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Toward a Psychology of Person–Environment (PE) Correlation: The Role of Spouse Selection

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Identifying the important ways in which attributes of persons correlate with features of the interpersonal environment is perhaps one of the most intriguing issues facing the development of an interactional psychology. Little empirical progress has yet been made, however, in documenting the domains within which person–environment (PE) correspondence occurs, in identifying the mechanisms by which such correspondence is brought about, and in exploring the consequences of obtained correspondence. One hypothesis of this article is that nonrandom spouse selection (assortative marriage) is one mechanism by which correspondences between persons and their interpersonal environments are created. An empirical study of 93 married couples examined spouse correlations within eight interpersonal categories (e.g., dominance, submissivness, extraversion) by using self and observer reports of the performance frequencies of 800 acts. Substantial spouse correspondence was found, particularly for the domains of extraversion, dominance, quarrelsomeness, and ingenuousness. In addition, changes in degree of spouse correspondence were associated with length of marital relationship. Discussion focuses on different types of PE correspondence, implications for the study of adult personality development, and the emergence of a psychology of PE correlation.

Who marries whom is the subject of intense interest in groups ranging from tabloid readers to behavior geneticists. Part of the intrigue of nonrandom marriage, of which assortative marriage[1] is one of the most prevalent examples, lies with the range of implications that transcends disciplinary boundaries. It is an interesting sociological process in its own right because nearly all members of society eventually enter into a marital relationship (Price & Vandenberg, 1980). At a psychological level, moderate levels of assortment have been found for certain intellectual, attitude, and personality variables (Buss, 1984; Jensen, 1978; Vandenberg, 1972). And at the genetic level, the process of assortative mating has consequences for changes in the genetic structure in the population in subsequent generations.

But the study of assortative marriage has remained largely within the province of behavior geneticists, perhaps because the process has such profound genetic consequences. First, heritability coefficients tend to be inflated by assortment (Plomin, DeFries, & Roberts, 1977), and thus must be considered in many studies attempting to derive accurate estimates of genetic influence. Second, assortative mating for heritable characteristics tends to increase the dispersion of those characteristics in subsequent generations (Jensen, 1978; Vandenberg, 1972). Thus, greater frequencies of individuals are found at the tails of the distribution as assortative mating makes subsequent distributions more platykurtic. A third consequence is that traits that are initially uncorrelated in the population (e.g., dominance and conscientiousness) may become correlated through the process of assortative mating. And fourth, the process influences the correlations among most biological relatives (e.g., between parents and children) on those heritable char-

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[1] Assortative mating may be defined as the nonrandom coupling of individuals based on resemblance on one or more characteristics.

acteristics for which assortment occurs. For these reasons, assortment is critical to behavioral genetic analysis.

The importance of assortative marriage for personality psychology, however, has not been elaborated as fully. This article will examine several ways in which spouse correspondence in the interpersonal domain and processes contingent on that correspondence can address two key issues in personality psychology: (a) specifying the ways in which individuals create their own environments, and (b) identifying potent variables that affect adult personality development. A conceptual framework within which these processes might operate is presented, followed by an empirical study of married couples.

An important conceptual advance in understanding the different ways in which correspondence between dispositions and environments can occur pertains to the family of concepts subsumed by genotype–environment (GE) correlation (Plomin, DeFries, & Loehlin, 1977; see also Scarr & McCartney, 1983). Active genotype–environment correlation entails creating or selecting environments that correspond to (and perhaps reinforce) initial predispositions. Highly gregarious individuals, for example, may seek social stimulation by throwing parties, calling friends, and initiating conversations with strangers. Those high on intelligence may attend lectures, read books, and initiate academic conversations, thereby creating environments that correspond to and reinforce initial propensities.

Active GE correlation may be contrasted with evocative (or reactive) GE correlation in which differential responses from others are evoked depending upon differences in a given attribute. For example, parents and peers tend to react to highly active children with behaviors designed to reduce the noise and intensity of their behavior, resulting sometimes in strife and competitiveness, whereas interactions with less active children are generally more harmonious (Buss, 1981a; Buss, Block, & Block, 1980). Similarly, society may like to cut down individuals who are highly dominant "to help the humble inherit the earth" (Cattell, 1973, p. 145).

Both active and evocative (or reactive) GE correlations may be contrasted with passive GE correlation, in which parents provide both genes and environments that happen to be correlated, independent of any response from or reaction to the child. Parents who are genetically gifted in verbal abilities, for example, in addition to passing on genes favorable to verbal skills, may provide environmental contexts (e.g., books, verbal exchange) that correlate with and facilitate initial abilities.

Genotype–environment correlation, rather than GE interaction (as in nonlinear statistical combinations of effects in an analysis of variance (ANOVA) framework) more closely resembles the concept of "interactionism" in the dynamic sense of interchange between persons and environments (Plomin et al., 1977).

In spite of the potential importance of this concept, little empirical progress has yet been made in documenting the domains of person–environment (PE) correspondence, nor in identifying the mechanisms by which such correspondence is reached (but see Buss, 1981a; Snyder, 1981; Snyder & Gangestad, 1982). One thesis of this article is that the process of assortative marriage provides one important avenue through which PE correlation occurs. The social environment is defined largely by significant others who occupy and behave within it. And because the spouse is perhaps one of the most important persons occupying that environment, selection of a partner based on one's personal characteristics becomes an important mechanism for establishing correspondence between person and environment. As such, the study of the basis of spouse selection can provide clues to the manner in which persons actively create their own environments.

Identifying important correspondences between attributes of persons and features of their interpersonal environment may have consequences for adult personality development. To date, we have not identified any large environmental variables that account for much variance in personality traits (Loehlin & Nichols, 1976; Rowe & Plomin, 1981). By putting similar individuals into close proximity, assortative marriage may be an important area within which the key environmental variables that affect adult development may be identified.

What mechanisms affecting adult personality development might be contingent on spouse similarity? First, initial similarity might

create a marital environment that corresponds to and reinforces initial tendencies. Spouse similarity in extraversion, for example, may result in mutually reinforcing tendencies to select some environments (e.g., parties, nightclubs) rather than others (e.g., quiet evening at home). Shared environments create shared experiences, and deviation from the marital mean may be resisted. The crystallization of existing tendencies resulting from exposure to common and mutually selected environments is one developmental process that might be based on initial spouse similarity.

A second process is suggested by the developmental concept of "pacers" (e.g., Loevinger, 1976). Effective developmental pacers are generally those that provide a model that is only moderately discrepant from the target individual. For example, moral development may be accelerated by interaction with someone who is advanced by a single stage within a given stage sequence but less so by one who is two or more stages advanced. Assortative marriage for certain characteristics (e.g., moral stage, maturity, social skills) may result in more cases of moderate discrepancy between spouses than would occur if mating were random. Thus, spouses may serve as pacers for each other, creating environments that affect adult personality development—a process established by the initial marital assortment.

In sum, the process of assortative marriage, although previously studied primarily within the contexts of behavioral genetics and sociology, could have important linkages to personality theory and research (a) by specifying one way in which persons create their own environments (PE correlation) and (b) by identifying variables that might affect adult personality development (e.g., processes of solidification and pacing).

The first step in exploring these processes is to document the domains within which correspondence between attributes of persons and features of their interpersonal environment may be found. One potentially fruitful area for examining PE correlation is with married couples. The correspondence between an attribute or behavior of the husband and an attribute or behavior of his wife (and vice-versa) identifies one potentially important form of PE correlation. But even though studies of assortative marriage with respect to intellectual and cognitive abilities have been numerous (see Jensen, 1978; Johnson, Ahern, & Cole, 1980; Watkins & Meredith, 1981; Zonderman, Vandenberg, Spuhler, & Fain, 1977), studies on spouse correlation with respect to personality and interpersonal behavior have been fewer in number. As one step in bringing the process of assortative marriage into the domain of personality and interactional psychology, I conducted the present study to assess, in a relatively comprehensive way, the interpersonal domains within which spouse correlation occurs.

The Wiggins (1979) circumplex model of the interpersonal domain was chosen as a relatively comprehensive system from which to sample systematically from the interpersonal domain. For the purposes of this study, I selected every other point on the circumplex, resulting in eight categories: *dominance, extraverted, agreeable, ingenuous, submissive, introverted, quarrelsome,* and *calculating.* To obtain a relatively comprehensive assessment of each of these eight interpersonal dispositions, 100 acts, independently nominated as belonging to each disposition, were employed (see Method section).

Previous studies of spouse correlation have used standard self-report scales. In the present study, self-reports of performance with respect to each of the 800 acts (100 within each of eight categories) were supplemented by observer (spouse) reports of act performance in order to assess convergence. The purposes of the present study may be briefly outlined: (a) to identify the interpersonal domains within which spouse correlations occur; (b) to examine whether obtained spouse correlations are accounted for by the process of initial marital assortment, or are due to age, to cohort, or to convergence over the course of the marriage; and (c) to explore developmental trends in spouse correspondence as a function of marriage length and number of years of association.

The Act Nominations

Method

Subjects

Several samples of subjects participated in the act nomination stage. The first consisted of 75 undergraduate students who provided act nominations for the category of

dominance (see Buss & Craik, 1980). Thirty-seven undegraduates provided nominations for submissiveness (see Buss & Craik, 1981). The remaining act nominations, obtained from independent samples for this study, were (sample size in parentheses) quarrelsome (79), agreeable (83), calculating (76), ingenuous (78), extraverted (78), and introverted (79).

Procedure

Each participant received a sheet with standard instructions, the basic form of which read: "Think of the three most dominant [submissive, quarrelsome, agreeable, etc.] females you know. With these females in mind, write down five acts or behaviors they have performed (or might perform) that reflect or exemplify their dominance [submissiveness, quarrelsomeness, etc.]." Five lines were provided upon which act nominations could be written. The instructions were then repeated, altering the sex of actor to male (e.g., "Think of the three most dominant males you know . . .").

Results

The eight lists of acts generated in this way were subsequently reduced by eliminating redundancies, "nonact" statements (e.g., adjectives), general tendency statements (e.g., "she tends to exercise a lot"), and statements considered too vague to constitute observable acts. Some act nominations (e.g., general tendency statements) were converted into act descriptions by appropriate rephrasing. The final lists were examined for grammatical errors, which were then corrected.

The target number of 100 acts within each category was obtained for each of the eight categories and then prepared for the subsequent study. Three forms of each act were created: two in the third-person singular (one for "he . . ." and one for "she . . .") and one in the first-person singular. For example, the act "He introduced himself to the new neighbor" became "I introduced myself to the new neighbor" on the first-person singular form of the act. The 800 acts thus obtained were intermingled and packaged into *Act Reports*, described below.

Main Study: Spouse Correlations

Method

Subjects

One hundred and eight-six individuals composing 93 married couples participated in the main study. Subjects were obtained by placing newspaper advertisements and flyers throughout the larger Boston area. Both the advertisements and the flyers indicated that a study was being conducted using married couples and that personal feedback and a small sum of money would be given as a token of appreciation for participation.

Materials

Among a larger battery of tests and measures were the following instruments used for the present study:

Confidential biographical questionnaire. This questionnaire asked a variety of questions about physical characteristics, demographic characteristics, consumption habits, academic achievements, background marital information, and marital satisfaction. Of particular importance for the present study, in order to establish comparability to published studies on assortative marriage and spouse correlation, were the variables of age, height, weight, smoking and drinking behavior, previous marriages, number of years known, number of years married, and satisfaction with marriage.

General Vocabulary Test. This multiple choice vocabulary test (Gough & Sampson, 1974) consists of 50 words. Among the four multiple-choice options, subjects select the option that is most similar in meaning to the initial word. The vocabulary score is the sum across the 50 items of the correct answers.

Self-Act Reports The retrospective self-report of act performance was obtained through two forms with 400 acts (intermingled from the eight categories) composing each form. The instructions were as follows: "The following pages contain 400 human acts beginning with act (1) to act (400). For each act, please indicate how often you have performed it (if at all) *within the past three months.*" A three month time frame was chosen to allow enough time for a sufficient number of the acts to have occurred.

Observer-Act Reports. In order to obtain an independent assessment of act performance, the spouse of each participant completed a parallel Act Report form on which their spouse's performance of each of the 800 acts was reported. Instructions were similar to those for the Self-Act Report.

Procedure

Data gathering for the main study occurred in two sessions, separated by several days. Each session lasted about three hours, although the time needed to complete the procedures varied across individuals. In the first session, participants completed the confidential biographical questionnaire, the Self-Act Reports, and other measures. In the second session, participants completed the Observer-Act Report, the vocabulary test, and several other measures. Subjects were tested in groups that ranged from two (a single couple) to 14 (seven couples). Each couple was separated for the duration of the testing session to prevent discussion of the forms.

Results

Spouse Correlations in Background Variables

To establish comparability between the findings of the present study and those reported

Table 1
Spouse Correlations in Age, Physical Traits, and Background Variables

Variables	Unadjusted correlation	Adjusted for spouses' ages	Husbands		Wives	
			M	*SD*	*M*	*SD*
Age and physical variables						
Age	.86***	—	28.7	5.5	27.5	5.2
Reported height (in inches)	.39***	.37***	70	2.8	65	2.7
Reported weight (in pounds)	.30*	.29*	167	24	127	21
Consumption variables						
Reported smoking frequency	.43***	.41***	0.5	1.3	0.3	0.9
Reported drinking (alcohol)	.33**	.34***	1.4	0.8	1.3	0.8
Marital valiables						
Previously married (yes–no)	.37***	.33**	8%		7%	
Number of years known	.99***	.99***	6.5	3.8	6.7	3.9
Number of years married	.99***	.99***	3.7	3.6	3.7	3.6
Satisfaction with marriage	.74***	.72***	7.2	1.3	7.1	1.5
Cognitive variable						
Vocabulary test	.34***	.34***	34.8	9.0	30.9	10.4

* $p < .05$. ** $p < .01$. *** $p < .001$.

in the behavioral genetics literature, Table 1 shows descriptive statistics and spouse correlations for age, physical variables, smoking and alcohol consumption, vocabulary, and several marital variables. The spouse correlations for age, height, and weight are comparable to those found in previous studies. For example, Price and Vandenberg (1980) report spouse correlations for age of .83 (Swedish couples) and .91 (American couples), whereas the present study found a correlation of .86.

Similarly, the spouse correlations for the smoking and alcohol consumption variables are similar to those reported in the literature. Price and Vandenberg found (for American couples) correlations of .46 and .41 for drinking and smoking, whereas the present study found correlations of .33 and .43. Controlling for age does not seem to affect these correlations much.

The cognitive measure (vocabulary) shows a spouse correlation of .34 in this study. Previous studies (e.g., Johnson et al., 1980; Price & Vandenberg, 1980; Watkins & Meredith, 1981; Zonderman et al., 1977) show similar magnitudes for a variety of cognitive measures. Johnson et al. (1980) report a mean correlation across a large array of studies (corrected for *N*) of .35.

The marital variables are of interest for several reasons. First, the .99 correlations between spouses on years known and years married, while not surprising, lend credibility to the care and accuracy with which the procedures were completed. Second, the positive correlation ($r = .37$) on previously married replicates the often noted trend for the divorced to marry the divorced and the previously unmarried to marry previously unmarried. And third, the striking correlation between spouses for marital satisfaction (.74) suggests that spouses agree highly on perceived marital quality.

Like previous studies in the assortative marriage literature, the present study finds no strong effects for controlling statistically for the ages of the spouses. 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 1 suggest strong comparability between the present study and those reported in the literature.

Table 2
Spouse Correlations in Act Performance: Composites Within Eight Categories

Category	S Data		O Data	
	Unadjusted correlation	Adjusted for age	Unadjusted correlation	Adjusted for age
Extraverted	.22*	.21*	.48***	.49***
Introverted	.09	.08	.20	.20
Quarrelsome	.24*	.24*	.27*	.27*
Agreeable	.14	.14	.22*	.23*
Dominant	.22*	.23*	.28**	.27*
Submissive	.20	.19	.31**	.29**
Calculating	.08	.10	.28**	.27*
Ingenuous	.37***	.37***	.46***	.45***
Mean *r*	.20	.20	.31	.31

Note. S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Spouse Correlations in Eight Dispositional Categories

The major novel measures in this study were assessments of the performance frequencies of the 800 independently generated interpersonal behaviors. Recall that two independent assessments of the frequencies with which these acts were performed within the past three months were obtained: self and observer (spouse) generated. Composite scores were computed for each category, consisting of the 25 most prototypical acts within each (see Buss & Craik, 1980, 1981, 1983, 1984), excluding acts with extreme base rates (less than 10% or greater than 90% endorsement). These composites were computed for each subject, separately for each of the two data sources.

This study sought to examine spouse correlations (reflecting either similarity of dissimilarity) of acts performed in the 3-month period prior to assessment. In this context, it is appropriate to examine correlations from the two data sources separately so that those derived from the self-report data source can be corroborated by those derived from the spouse-observer data source. This dual analysis allows examination of whether the patterns of results replicate across different data sources. Thus, two sets of correlations are shown in Table 2: between husband and wife (a) from their respective self-reports of act performance and (b) from their reports of each others act performance. Two columns of correlations are shown for each data source—unadjusted and adjusted (through partialling) for spouses' ages.

All correlations are positive, suggesting that similarity, rather than complementarity, is the rule in the interpersonal domain. The categories showing the greatest spouse similarity across data sources (self (S) and observer (O) reports) are extraverted, quarrelsome, dominant, and ingenuous. Of interest is the finding that observer act reports tend to yield higher correlations than do self-reports of act performance (average difference = .11 points). Although the present data do not afford an explanation for this difference, several speculations may be offered.

First, the observer reports were obtained in the second testing session, and thus may have been placed in a more familial context (e.g., reflecting the family party line) than were the self-reports of act performance, which were obtained in the initial session. Second, the observer reports may have focused attention more exclusively on public observable acts, yielding higher spouse similarity, while the self-reports permit reporting of private acts not performed in the presence of the spouse. Third, the differences in the perspectives of the self and observer (e.g., in terms of impression management) may have been sufficient to cause the obtained discrepancies (e.g., Laing, Phillipson, & Lee, 1966). Clarification of these alternative explanations must await replication and al-

Table 3
Spouse Correlations in Extraverted Act Performance

Extraverted acts	Spouse correlations		Base rates		
	S Data	O Data	S Data	O Data	S × O
I went to a disco	.74***	.58***	11	10	.67***
I went to a nightclub	.69***	.57***	31	27	.65***
I went skiing	.57***	.64***	20	17	.72***
I rode on a motorcycle	.64***	.81***	5	6	.91***
I danced in front of a crowd	.52***	.63***	31	30	.58***
I dressed in flashy clothes	.48***	.26*	35	30	.39***
I played sports over the weekend	.46***	.30**	24	18	.59***
I drank a lot of alcohol at the party	.46***	.45***	43	38	.55***
I spoke openly about sex	.42***	.43***	60	55	.44***
I wore a sexy outfit to the dance	.38***	.29**	11	15	.52***

Note. S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

ternative research designs (e.g., enlisting other observers such as friends to record act performance).

In order to examine spouse correlations in greater detail, correlations were computed for each of these 800 acts, for each data source and with spouse's ages partialled and unpartialled.[2] The resulting 3200 correlation coefficients pose formidable reportorial problems. In addition, one would expect a certain number of these to appear significant by chance alone. To reduce this formidable array and to decrease the probability that chance findings would be reported, two criteria were adopted, both of which had to be fulfilled: (a) that the unpartialled correlation coefficients for the self-reported act performance had to be significant beyond the .05 level (two-tailed), and (b) that the unpartialled correlations derived from the observer data source also had to be significant beyond the .05 level (two-tailed).

Application of these criteria yielded 112 (14%) of the 800 acts as having significant spouse correlations across data sources, where approximately two would be expected by chance alone. Of these, 58 were significant beyond the .01 level (two-tailed) for both self and observer data sources, where less than one would be expected by chance alone. All were positive in direction. The frequencies within each of the eight categories are as follows: extraverted (26), introverted (9), quarrelsome (11), agreeable (14), dominant (18), submissive (10), calculating (9), and ingenuous (15). Thus, the interpersonal categories of extraverted and dominant showed the highest frequency of significant spouse correlations, whereas the categories of introverted and calculating showed the lowest frequency of significant spouse correlations.

For reportorial purposes, Tables 3–10 show only the 10 (or nine) acts with the largest correlation magnitudes (from the self-reported performance) for each of the eight categories. Also reported are the base rates (percentage of the sample who reported performing each act) and the S × O correlations for each act. To conserve space, adjusted correlations are not reported.[3] All adjusted correlations were within .05 correlation points of the unadjusted values.

Table 3 shows the acts with the largest spouse correlations from the extraverted act category. The magnitudes are striking, more so for this category than for the others. Reviewing the content of these acts reveals that spouses are correlated in the environments they select: attending discos, nightclubs, ski resorts, sporting

[2] Correlations were computed twice, once using reported frequency and once using dichotomized (yes–no) scores, indexing whether or not the act had been reported at least once. They were highly similar; therefore, only the former are reported here. The full set of analyses may be obtained from the author.

[3] These additional analyses may be obtained from the author.

Table 4
Spouse Correlations in Introverted Act Performance

Introverted acts	Spouse correlations		Base rates		
	S Data	O Data	S Data	O Data	S × O
I unplugged my phone for the evening	.56***	.67***	27	24	.57***
I watched the soap opera on TV	.56***	.34***	33	29	.73***
I jogged alone	.44***	.22*	30	30	.78***
I escaped to a wild natural location	.43***	.31**	27	24	.41***
I stayed at home to watch TV rather than attend the party	.33**	.31**	37	32	.29***
I went for a long walk alone	.28**	.21*	58	42	.28***
I pretended I was sick to avoid attending the party	.26*	.41***	16	15	.20**
I gave one-word answers to personal questions	.26*	.25*	37	37	.26***
I wrote a poem	.25*	.38***	18	16	.66***

Note S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

events, and parties. In addition, the acts suggest correspondence in inhibition–disinhibition of dress (e.g., flashy clothes, sexy outfits) as well as behavior (e.g., dancing in front of crowds, talking openly about sex).

Table 4, showing the acts with the largest spouse correlations within the introverted category, supports the findings from the extraverted category. Spouses are correlated in acts that entail avoiding the loud and uninhibited settings seen in Table 3. For example, spouses show correspondence in watching TV (soap operas), walking alone, avoiding parties, and escaping to nature. The similarity of some couples in loud group activities appears to be replaced in other couples by similarity in enjoyment of quiescence and solitude.

Tables 5 and 6 show the spouse correlations in the categories of quarrelsome and agreeable. These acts appear to differ from those of the

Table 5
Spouse Correlations in Quarrelsome Act Performance

Quarrelsome acts	Spouse correlations		Base rates		
	S Data	O Data	S Data	O Data	S × O
I made fun of him or her for having a runny nose	.53***	.34***	12	10	.51***
I yelled at my partner	.50***	.53***	82	73	.54***
I criticized someone for failing to put the napkin on his or her lap	.48***	.65***	7	10	.68***
I cursed at my parents	.48***	.29**	11	14	.41***
I made belittling comments about the people who walked by	.46***	.35***	49	35	.48***
I argued about whose turn it was to drive	.40***	.22*	11	16	.38***
I played my stereo loudly at 1 a.m.	.33**	.30**	10	9	.39***
I made fun of his driving ability	.29**	.35**	36	32	.47***
I argued about who was the best novelist	.29**	.35**	17	16	.37***
I criticized a minority group for being lazy	.23*	.25*	18	17	.28***

Note. S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 6
Spouse Correlations in Agreeable Act Performance

Agreeable acts	Spouse correlations		Base rates		
	S Data	O Data	S Data	O Data	S × O
I drank a lot at the social gathering when everyone else did	.44***	.33**	72	80	.45***
I tried to please others at the dinner party	.37***	.24*	70	75	.31***
I remained patient when the car ran out of gas	.32**	.24*	7	11	.32***
I made witty remarks at the party	.32**	.38***	65	72	.51***
I took my friend to the baseball game	.31**	.50***	5	5	.08
I showed sympathy with my friend's troubles	.31**	.32**	95	88	.19**
I watched a different TV show because someone else wanted to	.26*	.29**	57	59	.26***
I picked up the tab for lunch	.25*	.37***	55	52	.45***
I compromised about where to go out to eat	.23*	.26**	86	83	.26***
I told a joke to lighten up a tense situation	.22*	.33**	61	46	.20**

Note. S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

extraverted and introverted categories in that they seem to refer more to specific actions rather than to the selection of settings. Thus, spouses are correlated in yelling at each other, belittling passersby, and generally criticizing, cursing, arguing, and making fun of others. They also show congruence in trying to please others, making witting comments, showing sympathy, and compromising about restaurant choice.

The findings for dominant and submissive acts, shown in Tables 7 and 8, amplify the themes seen earlier. For example, there appear to be correlations between spouses in planning parties (probably the same party held by the couple together) as well as in dominant acts

Table 7
Spouse Correlations in Dominant Act Performance

Dominant acts	Spouse correlations		Base rates		
	S Data	O Data	S Data	O Data	S × O
I advocated an idea that was ahead of the times	.45***	.28**	55	48	.41***
I made a bold sexual advance	.44***	.39***	56	71	.47***
I decided which TV programs we would watch	.38***	.25*	72	67	.43***
I refused to accept the compromise	.36***	.33**	34	34	.28***
I took the initiative in planning the party	.35***	.27**	31	39	.35***
I directed the conversation around to myself and my doings	.33**	.25*	43	25	.07
I hung up the phone on my partner	.33**	.22*	29	20	.39***
I haggled over prices	.32**	.24*	55	49	.40***
I readily used the authority of my position	.31**	.24*	46	35	.56***
I deliberately arrived late for the meeting	.30**	.22*	18	15	.17*

Note S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8
Spouse Correlations in Submissive Act Performance

Submissive acts	Spouse correlations		Base rates		
	S Data	O Data	S Data	O Data	S × O
I smoked marijuana when everyone else did even though I didn't want to	.62***	.25*	06	07	.47***
I made coffee for my lover in the morning	.59***	.36***	56	53	.73***
I requested no compensation when an acquaintance lived in my apartment	.56***	.49***	18	15	.50***
Although not really interested in it, I watched the big TV show because everyone would be talking about it the next day	.52***	.32**	09	12	.13*
I picked up the visitor at the airport even though bus transportation was available	.50***	.29**	32	26	.46***
I agreed to go out with someone I didn't like	.35***	.23*	20	29	.31***
When the three of us set out on the journey, I took the back seat of the car	.28**	.25*	53	36	.38***
I straightened up my room when my partner asked me to	.27**	.22*	68	73	.42***
I used my car for the group trip and didn't ask for gas money from the others	.27**	.25*	27	57	.32***
I was passive in the sexual encounter	.22*	.24*	50	44	.48***

Note S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

of a quarrelsome nature (e.g., hanging up the phone on the partner). But several other themes warrant notice. Acts that reflect an arrogant tone show spouse correlations: deliberately arriving late, refusing to compromise, and directing the conversation around to the self.

In addition, spouse correlations with respect to the sexual acts seem intriguing, and perhaps paradoxical at first. Spouses show congruence both in making bold sexual advances and in remaining passive in the sexual encounter. Although one might expect complementarity with respect to these acts, these results suggest that, on the contrary, behavior in the sexual domain appears to be similar on the boldness–passivity dimension.

Tables 9 and 10 show spouse correlations for calculating and ingenuous acts. Several of the calculating acts suggest common actions performed by the members of the couple together: not answering the phone when home and going to a friend's house for food. Others, however, suggest correspondence between individual acts performed separately: taking credit for a co-workers idea, letting someone else pay for cocktails, and wearing sexy clothes to impress someone.

The ingenuous acts suggest a selection of common settings and activities: going to church, going to the beach, and letting a friend stay in the apartment while away. Others, however, suggest mutuality of affection. Thus, spouses are correlated on the acts of saying "I love you" and hugging a friend. Leaving the car and apartment unlocked and answering the door without asking who was there suggest similarity in general trust. The correlation between spouses on the act "I cosigned a loan for my friend" might be a spurious result of the low base rate shown for that act. Most other base rates are sufficiently large to rule out this interpretation generally.

In sum, spouse correlations with respect to a variety of acts within eight interpersonal categories are striking in magnitude. Several themes emerge from these spouse correlations: (a) commonality in the selection of settings (e.g., attending church, going to the beach, attending discos, nightclubs, ski resorts,

Table 9
Spouse Correlations in Calculating Act Performance

Calculating acts	Spouse correlations		Base Rates		
	S Data	O Data	S Data	O Data	S × O
I did not answer the phone, even though I was home	.47***	.52***	49	37	.60***
I let someone else pay for the cocktails	.43***	.51***	51	45	.52***
I went over to a friend's place to get food	.38***	.31***	34	27	.35***
I wore seductive clothes	.37***	.50***	27	30	.60***
I told everyone I was broke, even though I wasn't	.36***	.42***	15	11	.46***
I paid my bills the last day they were due to obtain the highest interest	.32**	.28**	44	38	.52***
I wore sexy clothes to impress someone	.31**	.29**	26	25	.40***
I took credit for a co-worker's idea	.24*	.65***	7	4	.39***

Note. S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

dances, baseball games); (b) similarity in attire (e.g., flashy clothes, seductive clothes, sexy outfits); (c) mutuality in physical and verbal affection (e.g., hugging, saying "I love you," active–passive orientation in the sexual domain); (d) correspondence in social orientation (e.g., staying at home to watch TV, taking long walks alone, dancing in front of crowds, declining party invitations, planning parties); and (e) correspondence in positive or negative affect toward others and perhaps toward each other (e.g., yelling at partner, criticizing a minority group, showing sympathy with a friend).

Two additional findings warrant comment. First, although a few of the acts may show significant spouse correlations due to extreme base rates, most base rates appear to be moderate. Thus, extreme base rate can be generally ruled out as an explanation for the sizable spouse correlations for these acts. Second, the S × O correlations are generally high, but several factor may have attenuated them. For ex-

Table 10
Spouse Correlations in Ingenuous Act Performance

Ingenuous Acts	Spouse Correlations		Base Rates		
	S Data	O Data	S Data	O Data	S × O
I cosigned a loan for my friend	.80***	.49***	2	3	.77***
I went to church	.69***	.69***	44	42	.81***
I went to the beach by myself	.58***	.45***	5	6	.46***
I let a friend stay at my apartment while I was away	.41***	.27**	20	11	.38***
I left my apartment unlocked at night	.40***	.21*	22	19	.36***
I did not object to my partner spending time with members of the opposite sex	.38***	.46***	54	51	.42***
I left my car unlocked while I ran an errand	.36***	.48***	47	34	.61***
I opened my door without asking who was there	.35***	.21*	51	39	.33***
I told someone "I love you"	.29**	.40***	49	32	.47***
I hugged my friend	.26*	.24*	97	94	.41***

Note. S = Self, O = Observer.
* $p < .05$. ** $p < .01$. *** $p < .001$.

ample, the S and O data assessments were separated by several days, and correlations less than unity may reflect veridical differences in the act performance from which the reports draw. Another attenuating factor pertains to the performance of private acts, unseen by the spouse, which might emerge on the self-report but not on the observer report. This suggestion gains empirical credibility from the generally lower base rates shown for the O than for the S data source. Finally, the differing perspectives entailed in observing and reporting on the self versus observing and reporting on others would serve to attenuate the S × O correlations. These issues are interesting in their own right and deserve research attention. In the present context, the it may be noted that the obtained S × O correlations for specific acts are generally quite robust.

Changes in Spouse Correspondence With Time

This study also sought to assess the degree to which spouses converge or diverge in act performance in the interpersonal domain across time. As Price and Vandenberg (1980) note, assessing the linear effects of length of marriage does not test directly for the presence or absence of phenotypic convergence or divergence during marriage. Rather, change in the degree of spouse similarity as a function of length of marriage (either convergent or divergent) is appropriately assessed by the interaction between a time variable and one spouse member's score in predicting the other spouse members score. Price and Vandenberg (1980) recommend using hierarchical multiple regression in which the years of marriage are 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 effects. Testing for the statistical significance of the increment in R provides a test of whether there is change in the degree of similarity over time. A positive beta (β) suggests convergence; a negative beta ($-\beta$) suggests divergence.

The procedure suggested by Price and Vandenberg (1980) was followed closely in the analysis of changes in spouse correspondence over time on each of the eight act composites and on each of the 800 acts. However, even though Price and Vandenberg employed number of years married as the time variable, it could be argued that the length of time the couples knew each other might be a better time variable, particularly in an era where many couples live together and interact intensively prior to marriage. Thus, hierarchical multiple regressions were performed on each of the eight act composites and each of the 800 acts; once by using number of years married as the time variable and once by using number of years known as the time variable.

Regressions for the eight act composites showed that none of the dispositional categories yielded significant R increments for the interaction term across the two data sources. Thus, no general increases or decreases in spouse correspondence are associated with years known or years married in this data set. Of the 800 specific act level multiple regressions performed by using the length of marriage variable, 75 interactions proved to be significant beyond the .05 level. For the analogous regressions performed by using the length of time known, 93 interactions (about 12%) proved to be significant beyond the .05 level. Thus, it appears that length of time known might be a a slightly better time variable in predicting changes in spouse correspondence than is length of marriage. The directions of the two sets of analyses, however, were quite similar; thus, only the results of the regressions using the length of time known will be reported (the complete set of analyses may be obtained from the author).

The first finding was unexpected: There were many more acts on which couples became less similar with time (divergence) than vice-versa (convergence). Of the 93 significant interactions, 56 showed divergence and 37 showed convergence. The interpersonal categories within which these significant interactions occurred are (convergent, then divergent in parentheses): extraverted (7, 5), introverted (3, 3), quarrelsome (10, 12), agreeable (0, 8), dominant (2, 8), submissive (3, 10), calculating (6, 3), and ingenuous (6, 7). Thus interpersonal acts within three categories (dominant, submissive, and agreeable) primarily show divergence with time, whereas the acts that show convergence are distributed across categories and not concentrated heavily within any.

Space limitations preclude presenting the results from all of these analyses. Instead, Tables 11–13 show selected regressions: those for the acts showing divergence within the categories of dominance and submissiveness, and a subset of the acts that show the greatest amount of convergence. In interpreting these results, it should be noted that because this study is not longitudinal, convergence and divergence cannot strictly be claimed. As a cross-sectional study, an interpretation of these results in terms of convergence and divergence requires the (untested) assumption that differences in similarity between the couples of long and short duration reflect change over time.

As can be seen in Table 11, the dominant acts that show divergence are primarily "egoistic" or "agentic" in nature (see Buss, 1981b for a discussion of different themes of dominant acts). Flattering others to get one's way, telling others to perform one's menial tasks, and directing the conversation around to the self all seem to embody displays of influence, but for selfish rather than for group aims. The submissive acts that show divergence (Table 12) seem to involve being the recipient of these selfish dominant acts: accepting verbal abuse from others, taking on all the blame when the group failed, and following the dictates of others.

One speculative interpretation may be placed on these results: That in spite of initial levels of assortment for dominance, and despite the results reported earlier that couples are quite similar with respect to many dominant acts, spouses may, through the course of marriage, diverge with respect to dominance and submissiveness. That is, they may take on different roles within the marriage—one assuming the role of director, the other assuming the role of follower who submits to the requests of the emerging dominant parter. This finding, however, appears to occur only with a subset of these acts and not for the disposition generally.

In contrast to the results suggesting divergence, no prominent themes seem to emerge

Table 11
Dominant Acts Showing Divergence

Wife's variable	Hierarchical step	Multiple R	R^2	Significance of increment
I flattered him in order to get my way.	years known	.04	.00	ns
	husband's variable	.08	.01	ns
	interaction	.28	.08	.05
I reported someone who had broken a rule.	years known	.03	.00	ns
	husband's variable	.04	.00	ns
	interaction	.23	.05	.05
When someone cut ahead of me in line, I protested loudly.	years known	.07	.01	ns
	husband's variable	.13	.02	ns
	interaction	.29	.09	.05
I settled the dispute among other members of the group.	years known	.10	.01	ns
	husband's variable	.30	.09	ns
	interaction	.50	.25	.01
I told others to perform menial tasks instead of doing them myself.	years known	.06	.00	ns
	husband's variable	.23	.05	ns
	interaction	.35	.12	.05
I directed the conversation around to myself and my doings.	years known	.08	.01	ns
	husband's variable	.34	.11	.05
	interaction	.41	.17	.05
I managed to get my own way.	years known	.05	.00	ns
	husband's variable	.17	.03	ns
	interaction	.31	.10	.05
I initiated the conversation with the stranger.	years known	.18	.03	ns
	husband's variable	.25	.06	ns
	interaction	.35	.12	.05

Note. *ns* = not significant.

from the regressions showing convergence, or increasing spouse similarity with time (see Table 13). Instead, they seem to be a hodgepodge of acts: some reflecting isolation and separation (e.g., ignoring the partner, saying "do it yourself") and others reflecting possible joint activities (e.g., watching a soap opera on TV, throwing a party). Perhaps the present set of eight interpersonal categories were insufficient for the task of discerning the important themes of interpersonal convergence that may have occurred.

Discussion

Identifying correlations between attributes of persons and features of their interpersonal environment is perhaps one of the most intriguing issues facing the incipient field of interactional psychology. Little empirical progress has yet been made, however, in documenting the domains within which PE correspondence occurs, in identifying the mechanisms by which such correspondence is brought about, and in exploring the potential consequences of obtained correspondence (Buss, 1983, in press-a, in press-b). This article sought to create a bridge between the study of assortative marriage (traditionally residing within behavioral genetics and sociology) and personality psychology. It was suggested that assortative marriage may be one mechanism by which correspondences between persons and interpersonal environments are created. In addition, it was suggested that within such correspondence may lie important clues to variables that affect adult personality development.

The first step requires documentation of the domains within which PE correspondence occurs (Buss, in press-b). This study sought to assess, in a relatively comprehensive way,

Table 12
Submissive Acts Showing Divergence

Wife's Variable	Hierarchical step	Multiple R	R^2	Significance of increment
When the group failed at its task, I took on all the blame for it.	years known	.03	.00	ns
	husband's variable	.20	.04	ns
	interaction	.70	.49	.001
I accepted verbal abuse without defending myself.	years known	.01	.00	ns
	husband's variable	.04	.00	ns
	interaction	.34	.11	.01
I laughed at a joke that was not funny.	years known	.02	.00	ns
	husband's variable	.15	.02	ns
	interaction	.29	.08	.05
Although not really interested in it, I watched the big TV show because everyone would be talking about it the next day.	years known	.06	.00	ns
	husband's variable	.52	.27	.001
	interaction	.66	.44	.001
I let someone cut into the parking space I was waiting for.	years known	.00	.00	ns
	husband's variable	.10	.01	ns
	interaction	.33	.11	.01
I asked my partner if it would be OK to meet his parents.	years known	.11	.01	ns
	husband's variable	.29	.08	ns
	interaction	.37	.14	.05
I killed a fly when someone asked me to.	years known	.10	.01	ns
	husband's variable	.14	.02	ns
	interaction	.27	.08	.05
I let my friend decide which jacket I should buy.	years known	.09	.01	ns
	husband's variable	.38	.14	.05
	interaction	.58	.34	.001
On the new assignments, I followed my supervisor's directions without question.	years known	.08	.01	ns
	husband's variable	.11	.01	ns
	interaction	.46	.21	.001

Note. *ns* = not significant.

spouse correspondence across a large array of specific interpersonal behaviors within eight dispositional categories. In light of the average spouse correlation reported in the literature of .15 for traditional personality scales (Jensen, 1978), the magnitudes of the present results stand out, although some are clearly due to couple co-acting rather than to independent correspondence of performance.

The present study found substantial spouse correlations with respect to a variety of specific interpersonal behaviors across all eight dispositional categories examined. These correlations were greatest for the categories of extraversion, dominance, quarrelsomeness, and ingenuousness, and lowest for the category of calculating acts, although significant correlations across data sources were found within all eight interpersonal categories. Several themes emerged: (a) correlation in the selection of extraverted settings (e.g., going to discos, nightclubs, ski resorts, dances, parties); (b) correspondence in interpersonal intimacy (e.g., talking openly about sex, passivity and boldness in the sexual arena, hugging friends, and expressing love verbally); (c) similarity in preferred leisure activities (e.g., jogging, watching soap operas, writing poems); (d) mutuality in quarrelsome responses (e.g., yelling at one's partner, arguing about novelists); (e) correlation of extraverted attire (e.g., flashy clothes, sexy outfits); and (f) similarity in calculating interpersonal tactics (e.g., deliberately arriving late for a meeting, directing the conversation around to the self, taking credit for a co-worker's idea).

These results suggest two forms of PE correlation. The first is direct—a correspondence between an attribute of one person (e.g., extraversion) and that person's interpersonal environment (spouse's extraversion). The second is suggested by examining the environments implied by similarity on specific acts (e.g., parties, nightclubs, church, wilderness). Spouses are thus correlated with respect to the environments they select. Correlated "niche-picking" (Scarr & McCartney, 1983) represents a second way in which PE (or environment–environment) correlation occurs.

Another purpose of this study was to ex-

Table 13
Sample Acts Showing Convergence

Wife's Variable	Hierarchical step	Multiple *R*	R^2	Significance of increment
I ignored my partner at the dance.	years known	.05	.00	ns
	husband's variable	.65	.42	.001
	interaction	.82	.68	.001
I insisted on playing a record I knew my friend didn't like.	years known	.01	.00	ns
	husband's variable	.07	.00	ns
	interaction	.58	.33	.001
I was the first to stand up to deliver a standing ovation.	years known	.21	.04	ns
	husband's variable	.27	.07	ns
	interaction	.57	.33	.001
I invited a stranger to stay at my apartment.	years known	.05	.00	ns
	husband's variable	.52	.27	.001
	interaction	.63	.39	.001
I did not start a single conversation at the party.	years known	.01	.00	ns
	husband's variable	.48	.23	.01
	interaction	.60	.36	.001
When someone asked me for a favor, I said "do it yourself."	years known	.13	.02	ns
	husband's variable	.23	.05	ns
	interaction	.44	.19	.01
I watched the soap opera on TV.	years known	.12	.01	ns
	husband's variable	.56	.32	.001
	interaction	.65	.42	.01
I threw a big party.	years known	.05	.00	ns
	husband's score	.42	.18	.01
	interaction	.52	.27	.01

Note. *ns* = not significant.

amine the degree to which spouses become more or less congruent over time. Because spouses may have converged prior to the actual marriage, the number of years of the relationship might be a better index than number of years of the marriage. Both indices were used in a series of hierarchical multiple regressions designed to assess changes in spouse similarity. Regressions using the number of years known emerged more robustly in predicting changes in spouse correspondence.

Although no significant trends were found for the act composites, one surprising result was that divergence was found more frequently than convergence at the single-act level. The acts that showed convergence were dispersed throughout the eight interpersonal categories, suggesting that the category system employed in this study may be insensitive to the major dimensions along which spouses become more similar with time. The acts that showed divergence were more clearly concentrated in the dominant, submissive, and agreeable categories. These results must be viewed as provisional in that interpretation of the differences between older and younger couples on similarity in terms of convergence or divergence is based on the untested assumption that the locus of the differences is temporal rather than generational. Longitudinal studies are needed to verify the temporal interpretation.

What are the implications of the results for personality development? First, the search for big variables affecting personality has met with little success (see, e.g., Loehlin & Nichols, 1976; Willerman, 1979). The present results suggest that one's marital partner may be one such big variable. One way in which this variable might operate entails the establishment (and selection) of environments that reinforce initial propensities. Mutuality of niche picking produces a self-perpetuating cycle in which common environments create shared experiences and maintain shared interests. Deviation from the marital mean by one partner may be strongly resisted by the other. The processes (e.g., reinforcement contingencies) set into motion by initial spouse similarity may serve to maintain personality consistency frequently found in longitudinal studies (e.g., Block, 1971; Costa & McCrae, 1980; Costa, McCrae, & Arenberg, 1980).

Another way in which the marital partner might operate as a big variable pertains to the finding that older couples are less similar than younger couples for specific acts within the domains of dominance and submissiveness. Perhaps this is one area where complementarity begins to emerge only after the relationship progresses considerably. In spite of initial similarity, spouses may adopt complementary roles as one partner gains relative ascendance over the other.

An interesting parallel may be noted between the present results and recent findings summarized by Rowe and Plomin (1981) in the domain of child development. Rowe and Plomin conclude that most environmental variables affecting child development are probably nonshared factors operating within families (causing siblings to become different from each other) rather than shared influences (causing family members to become more similar to each other). The present study found striking spouse similarity in interpersonal behavior, yet notably more divergence than convergence associated with length of time spouses knew each other, particularly in the domains of dominance, submissiveness, and agreeableness. These preliminary findings suggest that, as with child personality development, there may be important factors operating within marriages causing spouses to become more dissimilar to each other, in spite of considerable mutuality exhibited in interpersonal behavior.

The present research must be viewed as only a preliminary attempt to uncover the domains within which correlations between persons and interpersonal environments occur and to discover the mechanisms responsible for obtained correlations. The results are sufficiently robust across data sources to suggest that substantial spouse correspondence can be found in the interpersonal domain, particularly with reference to dominance, extraversion, quarrelsomeness, and ingenuousness. Because adjusting for spouses' ages did not decrease the correlations appreciably, age and cohort can be ruled out as factors responsible for obtained correlations. Further, the hypothesis that obtained spouse correlations result from convergence over the course of the marriage is not supported by these data. Initial assortment is implicated as one cause of obtained spouse correspondence.

Although spouse selection provides a dramatic example of choosing one's interpersonal environment, other domains (e.g., assortative

friendship) and different processes (e.g., evocation and alteration) can be subsumed profitably by a PE correlation framework. In everyday life, individuals rarely assign themselves randomly to conditions. The present results suggest that personality assessment can be extricated from broader personal contexts only at a cost, and that an integral part of personality is the process of selecting, evoking, and altering environments within which one resides. The study of spouse selection is but one step toward developing a psychology of PE correlation.

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