

Marital Assortment for Personality Dispositions: Assessment with Three Different Data Sources

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Received 15 Mar. 1983—Final 23 Sept. 1983

This study examined spouse correlations in a sample of 93 married couples with respect to 16 interpersonal dimensions using three different data sources: self-report, spouse ratings, and independent interviewer-observer ratings. Results across all three sources supported the previously obtained low positive correlations between spouses. Partial correlations using age and hierarchical multiple regressions using length of marriage do not support the alternative hypothesis that obtained spouse correlations are due to age, to cohort, or to convergence over the course of marriage. Initial assortment is implicated as a probable cause of obtained spouse correspondence.

KEY WORDS: assortative mating; personality ratings.

INTRODUCTION

Marital assortment on traits showing significant heritability are important to behavior genetic analysis because of potentially profound genetic consequences. Heritability estimates tend to be inflated by assortment (Plomin *et al.*, 1977a). Correlations among biological relatives are influenced on those heritable features for which assortment occurs. And the distribution of genotypes, degree of homozygosity, and correlations among traits in subsequent generations can all be affected by assortative mating (Crow and Kimura, 1970; Jensen, 1978; Vandenberg, 1972).

The author thanks Michael Barnes, Patricia French, Mary Gomes, Steve Kelner, Ping Lee, and Helen Van Metre for help with conducting this study. Additional thanks go to Michael Barnes for lending his expertise at all stages of this project.

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The study of marital assortment is also important for personality and social psychology, and the consequences of this process are receiving increasing attention (Buss, 1983, 1984; Cattell, 1982; Cattell and Nesselroade, 1967; Eaves and Heath, 1981; Nance *et al.*, 1981). Perhaps one of the most striking ways in which adults create extensive and enduring environments which they subsequently occupy is through the selection of a mate. If that selection is nonrandom, based on personal characteristics, it becomes an important mechanism by which correlations between *persons* (or *genotypes* for heritable traits) and *environments* are created (Buss, 1984; see Plomin *et al.*, 1977b, for a detailed discussion of genotype-environment correlation). Thus, in developing an interactional psychology, the study of spouse similarity can illuminate the domains within which person-environment correlations occur, as well as the mechanisms (e.g., initial assortment) responsible for creating such correspondences.

Although systematic meta-analyses have not yet been conducted on marital assortment for personality characteristics, several studies have reported low but consistently positive correlations for a variety of dispositions using self-report personality scales (e.g., Ahern *et al.*, 1982; Jensen, 1978; Price and Vandenberg, 1980; Vandenberg, 1972). Because validity coefficients for self-report personality scales are always below unity, often dramatically so, convergent evidence of marital assortment from alternative data sources would lend credibility to existing findings.

The present study was conducted to assess spouse similarity in personality characteristics, with particular reference to *interpersonal* dispositions, using three different data sources to assess dispositions: self report personality measures, spouse ratings, and independent interviewer-observer ratings. The self-report measures consist of some that have previously been employed [e.g., Eysenck Personality Questionnaire (Eysenck and Eysenck, 1975)] as well as the battery of scales for which no data on spouse similarity have yet been reported [e.g., California Psychological Inventory (Gough, 1957/1964); Interpersonal Adjective Scales (Wiggins, 1979); Personal Attributes Questionnaire (Spence *et al.*, 1979)]. The spouse ratings consist of Likert-type endorsements using seven-place scales on the 16 interpersonal dimensions assessed by the Wiggins (1979) IAS scales. The observer ratings, using composites based on two interviewers' ratings, also entail judgements of the above 16 interpersonal dimensions.

In sum, assessments of the same 16 interpersonal dimensions from three different data sources permits a direct test of whether convergent evidence of spouse similarity can be found with non-self-report measures of personality. Various cognitive, physical, and background variables

were included to establish comparability between the present study and those previously reported.

METHOD

Subjects

One hundred eighty-six (186) individuals composing 93 married couples participated in the study. Subjects were obtained by placing advertisements and flyers throughout the larger Boston area. Both indicated that a study was being conducted using married couples and that personal feedback and a small sum of money would be given as tokens of appreciation for participation. These and similar methods of recruitment used in studies of married couples may create problems of bias or unrepresentativeness. For example, it is possible that couples who enroll in such studies may be more similar than are couples who do not enroll or that there are biases in attrition over time such that divorces are more prevalent among couples who are least similar (cf. Cattell and Nesselrode, 1967).

Materials

Among a larger battery of tests and measures were the following assessment tools used for the present study.

Confidential Biographical Questionnaire. This questionnaire asked a variety of questions about physical characteristics, demographic characteristics, consumption habits, and background marital information. Of particular importance for the present study, in order to establish comparability to published studies on assortative marriage and spouse similarity, were the variables of age, height, weight, handedness, number of siblings, sleep habits, and consumption habits.

The General Vocabulary Test. To estimate comparability between the present sample and published studies on assortment for cognitive abilities, a multiple-choice vocabulary test (Gough and Sampson, 1974) was completed by subjects.

Self-Report Personality Measures. A battery of personality tests was completed: the Wiggins (1979) Interpersonal Adjective Scales (IAS), the California Psychological Inventory (CPI; Gough, 1957/1964), the Eysenck Personality Questionnaire (EPQ; Eysenck and Eysenck, 1975), a subset of scales from the Personality Research Form (PFR; Jackson, 1967), the Interpersonal Dependency Scales (Hirschfeld *et al.*, 1977), the Personal Attributes Questionnaire (Spence *et al.*, 1979), the Machiavelianism scale (Christie and Geis, 1970), the Self-Consciousness scales

(Fenigstein *et al.*, 1975, and the California Self-Evaluation Scale—a measure of general self-esteem (Phinney and Gough, 1982).

Spouse Ratings. Each participant rated his or her spouse on the 16 interpersonal dimensions derived from Wiggins' (1979) taxonomy of interpersonal dispositions, using seven-place rating scales.

Interviewer Ratings. Each couple was interviewed by a pair of interviewers drawn from a seven-member team. The interview consisted of a series of questions centered around each participant's reaction to each of the procedures in the battery, whether they felt that the measures accurately assessed their personalities, their suggestions for improving procedures, and their willingness to participate in a follow-up study. Each interview lasted about 30 min. Directly following each interview, the two interviewers independently rated each participant on the 16 interpersonal dimensions cited above using forms structurally identical to those used for the spouse ratings.

Procedure

Data gathering occurred in two sessions, separated by several days. Evening and weekend sessions were arranged to permit flexible scheduling. Each session lasted about 3 h. In the first session, participants completed the confidential biographical questionnaire, the battery of self-report measures, and other instruments. In the second session, participants completed the vocabulary test, the spouse ratings, and other measures. Interviews took place during the second testing session. Subjects were tested in groups that ranged from 2 (a single couple) to 14 (seven couples). Each couple was separated for the duration of the testing session to prevent discussion of the measures. To facilitate careful completion of the test battery, refreshments were provided and subjects were encouraged to take breaks to combat boredom and fatigue.

RESULTS

Spouse Correlations for Age and Background Variables

To establish comparability between the findings of the present study and those reported in the behavioral genetics literature, Table I shows descriptive statistics and spouse correlations for age, physical variables, handedness, number of siblings, average amount of nightly sleep, smoking, drinking, and tested vocabulary. The spouse correlations for age, height, and weight are comparable to those found in previous studies (see Spuhler, 1968, for a summary of previous studies). Quite high correlations

Table I. Spouse Similarity in Age and Background Variables

Variable	Correlation	Husbands		Wives	
		Mean	SD	Mean	SD
Age	0.86***	28.7	5.5	27.5	5.2
Height (in.)	0.39***	70	2.8	65	2.7
Weight (lb)	0.30*	167	24	127	21
Number of brothers	0.12	1.1	0.8	1.3	1.2
Number of sisters	0.15	1.2	1.1	1.5	1.6
Sleep (h)	-0.02	7.4	0.9	7.7	1.2
Smoking ^a	0.43***	0.5	1.3	0.3	0.9
Drinking ^b	0.33**	1.4	0.8	1.3	0.8
Vocabulary	0.34***	34.8	9.0	30.9	10.4
Handedness (% right-handed) ^c	0.05	80		94	
Day/night person (% day) ^d	0.28*	62		62	

^a Self-reported smoking was recorded on a seven-place scale and coded as follows: none (0), 1-5 cigarettes per day (1), 6-10 per day (2), 11-20 per day (3), 1.5 packs per day (4), 2 packs per day (5), and 3 packs per day (6).

^b Drinking was recorded on a six-place checklist and coded as follows: none (0), occasional drink (1), few times per week (2), 1-2 per day (3), 3-4 per day (4), and 5+ per day (5).

^c Self-reported in response to "Are you left- or right-handed?"

^d Self-report in response to "Are you a 'day' or a 'night' person?"

* $P < 0.05$.

** $P < 0.01$.

*** $P < 0.001$.

are typically found for age, while low to modest correlations are typically found for height and weight (Price and Vandenberg, 1980).

Handedness (self-report of whether left- or right-handed), number of brothers and sisters, and amount of sleep are not significantly correlated in spouses. Preferences for day versus night ("Are you a 'day' or a 'night' person?"), however, are significantly positively correlated, although the magnitude is not high. The spouse correlations for smoking and drinking are similar to those reported in the literature. Price and Vandenberg (1980), for example, found spouse correlations of 0.46 and 0.41 for smoking and drinking among American couples, while the present study found correlations of 0.43 and 0.33. Finally, the cognitive measure of tested vocabulary shows a spouse correlation of 0.34, which is similar to the mean correlation reported by Johnson *et al.* (1980) of 0.35, as well as being similar to others reported in recent literature (e.g., Price and Vandenberg, 1980; Watkins and Meredith, 1981; Zonderman *et al.*, 1977).

As Price and Vandenberg (1980) and others have noted, spouse similarity in age may cause spuriously high spouse correlations on other variables that are related to age or cohort. Therefore, partial correlations

Table II. Spouse Correlations for 16 Interpersonal Dispositions Using Three Different Data Sources

Dimension	Self-report IAS	Spouse report rating	Interviewers' rating	Observer composite reliability
Ambitious	0.25*	0.19	0.25*	0.64
Dominant	0.23*	-0.10	-0.28*	0.73
Arrogant	0.22	0.20	0.26*	0.59
Calculating	0.42***	0.15	0.26*	0.37
Cold	-0.01	0.05	0.35***	0.60
Quarrelsome	0.06	0.38***	0.42***	0.65
Aloof	0.06	-0.06	0.01	0.64
Introverted	0.09	0.11	0.14	0.66
Lazy	0.16	0.30**	0.15	0.41
Submissive	0.22	-0.15	-0.18	0.64
Unassuming	0.37**	-0.12	0.09	0.53
Ingenuous	0.26*	0.30**	0.18	0.47
Warm	-0.04	0.47***	0.16	0.67
Agreeable	0.22	0.23*	0.24*	0.65
Gregarious	-0.17	0.23*	0.26*	0.60
Extraverted	0.12	0.15	-0.01	0.62
Mean	0.12	0.15	0.14	0.59

* $P < 0.05$.** $P < 0.01$.*** $P < 0.001$.

were computed, controlling for spouse's ages, between spouses for each of the variables shown in Table I (height, weight, handedness, and so on). All age-adjusted correlations were within 0.03 correlation point of the unpartialled correlations, a finding highly similar to other studies in the behavioral genetics literature. This suggests that cohort effects can be ruled out as a hypothesis in accounting for the observed correlations between the spouses on these variables. In sum, the results in Table I suggest a strong comparability between the results typically reported in the assortative marriage literature and the results of the present study.

Spouse Correlations for 16 Interpersonal Dimensions Using Three Different Data Sources

The primary purpose of this study was to assess the degree of spouse similarity in interpersonal dispositions using three different data sources: self-report, spouse ratings, and independent interviewer ratings. Table II shows these results.

To control for potential differences among interviewers in use of the rating scales, scores were standardized for each interviewer separately

before compositing (with unit weighting) the ratings for each interviewer pair. The alpha reliability coefficients for these interviewer composites are shown in the rightmost column in Table II. While not strikingly high, these reliabilities are typical of those found between two raters (Wiggins, 1973), and any unreliability serves to attenuate the magnitude of the obtained spouse correlations.

Since the IAS scales were developed only recently (Wiggins, 1979), no data on spouse similarity have yet been reported. Perusal of Table II reveals that the magnitudes of spouse correlations are generally low but positive, with a few notable exceptions. The mean spouse correlations across all interpersonal dimensions are 0.12 for the self-report IAS scales, 0.15 for the spouse ratings, and 0.14 for the interviewer ratings. Thus, these results provide independent support for the previously obtained findings of low positive spouse correlations in the personality realm, although correlations for behaviorally based or act frequency measures of personality (Buss and Craik, 1983a,b) may be slightly higher (Buss, 1984).

Three additional findings warrant note. First, the age-adjusted (through partialing) spouse correlations show an average difference from the unadjusted correlations of only 0.01 correlation point. Second, the reliabilities for the interviewer ratings, although typical of those that employ two raters, are sufficiently low that correlations would be improved nontrivially by correcting for attenuation. Indeed, the obtained correlations between husbands and wives found here may be generally viewed as lower-bound estimates of spouse similarity, since some degree of unreliability in all measures serves to attenuate obtained correlations.

Third, an intriguing anomaly to the generally positive correlations is found with respect to the dimensions of dominance and submissiveness, which both yield negative spouse correlations for the spouse and interviewer data sources yet positive correlations for self-reports. This anomaly might stem from alternative reference groups used. When asked to rate how dominant one's spouse is, the referent might be relative dominance within the marriage itself. Similarly, the interviewers had as their sole data base the spouses' behavior within the interview context, and hence their ratings also probably reflect relative spouse dominance within that context. In contrast, self-judgements of dominance and submissiveness are probably made with reference to the general population or peer group. The pattern of findings here might simply reflect dominant-submissive *complementarity* within the context of the relationship itself but *similarity* on these dimensions with respect to the population generally.

In sum, the spouse similarity results from the three different data sources generally support the low but consistently positive correlations

found in previous studies that have employed only self-report measures. Differences among the data sources with respect to the dimensions of dominance and submissiveness should alert future investigators to the alternative reference groups that may be implicit in self- and observer judgements on personality dimensions.

Spouse Correlations for Self-Report Personality Scales

Table III shows the spouse correlations for personality scales from the CPI, EPQ, PRF, Interpersonal Dependency Scales, PAQ scales, Machiavellian scale, Self-Consciousness scales, and California Self-Evaluation Scales (General). The results for the CPI, EPQ, and PRF scales generally support the low but positive spouse correlations found in previous studies. For example, the mean unadjusted spouse correlation for the 18 CPI scales is 0.22. Although none of the spouse correlations for the Interpersonal Dependency scales, the PAQ scales, the Machiavellian scale, the Self-Consciousness scales, or the California Self-Evaluation Scale is statistically significant, they also are generally of low magnitude and positive in sign. Finally, it should be noted that the partial correlations (adjusted for spouse's ages) differ from the unadjusted correlations by only 0.01 correlation point on the average.

Differences Between Older and Younger Couples in Similarity

As Price and Vandenberg (1980) note, one competing hypothesis for obtained spouse correlations is that such relations occur because of convergence of phenotypes over the duration of the marriage. Ideally, longitudinal studies are needed to directly test this hypothesis. Within the context of a cross-sectional study, however, the hypothesis can be tested indirectly by examining whether couples who have been married longer are more similar than those who have been married only briefly.

Price and Vandenberg point out that assessing the linear effects of length of marriage does not directly test for the presence or absence of phenotypic convergence or divergence during marriage. Changes in degree of spouse similarity as a function of marriage length are more appropriately assessed by the interaction between a time variable and one spouse's score in predicting the other spouse's score. Price and Vandenberg (1980) recommend using hierarchical multiple regression in which the years of marriage is entered as the first step, one spouse's score on a given variable is entered as the second step, and the interaction term is entered as the third step. The interaction term, when entered as the last step in hierarchical multiple regression, is independent of the other

Table III. Spouse Correlations in Self-Report Personality Measures

Scale	Correlation
CPI	
Dominance	0.45***
Capacity for Status	0.31**
Sociability	0.18
Social Presence	0.37***
Self-Acceptance	0.19
Well Being	0.05
Responsibility	0.36***
Socialization	0.17
Self-Control	0.07
Tolerance	0.23*
Good Impression	0.31**
Communality	-0.23*
Achievement via Conformance	0.25*
Achievement via Independence	0.22*
Intellectual Efficiency	0.20
Psychological Mindedness	0.41***
Flexibility	0.22*
Femininity	0.17
EPQ	
Psychoticism	0.16
Extraversion	0.39***
Neuroticism	0.00
Lie Scale	0.16
PRF	
Abasement	0.18
Nurturance	0.07
Affiliation	0.20
Aggression	0.20
Dominance	0.16
Achievement	0.23*
Interpersonal Dependency	
Autonomy	0.13
Lack Self-Esteem	0.13
Emotional Reliance	0.05
PAQ	
Masc.-Fem.	0.10
Masc. +	0.18
Fem. +	-0.07
Masc. -	0.14
Fem. Verbal Agg.	-0.06
Fem. Communion	0.11
Machiavellianism	0.16
California Self-Evaluation	0.13
Self-Consciousness	
Private SC	0.03
Public SC	0.03
Social Anxiety	0.16

* $P < 0.05$.** $P < 0.01$.*** $P < 0.001$.

effects. Testing for the statistical significance of the increment in R provides a test of whether older couples are more or less similar to each other than are younger couples.

The procedures suggested by Price and Vandenberg (1980) were followed closely in the analysis of changes in spouse correspondence as a function of marriage length. Of the 89 multiple regressions performed using years married as the time variable, 13, or about 15%, showed significant R increments for the interaction term; of these, 11 showed divergence and 2 showed convergence. These results are shown in Table IV. Since no significant increments were replicated for the interpersonal variables across data sources, substantive interpretation of these findings should await longitudinal studies. These analyses suggest, however, that longer married spouses tend to be *less* similar to each other than spouses married only briefly. Thus, the hypothesis that obtained spouse correlations are due to convergence over the course of marriage receives no support in this data.

DISCUSSION

This study makes three contributions to the study of spouse similarity in the domain of personality. First, spouse correlations are presented for a battery of self-report scales for which no data have previously been reported. The results from these self-report data generally support the results from other studies that show low but consistently positive correlations between spouses. As in these previous studies, the present study found no large effects due to controlling for the ages of the spouses.

Second, previous studies have been limited to a single method of assessing the personality dispositions—self report. This study sought to obtain convergence by employing two additional data sources—spouse's ratings and interviewer's ratings. These independent assessments do support previous findings of low positive spouse correlations. An interesting exception to this pattern was found with respect to spouse and interviewer ratings on the dimensions of dominance and submissiveness, which yielded negative spouse correlations. Alternative implicit reference groups were suggested as a possible explanation of this anomaly, which implies that some complementarity may exist within marriages, in spite of personality similarity generally.

Finally, using hierarchical multiple regression to test for differences in similarity between younger and older couples revealed that more divergence appears to occur than convergence. This result parallels the recent findings summarized by Rowe and Plomin (1981) in the domain of child development. They conclude that most environmental variables

Table IV. Differences in Spouse Similarity as a Function of Marriage Length as Tested Using Hierarchical Multiple Regression

Wife's variable	Hierarchical step	Multiple R	R ²	Significance of increment
IAS				
Calculating (-)	Years married	0.42	0.17	0.001
	Husband's var.	0.42	0.18	ns
	Interaction	0.48	0.23	0.04
Quarrelsome (-)	Years married	0.06	0.00	ns
	Husband's var.	0.09	0.01	ns
	Interaction	0.39	0.15	0.001
Unassuming (-)	Years married	0.37	0.13	0.002
	Husband's var.	0.22	0.05	0.02
	Interaction	0.58	0.34	0.001
Warm (+)	Years married	0.04	0.00	ns
	Husband's var.	0.05	0.00	ns
	Interaction	0.44	0.20	0.001
Spouse ratings				
Introverted (-)	Years married	0.11	0.01	ns
	Husband's var.	0.19	0.04	ns
	Interaction	0.35	0.12	0.006
CPI scale				
Responsibility (-)	Years married	0.36	0.13	0.001
	Husband's var.	0.38	0.15	ns
	Interaction	0.47	0.22	0.008
Socialization (-)	Years married	0.17	0.03	ns
	Husband's var.	0.29	0.08	0.03
	Interaction	0.36	0.13	0.04
Self Control (-)	Years married	0.07	0.00	ns
	Husband's var.	0.10	0.01	ns
	Interaction	0.25	0.06	0.04
Tolerance (-)	Years married	0.23	0.05	0.04
	Husband's var.	0.25	0.06	ns
	Interaction	0.38	0.15	0.006
EPQ Neuroticism (+)	Years married	0.00	0.00	ns
	Husband's var.	0.06	0.00	ns
	Interaction	0.23	0.05	0.05
Interpersonal Dependency Scales				
Autonomy (-)	Years married	0.13	0.02	ns
	Husband's var.	0.14	0.02	ns
	Interaction	0.26	0.07	0.05
Emotional Reliance (-)	Years married	0.05	0.00	ns
	Husband's var.	0.16	0.03	ns
	Interaction	0.52	0.27	0.001
Machiavellianism scale (-)	Years married	0.16	0.03	ns
	Husband's var.	0.21	0.04	ns
	Interaction	0.36	0.13	0.007

Note. Signs in parentheses following scale name indicate divergence (-) or convergence (+).

affecting child development are probably nonshared factors operating within families causing siblings to become different from each other. This study found low but positive spouse similarity generally but more *divergence* than convergence associated with marriage length. While longitudinal studies must ultimately be employed to substantiate these results, the hypothesis that obtained spouse correlations result from increased similarity over time receives no support in these data. Initial assortment is implicated as a probable cause of obtained spouse correspondence.

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Edited by Thomas J. Bouchard, Jr.