 1962; Klohnen & Mendelsohn, 1998; Winch, 1958). If both similarity and complementarity are predictive of greater relationship satisfaction, we would expect to find a U-shaped association between profile similarity and satisfaction

indices. Second, regardless of any possible complementarity effects, testing for curvilinearity is also important because there is no reason to assume that the relationship between couple similarity and satisfaction should be purely linear in nature: For example, at a certain level of couple dissimilarity, further decreases in similarity may no longer have increasingly negative effects on marital satisfaction; or, alternatively, beyond a certain degree of couple similarity, further increases in similarity may not have any additional beneficial effects on relationship satisfaction. It is thus important to assess the exact nature of the similarity–satisfaction association instead of simply assuming that it will be purely linear. It appears that research to date, including variable-centered and couple-centered studies, have not examined curvilinear similarity–satisfaction effects.

The Current Study

To recapitulate, the current study provides the most comprehensive couple-centered examination of assortative mating to date and extends previous research in several important ways. Using a CCA, we (a) examined assortative mating in a very large sample of newlyweds on a wide range of important individual-difference domains that we could measure reliably and validly; (b) tested questions of initial selection (vs. convergence) and active assortment (vs. social homogamy) in a much more direct and powerful fashion than is possible using the VCA; and (c) conducted the most comprehensive analysis of the similarity–satisfaction link to date by examining both linear and curvilinear effects, by including self-report and observer measures of satisfaction, and by explicitly testing both profile-based and difference-score-based similarity indices.

On the basis of findings from previous (mostly variable-centered) research, we made the following predictions. First, we expected to find strong positive assortment on attitude-related domains (i.e., values, religiosity, and political attitudes) but little assortment for the overarching personality domains and the more narrow personality subdomains. Second, we predicted that we would find no evidence for either the social homogamy or the convergence hypotheses. Third, we expected positive associations between couple similarity and relationship quality. More specifically, we predicted that we would find some evidence for both linear and curvilinear effects, and we hypothesized couple-centered profile similarity to be a better predictor of relationship quality than absolute difference scores.

Method

Participants and Procedure

The sample consisted of 291 married couples who participated in the Iowa Marital Assessment Project (IMAP).[1] IMAP staff members identified recently married couples from the records of Johnson County and Linn County in eastern Iowa. Couples who met the inclusion criteria for the study (which required that they had been married less than a year at the time of initial contact and that both members of the couple were age 50 years or younger) then were sent a letter inviting them to participate. All participants were assessed in small-group sessions that included a maximum of 3 couples. The sessions typically lasted from 2.0 to 2.5 hr and included a battery of self-report measures and two videotaped interaction tasks. The couples were compensated $120 for their participation. To ensure honest and independent responding, each participant sat quietly at a separate desk when completing the ratings.

The participants' average age was 27.8 years (SD = 6.2 years). The majority (90.9%) of the sample were Caucasian, 0.5% were Asian American, 2.6% were Hispanic, 1.2% were African American, and 4.8% marked "other." The sample was fairly well educated: 11% had advanced degrees (masters' or doctorate), 42% had college degrees, 30% had some college education, and 12% had high school education. The majority of the participants (70.2%) marked Christian as their religious affiliation. With regard to occupation, 47.0% of participants were professionals, 17.5% were laborers, 10.0% were clerical workers, 9.4% were managers, and 16.2% of them did not have a job. Most participants (82%) reported this was their first marriage, and 75% of them had no children. At the time of assessment, the couples had been married an average of 153.9 days (range = 25–452)—that is, approximately 5 months. They indicated that they had known each other an average of 4.7 years (range = <1 year–30 years) and had begun dating approximately 3.5 years earlier (range = <1 year–15 years).

Measures

Descriptive statistics and alpha reliabilities for all measures are shown in Table 1.

Demographic questionnaire. The participants completed a demographic questionnaire that included questions about their gender, age, ethnicity, education level, occupation, religious affiliation, length of their acquaintanceship, and the duration of their marriage.

Big Five personality characteristics. The respondents rated themselves on the Big Five Inventory (BFI; Benet-Martinez & John, 1998; John & Srivastava, 1999). The BFI contains 8-item scales assessing Neuroticism and Extraversion, a 10-item Openness scale, and 9-item measures of Agreeableness and Conscientiousness. Participants were asked to indicate the degree to which each item was descriptive of them on a 5-point scale ranging from *disagree strongly* to *strongly agree*.

Affectivity. The participants rated themselves on the trait form of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20-item inventory assessing negative affect (e.g., *nervous, upset*, *irritable*, *ashamed*, *scared*) and positive affect (e.g., *enthusiastic*, *active*, *interested*, *proud*, *determined*). Participants were asked to indicate on a 5-point scale (ranging from *very slightly or not at all* to *extremely*) "to what extent you generally feel this way, that is, how you feel on average."

Emotional expression. Respondents used a 5-point scale (ranging from *not at all* to *very strongly*) to indicate the extent to which they typically express 15 discrete emotions (Gross & John, 1998), which included 6 positive emotions (e.g., *amusement*, *joy*, *love*, *excitement*) and 9 negative emotions (e.g., *anger*, *fear*, *sadness*, *shame*).

Adult attachment. Participants completed a 16-item short version of Brennan, Clark, and Shaver's (1998) 36-item attachment measure, which yields scores on the dimensions of anxiety and avoidance. Participants used a 7-point scale (ranging from *strongly disagree* to *strongly agree*) to indicate how they "typically act and feel" in their relationships with their spouse.

Circumplex measure of attachment-based self-representations. Participants completed a 32-item short version of Klohnen's (2004) 64-item measure of internal working models designed to capture the attachment-related components of individuals' self-concepts. This measure contains eight scales that can be scored to assess four dimensions: the other-model dimension combines the Negative Other (e.g., *detached*, *distant*) and Positive Other (e.g., *loving*, *affectionate*) scales; the self-model dimension combines the Negative Self (e.g., *vulnerable*, *worrying*) and Positive Self (e.g., *competent*, *strong*) scales; the fearful–secure dimension combines the Fearful (e.g., *inhibited*, *insecure*) and Secure (e.g., *enthusiastic*, *optimistic*)

[1] Research by Watson et al. (2004) also drew on the IMAP dataset; those researchers took a VCA to assortative mating, and no overlapping results are reported here.

Table 1
Alpha Reliabilities, Means, and Standard Deviations for the Husbands and Wives for All Major Study Variables and Gender Differences

Measure	α	Husband M (SD)	Wife M (SD)	Effect size d	Effect size r
Attitude domains					
Values	.79	3.92 (0.43)	4.02 (0.40)**	−.24	−.12
Political attitudes	.71	1.39 (0.23)	1.39 (0.21)	.00	.00
Religiosity	.90	1.96 (0.36)	2.05 (0.34)**	−.26	−.13
Personality domains					
Extraversion	.86	3.48 (0.78)	3.55 (0.83)	−.09	−.04
Neuroticism	.87	2.45 (0.77)	3.11 (0.85)**	−.81	−.38
Agreeableness	.79	3.85 (0.60)	4.01 (0.57)**	−.27	−.14
Conscientiousness	.82	3.69 (0.65)	3.90 (0.65)**	−.32	−.16
Openness	.81	3.90 (0.58)	3.87 (0.62)	.05	.03
Positive affect	.86	3.86 (0.52)	3.79 (0.58)	.13	.06
Negative affect	.89	1.85 (0.64)	1.87 (0.68)	−.03	−.02
Positive emotions	.84	4.05 (0.55)	4.17 (0.62)**	−.20	−.10
Negative emotions	.83	2.48 (0.66)	2.72 (0.68)**	−.36	−.18
Avoidance	.81	2.04 (0.80)	1.80 (0.90)**	.28	.14
Anxiety	.75	2.94 (0.99)	3.44 (0.99)**	−.51	−.24
Fearful–secure	.77	2.01 (0.55)	2.00 (0.61)	.02	.01
Negativity of self-model	.82	1.89 (0.55)	2.01 (0.61)**	−.33	−.16
Negativity of other-model	.84	1.80 (0.57)	1.51 (0.48)**	.55	.27
Dismissing–preoccupied	.65	3.25 (0.50)	2.89 (0.50)**	.72	.34
Ego-resiliency	.87	3.23 (0.45)	3.21 (0.50)	.04	.02
Disinhibition	.74	1.29 (0.19)	1.20 (0.16)**	.51	.25
Marital satisfaction					
Observer-based satisfaction	.76	−0.01 (0.83)	0.01 (0.83)	−.02	−.01
LWMAT	.76	5.60 (0.74)	5.62 (0.78)	−.03	−.01
Sexual satisfaction	.86	3.59 (0.76)	3.66 (0.77)	−.09	−.05
Conflict	.81	3.29 (0.84)	3.32 (0.78)	−.04	−.02
Disagreement	.73	3.80 (1.30)	4.00 (1.31)	−.15	−.08
Composite self-report satisfaction	.70	−0.00 (0.72)	−0.01 (0.72)	.01	.01

Note. $N = 266–290$. LWMAT = Locke–Wallace Marital Adjustment Test.
** Husbands' and wives' scale means differ at $p < .01$.

scales; and the dismissing– preoccupied dimension combines the Dismissing (e.g., *indifferent*, *independent*) and Preoccupied (e.g., *needy*, *emotional*) scales. Participants used a 5-point scale (ranging from *Disagree strongly* to *Agree strongly*) to indicate how descriptive each adjective was of themselves.

Ego-resiliency. Participants rated themselves on a 16-item short version of Klohnen's (1996) 29-item ego-resiliency scale. Ego-resilient individuals have the capacity for flexible and resourceful adaptation to both external and internal stressors (J. Block, 2002; J. H. Block & Block, 1980). Ego-resiliency is a personality resource that has been shown to have important links to psychological well-being and positive life outcomes, including adaptive midlife development (e.g., Klohnen, 1996; Klohnen, Vandewater, & Young, 1996). Example items from this scale are "I feel like giving up quickly when things go wrong," "My daily life is full of things that keep me interested," and "It is very hard for me to tell anyone about myself." Participants used a 4-point scale to indicate their level of agreement with each statement (ranging from *do not agree at all* to *agree a lot*).

Disinhibition. Participants were assessed on the 16-item disinhibition scale from the Brief Temperament Survey (Clark, 1995), which was designed to assess the "Big Three" personality traits (Clark & Watson, 1999). The Disinhibition scale assesses general individual differences in under- versus overcontrolled behavior; high scorers indicate that they are more reckless, impulsive, irresponsible, and undisciplined. Items on the Disinhibition scale were answered using a true–false format.

Religiosity. Five items assessed the importance of religion in the participants' lives. Three items measured the frequency of various religious activities (e.g., "attend a religious or spiritual service," "pray or meditate," "talk to others about religious issues") on a 6-point scale ranging from *never* to *once or more a day*. The two remaining items assessed the perceived importance of religion (e.g., "How important or meaningful is religion and/or spirituality to you, personally?") on a 5-point Likert scale ranging from *not at all important* to *extremely important*.

Political attitudes. To assess political attitudes, respondents were asked to indicate whether they agreed or disagreed with 13 statements reflecting a wide range of contemporary sociopolitical issues such as the legalization of abortion, public school prayer, the censorship of pornography, and the legalization of same-sex marriages. Participants answered these items using a yes–no format.

Values. This 17-item measure was adapted from value inventories created by Rokeach and Ball-Rokeach (1989) and Schwartz and Bilsky (1990). Participants were asked to indicate, "How important is each of these values to you as a guiding principle in your life?" (1 = *not at all*, 5 = *very*). Example values are equality, self-respect, love, relationships/friendships, wealth, religion.

Observer and self-report indicators of marital quality. We obtained one observer-based indicator of relationship quality and four self-report-based measures, two of which assessed satisfaction with different aspects of the relationship and two of which assessed aspects of conflict or disagreement.

The observer measure of marital quality was based on codings of two 5-min videotaped interaction tasks each couple engaged in. One interaction task focused on topics of intimacy and closeness and involved having both spouses of a couple respond to questions that were written on index cards. Example questions are, "What first attracted you to your partner?"; "What made you decide that you wanted to be in a relationship with your partner?"; and "Name three ways in which you have changed for the better by being in this relationship." The second interaction task focused on discussing an issue of disagreement or conflict in a couple's relationship. Spouses were asked to pick one of the topics of disagreement or conflict each of them had independently listed earlier during the session when filling out questionnaires and to attempt to work toward a resolution of the conflict. For both interaction tasks, participants were encouraged to relate and talk to each other as if they were at home or any other setting they typically would find themselves in. Two independent teams of trained coders provided 5-point ratings of three aspects of relationship quality separately for the intimacy and the conflict discussions. The three aspects of relationship quality that were coded were how critical each spouse was of his or her partner, how much in love each spouse appeared to be, and the likelihood of breaking up versus staying together. Husbands and wives were rated independently by two different coders. Overall, there was good agreement among coders on ratings of all three aspects of relationship quality both for the intimacy and the conflict tasks. Specifically, the interrater agreement (intraclass correlations) between the two coders for the intimacy and for the conflict tasks, respectively, was .53 and .55 for the "how much in love" ratings, .50 and .54 for the "how critical of spouse" ratings, and .64 and .65 for the "how likely to stay together" ratings. Moreover, these codings of aspects of relationship quality showed consistency across the two interaction tasks. We therefore created one composite, observer-based measure of relationship quality by aggregating across the three ratings obtained for the intimacy task and the three ratings obtained for the conflict task. The alpha for this six-indicator-based composite measure was .76.

Participants completed four self-report-based measures of relationship quality. Participants completed the Locke–Wallace Marital Adjustment Test (Locke & Wallace, 1959), which is a 15-item self-report measure of marital satisfaction and couple agreement on a number of issues (e.g., finances, recreation, affection, friends, sex, conventionality, conflict resolution, and confiding). The rating scales participants used to indicate their answers varied across items. Sexual satisfaction was assessed using 10 items from the Pinney Sexual Satisfaction Inventory (Pinney, Gerrard, & Denney, 1987). The respondents indicated their level of agreement with each item on a 5-point scale ranging from *strongly disagree* to *strongly agree*. Sample items are "Generally, I am satisfied with my sex life"; "I wish my partner were more affectionate during foreplay." Participants also completed a 3-item Conflict subscale from the Relationship Assessment Questionnaire (Simms & Watson, 2003), which measures the frequency of interpersonal conflict in the relationship (e.g., "How often do you and your spouse quarrel?"). Items were rated on a 5-point scale ranging from *never* to *once or more a day*. Finally, participants listed up to five topics of disagreement or conflict in their relationship and rated the degree to which each of the topics concerned them using a 7-point scale ranging from *not at all* to *quite a bit*. These disagreement ratings were averaged across topics.

Scores on these four self-report-based relationship quality measures were moderately to strongly correlated for both husbands (rs = .28–.54) and wives (rs = .26–.48). These intercorrelations were small enough to warrant conducting separate analyses for each measure to examine whether they may have differential correlates. At the same time, all of these measures clearly do capture a common underlying dimension. We therefore also created a composite index of relationship quality by averaging the four standardized measures. Alpha reliability for the composite satisfaction measure was .70 for both husbands and wives.

The observer-based index of relationship quality was moderately correlated with scores on each of the individual self-report satisfaction measures (rs = .24–.35 for wives and .19–.28 for husbands) and showed somewhat higher correlations with the composite index of relationship quality (.41 for wives and .31 for husbands).

Computing Within-Couple Similarity Correlations

Following Klohnen and Mendelsohn's (1998) procedure, we indexed husband–wife similarity by computing the profile similarity correlations between each husband's and wife's self-ratings on (a) all items for each of the 8 overarching domains (BFI, PANAS, emotion expression, attachment dimensions, working models of attachment, values, political attitudes, and religiosity) and (b) for each of the 13 narrower subdomains (the Big Five dimensions of Extraversion, Neuroticism, Agreeableness, Conscientiousness, and Openness; the two attachment dimensions of avoidance and anxiety; the four working model dimensions including the fearful–secure, self-model, other-model, and dismissing–preoccupied dimensions; and ego-resiliency and disinhibition). These correlations capture the degree of similarity between each husband and wife pair on a particular individual-difference domain and can range from −1.0 to 1.0, just like any other correlation coefficient. Positive correlations indicate that spouses are similar to each other in terms of the profiles of their ratings on a given set of attributes, whereas negative correlations suggest that spouses are opposite. Correlations close to 0 indicate that spouses are neither particularly similar nor opposite to each other.[2, 3]

[2] When computing profile correlations, some researchers (e.g., Murray et al., 2002) reversed negatively keyed items before computing the correlation, whereas others did not (e.g., Caspi & Herbener, 1990; Thiessen et al., 1997). We decided to compute profile correlations on the basis of the original scoring of the items, because reverse keying of items in this context has several potential problems. First, it seems untenable to assume that participants would necessarily give the corresponding reverse-keyed rating to an item if it were phrased in the psychologically "opposite" direction. Second, real and meaningful variance in participants' ratings is eliminated; that is, participants provided their ratings for a reason, and they did so specifically within the context of how the items were phrased in the questionnaire. By reverse keying items, this variance is thus artificially restricted to about half of the original rating scale. Because of this highly restricted range, profile correlations may not accurately capture the true association between two individuals' ratings, which can lead to potentially misleading results (i.e., restriction in range is known to result in an underestimation of the true effect). Third, sometimes it is not apparent which items on a measure should be reversed, as is the case for the attitude and the value measures. It is important to note that as the total number of items and the variance of the ratings of the items increases, the impact of any particular reverse-keyed item on a profile correlation diminishes and, in fact, becomes negligible. However, to ensure that the number of reverse-keyed items did not systematically affect the computed profile similarities in the current study, we correlated the percentage of reverse-keyed items on each scale with the corresponding profile similarity means shown in Table 2. The correlation was .04. Note also that any response biases that may be associated with extreme or socially desirable responding cannot account for the similarity–satisfaction findings reported here, because the majority of findings replicated across the self and observer indices of marital satisfaction.

[3] One may wonder how the reliability of a scale may impact profile correlations. It is conceivable that a scale with very low reliability may inflate variance in ratings and thus may also inflate variance in profile

Evaluating Similarity of Spouses: Conceptual and Methodological Considerations

Because individuals, on average, tend to be more similar than dissimilar, the expected value of profile similarity correlations between randomly selected individuals is greater than zero (e.g., J. Block, 1978; Caspi & Herbener, 1990; Klohnen & Mendelsohn, 1998). Moreover, the size of the average correlation among random individuals will vary greatly depending on the particular domain assessed as well as on the properties of the measure used. This phenomenon is also called *stereotypical accuracy* (Cronbach, 1955); that is, people are likely to be similar to each other to some degree, possibly because of common response biases (e.g., social desirability bias, extreme response tendency), shared cultural norms and values, and common general knowledge about human nature as well as true shared human nature (e.g., Blackman & Funder, 1998). It is therefore necessary to evaluate whether similarity correlations of real (actual) couples are greater than expected by chance (i.e., greater than the similarity of people in general). To accomplish this, we created random pairs of husbands and wives in our sample, computed their base similarity, and compared the similarity of the randomly paired couples with that of the real couples.

To form random couples, we first generated a random distribution of numbers between 1 and 291 using a random number–generating program. Next, we paired "husbands" (1–291) with random "wives" whose participant numbers corresponded to the random number distribution we obtained. To obtain a highly reliable distribution of random couple similarities, we performed this procedure 100 times, thus obtaining a maximum of 29,100 random couples.[4] The actual number of random couples varied by domain because of missing data and ranged from 23,614 to 28,699. To ensure that the random distributions were indeed random, we computed intercorrelations among the 100 random distributions as well as the real couple number (1–291). The largest correlation was only .12, suggesting that the 100 random trials were not systematically related to each other or to the couple number.

To determine the similarity of the randomly paired husbands and wives, we computed similarity correlations for each random couple for all of the 21 individual-difference domains just as we did for the real couples. We then computed the mean of all random similarities for each domain, thus averaging over 23,000 profile similarities. The mean of such a large number of random couple similarities essentially provides us with the population value for the similarity of "random couples" on any given domain. To determine whether the average similarity of the 291 real couples differed from the average similarity of men and women in the population, we computed one-sample *t* tests for each of the 21 domains.

Results

Preliminary Analyses

Before turning to our primary analyses of assortative mating, we examined the mean-level differences between the husbands and wives on all key variables of interest. Table 1 presents descriptive statistics for the wives and husbands on these variables. The wives in our sample rated the values as being more important to them than their husbands did, and they were also more religious. The wives described themselves as significantly more neurotic, agreeable, conscientious, and as expressing both more positive and negative emotions. In terms of adult attachment, the wives were more anxious and had more negative self-models, whereas the husbands were more avoidant and had more negative other-models. The husbands were more disinhibited than their spouses. Table 1 also shows the effect sizes for these gender differences. It is important to note that with the exception of two effects (Neuroticism, $r = .38$, and dismissing–preoccupied, $r = .34$), all of the remaining effects were small in size and only reached statistical significance because of the large sample size examined here. In general, the observed mean differences are consistent with previous research, which indicates that women tend to be somewhat more distressed, controlled, emotionally expressive, and interpersonally sensitive than men (e.g., Bartholomew & Horowitz, 1991; Costa & McCrae, 1992; Feeney & Hohaus, 2001; Watson & Clark, 1993). The husbands and wives did not differ significantly on any marital satisfaction measure.

Intercorrelations among the subscales ranged from −.76 to .65. The highest set of correlations was between ego-resiliency and the internal working model scales (−.76 with the fearful–secure dimension and −.70 with the self-model dimension), and between Neuroticism and the self-model dimension ($r = .65$). These intercorrelations make good conceptual sense. The intercorrelations among the profile similarities were substantially lower, ranging only from −.08 to .56. The highest intercorrelations among the profile similarities were between ego-resiliency and the fearful–secure dimension ($r = .56$), between the self-model and the fearful–secure dimension ($r = .56$), and between avoidance and the other-model dimension ($r = .51$).

Is There Evidence for Assortative Mating?

To test whether there is evidence for assortative mating in our sample of newlyweds using the CCA, we performed a one-sample *t* test for each individual-difference domain to compare the similarity mean of the real couples with the mean of the approximately 29,000 random couple similarities; that is, the mean of the large number of randomly paired couple similarities served as the population mean against which we compared the real couple similarity.[5] Table 2 shows the descriptive statistics, *t*-test values, and effect sizes for each comparison.

correlations. However, if this were indeed the case, this variance would be random (rather than systematic), and it is therefore highly unlikely that this increase in variance due to unreliability should be systematically related to any other variables (e.g., self-reported and observer-based marital satisfaction indices). Moreover, in terms of evaluating the similarity of real couples against that of random couples, any potential increase in variance due to unreliability should equally inflate unsystematic variance in both real and random couples, thus effectively canceling each other out. However, to ensure that scale reliabilities do not inflate profile similarities, we correlated the scale reliabilities (shown in Table 1) with the mean couple similarity (shown in Table 2) for the scales and obtained $r = -.08$.

[4] Note that 10 randomizations were just as effective in establishing a reliable distribution of random couple similarities as the 100 randomizations reported here (see Footnote 5 for more details). Results based on the smaller number of randomizations can be obtained from the authors.

[5] Because the evaluation of the actual degree of couple similarity in the CCA does require establishing a base similarity against which the actual couple similarity can be compared, we thought it would be important to provide some information about how many random couple pairings are needed before a reliable base estimate of average couple similarity can be obtained. To accomplish this, we compared the results we obtained when we conducted 10 randomizations (providing approximately 2,800 random husband–wife pairings) with those we obtained when we conducted 100 randomizations (providing approximately 28,000 random pairings). We found that the results from the 10 randomizations were almost identical to

Table 2
Profile Similarity Obtained for Married Couples Compared With Similarity Obtained for Randomly Paired Couples

Individual difference domain	Real couples *M* (*SD*)	Random couples *M* (*SD*)	*t*	Effect size *d*	*r*
Attitude domains					
Values	.51 (.32)	.40 (.30)	7.70**	.57	.28
Political attitudes	.48 (.66)	.17 (.45)	7.29**	.60	.29
Religiosity	.72 (.80)	.39 (.65)	7.37**	.60	.29
Overarching personality domains					
Big Five	.30 (.29)	.31 (.27)	−0.20	−.01	−.01
PANAS	.69 (.46)	.66 (.47)	2.00*	.14	.07
Emotion expression	.56 (.40)	.52 (.40)	2.31*	.17	.09
Attachment	.66 (.44)	.64 (.41)	1.15	.08	.04
Working models	.66 (.41)	.64 (.39)	1.33	.10	.05
Specific personality domains					
Extraversion	.06 (.63)	.14 (.63)	−1.91†	−.14	−.07
Neuroticism	.17 (.59)	.15 (.60)	0.31	.03	.01
Agreeableness	.59 (.60)	.57 (.55)	0.79	.06	.03
Conscientiousness	.44 (.55)	.42 (.55)	0.47	.03	.02
Openness	.42 (.49)	.40 (.49)	0.75	.06	.03
Avoidance	.87 (.69)	.85 (.70)	1.56	.11	.05
Anxiety	.53 (.52)	.51 (.46)	0.82	.06	.03
Fearful–secure	.69 (.63)	.66 (.59)	1.35	.10	.05
Self-model	.76 (.64)	.73 (.64)	1.40	.11	.05
Other-model	.88 (.68)	.87 (.65)	0.80	.05	.03
Dismissing–preoccupied	.55 (.51)	.54 (.49)	0.35	.03	.01
Ego-resiliency	.45 (.43)	.42 (.38)	1.62	.12	.06
Disinhibition	.40 (.52)	.37 (.52)	0.97	.07	.03

Note. $N = 266–290$ for real couples. $N = 23{,}614–28{,}699$ for randomly paired couples. Statistical analyses were performed on Fisher *r*-to-*z* transformed similarity correlations; values in the table have been transformed back to regular correlations. PANAS = Positive and Negative Affect Schedule.
† $p < .10$. * $p < .05$. ** $p < .01$.

Turning first to the means and standard deviations of the similarity correlations obtained for the real and randomly paired couples, we can see that (a) all 21 means are positive in direction; (b) the majority of the average similarity correlations are moderate to large in magnitude; and (c) 19 of the real couple means were greater than the random couple means, although only five differences reached statistical significance. A sign test of the direction of these differences in means was significant ($p < .01$), indicating that the real couple means were greater than the random couple means more often than would be expected by chance. The standard deviations for both real and random couples were substantial (ranging from .27 to .80), suggesting that there was considerable variability in couple similarity, with some couples being very similar and others dissimilar. A sign test comparing the standard deviations for the real and random couples was not statistically significant, suggesting that real and random couple similarities were equally heterogeneous.

Consistent with our predictions, the one-sample *t* tests showed that real couples were significantly more similar to each other on values, religiosity, and political attitudes than randomly paired couples, and these effects were moderate in size (Cohen, 1977). The *t* tests of the overarching personality domains showed that real couples were more similar than random couples on affectivity and emotion expression; however, the size of these effects was small.

To get a better sense of the nature of these effects, we graphed the frequency distributions of the Fisher *r*-to-*z* transformed similarity correlations for the real and random couples for a domain that showed a statistically significant difference (values; Figure 1, Panel A) and for a domain that did not (attachment; Figure 1, Panel B). The graphs clearly show that the real and random couple distributions were quite distinct for the value domain but almost completely overlapping for the attachment domain.

Turning to comparisons of the personality subdomains, we see that the real couples were no more similar than random couples. Extraversion was the only characteristic for which there was evidence for marginally significant negative assortment, indicating that married couples tended to be somewhat less similar to each

those from the 100 randomizations: First, 13 of the 21 domains had exactly the same similarity means, and the remaining 8 means only showed negligible differences (the largest difference was .01); second, 10 domains had exactly the same standard deviations, and the largest discrepancy for the remaining domains was only .02; third, the one-sample *t* tests provided the exact same results for all of the domains assessed. These results should help researchers determine the number of randomizations needed to establish reliable estimates of couples' average similarity given their sample size and the particular set of individual-difference domains assessed in their study.

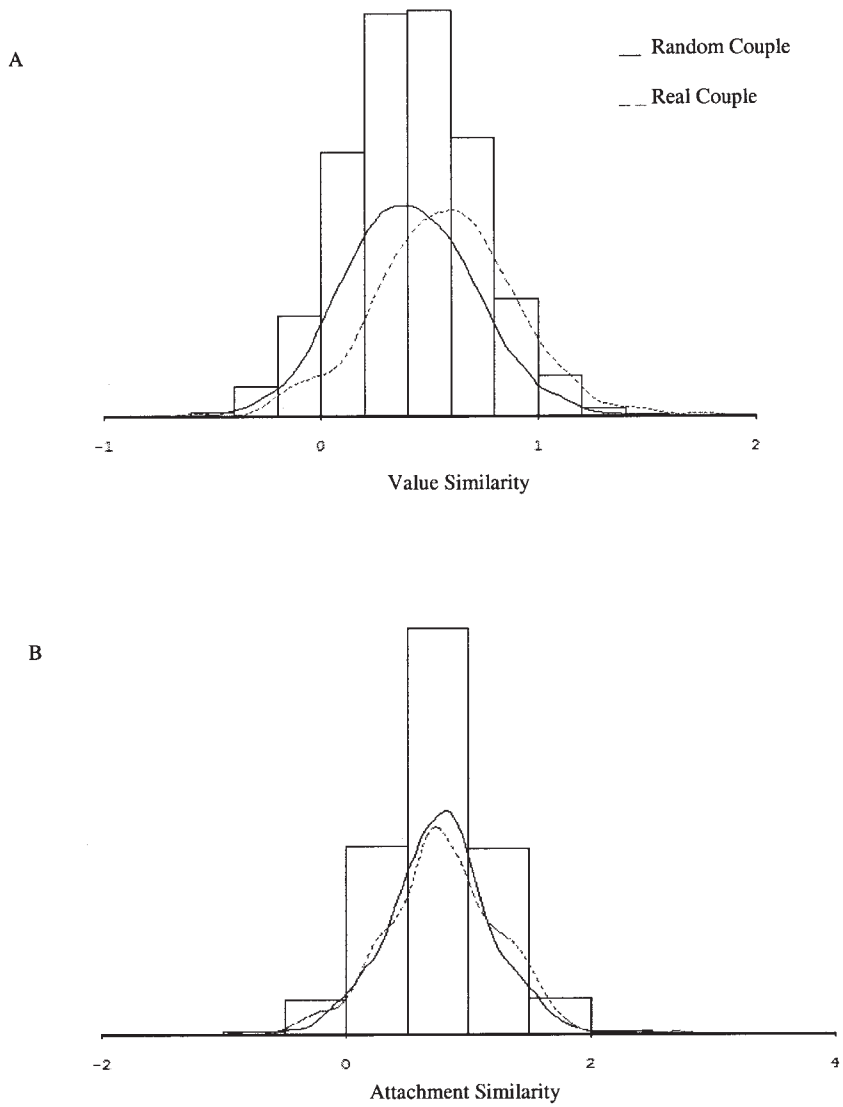

Figure 1. Frequency distributions of profile-similarity correlations (Fisher *r*-to-*z* transformed) for real and random couples on two individual difference domains.

other than randomly paired couples. Overall, these analyses suggest that among newlyweds there is substantial positive assortment on attitude-related domains (values, religiosity, political attitudes), weak positive assortment on the overarching domains of emotion expression and affectivity, weak negative assortment on extraversion, and no assortment on the remaining personality domains.

What Contributes to Spouse Similarity: Active Selection and Initial Assortment or Social Homogamy and Convergence?

Some researchers have suggested that whatever couple similarity in terms of psychological characteristics does exist may not be due to active and initial selection but may instead be due to either (a) *social homogamy*—that is, the meeting of individuals with similar backgrounds that may be responsible for similarity in terms of other individual-difference characteristics, or (b) *convergence*—that is, partners becoming more similar to each other over time. We examined whether either of these two hypotheses can explain profile-based couple similarity in this sample.

Social homogamy. Because the couples in our sample showed assortment on several background variables (κ = .28 for ethnicity, κ = .40 for religious affiliation, r = .77 for age, and r = .45 for education; see also Watson et al., 2004), it is possible that this background similarity could account for similarity in terms of other individual-difference domains. Given that the CCA affords a similarity index for every couple for each of the domains, we directly tested the social homogamy hypothesis by predicting couple similarity on attitude and personality domains from husbands' and wives' similarity on the four background variables. Note that we did not find evidence for similarity in terms of husband and wife occupation (κ = .08); we therefore did not test for social homogamy effects of occupational similarity.

We dummy coded the two nominal background variables (ethnicity and religious affiliation) so that a 1 indicated that spouses

were similar and a 0 that they differed. We then correlated the two dummy-coded variables with the profile similarity on each of the 21 domains. Similarity in terms of ethnicity showed only one statistically significant correlation with spouse similarity on emotion expression, and this was a small effect ($r = .12$, $p < .05$). Similarity in terms of religious affiliation was significantly ($p < .05$) correlated with similarity in terms of disinhibition ($r = .14$), Agreeableness ($r = .15$), the other-model dimension ($r = .18$), and religiosity ($r = .17$), and with dissimilarity in terms of political attitudes ($r = -.16$). Even though these correlations were also small in size, the larger number of significant associations suggests that these might be meaningful effects. However, given that the vast majority of participants marked Christian as their primary religious affiliation, these correlations may be due to participants' Christian beliefs rather than to spouse similarity on religious affiliation. To test this possibility, we dummy coded husbands' and wives' religious affiliation such that 1 indicated Christian beliefs and 0 indicated non-Christian beliefs. We recomputed the above (significant) correlations, partialing out husband and wife Christianity. The correlations were no longer significant (all ps $> .05$), suggesting that the observed associations between similarity in terms of religious affiliation and similarity on the five domains may indeed be due to Christian beliefs rather than to spouses' similarity in terms of their religious affiliation.

For the two continuous background variables (i.e., age and education), we conducted two sets of multiple regressions to test whether similarity on these variables can predict couple similarity on other domains. In one set of regressions, we used husbands' age, wives' age and the interaction term for age as the predictors. In the other set, we entered husbands' education, wives' education, and the interaction term for education as predictors. We conducted separate analyses for every individual-difference domain assessed. If social homogamy is indeed the primary reason for couple similarity, then the interaction terms for age and education should significantly predict couple similarity. In the set of 21 regressions testing for age similarity effects, none of the interaction terms made any significant contributions. The regressions testing for educational similarity effects showed three significant interactions. However, all of them were small in size and negative in direction, suggesting that greater educational similarity may be associated with less similarity in affectivity, attachment anxiety, and ego-resiliency. Given the overall pattern of results for the four background domains for which we have observed some assortment, there appears to be little evidence that social homogamy can account for couple similarity on the other individual-difference domains assessed.

Convergence. To test whether couple similarity might be due to convergence over time rather than to initial selection, we examined whether relationship length can predict couple similarity. If couple similarity is mostly due to convergence, then spouses who have been together longer should be more similar to each other. We had two indicators of relationship length: how long spouses had known each other and how long they had been in a romantic relationship. Out of the 42 correlations we computed (similarity on 21 domains and two indicators of relationship length), only two significant effects emerged, and one of them was negative in direction (similarity on emotion expression and length of acquaintanceship, $r = .13$; similarity of Openness and relationship length, $r = -.18$, $p < .05$). These findings suggest that couple similarity is most likely not due to convergence.

Is Couple Similarity Related to Marital Satisfaction?

Next, we investigate the similarity–satisfaction link. Even though the main focus of the current study was on couple-centered similarity, we were in a unique position to compare the relative predictive power of the profile-based similarity with that of the absolute difference-score-based similarity. On the most general level, we predicted that the more similar spouses are to each other (irrespective of how similarity is indexed), the higher their marital quality and satisfaction should be. However, we hypothesized that the profile-based similarities would be stronger and more consistent predictors of relationship quality than the difference-score-based similarities.

Table 3 shows the correlations between the two similarity indices and observer and self-report marital satisfaction indicators for each of the domains. We only report the correlations for the observer ratings and the composite self-report index of relationship quality, because the four more specific measures of aspects of relationship quality showed highly similar patterns of results. Even though the average effects for the individual scales (marital adjustment = .15, sexual satisfaction = .19, conflict = −.19, and severity of disagreements = −.16) were smaller than the average effect for the more reliable composite measure (average $r = .24$), the effects replicated well across all measures. We can quantify this replication by intercorrelating the effects we obtained for each of the four scales across the 21 domains. The intercorrelations among these effects were quite high for both men (average $r = .73$) and women (average $r = .77$), indicating that each measure showed a highly similar pattern of correlates with couple similarity across domains. Moreover, the pattern of effects for the individual scales replicated the pattern of effects for the composite index for husbands (average $r = .89$) and wives (average $r = .86$), providing additional evidence that the four measures designed to capture different aspects of relationship quality were similarly related to couple similarity across domains.

Accordingly, all of the subsequent satisfaction analyses focus on the more robust self-report-based composite index of satisfaction and on the observer ratings of marital quality derived from the videotaped interaction tasks (see Table 3). It is noteworthy that the average similarity–satisfaction effect for the observer measure ($r = .17$) was quite similar to effects obtained for the individual self-report measures (.15–.19). This is a remarkable finding, because the couple similarity indices are entirely based on participants' self-reports; this cross-method replication therefore provides strong evidence that the observed findings are not due to any response biases or shared method variance. Note also that the observed pattern of effects for the observer index was similar to that obtained for the self-report measures: The correlation between the observer effects and the composite self-report effects was .72 for husbands and .86 for wives.

Although effects varied from domain to domain, the results in Table 3 provide solid support for the proposition that couple similarity is indeed associated with better relationship quality. Across both husbands and wives and across both observer and self-report satisfaction indices, there is consistent evidence that similarity on attachment-related domains is the best predictor of relationship quality. More specifically, similarity on the overarching attachment and working model domains as well as on the more narrow subdomains of attachment avoidance and the fearful–secure, other-model, and dismissing–preoccupied working model

Table 3
Correlations Between Profile-Based (Pro) and Difference Score-Based (Diff) Similarity and Spouses' Observer and Self-Report Indicators of Marital Quality

	Husband satisfaction				Wife satisfaction			
	Observer		Self-report		Observer		Self-report	
Individual difference domain	Pro	Diff	Pro	Diff	Pro	Diff	Pro	Diff
Attitude domains								
Values	.16**	−.10	.15*	−.12*	.11	−.07	.09	−.08
Political attitudes	.12*	−.15*	.02	.01	.08	−.10	.03	−.07
Religiosity	.03	−.11	−.01	−.10	.02	−.09	.02	−.08
Mean	**.10**	**−.12**	**.05**	**−.07**	**.07**	**−.09**	**.05**	**−.08**
Overarching personality domains								
Big Five	.20**	−.04	.36**	−.17**	.21**	−.05	.31**	−.13*
PANAS	.18**	−.09	.29**	−.13**	.16**	−.07	.31**	−.16**
Emotion expression	.06	−.09	.24**	−.01	.09	−.10	.28**	−.04
Attachment	.28**	−.19**	.36**	−.20**	.28**	−.18**	.48**	−.26**
Working models	.29**	−.17**	.43**	−.24**	.27**	−.15*	.43**	−.26**
Mean	**.20**	**−.12**	**.34**	**−.15**	**.20**	**−.11**	**.36**	**−.17**
Specific personality domains								
Extraversion	.03	.03	.06	−.05	.04	.02	.07	−.01
Neuroticism	.09	−.04	.11	.04	.13*	−.07	.16**	−.13*
Agreeableness	.23**	−.09	.29**	−.12*	.20**	.01	.33**	−.10
Conscientiousness	.02	.06	.24**	−.16**	−.04	.01	.03	.06
Openness	.15*	−.04	.18**	−.17**	.18**	−.10	.17**	−.14*
Avoidance	.26**	−.18**	.30**	−.29**	.25**	−.15*	.42**	−.21**
Anxiety	.13*	−.10	.18**	−.04	.17**	−.11	.21**	−.16**
Fearful–secure	.22**	−.14*	.41**	−.24**	.21**	−.14*	.31**	−.17**
Self-model	.12*	−.07	.24**	−.08	.11	−.09	.26**	−.16**
Other-model	.25**	−.16**	.37**	−.27**	.23**	−.14*	.33**	−.17**
Dismissing–preoccupied	.24**	−.08	.16**	−.03	.26**	−.03	.26**	−.16**
Ego-resiliency	.23**	−.10	.27**	−.13*	.18**	−.11	.29**	−.17**
Disinhibition	.21**	.00	.29**	−.15*	.18**	.00	.22**	−.04
Mean	**.17**	**−.07**	**.24**	**−.13**	**.16**	**−.07**	**.24**	**−.12**

Note. N = 266–290. Means are highlighted with boldface type. PANAS = Positive and Negative Affect Schedule.
* $p < .05$. ** $p < .01$.

dimensions showed substantial correlations with satisfaction indicators. Other domains that showed robust similarity–satisfaction effects were the overarching Big Five domain, Agreeableness, ego-resiliency, and disinhibition. It is interesting to note that similarity on attitude-related domains was not associated with satisfaction.

Profile and difference score similarity. Although both profile and difference score similarity were related to satisfaction, we see clear differences in the size of the effects for each (see Table 3): Profile similarity was more strongly and more consistently associated with marital satisfaction indicators than the difference scores, and this pattern held across domains and across husbands and wives. Overall, the average size of effect for the profile-based similarity was about twice as large as that for the difference-score-based similarity.

To explicitly test the relative and independent contributions each of the similarity indices made, we conducted a series of regressions with both indices entered simultaneously as predictors of satisfaction. Because the profile index primarily captures similarity in the shape of responses, whereas the difference score captures mean level similarity, it is possible that the two indices might interact. To test this possibility, we also included the interaction term for the two similarity indices in the regressions. Tables 4 and 5 present these regression results for husbands and wives, respectively. For all regressions involving the 18 personality-related domains, we obtained two consistent findings that replicated across husbands and wives and across self and observer satisfaction indices. First, when only one of the indices made a statistically significant contribution (69% of the time for husbands and 72% for wives), it was always the profile-based index. Second, when both similarity indices made significant and independent contributions to satisfaction (11% of the time for husbands and 6% for wives), the profile similarity was always the stronger predictor. For values, political attitudes, and religiosity, neither similarity index showed substantial effects (Bs ≤ .17). With regard to interactions between profile similarity and difference scores, we only found a total of 10 significant interactions (out of 84 regressions), and these effects tended to be small (only 2 effects were above .15). Moreover, with the exception of the results for avoidance for husbands, these interaction effects did not replicate across self-report and observer measures of satisfaction. This pattern of findings suggests that the effects of profile similarity do not depend on mean-level similarity.

Table 4
Regressions Predicting Husbands' Observer and Self-Report Indicators of Marital Quality From Profile-Based (Pro) and Difference Score-Based (Diff) Similarity and Their Interaction

	Observer-based satisfaction			Self-report satisfaction		
Individual difference domain	Pro	Diff	Interaction	Pro	Diff	Interaction
Attitude domains						
Values	.15*	−.08	.01	.14*	−.09	.04
Political attitudes	.06	−.17*	−.10*	.03	.01	−.04
Religiosity	−.01	−.15*	−.11	−.04	−.13	−.09
Mean	**.07**	**−.13**	**−.07**	**.04**	**−.07**	**−.03**
Overarching personality domains						
Big Five	.30**	.17*	.05	.43**	.09	−.04
PANAS	.19*	.02	.00	.36**	.03	−.07
Emotion expression	.01	−.07	.06	.28**	.04	−.05
Attachment	.27**	−.05	−.03	.39**	−.03	−.09*
Working model	.35**	.06	−.03	.58**	.10	−.09*
Mean	**.22**	**.03**	**.01**	**.41**	**.05**	**−.07**
Specific personality domains						
Extraversion	.08	.06	−.02	.06	.03	.07
Neuroticism	.12	.03	−.02	.30**	.25*	−.01
Agreeableness	.30**	.03	−.07	.35**	.08	−.02
Conscientiousness	.11	.07	−.09	.24**	−.06	−.08
Openness	.17*	−.01	−.08	.13*	−.13	−.04
Avoidance	.33**	−.09	−.10*	.36**	−.31**	−.19**
Anxiety	.10	−.09	−.03	.18**	.00	−.05
Fearful–secure	.22**	−.05	−.03	.45**	−.12	−.14**
Self-model	.13	.01	−.01	.37**	.10	−.05
Other-model	.37**	.03	−.05	.62**	−.05	−.16**
Dismissing–preoccupied	.36**	.14	−.03	.24**	.17*	.05
Ego-resiliency	.24**	.02	−.02	.28**	.04	.02
Disinhibition	.32**	.13	−.07	.31**	.04	.02
Mean	**.22**	**.02**	**−.05**	**.30**	**.00**	**−.04**

Note. $N = 266–290$. Profile and difference score similarities were z scored before computing the interaction terms. Values are unstandardized regression coefficients. Means are highlighted with boldface type. PANAS = Positive and Negative Affect Schedule.
* $p < .05$. ** $p < .01$.

In sum, this set of findings indicates that spouse similarity on personality domains is associated with marital satisfaction, and similarity on attitude domains is not. Furthermore, profile-based similarity appears to be a much better predictor of relationship quality and satisfaction than absolute difference-score-based similarity.

Is Similarity on Some Individual Difference Domains More Important to Marital Satisfaction Than Similarity on Others?

Because the present study assessed similarity on a broad range of individual-difference domains, we were able to test which specific domains of spouse similarity make the largest independent contributions to marital quality. To examine this question, we conducted multiple regressions predicting husbands' and wives' observer- and self-report-based satisfaction from similarity indices on the various domains. We first conducted regressions to test the relative importance of the five overarching personality domains and then tested the subdomains. We did not include values, religiosity, and political attitudes, because the correlational analyses showed that similarity on these domains was not predictive of satisfaction.

To test which of the overarching domain similarities were most important, we entered couple similarity in terms of the Big Five characteristics, affectivity, emotion expression, attachment, and internal working models simultaneously into the equation. Because we have four different relationship outcomes (self-report and observer-based indices for husbands and wives), we conducted parallel regressions for each. As shown in Table 6, the results replicated across all four regression analyses: Similarity in terms of the Big Five, attachment, and working model dimensions made significant and independent contributions to predicting both self-report and observer satisfaction for husbands and for wives. The beta weights averaged across the four sets of regressions were .15, .23, and .20 for the Big Five, attachment, and working model dimensions, respectively. Similarity in terms of affectivity and emotion expression, however, did not make statistically significant contributions. It is noteworthy that similarity on these broad, overarching personality domains accounted for a substantial amount of variance in both the self-report and the observer indices of satisfaction (13%–30%).

Table 5
Regressions Predicting Wives' Observer and Self-Report Indicators of Marital Quality From Profile-Based (Pro) and Difference Score-Based (Diff) Similarity and Their Interaction

	Observer-based satisfaction			Self-report satisfaction		
Individual difference domain	Pro	Diff	Interaction	Pro	Diff	Interaction
Attitude domains						
Values	.10	−.05	.03	.08	−.04	.10
Political attitudes	.03	−.14	−.09	.01	−.05	−.01
Religiosity	−.01	−.11	−.04	−.01	−.12	−.11
Mean	**.04**	**−.10**	**−.03**	**.03**	**−.07**	**−.01**
Overarching personality domains						
Big Five	.30**	.13	−.03	.39**	.11	−.06
PANAS	.19*	.02	−.02	.38**	.00	−.11*
Emotion expression	.03	−.05	.08	.30**	.06	−.00
Attachment	.28**	−.03	−.02	.50**	.07	.04
Working model	.36**	.04	−.07	.51**	.10	−.01
Mean	**.23**	**.02**	**−.01**	**.42**	**.07**	**−.03**
Specific personality domains						
Extraversion	.09	.03	−.08	.12	.08	.01
Neuroticism	.16	.07	.04	.15	.00	.03
Agreeableness	.36**	.13	−.12**	.44**	.14	−.04
Conscientiousness	−.03	−.08	−.10	.11	.11	−.03
Openness	.17*	−.02	.02	.13*	−.12	−.08
Avoidance	.30**	−.02	−.04	.52**	.08	−.04
Anxiety	.14*	−.13	−.11	.17**	−.15*	−.04
Fearful–secure	.19**	−.05	−.02	.34**	−.05	−.06
Self-model	.13	−.06	−.05	.31**	−.01	−.05
Other-model	.36**	.05	−.05	.59**	.15	−.08*
Dismissing–preoccupied	.46**	.21*	−.07	.26**	.04	.04
Ego-resiliency	.18*	−.05	−.05	.28**	−.05	−.06
Disinhibition	.29**	.15	−.04	.30**	.13	−.02
Mean	**.22**	**.02**	**−.05**	**.29**	**.03**	**−.03**

Note. $N = 266–290$. Profile and difference score similarities were z scored before computing the interaction terms. Values are unstandardized regression coefficients. Means are highlighted with boldface type. PANAS = Positive and Negative Affect Schedule.
* $p < .05$. ** $p < .01$.

Given these regression results, an interesting next question concerns whether some of the Big Five, attachment, or working model subdomains are more important to predicting marital quality than others. To examine this question, we again conducted parallel regression analyses to predict the four satisfaction indices. However, this time we conducted three sets of analyses for each of the four outcome variables: We predicted satisfaction from similarity on (a) the Big Five dimensions, (b) the two attachment dimensions, and (c) the four internal working model dimensions (see Table 6). Once again, our findings replicated well across the self-report and observer measures and across husbands' and wives' satisfaction: Among the Big Five dimensions, similarity on Agreeableness and Openness made significant contributions; for the attachment dimensions, both avoidance and anxiety tended to be significant predictors; and for the working model dimensions, the other-model and the dismissing–preoccupied dimensions tended to predict significantly. Similarity on these dimensions also explained a substantial amount of spouses' satisfaction (7%–20%).

What Is the Nature of the Similarity–Satisfaction Effect?

The above analyses show that couple similarity in terms of a broad range of personality domains is predictive of both spouses' marital satisfaction. However, the link between couple similarity and satisfaction may not be strictly linear in nature. To test for potential curvilinear similarity effects, we conducted multiple regressions with both linear and quadratic terms entered as predictors of marital satisfaction. As before, we conducted parallel sets of regressions for each of the four outcome variables, including self and observer measures for both husbands and wives. Each set of regressions included a separate analysis for each of the 21 domains. The similarity indices and the satisfaction indicators were z scored before analysis, and the quadratic terms were formed by squaring the z-scored linear terms. Tables 7 and 8 show the regression results for husbands and wives, respectively. Consistent with Aiken and West's (1991) recommendations, we report the unstandardized regression coefficients, as is true for any regressions that contain multiplicative terms (e.g., quadratic terms, interaction terms).

These regression findings mirror the correlational findings quite closely: The attitude-related domains did not account for much variance, whereas similarity on attachment and working models and on the avoidance, the fearful–secure, and the other-model dimensions explained most variance in self-report (12%–20%) and observer (5%–9%) satisfaction. Considering that we are predicting

Table 6
Regressions Predicting Husbands' and Wives' Observer- and Self-Report-Based Marital Satisfaction From Couple Similarity on Multiple Domains

	Husband satisfaction		Wife satisfaction	
Individual difference domain	Observer	Self-report	Observer	Self-report
Overarching personality domains				
Big Five	.13†	.21**	.15†	.13*
PANAS	−.09	−.05	−.10	.02
Emotion expression	−.07	.07	−.07	.05
Attachment	.18*	.19**	.22**	.33**
Working model	.23*	.20**	.18†	.19*
R^2	*.13***	*.22***	*.13***	*.30***
Big Five				
Extraversion	−.03	−.02	−.02	−.01
Neuroticism	.05	.07	.09	.12*
Agreeableness	.22**	.22**	.19**	.32**
Conscientiousness	−.04	.18**	−.09	−.07
Openness	.14*	.16**	.17**	.13*
R^2	*.08***	*.14***	*.08***	*.15***
Attachment dimensions				
Avoidance	.25**	.27**	.22**	.39**
Anxiety	.08	.13*	.13*	.13*
R^2	*.07***	*.11***	*.08***	*.19***
Working model dimensions				
Fearful–secure	.12	.30**	.11	.13†
Self-model	−.06	−.00	−.07	.08
Other-model	.16*	.23**	.13†	.20**
Dismissing–preoccupied	.17**	−.02	.21**	.12*
R^2	*.10***	*.20***	*.10***	*.16***

Note. $N = 266–290$. Coefficients are standardized beta weights. R^2s are highlighted with italics. PANAS = Positive and Negative Affect Schedule.
† $p < .10$. * $p < .05$. ** $p < .01$.

satisfaction from similarity on only one domain at a time, these percentages are quite impressive.

Turning to the curvilinear effects, we note that husbands had more than three times as many statistically significant quadratic effects than wives did (i.e., 18 for husbands and only 5 for wives). In fact, for husbands, 12 of the 18 effects replicated across the self-report and the observer indicators of marital quality, suggesting that these are robust effects. It is interesting to note that four of these effects involved similarity on attachment-related characteristics: overarching attachment, avoidance, and the fearful–secure and other-model dimensions. The remaining two replicated curvilinear effects were for Conscientiousness and for political attitudes. The wives had too few quadratic effects to show replications across the observer and self-report indices. However, it is noteworthy that 4 of the 5 significant quadratic effects we observed for the wives actually replicated effects we obtained for the husbands. Specifically, for the observer-based satisfaction measure, both wives and husbands showed curvilinear effects for emotion expression and political attitudes, and for the self-report index, they showed curvilinear effects for affectivity and the fearful–secure dimension for the self-report index; note also that the political attitudes and the fearful–secure effects were among those that replicated across both observer and self-report indices for the husbands.

This degree of replication across husbands and wives and across self and observer indicators of marital quality suggests that these effects are reliable, and it is therefore important to better understand the exact nature of these effects. One way to accomplish that is to graph the curvilinear effects. Figure 2 shows the effects for attachment similarity for husbands and wives and for both satisfaction indicators. We chose to graph the attachment similarity effects because (a) they replicated across both satisfaction indices, (b) they showed different effects for husbands and wives, and (c) the significant curvilinear effects were representative of most quadratic effects we observed; specifically, the quadratic term was positive in direction and the linear effect was also significant. Consequently, the most appropriate interpretation of these curvilinear effects is that greater similarity does predict greater satisfaction but that this association does not hold across the whole range of spouse similarities: For couples of above average similarity, greater similarity was associated with greater satisfaction for both husbands and wives. However, for couples of below average similarity, less similarity was not associated with the expected (linear) decrease in satisfaction for husbands (Figure 2, Panels A and B). For wives, the association between attachment similarity and satisfaction was linear across the whole range of similarities (Figure 2, Panels C and D).

Finally, it is noteworthy that the only statistically significant curvilinear effects that had negligible linear terms were those that were negative in direction. Two of these effects were replications, involving similarity in terms of emotion expression predicting husband and wife observer-based satisfaction. The third effect involved predicting husbands' self-report satisfaction from Extraversion. These effects resemble a somewhat more symmetrical inverted U-shape, indicating that moderate similarity appears to be associated with the highest level of satisfaction.

Table 7
Regressions Predicting Husbands' Observer- and Self-Report-Based Marital Satisfaction From Couple Similarity

	Observer-based satisfaction			Self-report satisfaction		
Profile similarity	Linear	Quadratic	R^2	Linear	Quadratic	R^2
Attitude domains						
Values	.14**	−.04	.03*	.20**	.05	.03*
Political attitudes	.15**	.12**	.03**	.06	.12**	.02*
Religiosity	.10	.07	.00	.03	.04	.00
Overarching personality domains						
Big Five	.19**	−.06	.05**	.37**	.03	.13**
PANAS	.20**	.02	.03**	.44**	.12**	.11**
Emotion expression	−.03	−.07*	.02*	.33**	.07*	.07**
Attachment	.39**	.09*	.09**	.56**	.16**	.18**
Working model	.35**	.05	.09**	.54**	.09*	.19**
Specific personality domains						
Extraversion	.03	.01	.00	.05	−.14*	.02*
Neuroticism	.09	.01	.01	.15**	.14*	.03**
Agreeableness	.26**	.03	.05**	.35**	.06	.09**
Conscientiousness	.11	.13*	.02	.32**	.12*	.07**
Openness	.15**	.00	.02*	.23**	.09	.04**
Avoidance	.45**	.09*	.09**	.72**	.19**	.17**
Anxiety	.12	−.01	.02	.17**	−.02	.03**
Fearful–secure	.36**	.10*	.06**	.58**	.13**	.19**
Self-model	.08	−.02	.01	.35**	.07	.06**
Other-model	.46**	.09*	.08**	.75**	.15**	.19**
Dismissing–preoccupied	.28**	.03	.06**	.15*	−.01	.03*
Ego-resiliency	.22**	−.00	.05**	.30**	.04	.08**
Disinhibition	.23**	.07	.05**	.29**	.01	.08**

Note. $N = 266–290$. Profile similarity was z scored before computing the quadratic terms. Unstandardized coefficients are reported. PANAS = Positive and Negative Affect Schedule.
* $p < .05$. ** $p < .01$.

Does Similarity Make Additional Contributions Above and Beyond Spouses' Self-Ratings?

Because assortative mating researchers using the VCA generally find that absolute difference-score-based similarity no longer tends to make significant contributions to explaining satisfaction after husbands' and wives' self-ratings on the corresponding domains have been controlled, we conducted similar regressions for profile-based similarities. We entered husbands' self-ratings, wives' self-ratings, and both the linear and quadratic terms of profile similarity on the same domain simultaneously into a multiple regression to predict one of the four satisfaction outcome measures (self and observer satisfaction for husbands and wives). Note that when conducting regressions for the overarching domains, we entered husbands' and wives' self-ratings on all dimensions that are incorporated when overarching similarities are computed. These regressions thus are extremely conservative tests for the unique contribution of profile similarity to satisfaction. We obtained the following results: For husbands, 48% of the observer effects and 69% of the self-report effects remained significant; for wives, 38% of the observer and 30% of the self-report effects remained significant.

An unexpected result of these analyses was that for both husbands and wives and for self- and observer-based satisfaction indices, the linear profile similarity effects for anxiety, the dismissing–preoccupied dimension, and disinhibition consistently made significant contributions to satisfaction above and beyond self-ratings. It seems that spouse similarity on these dimensions may be particularly important to satisfaction. Overall, these regression results suggest that profile-based similarity of spouses is a robust predictor of marital satisfaction and that this association cannot simply be accounted for by spouses' self-ratings.

How Much Variance in Marital Satisfaction Can Be Accounted for by Similarity and Self-Ratings Across All Domains?

So far, our interest has primarily been in identifying those individual-difference domains for which spouse similarity is particularly important to marital satisfaction. However, these effects, including those based on linear and curvilinear profile similarity and spouses' self-ratings, do not operate in isolation; that is, all of these individual differences work together in influencing marital satisfaction. One way to estimate what this type of overarching effect on marital well-being might be is to conduct hierarchical regressions in which we predicted marital satisfaction from (a) all of the linear similarity effects (Step 1); (b) all of the curvilinear similarity effects (Step 2); and (c) the husbands' and wives' self-ratings on all 16 domains, including the 3 attitude and 13 specific personality domains (Step 3). We conducted four parallel, three-step regressions corresponding to the four marital satisfaction indicators.

Table 8
Regressions Predicting Wives' Observer-Based and Self-Reported Marital Satisfaction From Couple Similarity

	Observer-based satisfaction			Self-report satisfaction		
Profile similarity	Linear	Quadratic	R^2	Linear	Quadratic	R^2
Attitude domains						
Values	.10	−.02	.01	.10	.01	.01
Political attitudes	.10	.11*	.02*	.06	.09	.01
Religiosity	.06	.04	.00	.09	.08	.00
Overarching personality domains						
Big Five	.20**	−.04	.05**	.33**	.05	.10**
PANAS	.20*	.03	.03*	.43**	.10*	.11**
Emotion expression	−.01	−.08*	.02*	.31**	.02	.08**
Attachment	.34**	.04	.08**	.46**	−.01	.23**
Working model	.34**	.06	.08**	.46**	.02	.19**
Specific personality domains						
Extraversion	.05	.08	.01	.07	−.01	.01
Neuroticism	.10	−.08	.02*	.17**	.04	.03*
Agreeableness	.23**	.04	.04**	.33**	.00	.11**
Conscientiousness	.03	.10	.01	.09	.09	.01
Openness	.19**	.01	.03**	.24**	.15**	.05**
Avoidance	.28**	.01	.06**	.45**	.01	.18**
Anxiety	.14*	−.03	.03*	.19**	−.02	.05**
Fearful–secure	.29**	.07	.05**	.46**	.11**	.12**
Self-model	.19*	.05	.02	.38**	.08	.07**
Other-model	.37**	.06	.06**	.46**	.05	.12**
Dismissing–preoccupied	.32**	.06	.07**	.29**	.03	.07**
Ego-resiliency	.20**	.02	.03**	.32**	.06	.09**
Disinhibition	.20**	.05	.04**	.23**	.03	.05**

Note. $N = 266–290$. Profile similarity was z scored before computing the quadratic terms. Unstandardized coefficients are reported. PANAS = Positive and Negative Affect Schedule.
* $p < .05$. ** $p < .01$.

The results were as follows. For husbands' self-reported satisfaction, all predictors together were able to account for 58% of the total variance, with linear similarity accounting for 29%, curvilinear similarity for 15%, and spouses' self-ratings for an additional 14%. For wives' satisfaction self-ratings, the corresponding percentages of variance accounted for were 60% of the total variance, with 34% (linear), 5% (curvilinear), and 21% (self-ratings) coming from each of the individual steps of the regression. For husbands' observer-rated marital satisfaction the corresponding percentages were 42% (total variance), with 21% (linear), 6% (curvilinear), and 15% (self-ratings). Finally, the corresponding percentages for wives' observer-based satisfaction were 44% (total variance), 20% (linear), 3% (curvilinear), and 21% (self-ratings). These are remarkable effects. The amount of variance we can explain in the observer ratings is particularly impressive given that there is absolutely no overlap in method variance that could potentially contribute to an overestimation of the effect.

Discussion

Summary of Key Findings

Research on assortative mating has focused primarily on two questions. One is mate selection—that is, do individuals tend to select similar or opposite others to be their partners? The other is marital success—that is, is spouse similarity important to marital quality? The current research presents one of the most comprehensive studies of these questions to date. Using a couple-centered approach and assessing a large sample of newlyweds on a broad range of individual difference domains, we found evidence for differential assortment, with strong similarity on attitudes, religiosity, and values, and little or no similarity on personality-related domains such as the Big Five, affectivity, and attachment. Additional analyses suggested that the observed similarity of spouses is not likely due to convergence over time or social homogamy.

With regard to the second major question—the similarity–satisfaction link—we found spouse similarity on personality-related domains to be a robust predictor of self-report and observer-based marital quality, and these findings replicated across husbands and wives. This replication, particularly across the observer measure of satisfaction, is important because it ensures that any observed similarity–satisfaction link cannot be due to participants' response biases, such as socially desirable responding or extreme response tendencies. We also found consistent evidence for curvilinear similarity effects on marital quality, and our results clearly show profile-based similarity to be a consistently stronger predictor of satisfaction than difference-score-based similarity. Finally, we were able to explain a substantial amount of variance in self-reported (59%) and observer-based (43%) marital satisfaction when we entered all of the predictors, including linear and curvilinear similarity effects as well as spouses' self-ratings, into a

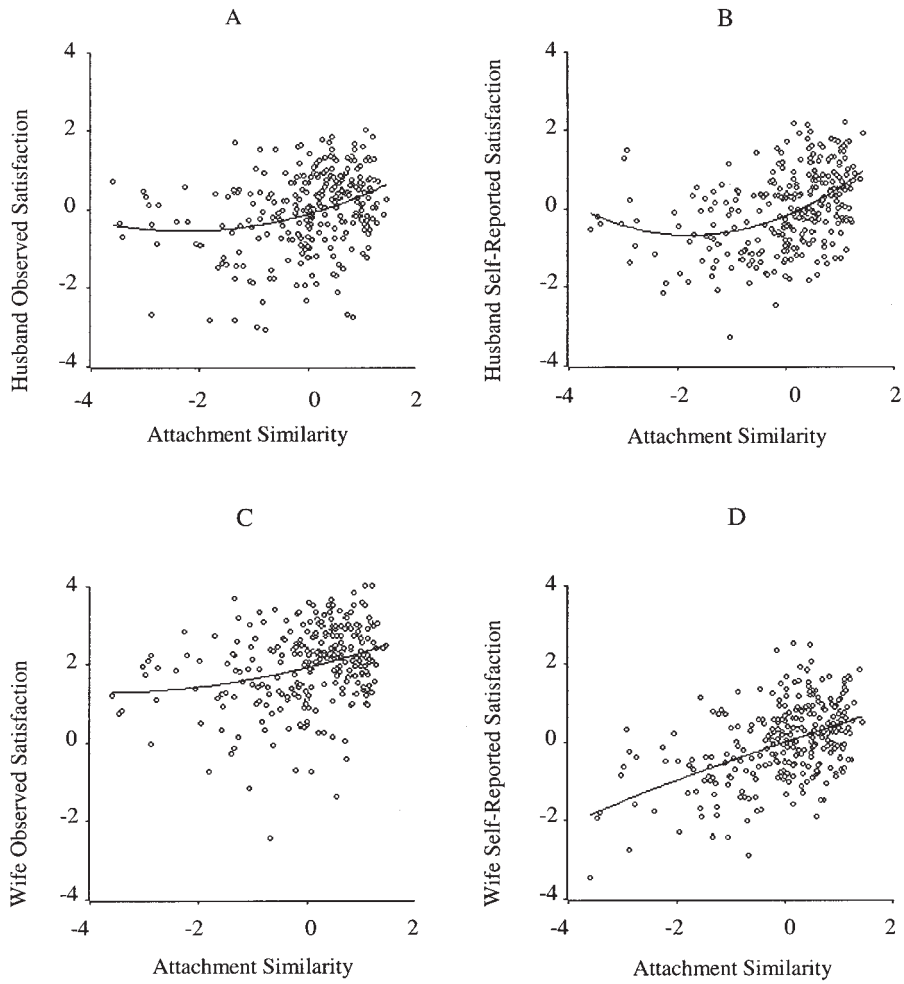

Figure 2. The relationship between attachment similarity and observer and self-report indices of marital quality for husbands and wives. Both predictors and outcomes were z scored.

regression. Note that for self-reported satisfaction, approximately 42% of variance was accounted for by the similarity effects; for the observer index, about 25% of variance was accounted for by similarity. These are impressive effects in light of the fact that there are certainly many other factors that impact husbands' and wives' marital satisfaction.

Mate Selection

Whether individuals select those who are similar or opposite to themselves as a spouse can have important genetic and social consequences (e.g., Caspi & Herbener, 1993; Thiessen et al., 1997). For example, if spouses are similar to each other on a trait with a genetic component, their children may, in turn, be more similar to each other and to their parents than they would be under conditions of random mating. In terms of social consequences, similar spouses may create more homogeneous marital and rearing environments that may well have important consequences for their own and their children's development. Moreover, distinct patterns of assortative mating may have consequences for relationship development and satisfaction over time. Given these potentially wide-ranging implications of assortative mating, the study of systematic patterns in mate selection has been an important and long-standing research topic.

Along the lines of previous findings (for a review, see Berscheid & Reis, 1998), results from our study provide consistent evidence for spouse similarity but none for complementarity: On 19 of the 21 domains under investigation, real couples were more similar than randomly paired couples, and a sign test showed that this pattern of results was not likely due to chance. These findings suggest that similarity is clearly more important than complementarity in mate selection.

Differential assortment. However, when we compare the magnitude of the similarity correlations observed for real couples with those observed for random couples, the evidence for similarity is much more tempered: Real couples, when compared with random couples, only showed substantial and statistically significant similarity on attitudes, religiosity, and values but not on personality-related domains. This pattern of results is consistent with past assortative mating research as well as with attraction research: Whereas there is overwhelming evidence that attitudinal similarity is reliably predictive of attraction, there is much more mixed support for the attractiveness of personality similarity (e.g.,

Klohnen & Luo, 2003). Given this set of findings, the differential degree of assortment we observed suggests that individuals do, in fact, end up marrying partners with similar attitudes and values but not those with similar personality characteristics.

We cannot be certain, however, how this pattern of differential assortment comes about: Is it due to active and initial selection during the earliest parts of relationship formation, or is it due to other processes, such as social homogamy, convergence, or the attrition of couples whose relationships ended before reaching the newlywed stage? We were able to conduct analyses to test evidence for the social homogamy or convergence hypotheses but did not find evidence for either process; this finding is consistent with the results from previous variable-centered research. However, it is important to keep in mind that our sample was relatively homogeneous in terms of background variables and that we did not have a longitudinal design. Consequently, our analyses of these two processes are less than ideal.

The current study did not allow us to test the possibility that attrition of couples before the newlywed stage may have resulted in the pattern of differential assortment we observed here. However, given that the pattern of findings obtained in this study of newlyweds is consistent with that observed by attraction researchers, we are leaning toward the initial selection explanation of differential assortment results rather than the selective attrition explanation. Nevertheless, ultimately only research specifically designed to study relationship development in its most initial stages can differentiate between these alternative processes.

However, irrespective of how this pattern of differential assortment comes about, it is important to consider possible reasons for why attitude and value similarity may be important in mate selection whereas personality similarity appears not to be. Given that the most active selection is likely to occur at the beginning of relationships, characteristics that are most visible and salient during that stage of the relationship might show the greatest selection pressure. Attitudes and values, compared with personality-related characteristics, are much more fundamental to the way in which individuals lead their lives. As a consequence, attitudes and values are likely to be more visible and to be communicated more clearly early on in the relationship formation process. Furthermore, because attitudes and values are so basic to how individuals live their lives, selecting a partner who is similar on such domains is likely to be important for the relationship to progress. Personality-related characteristics, on the other hand, are likely to influence individuals' lives more indirectly and subtly by affecting the typical ways in which individuals go about their daily living. Personality characteristics are therefore also likely to be less visible during the early stages of relationship development and will take more time to emerge more clearly.

Another possible explanation for the differential assortment we observed concerns how psychologically rewarding attitude, as opposed to personality similarity, is likely to be. Most individuals are likely to hold their ideal attitudes and values; however, they are much less likely to possess their most desired personality characteristics. Whereas it is easy to understand why partner similarity in terms of individuals' well-liked characteristics is likely to be positively reinforcing, it is not apparent why similarity in terms of disliked characteristics should be psychologically rewarding (Klohnen & Luo, 2003; Klohnen & Mendelsohn, 1998). Consistent with this reasoning, attitude and value similarity should be desirable, and indeed, that is what we observed. Personality similarity, on the other hand, may depend on how individuals feel about what they are like, and indeed, we found essentially no evidence for above average similarity on personality-related domains. Although we cannot examine these possible explanations for the observed pattern of assortment in the current study, we feel they provide fruitful avenues for future research.

Couple Similarity and Marital Quality

Our study presents one of the most comprehensive examinations of the similarity–satisfaction link. The observed similarity–satisfaction correlations suggest that similarity on personality-related domains was strongly associated with satisfaction, whereas similarity on attitude-related domains was not. This is an intriguing pattern of findings when considered in conjunction with the just reviewed assortative mating results: Spouses showed substantial similarity on attitude-related domains, but this similarity does not appear to be related to satisfaction; spouses were no more similar than randomly paired couples on personality-related domains, but this similarity appears to be important to satisfaction. We sought to quantify this inverse association by correlating the mean couple similarity we observed for the 21 domains with the observed magnitude of the similarity–satisfaction link for each of the domains. However, before computing these correlations, we needed to partial out the observed random couple (or base) similarity, because there were substantial differences in base similarity among the domains (see Table 2). When we computed the partial correlations between couple similarity and the observed similarity–satisfaction link across the 21 domains, we obtained substantial negative correlations for both husbands (partial $r = -.38$) and wives (partial $r = -.35$). These negative correlations provide strong evidence for the observation that the greater the couple similarity on any given domain, the less important that similarity appears to be to relationship quality. This is an intriguing and unexpected finding that warrants more detailed examination in future research. Below we consider possible explanations for this pattern of results.

Eysenck and Wakefield (1981) suggested that one reason attitude and value similarity is not related to satisfaction may be that couples show strong similarity on these domains, and the variances in similarity are therefore restricted; this restriction in range, in turn, results in small correlations with satisfaction. However, Eysenck and Wakefield did not examine this possibility empirically in their study. When we examined this hypothesis in the current study, we saw that the variances of the profile similarity correlations for attitudes, values, and religiosity did not appear restricted compared with the variances on the personality domains (see Table 2). In fact, religiosity had the largest variance of all domains and yet only had negligible correlations with the satisfaction indices. Therefore, restriction in range is not a viable explanation for the inverse relationship we observed between similarity and its importance to satisfaction.

We propose an alternative explanation of this curious finding: People may be attracted to those who have similar attitudes, values, and beliefs and even marry them (at least in part) on the basis of this similarity. However, once individuals are in a committed relationship, it may be primarily personality similarity that influences marital happiness. This suggests that attitude and value similarity may play a different role in relationship development than personality similarity does. For example, whereas similarity

in attitudes and values appears to be important early on in the relationship and may play an important role in relationship progression, personality similarity becomes more important as the relationship reaches greater commitment. Our empirical findings and this proposition are certainly consistent with "filter" or "process" theories of relationship development (e.g., Kerckhoff & Davis, 1962; Murstein, 1980) that hold that patterns of similarity and complementarity on different individual-difference domains play differential roles at different points in the relationship development process.

As discussed above, there are several reasons (visibility, salience, and psychological reward value) why similarity in terms of attitudes and values may influence individuals' partner choices early in the relationship. However, given the substantial variances in value and attitude similarity we observed, it appears that not everybody is paired with a spouse who holds similar attitudes and values. Because of the visibility and saliency of attitudes and values, it is very likely that partners who are not similar on these domains are nevertheless aware of these differences from the outset and yet chose to marry each other anyway. It thus appears likely that attitudinal and value differences, when they exist, are part of a conscious decision to stay together on the basis of other important considerations. Personality-related characteristics, on the other hand, take much longer to be known and to be accurately perceived. Thus, they are not likely to play a more substantial role until later in the relationship development process. However, once individuals are in a committed relationship, it is difficult to ignore personality differences, because being in a committed relationship entails regular interaction and requires extensive coordination in dealing with the tasks, issues, and problems of daily living. Whereas personality similarity is likely to facilitate this process, personality differences may result in more friction and conflict in daily life. We currently do not have the data to examine these ideas; however, because of the importance of these issues to marital success and failure, future research designed to better understand these underlying processes is needed.

Curvilinear effects of similarity. In addition to examining the linear association between similarity and satisfaction, we also examined curvilinear relations to test for evidence of complementarity effects. We did find substantial evidence for nonlinear effects, although there seemed to be some gender differences. Wives only showed one third of the statistically significant curvilinear effects we observed for husbands. Nonetheless, the majority of the effects that did emerge were in line with those observed for the husbands. There was substantial evidence for replicated curvilinear effects on overall attachment, avoidance, the fearful–secure and other-model dimensions, Conscientiousness, and political attitudes. These curvilinear effects indicate that above average similarity was associated with greater satisfaction, whereas lower than average similarity was not associated with the decreases in satisfaction one would expect if the similarity–satisfaction link was purely linear in nature. The finding that husbands had substantially more curvilinear effects than wives suggests that similarity may play somewhat different roles with regard to husbands' and wives' relationship satisfaction: Whereas greater personality dissimilarity appears to have negative implications for wives' marital happiness, it does not for husbands. This finding is consistent with research on marital couples that has shown that wives tend to be the "barometer" of relationships (Floyd & Markman, 1983); that is, women, compared with men, tend to be more attuned to what goes on in the relationship (e.g., Acitelli, 1992; Antonucci, 1994), to think more about relationships once they are formed than men do (e.g., Martin, 1991), and to focus more on the internal dynamics of the relationship after it has been established (Burnett, 1987). Thus, the finding that men appear to be less sensitive to and affected by the more extreme levels of dissimilarity than women is consistent with the general idea that ongoing interactions for women tend to have stronger implications for the relationship and their satisfaction with it than is the case for men.

Importance of similarity to satisfaction when spouse self-ratings are controlled. In light of the general finding that difference-score-based similarity no longer tends to make significant contributions to satisfaction after spouses' self-ratings have been controlled, and given our finding that profile similarity was a stronger predictor of satisfaction than difference scores, we tested whether profile-based similarity continues to make contributions to satisfaction beyond spouses' self-ratings. Consistent with previous research that has included spouses' self-ratings, current results show that husbands' and wives' personality characteristics had a strong impact on their marital satisfaction ratings (e.g., Watson, Hubbard, & Wiese, 2000). This is not surprising, because individuals' marital happiness should be primarily a function of who they and their spouses are. However, even when we control for husbands' and wives' own personality characteristics, we find that profile similarity continued to make incremental contributions an average of 46% of the time. This is an important finding, because the vast majority of assortative mating researchers who have taken the VCA have concluded that spouse similarity is not important to satisfaction. The current research instead suggests that spouse similarity, as captured via the CCA, is a robust predictor of marital quality.

Importance of attachment and working model similarity to marital satisfaction. Several consistent and highly replicable substantive findings emerged when we tested the similarity effects: First, attachment and working models showed the strongest similarity–satisfaction effects and continued to be the most powerful predictors of satisfaction even when the other overarching domains were also included as predictors. Second, similarity on (a) avoidance and anxiety (attachment dimensions), (b) the other-model and the dismissing–preoccupied dimensions (internal working models), and (c) Agreeableness and Openness (Big Five) made statistically significant contributions to satisfaction in regression analyses. Subsequent analyses showed that similarity on Agreeableness was moderately correlated with similarity on avoidance (.26) and the other-model dimension (.42). Thus, with the exception of similarity on Openness, all of the specific personality domains for which spouse similarity mattered the most were related to individuals' attachment organization.

Finally, the regression analyses that tested the importance of profile similarity while controlling for spouses' self-ratings indicated that similarity on attachment anxiety, the dismissing–preoccupied dimension, and disinhibition consistently made independent contributions to satisfaction above and beyond self-ratings for both husbands and wives and for both observer- and self-report-based satisfaction indicators. These findings provide additional support for the fundamental importance of adult attachment to interpersonal functioning. These results also extend previous research in important ways: Specifically, they highlight that it is not only individuals' attachment styles and working models that

influence relationship quality but that husbands' and wives' similarity on these domains plays an important role as well.

Some Caveats and Limitations

When interpreting the effects of profile similarity on marital satisfaction, it is important to keep in mind that profile similarities on any given individual-difference domain only indicate that two individuals have a similar pattern of responses on the particular attribute of interest; it does not tell us how characteristic the attribute is of either of the two individuals. That is, the individuals could score high, moderate, or low on the attribute. A more detailed examination of the observed similarity effects is needed to draw specific conclusions about the exact nature of these effects.

More generally, when evaluating the results reported in this study it is important to consider several limitations of this research: First, the participants were at a particular stage in their relationships (i.e., newlyweds), and it will therefore be of interest to examine the degree to which the observed pattern of results generalizes to couples in earlier and later stages of relationship development. Second, although we assessed a wide range of individual-difference domains in this study, the impact of couple similarity on other domains (such as interests, habits, intelligence, attractiveness) certainly can also impact relationship satisfaction; in the current study we only focused on those domains that lend themselves to couple-centered analyses. Third, although we explicitly assessed a large sample of newlyweds to ensure that our results would be fairly generalizable to other newlywed populations, some of the findings reported here may be sample specific. For example, the fact that the vast majority of the participants were fairly well-educated and Caucasian with a Christian background restricted our ability to conduct a more rigorous test of the social homogamy hypothesis. It is important to be cautious when generalizing the current findings to other populations.

What Have We Learned From Taking a Couple-Centered Approach?

The VCA and CCA are two alternative approaches to studying assortative mating. However, whereas there are probably over 100 variable-centered studies on assortative mating to date, there are only 4 couple-centered studies. This imbalance is not surprising, because couple-centered analyses are more methodologically and computationally complex and, as a consequence, are more difficult to conduct and discuss. However, just as has been the case for other areas of study (e.g., research on agreement and accuracy [Funder & Colvin, 1997] or research on personality stability and change [Asendorpf & Van Aken, 1991]), recent relationship research that has adopted a CCA to studying interpersonal processes has proved to be extremely fruitful. Caspi and Herbener (1990), for example, linked couple similarity to greater personality continuity over time. Klohnen and Mendelsohn (1998) showed that individuals perceived their romantic partners as more similar to their ideal selves than they actually were. Murray, Holmes, Bellavia, Griffin, and Dolderman (2002) found that exaggerated perceived similarity had positive relationship outcomes for married couples but not for dating couples. Klohnen and Luo (2003) found that perceptual self-similarity and perceptual ideal self-similarity are both important factors in the initial attraction process. Zentner (2004) provided evidence for the importance of ideal mate concepts in relationship satisfaction and stability.

The research reported here also suggests that the CCA can indeed provide a more complete understanding of assortative mating and its consequences for marital quality than the VCA alone. It is important to note that our couple-centered analyses replicated basic assortative mating findings obtained via the VCA. For example, we obtained strong evidence for attitude and value similarity but not for personality similarity. This is reassuring, because it provides evidence that even though the CCA and VCA provide conceptually and methodologically distinct approaches to studying similarity, they nevertheless also capture some fundamental aspects of spouse similarity that any approach to assortative mating should detect. Also noteworthy is that we replicated the findings generally observed in variable-centered studies that social homogamy and convergence do not tend to account for similarity. This is important, because our test of these two hypotheses was much more direct and powerful than is possible via the VCA. The current couple-centered replication therefore ensures that a lack of evidence for social homogamy and convergence is probably not due to the use of the more indirect VCA to testing these effects.

In addition to these replications, we also obtained results that highlight important differences between the approaches. For example, we found that profile-based similarity was a much more robust predictor of satisfaction than difference-score-based similarity and that profile similarity still made substantial contributions to satisfaction even after spouses' self-ratings were controlled. Moreover, we observed a number of replicated curvilinear effects of similarity on marital quality. These findings lead us to conclude that profile similarity is an important predictor of marital satisfaction, a conclusion that we would not have reached had we only relied on the VCA. We therefore believe that future research will most benefit from using both variable-centered and couple-centered approaches, because each approach provides answers to slightly different questions. It will also be important to study the psychological meaning of these different indices of similarity. For example, are individuals aware of profile-based or difference-score-based similarities on any given domain, and is such awareness necessary for these indices to have an effect on relationship outcomes?

On a more general level, the current study conforms well to the type of research recently advocated by Reis, Capobianco, and Tsai (2002) as necessary to bring about significant advances in the study of close relationships. More specifically, Reis et al. called for research that has sufficient power to detect small but potentially important and reliable effects, goes beyond the use of simple self-report measures, studies both partners of relationships, and takes a within-person rather than a between-person approach. We believe that future research along similar lines will help make important contributions to the understanding of relationship processes.

References

Acitelli, L. K. (1992). Gender differences in relationship awareness and marital satisfaction among young married couples. *Personality and Social Psychology Bulletin, 18,* 102–110.

Aiken, L. W., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Thousand Oaks, CA: Sage.

Antonucci, T. C. (1994). A life-span view of women's social relations. In

B. F. Turner & L. E. Troll (Eds.), *Women growing older: Psychological perspective* (pp. 239–269). Thousand Oaks, CA: Sage.

Asendorpf, J. B., & Van Aken, M. A. (1991). Correlates of the temporal consistency of personality patterns in childhood. *Journal of Personality, 59,* 689–703.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61,* 226–244.

Benet-Martinez, V., & John, O. P. (1998). *Los Cinco Grandes* across cultures and ethnic groups: Multitrait multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology, 75,* 729–750.

Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In D. T. Gilbert & S. T. Fiske (Eds.), *The handbook of social psychology* (pp. 193–281). New York: McGraw-Hill.

Blackman, M. C., & Funder, D. C. (1998). The effect of information on consensus and accuracy in personality judgment. *Journal of Experimental Social Psychology, 34,* 164–181.

Block, J. (1978). *The Q-sort method in personality assessment and psychiatric research.* Palo Alto, CA: Consulting Psychologists Press.

Block, J. (2002). *Personality as an affect-processing system: Toward an integrative theory.* Mahwah, NJ: Erlbaum.

Block, J. H., & Block, J. (1980). The role of ego-control and ego-resiliency in the organization of behavior. In W. A. Collins (Ed.), *Minnesota Symposia on Child Psychology* (Vol. 13, pp. 39–101). Hillsdale, NJ: Erlbaum.

Blum, J. S., & Mehrabian, A. (1999). Personality and temperament correlates of marital satisfaction. *Journal of Personality, 67,* 93–125.

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.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 47–76). New York: Guilford Press.

Burnett, R. (1987). Reflection in personal relationships. In R. Burnett, P. McGhee, & D. D. Clarke (Eds.), *Accounting for relationships: Explanation, representation and knowledge* (pp. 175–191). London: Methuen.

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

Caspi, A., & Herbener, E. S. (1990). Continuity and change: Assortative marriage and the consistency of personality in adulthood. *Journal of Personality and Social Psychology, 58,* 250–258.

Caspi, A., & Herbener, E. S. (1993). Marital assortment and phenotypic convergence: Longitudinal evidence. *Social Biology, 40,* 48–60.

Caspi, A., Herbener, E. S., & Ozer, D. J. (1992). Shared experiences and the similarity of personalities: A longitudinal study of married couples. *Journal of Personality and Social Psychology, 62,* 281–291.

Cattell, R. B., & Nesselroade, J. R. (1967). Likeness and completeness theories examined by 16 personality factor measures on stably and unstably married couples. *Journal of Personality and Social Psychology, 7,* 351–361.

Clark, L. A. (1995). *The Brief Temperament Survey.* Unpublished manuscript, Department of Psychology, University of Iowa.

Clark, L. A., & Watson, D. (1999). Temperament: A new paradigm for trait psychology. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality* (2nd ed., pp. 399–423). New York: Guilford Press.

Cohen, J. (1977). *Statistical power analysis for the behavioral sciences.* New York: Academic Press.

Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual.* Odessa, FL: Psychological Assessment Resources.

Costa, P. T., Jr., & McCrae, R. R. (1994). Set like plaster: Evidence for the stability of adult personality. In T. D. Heatherton & J. L. Weinberger (Eds.), *Can personality change*? (pp. 21–40). Washington, DC: American Psychological Association.

Cronbach, L. J. (1955). Processes affecting scores on "understanding of others" and "assumed similarity." *Psychological Bulletin, 52,* 177–193.

Eysenck, H. J., & Wakefield, J. A. (1981). Psychological factors as predictors of marital satisfaction. *Advances in Behavior Research and Therapy, 3,* 151–192.

Feeney, J. A., & Hohaus, L. (2001). Attachment and spousal caregiving. *Personal Relationships, 8,* 21–39.

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

Floyd, F. J., & Markman, H. J. (1983). Observational biases in spouse observation: Toward a cognitive/behavioral model of marriage. *Journal of Consulting and Clinical Psychology, 51,* 450–457.

Funder, D. C., & Colvin, C. R. (1997). Congruence of others' and self-judgments of personality. In R. Hogan & J. A. Johnson (Eds.), *Handbook of personality psychology* (pp. 617–647). San Diego, CA: Academic Press.

Glicksohn, J., & Golan, H. (2001). Personality, cognitive style, and assortative mating. *Personality and Individual Differences, 30,* 1199–1209.

Griffin, D., Murray, S., & Gonzalez, R. (1999). Difference score correlations in relationship research: A conceptual primer. *Personal Relationships, 6,* 505–518.

Gross, J. J., & John, O. P. (1998). Mapping the domain of expressivity: Multimethod evidence for a hierarchical model. *Journal of Personality and Social Psychology, 74,* 170–191.

Helson, R., & Klohnen, E. C. (1998). Affective coloring of personality from young adulthood to midlife. *Personality and Social Psychology Bulletin, 24,* 241–252.

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* (2nd ed., pp. 102–138). New York: Guilford Press.

Kenny, D. A. (1988). The analysis of data from two-person relationships. In S. Duck & D. F. Hay (Eds.), *Handbook of personal relationships: Theory, research and interventions* (pp. 57–77). Oxford, England: Wiley.

Kenny, D. A., & Cook, W. (1999). Partner effects in relationship research: Conceptual issues, analytic difficulties, and illustrations. *Personal Relationships, 6,* 433–448.

Kerckhoff, A. C., & Davis, E. K. (1962). Value consensus and need complementarity in mate selection. *American Sociological Review, 27,* 295–303.

Klohnen, E. C. (1996). Conceptual analysis and measurement of the construct of ego-resiliency. *Journal of Personality and Social Psychology, 70,* 1067–1079.

Klohnen, E. C. (2004). *A circumplex approach to attachment-based self-representations.* Manuscript under review.

Klohnen, E. C., & Bera, S. (1998). Behavioral and experiential patterns of avoidantly and securely attached women across adulthood: A 31-year longitudinal perspective. *Journal of Personality and Social Psychology, 74,* 211–223.

Klohnen, E. C., & Luo, S. (2003). Interpersonal attraction and personality: What is attractive—self similarity, ideal similarity, complementarity, or attachment security? *Journal of Personality and Social Psychology, 85,* 709–722.

Klohnen, E. C., & Mendelsohn, G. A. (1998). Partner selection for personality characteristics: A couple-centered approach. *Personality and Social Psychology Bulletin, 24,* 268–278.

Klohnen, E. C., Vandewater, E., & Young, A. (1996). Negotiating the middle years: Ego-resiliency and successful midlife adjustment. *Psychology and Aging, 11,* 431–442.

Locke, H., & Wallace, K. (1959). Short marital-adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living, 21,* 251–255.

Martin, R. W. (1991). Examining personal relationship thinking: The relationship cognition complexity instrument. *Journal of Social and Personal Relationships, 8,* 467–480.

Mascie-Taylor, C. G., & Vandenberg, S. G. (1988). Assortative mating for IQ and personality due to propinquity and personal preference. *Behavior Genetics, 18,* 339–345.

Murray, S. L., Holmes, J. G., Bellavia, G., Griffin, D. W., & Dolderman, D. (2002). Kindred spirits? The benefits of egocentrism in close relationships. *Journal of Personality and Social Psychology, 82,* 563–581.

Murstein, B. (1980). Mate selection in the 70's. *Journal of Marriage and Family, 42,* 777–792.

Pinney, E. M., Gerrard, M., & Denney, N. W. (1987). The Pinney Sexual Satisfaction Inventory. *Journal of Sex Research, 23,* 233–251.

Reis, H. T., Capobianco, A., & Tsai, F. (2002). Finding the person in personal relationships. *Journal of Personality, 70,* 813–850.

Robins, R. W., Caspi, A., & Moffitt, T. E. (2000). Two personalities, one relationship: Both partners' personality traits shape the quality of their relationship. *Journal of Personality and Social Psychology, 79,* 251–259.

Rokeach, M., & Ball-Rokeach, S. J. (1989). Stability and change in American value priorities, 1968–1981. *American Psychologist, 44,* 775–784.

Russell, R. J., & Wells, P. A. (1991). Personality similarity and quality of marriage. *Personality and Individual Differences, 12,* 407–412.

Schwartz, S. H., & Bilsky, W. (1990). Toward a theory of universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology, 58,* 878–891.

Simms, E. N., & Watson, D. (2003). *Interpersonal relationships: Assessment and personality correlates.* Manuscript in preparation.

Thiessen, D., Young, R. K., & Delgado, M. (1997). Social pressures for assortative mating. *Personality and Individual Differences, 22,* 157–164.

Watson, D., & Clark, L. A. (1993). Behavioral disinhibition versus constraint: A dispositional perspective. In D. M. Wegner & J. W. Pennebaker (Eds.), *Handbook of mental control* (pp. 506–527). New York: Prentice Hall.

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). General traits of personality and affectivity as predictors of satisfaction in intimate relationships: Evidence from self- and partner-ratings. *Journal of Personality, 68,* 413–449.

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

Winch, R. F. (1958). *Mate selection.* Harper: New York.

Zentner, M. R. (2004). *Individuals' ideal personality concepts, their partner's personality, and the quality of their relationships: A longitudinal analysis.* Manuscript under review.

Received November 18, 2003
Revision received July 24, 2004
Accepted August 11, 2004 ■

AMERICAN PSYCHOLOGICAL ASSOCIATION
SUBSCRIPTION CLAIMS INFORMATION

Today's Date:_____

We provide this form to assist members, institutions, and nonmember individuals with any subscription problems. With the appropriate information we can begin a resolution. If you use the services of an agent, please do **NOT** duplicate claims through them and directly to us. **PLEASE PRINT CLEARLY AND IN INK IF POSSIBLE.**

PRINT FULL NAME OR KEY NAME OF INSTITUTION

ADDRESS

CITY STATE/COUNTRY ZIP

YOUR NAME AND PHONE NUMBER

MEMBER OR CUSTOMER NUMBER (MAY BE FOUND ON ANY PAST ISSUE LABEL)

DATE YOUR ORDER WAS MAILED (OR PHONED)

____PREPAID ____CHECK ____CHARGE
CHECK/CARD CLEARED DATE:_____

(If possible, send a copy, front and back, of your cancelled check to help us in our research of your claim.)

ISSUES: ____ MISSING ____ DAMAGED

TITLE	VOLUME OR YEAR	NUMBER OR MONTH

Thank you. Once a claim is received and resolved, delivery of replacement issues routinely takes 4–6 weeks.

(TO BE FILLED OUT BY APA STAFF)

DATE RECEIVED: _____ **DATE OF ACTION:** _____
ACTION TAKEN: _____ **INV. NO. & DATE:** _____
STAFF NAME: _____ **LABEL NO. & DATE:** _____

Send this form to APA Subscription Claims, 750 First Street, NE, Washington, DC 20002-4242

PLEASE DO NOT REMOVE. A PHOTOCOPY MAY BE USED.