Journal of Personality and Social Psychology
1986, Vol. 50, No. 3, 559-570


0022-3514/86/$00.75

# Preferences in Human Mate Selection

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In this article we examine preferences in mate choice within the broader context of the human mating system. Specifically, we discuss the consequences of mate preferences for the processes of assortative mating and sexual selection. In Study 1 ($N$ = 184) we document (a) the mate characteristics that are consensually more and less desired, (b) the mate characteristics that show strong sex differences in their preferred value, (c) the degree to which married couples are correlated in selection preferences, and (d) the relations between expressed preferences and the personality and background characteristics of obtained spouses. In Study 2 ($N$ = 100) we replicated the sex differences and consensual ordering of mate preferences found in Study 1, using a different methodology and a differently composed sample. Lastly, we present alternative hypotheses to account for the replicated sex differences in preferences for attractiveness and earning potential.

Neither men nor women prefer all members of the opposite sex equally. Some are favored over others, and one important research task is to identify the characteristics that prospective mates consider to be important. Although mate choice is clearly a crucial adult decision for more than 90% of the population (Price & Vandenberg, 1980), surprisingly little is known about the characteristics that men and women seek in potential mates (Thiessen & Gregg, 1980). In this article we develop a conception of the role of mate preferences within the human mating system. Specifically, we address the consequences for sexual selection and assortative mating. In two empirical studies we document several basic features of this conception.

## Darwin's Concept of Sexual Selection

Evolutionary considerations of mate choice date back to Darwin (1871). After completing *On the Origin of Species,* Darwin (1859) became dissatisfied with natural selection as the sole mechanism for evolutionary change. He observed that characteristics such as the plumage of peacocks seemed to have no survival value, and appeared to elude natural selection in the sense of "survival of the fittest." To account for these findings, Darwin proposed the concept of "sexual selection" as a second process that caused evolutionary change. Sexual selection, Darwin thought, would account for the findings that he believed could not be explained by natural selection alone.

Darwin's concept of sexual selection subsumed two closely related processes. The first was called *intrasexual selection,* and defined the tendency of members of one sex to compete with one another for access to members of the opposite sex. The second, called *intersexual selection* (also "epigamic selection") was defined as the tendency of members of one sex to preferentially choose as mates certain members of the opposite sex. Darwin called intersexual selection "female choice" because he observed that throughout the animal kingdom, females tended to be more selective and discriminating than males in their mating choices. Patterns of sexual selection do not immediately involve environmental or ecological adaptations. In principle, neutral or even otherwise dysfunctional characteristics could evolve through female choice or intrasexual competition. Thus sexual selection is descriptive of the behavioral interactions of species members with each other, without necessary reference to the prevailing ecological demands.

It is now recognized that sexual selection operates through differential reproductive success (Campbell, 1972). Natural selection therefore subsumes sexual selection. There is one process of evolution, not two, and the proximate mechanisms of evolutionary change reduce to differential gene replication. In addition, intrasexual selection in humans probably operates indirectly, through social hierarchies, rather than through direct competition. Men may compete for elevation in hierarchies, and women tend to favor high-status men (Symons, 1979; Trivers, 1972). Differential access to women is attained more through the medium of hierarchies, and less through direct competition. Lastly, intersexual selection need not be restricted to female choice. Within certain mating systems, particularly those that tend toward monogamy, men exert choice.

The importance of sexual selection (intrasexual and intersexual) clearly depends on the nature of the mating system. There is one set of conditions in which sexual selection will not be likely to cause large changes in gene frequencies (Caspari, 1972): (a) if the sex ratio is 1:1 for individuals of mating age; (b) if the mating system is monogamous; and (c) if all individuals of mating age become coupled. In Western societies, the sex ratio does deviate from 1:1 under certain conditions and for certain age groups (Secord, 1983). Not all individuals of mating age become coupled, and, although presumptively monogamous, it is probably more accurate to describe our mating system as one of "serial polygamy": successive marriages and mating outside of marriage are common (Caspari, 1972). These conditions in our current mating system allow for considerable sexual selection.

The authors thank Don Symons and Del Thiessen for providing helpful comments on an earlier draft of this article.

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## Assortative Mating

All mating systems can be described as deviations from *panmixia,* or random mating. Inbreeding and outbreeding are two deviations from panmixia that reflect selection and avoidance of genetic relatives, respectively. *Polygyny* is another type of deviation, and it is a system in which there is a great variability among men in the number of wives they attain. In Western societies in which monogamy is the apparent norm, assortative mating is the most pronounced deviation from panmixia (Eckland, 1968; Jensen, 1978; Vandenberg, 1972). *Assortative mating* may be defined as the nonrandom coupling of individuals on the basis of resemblance on one or more genotypic or phenotypic characteristics (D. M. Buss, 1984a).

Two major subclasses of assortative mating are character-specific assortment and cross-character assortment. *Character-specific assortment* is defined as coupling that is based on resemblance on a particular attribute such as height, intelligence, or extraversion. *Cross-character assortment,* in contrast, may be defined as coupling that is based on congruent elevation (or depression) on different, but similarly valued, characteristics. An example of cross-character assortment would be a tendency for extraverted women to mate with conscientious men. Preferences in mate choice can affect both character-specific and cross-character assortment.

Although character-specific assortment can, in principle, be positive (homogamous) or negative (heterogamous), in human societies assortative mating tends to be positive (Eckland, 1968; Thiessen & Gregg, 1980; Vandenberg, 1972). With the exception of biological sex, there have been no replicable demonstrations of negative assortment. The range of characteristics that show positive assortment can only be described as staggering. Couples show assortment for age, race, religion, social status, cognitive abilities, values, interests, attitudes, personality dispositions, drinking, smoking, classes of acts, physical attractiveness, and a host of other physical variables such as height, weight, lung volume, and ear lobe length (D. M. Buss, 1984a, 1984b, 1985; Jensen, 1978; Spuhler, 1968; Vandenberg, 1972). This does not suggest that each of these characteristics individually forms a causal basis for assortment; some are clearly auxiliary characteristics that happen to covary with those for which assortment occurs. Nonetheless, the pervasiveness of homogamy suggests that it is one of the most well established replicable findings in the psychology and biology of human mating.

## Importance of Mate Preferences for Sexual Selection and Assortment

What is the role of mate preference within a mating system that is ostensibly monogamous and in which assortative mating is the primary deviation from panmixia? There are three levels of analysis at which this problem can be approached, each of which yields major connections to the human mating system. The first level of analysis is defined by those characteristics in a potential mate that are *consensually* desired and sought. The second level of analysis is defined by major *sex differences,* namely, the characteristics in potential mates that women view as more important than do men and vice versa. *Individual differences* define the third level of analysis. Some individuals prefer extraverted mates, for example, whereas others prefer more reclusive introverts. Findings at each level have important consequences for assortative mating and for sexual selection.

Consensually desired mate characteristics acquire importance because they are commonly sought, yet are in scarce supply. In a monogamous system, this means that some (indeed most) individuals must settle for a mate who is less than the consensual ideal. Only a select few acquire a mate possessing the consensually desired attributes. In mating systems that are based on multiple-attribute criteria, consensual preferences tend to produce cross-character assortment; that is, a given level of overall "market value" can be attained through elevation on different combinations of attributes. In addition, if any individuals are excluded from mating, it is those who lack consensually desired attributes. Thus the most important research tasks are (a) identifying those characteristics that are most and least desired, (b) specifying the degree of consensus with respect to the desirability of each of them, and (c) identifying the individuals who are capable of acquiring mates who possess those characteristics.

The second level of analysis, that of sex differences in mate preferences, also has consequences for assortative mating and for sexual selection. Specifically, different male and female preferences tend to produce cross-character assortment. In a multi-attribute market value mating system, men and women with different but similarly valued characteristics become mated. Male–female preference differences also produce sex differences in the types of men and women that are selectively excluded from mating. If women value earning power and men value physical beauty in potential mates, then penurious men and unattractive women are selectively excluded more than are homely men and poor women. In sum, sexual selection and cross-character assortment can be affected by sex differences in mate preferences.

Individual differences in mate preferences also can have consequences for assortment and selection. Such differences tend to increase the intensity of assortative mating if individuals with similar preferences seek one another. In addition, individual differences in desired characteristics reduce or minimize selection. Such differences mitigate the effects of consensual preferences that tend to produce strong selective exclusion.

In sum, mate preferences are linked to the mating system at three levels. At the consensual level, mate preferences define the commonly desired and sought characteristics in a mate. In a monogamous sytem, deviations from complete pairing result in selective exclusion of individuals who have low levels of these attributes and selective favoring of individuals who possess them in abundance. Consensual preferences also tend to produce cross-character assortment. Sex differences in mate preferences not only produce cross-character assortment, but also yield sex differences in the nature of individuals excluded from mating. Individual differences tend to increase assortment while decreasing selection. These key links are summarized in Table 1.

We conducted our studies to examine empirically the three levels by which mate preferences can be analyzed. Specifically, we conducted two studies to address this basic set of related questions: (a) What are the major dimensions along which preferences in mate selection differ? (b) What are the most valued characteristics in potential mates? (c) How do men and women differ in their selection preferences? (d) What are the character-

Table 1
*Effects of Marital Preferences on Selective and Assortative Mating*

| Level of analysis | Effect on assortative mating | Effect on selection |
|---|---|---|
| Consensually desired characteristics | Increases cross-character assortative mating | Those lacking consensually desired characteristics will be excluded from mating under conditions in which not all individuals mate |
| Sex differences in desired characteristics | Increases cross-character assortative mating | Produces sex differences in nature of individuals excluded from mating |
| Individual differences in desired characteristics | Increases assortative mating | Reduces or minimizes selection |

istics (personality and background) associated with different mate selection preferences? (e) Are spouses assortatively mated on their selection preferences? (f) What are the relations between mate preferences and the characteristics of the obtained spouse?

## Study 1

### *Method*

#### *Subjects*

One hundred eighty-four individuals who constituted 92 married couples participated in this study. We obtained subjects by placing newspaper advertisements and flyers throughout a large metropolitan area. Both indicated that a study was being conducted with married couples and that personal feedback and a small sum of money would be given for participation. All responding couples between the ages of 18 and 40 were included in this sample.

#### *Procedure*

Couples were tested in groups ranging from 2 (a single couple) to 14 (seven couples). Evening and weekend sessions were arranged in order to permit flexible scheduling. Members of each couple were separated for the duration of the testing sessions in order to prevent discussion of the measures. After the testing session, each couple was interviewed by a pair of interviewers, one male and one female, in order to clarify questions, to inquire about potential ambiguities or difficulties pertaining to the procedures, and to inform subjects about the nature and purposes of the study. Seven different interviewers were employed for this purpose. The following measures were included in the assessment battery.

*Confidential Biographical Questionnaire.* This questionnaire was designed to enable us to assess a variety of aspects relating to characteristics of subjects and their spouses. Specifically, physical characteristics (e.g., height, weight), demographic characteristics, consumption habits (e.g., smoking, drinking), academic achievements (e.g., grade point averages, board scores, years of education), background marital information (e.g., previous marriages), and current marital satisfaction were assessed.

*Marital Preferences Questionnaire.* This 76-item measure was developed by Gough (1973) for his study of family planning and population psychology. Characteristics were selected in order to represent a broad array of attributes that may be desired in a potential mate. Instructions were as follows:

> Please read the following list of characteristics and rate their desirability in someone you might marry. Use this scale: +2 = very desirable; +1 = somewhat desirable; 0 = inconsequential, or neutral; −1 = somewhat undesirable; −2 = very undesirable.

The 76 alphabetically ordered characteristics followed the instructional set. Examples of characteristics are *adaptable, able to plan ahead, affectionate in nature, dominant, frugal, good cook, intelligent, kind, loyal, neat and clean, physically attractive, tall, wealthy, and witty.* Included were characteristics representing social, physical, personal, goal, and background attributes of potential mates.

*California Psychological Inventory (CPI; Gough, 1957/1964).* Several broad-gauge instruments were included in order to assess the personality characteristics associated with individuals who express certain mate preferences, as well as to evaluate the characteristics in the obtained spouse. The CPI is a carefully designed test that emphasizes the intrapersonal (intrapsychic) and interpersonal (social) aspects of psychological functioning. Each scale is anchored in a "folk concept" that is presumed to index attributes of behavior that are found across all cultures and societies and that capture important aspects of social interaction. Scales are designed with the purpose of predicting "what an individual will do in a specified context, and/or to identify who will be described in a certain way" (Gough, 1968). Many of the scales have been validated in a variety of cultures and languages (Megargee, 1972).

*Eysenck Personality Questionnaire (EPQ).* The EPQ was developed by Eysenck and Eysenck (1975) in order to assess three broad orthogonal dimensions of personality: extraversion–introversion, neuroticism–stability, and psychoticism. In addition, this questionnaire contains a "Lie" scale designed to alert investigators to protocols in which dissembling may have occurred.

*Interpersonal Adjective Scales (IAS).* The Interpersonal Adjective Scales were developed by Wiggins (1979) to represent a reasonably comprehensive taxonomy of the interpersonal domain in the form of a circumplex structure. The 16 scales are Dominant, Ambitious, Extraverted, Gregarious, Agreeable, Warm, Ingenuous, Unassuming, Submissive, Lazy, Introverted, Aloof, Quarrelsome, Cold, Calculating, and Arrogant. Eight carefully selected adjectives index each construct. In the self-report form, subjects indicate how characteristic or uncharacteristic each adjective is on a 9-place rating scale. For the purposes of this study, we also used a structurally analogous form to obtain spouse–observer ratings for each of the 128 adjectives (OIAS).

*Self- and spouse ratings.* Each of the 16 interpersonal constructs represented by the Wiggins circumplex model were presented for direct ratings to each subject and their spouse. A 7-point scale was used for these self- and spouse ratings.

*Interpersonal Dependency Scales (IDS).* The three subscales of the IDS are Emotional Reliance, Autonomy, and Lack of Self-Esteem (Hirshfield et al., 1977).

*EASI Temperament Scales (EASI).* The 10 subscales of the EASI Temperament Survey (A. H. Buss & Plomin, 1975) were included in order to obtain a broad-gauge evaluation of the four temperaments of activity level, emotionality, sociability, and impulsivity.

*Personal Attributes Questionnaire (PAQ).* This instrument was developed by Spence and Helmreich (1978) in order to assess different facets of sex role orientation. Specifically, six scales are scored: Mascu-

linity–Femininity (a bipolar M–F scale), socially desirable Masculinity (M+), socially desirable femininity (F+), socially undesirable Masculinity (M−), verbal aggressive femininity (Fva−), and undesirable communal femininity (Fc−).

*Public and Private Self-Consciousness.* Three scales are scored from this instrument (Fenigstein, Scheier, & Buss, 1975): Public Self-Consciousness (the tendency to be dispositionally aware of public appearance), Private Self-Consciousness (the tendency to be dispositionally aware of private aspects of the self such as thoughts and fantasies), and Social Anxiety.

*General Vocabulary Test.* This multiple-choice vocabulary test (Gough & Sampson, 1974) consists of 50 words as items. Among the four multiple-choice options, subjects are instructed to 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.

*Interviewer Ratings.* Each couple was interviewed by a pair of interviewers drawn from a 7-member team. Each interview lasted about 30 min. Directly after the interview, the two interviewers independently rated each participant on the 16 interpersonal dimensions drawn from the Wiggins circumplex model (Wiggins, 1979). In order to control for potential differences among interviewers in the use of rating scales, scores were standardized for each interviewer before we composited (with unit weighting) the ratings for each interviewer pair.

*Summary of procedures.* In sum, we used four data sources to assess various characteristics of each subject and their spouse. Self-reports were used for standard personality tests (CPI, EPQ, IAS, PAQ, IDS) and background characteristics. We used spouse-observer reports to provide a second assessment of interpersonal dispositions. Tested vocabulary was used as an index of verbal ability, and composited interviewer ratings were used to assess 16 dimensions of interpersonal behavior.

## Results

### Most and Least Valued Characteristics in a Mate

We ranked the 76 characteristics from most desired to least desired by using the total sample means (on a transformed 1–5 scale). For the sample as a whole, the 10 characteristics most valued in a mate are *good companion, considerate, honest, affectionate, dependable, intelligent, kind, understanding, interesting to talk to,* and *loyal.* Characteristics that are not viewed as highly desirable in a mate are *wants a large family, dominant, agnostic in religious matters, night owl, early riser, tall,* and *wealthy.* The complete table of means, standard deviations, and ranks may be obtained from the authors.

### Sex Differences in Mate Selection Preferences

To examine sex differences, we computed $t$ tests for each of the 76 items. In relation to men, the women in this sample tended to prefer the following spouse characteristics: *considerate, honest, dependable, kind, understanding, fond of children, well-liked by others, good earning capacity, ambitious and career-oriented, good family background,* and *tall* (all $ps < .01$, two-tailed). In contrast, men in this sample tended to prefer more than did women the following spouse characteristics: *physically attractive, good looking, good cook,* and *frugal* (all $ps < .01$, two-tailed).

### Factor Analysis of Mate Preferences

To identify the major dimensions along which preferences in mate selection differ among individuals, we factor analyzed the 76 items, using varimax rotation. Nine interpretable factors with eigenvalues greater than unity emerged. In Table 2 we show the factor loadings for the highest loading items on each factor. In order to obtain an indication of the relative importance of these 9 factors in mate selection, the mean values (item total divided by number of items) for each factor are as follows, in descending order: *kind–considerate* (4.56), *likes children* (4.41), *easygoing–adaptable* (4.23), *socially exciting* (3.94), *artistic–intelligent* (3.83), *domestic* (3.73), *professional status* (3.59), *religious* (2.11), and *politically conservative* (1.93).

At the factor level, four of the nine factors showed significant sex differences; women valued more than did men the following characteristics: *kind–considerate,* $t(182) = 3.00$, $p < .003$; *professional status,* $t(182) = 4.81$, $p < .001$; *likes children,* $t(182) = 2.30$, $p < .022$; and *easygoing–adaptable,* $t(182) = 2.02$, $p < .045$.

### Composite Scores Based on Factor Analysis of Mate Preferences

To identify the relations between personality characteristics and mate selection preferences, we computed composites on the basis of the factor analysis. Specifically, the highest loading variables for each factor with weights greater than .30 were summed, with unit weighting, in order to create nine scores for each subject. Alpha reliabilities ranged from a low of .59 to a high of .95, with a mean of .73.

These factor composites were then correlated with the personality and background characteristics for each sex separately. This large array of correlations produces formidable reportorial problems as well as the expectation that a certain number would attain significance by chance alone. To reduce this array and to decrease the probability of reporting chance findings, we adopted three criteria, the fulfillment of any one of which would allow mention here (the full set of analyses may be obtained from the authors). First, correlations are reported if they exceeded the .01 level of significance (two-tailed). Second, correlations are reported if they occurred beyond the .05 level (two-tailed) for the same variable across two separate data sources (e.g., both self-ratings and observer ratings). Third, correlations are reported if they were statistically significant beyond the .05 level for each sex separately.

### Personality and Background Correlates of Mate Preferences

Both men and women who preferred mates who are *kind–considerate* tended to score high on interpersonal dependency in the sense of emotional reliance as well as in the feminine direction on PAQ Masculinity–Femininity. However, men who scored high on this factor tend to score high on extraversion and warmth; in contrast, women who scored high on this preference factor tended to score in the neurotic and submissive direction.

Correlates of the *socially exciting* preference composite also yield intriguing sex differences. Both men and women who preferred mates who are socially exciting scored relatively high on EPQ Extraversion as well as on Public Self-Consciousness, and they reported that they are night rather than day persons. These results suggest direct correspondence between an extraverted phenotype and preference for an extraverted mate, but for men, preference for a socially exciting mate was accompanied by a

high activity level as well as impulsivity or undercontrol. In contrast, the only correlates that fulfilled our established criteria for women were negative correlations with CPI Intellectual Efficiency and CPI Psychological Mindedness.

Both men and women who preferred mates who are *artistic–intelligent* tended to score high on CPI Self-Acceptance, Private Self-Consciousness and preference for night (rather than day) activities. However, only men who scored high on this preference cluster tended to score high on scales indicating neuroticism or emotionality. Females who scored high on this preference cluster had no additional distinguishing correlates that fulfilled the statistical criteria.

Men and women who preferred a *religious* mate scored high on CPI Responsibility, Socialization, and Good Impression Scales. Women who preferred a religious mate reported low levels of alcohol consumption; this was a finding that was not obtained for the male sample. Lastly, only men who scored high on this preference cluster tended to score high on nurturance and agreeableness.

No common correlates of the *domestic* preference composite were found across the sexes, and no correlates that fulfilled any of the three criteria were found for men. Women who preferred a highly domestic mate tended to score high on Public Self-Consciousness and Private Self-Consciousness scales. Otherwise, no other correlations exceeded the criterion thresholds.

Although no correlates of *professional status* preferences fulfilled the criteria for men in this sample, women who scored high on this preference cluster tended to score low on CPI Tolerance, CPI Achievement via Independence, CPI Intellectual Efficiency, and Psychological Mindedness, which suggests that they seek in mates attributes that they themselves do not possess. Interestingly, such women also tended to score high on IDS Emotional Reliance and Machiavellianism.

No common correlates were found across the sexes for the *wants children* preference composite. Men who preferred a wife who wants children tended to score high on CPI Good Impression, PRF Nurturance, and IAS Warm. Women who preferred a husband who wants children tended to score high on IAS Gregarious, but low on IDS Autonomy and low on IAS Arrogance.

Women who preferred a *politically conservative* husband tended to score low on CPI Psychological Mindedness, to have low college grades and low Scholastic Aptitude Test (SAT) scores, and to score high on CPI Femininity. Men who preferred a politically conservative wife tended to score high on PRF Dominance, IAS Dominance, and PAQ Masculinity (+). They also tended to be taller than average.

Table 2
*Factors of Marital Preferences*

| Factor/item | Loading | Factor/item | Loading |
|---|---|---|---|
| 1. Kind–considerate (16.0) | | 5. Domestic (3.4) | |
| Kind | .69 | Good housekeeper | .64 |
| Understanding | .66 | Good cook | .63 |
| Loyal | .63 | Frugal | .55 |
| Considerate | .59 | Musical | .37 |
| Honest | .58 | Home-oriented | .35 |
| 2. Socially exciting (6.9) | | 6. Professional status (3.1) | |
| Exciting personality | .69 | College graduate | .62 |
| Excellent social skills | .68 | Professional degree | .60 |
| Charming | .65 | Good family background | .54 |
| Sociable | .60 | Good earning capcity | .54 |
| Stylish appearance | .60 | Middle-class background | .43 |
| 3. Artistic–intelligent (4.5) | | 7. Likes children (2.9) | |
| Creative | .66 | Fond of children | .80 |
| Artistic | .62 | Likes children | .75 |
| Intellectually stimulating | .61 | 8. Politically conservative (2.6) | |
| Courageous | .53 | Politically conservative | .70 |
| Idealistic | .53 | Politically liberal | −.69 |
| Interesting to talk to | .49 | Tall | .44 |
| Intelligent | .46 | Wealthy | .39 |
| Witty | .45 | Healthy | .36 |
| 4. Religious (3.6) | | 9. Easygoing–adaptable (2.5) | |
| Church-goer | .80 | Easygoing | .60 |
| Agnostic in religion | −.79 | Able to plan ahead | .50 |
| Religious point of view | .78 | Well-liked by others | .43 |
| Wants large family | .53 | Open-minded on question of morals and ethics | .34 |
| Good moral character | .41 | Adaptable | .32 |

*Note.* Percentages in parentheses reflect percentage of total variance accounted for by each factor.

Both men and women who preferred *easygoing–adaptable* spouses tended to score high on Public Self-Consciousness. The wives of men who scored high on this preference cluster reported that their husbands were rather unambitious. Interestingly, women who scored high on the easygoing preference cluster reported sleeping more hours per night.

### *Spouse Correlations for Selection Preferences*

Are the selection preferences of wives related to the selection preferences of their husbands? To address this question, we computed spouse correlations for each of the nine factor composites and for each of the 76 individual preference characteristics. Results show strong positive spouse correlations for *religious* (.65) and *likes children* (.52), moderate positive correlations for *socially exciting* (.37), *artistic–intelligent* (.39), *politically conservative* (.36), and *easygoing–adaptable* (.35), and small nonsignificant correlations for *professional status* (.22), *kind–considerate* (.16) and *domestic* (.16). In sum, husbands and wives are correlated on mate selection preferences, but the magnitude of these correlations varies greatly with the particular cluster or characteristic under consideration.

### *Relationships Between Mate Preferences and Obtained Spouses*

To examine the relations between selection preferences and the characteristics of the obtained spouse, we computed cross-person correlations between the subject's nine factor composites and their spouse's personality and background variables. Although several alternative interpretations of these cross-person findings are possible, the findings themselves are sufficiently important to warrant detailed presentation. In Tables 3 and 4, we show the significant correlations between the preference composites of the husbands and the background and personality characteristics of the wives, as well as those between the preferences composites of the wives and the background and personality characteristics of their husbands. These cross-sex correlations acquire intrinsic importance in the present context because they suggest causal links between preferences and obtained spouse; that is a point that we examine more fully in the discussion section.

The spouse correlates of *kind–considerate* show striking differences between the sexes. The wives of husbands who preferred kind–considerate spouses scored high on several measures of agreeableness (IAS, OIAS, spouse ratings) as well as on measures of extraversion. In contrast to the agreeable–gregarious portrait of these wives, husbands of wives who preferred kind–considerate spouses appear to be aloof, submissive, unmasculine, unsociable, undominant, and unassuming. Thus the husbands of wives who preferred kind–considerate mates appeared to be weak, unassertive, and socially passive, much in contrast to the extraverted and agreeable wives of husbands who preferred kind–considerate mates.

Analogous cross-sex correlations for the *socially exciting* preference cluster appear to be more similar across sex. Men who preferred socially exciting wives appeared to have wives who scored high on self-acceptance, extraversion, and gregariousness, and low on social anxiety and aloofness. Similarly, women who preferred socially exciting husbands also appeared to have husbands who scored high on extraversion, affiliation, and warmth. However, significant correlations also occurred for self-control, tolerance, and achievement (all negative), suggesting husbands who are somewhat undercontrolled and underachieving.

Interesting sex differences also emerged in the correlates of the *artistic–intelligent* preference cluster. Men who preferred artistic–intelligent wives appeared to have wives who scored high on self-acceptance, ambitiousness, autonomy, and masculinity, and low on neuroticism. In marked contrast, wives who preferred artistic–intelligent husbands appeared to have husbands who scored high on EPQ Neuroticism, and were described (and described themselves) as somewhat lazy, quarrelsome, emotional, feminine, and arrogant. Thus preferences for an artistic–intelligent mate appear to have strikingly different implications for men and women in their obtained mate, particularly on the neuroticism–stability dimension.

Men who preferred *religious* wives had mates who tended to score high on making a good impression, agreeable, and unassuming (the latter deriving from the interview context), and low on sensation seeking, laziness, quarrelsomeness, and alcohol consumption. Similarly, women who preferred religious husbands tended to have husbands who were rated as agreeable, warm, ingenuous, unassuming, and not arrogant. However, these husbands also tended to score high on dominance, responsibility, self-control, and achievement via conformance, which is suggestive of a stronger or more forceful portrait than that conveyed by the wives.

Fewer significant correlations were found between *domestic* mate preferences and characteristics of obtained spouse, particularly for the obtained husbands. The wives of men who preferred domestic wives tended to score high on scales that were suggestive of warmth, agreeableness, submissiveness, and femininity, which was perhaps precisely what these men wanted. In contrast, these features did not covary with wive's preferences for a domestic husband. The few correlates that were significant suggest that such husbands are low on dominance and ambition but do not tend to differentially possess the warm and agreeable attributes seen in the wives of husbands who preferred domestic mates.

Spouse correlations of the *professional status* cluster are also different for men and women. Wives of men who preferred mates who have high professional status indeed had wives who scored high on CPI Capacity for Status and who rated themselves as ambitious. In addition, such wives tended to score high on agreeable and gregarious, but low on laziness, submissiveness, emotionality, and fearfulness. Such wives generally had elevated high school grade point averages. In contrast, the husbands of wives who preferred mates who had high professional status did not show signs of ambition or capacity for status. Instead, they seemed to be relatively low on psychological mindedness and vocabulary.

Correlates of the *wants children* preference cluster were too few in number to suggest a strong portrait. The wives of men who preferred a spouse who wanted children appeared to be warm, agreeable, gregarious, and feminine. Husbands of women who wanted a mate who wanted children showed slight indications of dominance and quarrelsomeness, but the number of these correlations is too few and the magnitudes are too small to draw firm conclusions.

Table 3
*Correlations Between Wives' Preferences and Husbands' Scores*

| Wives' preferences/husbands' scores | *r* |
|---|---|
| 1. Kind-considerate | |
| CPI Dominance | −.26* |
| CPI Sociability | −.23* |
| CPI Psychological Mindedness | .24* |
| IAS Aloof | .31** |
| IAS Submissive | .31** |
| OIAS Dominance | −.24* |
| OIAS Calculating | −.22* |
| OIAS Unassuming | .30** |
| PRF Achievement | −.26* |
| PAQ Masculine–Feminine | −.26* |
| PAQ Masculine + | −.27* |
| College grade average | −.28* |
| 2. Socially exciting | |
| CPI Responsibility | −.32** |
| CPI Self-Control | −.24* |
| CPI Tolerance | −.35*** |
| CPI Good Impression | −.27* |
| CPI Achievement via Conformance | −.26* |
| CPI Achievement via Independence | −.37*** |
| CPI Intellectual Efficiency | −.28** |
| CPI Psychological Mindedness | −.34*** |
| Tested vocabulary | −.23* |
| OIAS Ambitious | .23* |
| OIAS Introverted | −.22* |
| OIAS Warm | .22* |
| OIAS Extraverted | .27* |
| PRF Affiliation | .27* |
| PRF Achievement | −.25* |
| PAQ Femininity + | .27* |
| 3. Artistic–intelligent | |
| CPI Self-Control | −.26* |
| CPI Good Impression | −.23* |
| EPQ Neuroticism | .23* |
| EPQ Lie Scale | −.31** |
| IAS Lazy | .28* |
| OIAS Quarrelsome | .24* |
| EASI Emotionality | .22* |
| PAQ Femininity + | .23* |
| PAQ Feminine Verbal Aggressive | .24* |
| Private self-consciousness | .26* |
| SR Cold | −.21* |
| SR Lazy | .22* |
| SR Warm | .22* |
| SR Arrogant | .31** |
| SR Quarrelsome | .24* |
| SAT Quantitative | −.25* |
| 4. Religious | |
| CPI Dominance | .21* |
| CPI Responsibility | .30** |
| CPI Self-Control | .21* |
| CPI Achievement via Conformance | .24* |
| IAS Arrogant | −.28* |
| IAS Unassuming | .36*** |
| OIAS Arrogant | −.24* |
| OIAS Unassuming | .27** |
| EASI Anger | −.25* |
| PAO Masculine − | −.27* |
| SPR Arrogant | −.32** |
| OBS Agreeable | .23* |
| OBS Aloof | −.24* |
| OBS Calculating | −.29** |
| OBS Ingenuous | .34*** |
| OBS Quarrelsome | −.27* |
| OBS Warm | .31** |
| 5. Domestic | |
| OIAS Dominant | −.24* |
| SR Ambitious | −.21* |
| SPR Dominant | −.24* |
| 6. Professional status | |
| CPI Psychological Mindedness | −.32** |
| Tested vocabulary | −.22* |
| SR Cold | −.25* |
| SPR Quarrelsome | .22* |
| PAQ Masculine–Feminine | −.21* |
| Reported drinking | −.31** |
| High school grade average | .23* |
| OBS Dominant | .24* |
| 7. Wants children | |
| CPI Responsibility | .24* |
| IAS Calculating | −.24* |
| IAS Ingenuous | .29* |
| SR Aloof | −.24* |
| SPR Dominant | .31** |
| SPR Quarrelsome | .22* |
| Married before | .24* |
| OBS Submissive | −.23* |
| 8. Politically conservative | |
| CPI Capacity for Status | −.23* |
| CPI Tolerance | −.22* |
| IAS Cold | .27* |
| IAS Quarrelsome | .24* |
| IAS Aloof | .25* |
| IAS Warm | −.24* |
| IAS Agreeable | −.24* |
| OIAS Lazy | −.22* |
| PAQ Femininity + | −.22* |
| SPR Dominant | .24* |
| Reported height | .27* |
| Reported weight | .20* |
| No. years lived together | −.35** |
| OBS Submissive | −.24* |
| 9. Easygoing–adaptable | |
| SR Cold | −.26* |
| SR Unassuming | .25* |

*Note.* CPI = California Psychological Inventory: IAS = Interpersonal Adjective Scale; OIAS = Spouse–Observer Interpersonal Adjective Scales; PRF = Personality Research Form; PAQ = Personal Attributes Questionnaire; EPQ = Eysenck Personality Questionnaire; SR = self-reported; SAT = Scholastic Aptitude Test; SPR = spouse reported; OBS = composited observer–interviewer ratings.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4
*Correlations Between Husbands' Preferences and Wives' Scores*

| Husbands' preferences/wives' scores | *r* |
|---|---|
| 1. Kind-considerate | |
| CPI Responsibility | −.22* |
| IAS Agreeable | .21* |
| OIAS Agreeable | .26* |
| OIAS Extraverted | .28** |
| PRF Abasement | −.24* |
| EASI Tempo | −.28** |
| Public self-consciousness | .21* |
| SPR Agreeable | .23* |
| SPR Extraverted | .29** |
| Marital satisfaction | −.22* |
| 2. Socially exciting | |
| CPI Self-Acceptance | .24* |
| CPI Femininity | −.22* |
| EPQ Extraversion | .23* |
| OIAS Warm | .24* |
| OIAS Gregarious | .24* |
| OIAS Extraverted | .29** |
| Social anxiety | −.28** |
| SR Gregarious | .23* |
| SR Aloof | −.26* |
| SPR Extraverted | .29* |
| SPR Attractiveness | .24* |
| Reported weight | −.23* |
| Time up | .30** |
| OBS Aloof | −.22* |
| 3. Artistic–intelligent | |
| CPI Self-Acceptance | .26* |
| CPI Communality | −.22* |
| EPO Neuroticism | −.25* |
| OIAS Ambitious | .30** |
| OIAS Cold | −.23* |
| OIAS Quarrelsome | −.32** |
| IDS Autonomy | .26* |
| IDS Emotional Reliance | −.22* |
| PAQ Masculine–Feminine | .25* |
| Reported weight | .29* |
| Reported hours sleep | −.28* |
| 5. Domestic | |
| IAS Arrogant | −.24* |
| IAS Warm | .29** |
| IAS Agreeable | .28*** |
| IAS Gregarious | .31** |
| PAQ Femininity + | .24* |
| Machiavellianism | −.26* |
| SR Agreeable | .33* |
| SR Arrogant | −.21* |
| OBS Ambitious | −.27** |
| OBS Submissive | .27** |
| 6. Professional status | |
| CPI Capacity for Status | .21* |
| CPI Self-Control | .23* |
| IAS Unassuming | .29** |
| IAS Ingenuous | .24* |
| IAS Agreeable | .25* |
| IAS Gregarious | .36*** |
| OIAS Lazy | −.23* |
| OIAS Submissive | −.22* |
| EASI Emotionality | −.21* |
| EASI Fearfulness | −.22* |
| Social anxiety | −.23* |
| General self-esteem | .22* |
| SR Agreeable | .29** |
| SR Ambitious | .26* |
| SPR Extraverted | .27* |
| SPR Introverted | −.30** |
| High school grade average | .28** |
| 7. Wants children | |
| IAS Warm | .30** |
| IAS Agreeable | .29** |
| IAS Gregarious | .29** |
| EASI Time | −.25* |
| PAQ Femininity | .22* |
| Public self-consciousness | .22* |
| SR Agreeable | .25* |
| SR Warm | .24* |
| SPR Ingenuous | −.25* |
| 8. Politically conservative | |
| Tested vocabulary | −.26* |
| OIAS Introverted | .26* |
| SPR Agreeable | .22* |
| College grade average | −.28* |
| OBS Ambitious | −.36*** |
| OBS Calculating | −.29** |
| OBS Dominant | −.29** |
| OBS Ingenuous | .21* |
| OBS Submissive | .25* |
| OBS Unassuming | .21* |
| 9. Easygoing–adaptable | |
| CPI Flexibility | .25* |
| IAS Gregarious | .23* |
| PAQ Masculine–Feminine | .26* |
| PAQ Feminine Unmitigated Communion | −.23* |
| SR Aloof | −.24* |
| SPR Extraverted | .25* |
| Time up | .22* |
| High school grade average | .26* |
| SAT Verbal | .38*** |
| Years lived together | −.25* |
| Years known | −.29** |

*Note.* CPI = California Psychological Inventory; IAS = Interpersonal Adjective Scale; OIAS = Spouse–Observer Interpersonal Adjective Scales; PRF = Personality Research Form; SPR = spouse reported; EPQ = Eysenck Personality Questionnaire; SR = self-reported; OBS = composited observer–interviewer ratings; IDS = Interpersonal Dependency Scales; PAQ = Personal Attributes Questionnaire; SAT = Scholastic Aptitude Test.
* $p < .05$. ** $p < .01$. *** $p < .001$.

The *politically conservative* preference cluster draws a larger constellation of obtained spouse characteristics. Specifically, the interviewers tended to rate the wives of men who preferred politically conservative mates as submissive, ingenuous, unassuming, not dominant, not calculating, and not ambitious. In contrast to this somewhat weak portrait, husbands of women who preferred politically conservative spouses appeared to be somewhat low in tolerance, warmth, laziness, and femininity, and described themselves as somewhat cold, quarrelsome, and aloof. Their wives described them as relatively dominant, and the interviewers described them as low in submissiveness. Interestingly, those husbands also appeared to be relatively tall and heavy.

The final set of correlates, that for *easygoing–adaptable,* is too small for us to draw firm conclusions, particularly for the husband correlates of the wives' preferences. Wives of men who preferred easygoing–adaptable mates, however, do score relatively high on CPI Flexibility, appear to have elevated high school grade point averages and SAT verbal board scores, and seem to get up relatively late in the day.

In sum, many of the mate preference clusters appear to have substantial relations to the obtained spouse. These relations vary with the particular cluster, as well as with sex. Because of their relative novelty in personality research, as well as their potential importance, the entire set of significant correlations is presented.

## Study 2

We conducted the second study to build on and establish the replicability of two sets of findings obtained from Study 1: the consensual ordering of preferred mate characteristics and the striking sex differences in preferred mate characteristics. Specifically, the rating procedure used in Study 1 permitted placing many characteristics as highly desirable. Instead, in Study 2 we used a ranking procedure that required subjects to order their preferences. We used the factor-analytic solution from Study 1 as a guide to the selection of mate characteristics to be ranked. In general, the highest loading items from each factor were included. Because of their conceptual distinctiveness, both *intelligent* and *creative* were included even though they loaded on the same preference factor. *Good earning capacity* and *physically attractive* were included because they showed such large sex differences in Study 1. Lastly, *good heredity* was included on the basis of a literature search (Langhorne & Secord, 1955) that indicated its potential importance in mate choice.

We thought it particularly important to replicate the sex differences found in Study 1 because of their importance for cross-character assortment and for selective exclusions from mating. In particular, the subjects in Study 1 were married couples who might manifest traditional values in mate choice. Therefore, for Study 2 we chose subjects who were unmarried undergraduate students who might be least expected to manifest traditional values in mate choice. The characteristics that showed the largest sex differences in Study 1 were included in Study 2.

### Method

#### Subjects

One hundred undergraduates (50 male, 50 female) from a major west coast university participated in Study 2. All subjects were unmarried and between the ages of 18 and 23.

#### Procedure

Subjects completed two questionnaires that concerned their preferred characteristics in a potential mate. One was free form, and subjects were asked to list in order the 10 most desirable characteristics in a potential mate. The second questionnaire was a structured ranking procedure that consisted primarily of the high-loading items that represented each factor found in Study 1. Instructions were as follows:

> Below are listed a set of characteristics that might be present in a potential mate or marriage partner. Please *rank* them on their desirability in someone you might marry. Give a "1" to the most desirable characteristic in a potential mate; a "2" to the second most desirable characteristic; a "3" to the third most desirable characteristic; and so on down to "13" for the 13th most desired characteristic in a potential mate.

The following 13 characteristics were presented for ranking: *kind and understanding, religious, exciting personality, creative and artistic, good housekeeper, intelligent, good earning capacity, wants children, easygoing, good heredity, college graduate, physically attractive,* and *healthy.*

### Results and Discussion

In Table 5 we show the consensual rankings for the 13 potential mate characteristics. Also shown are the means and standard deviations for men and women separately. In the final two columns we show the $t$ values and significance levels for sex differences in preferred mate characteristics.

There is no direct and unambiguous way in which to compare the consensual ratings in Study 1 with the consensual ranks in Study 2 because of the different context (76 versus 13 characteristics) and different procedure (rating versus ranking). However, a few crude comparisons can be made. *Kind and understanding* were rated in the top 10 in Study 1 and received the first rank in Study 2. Similarly, *religious* was rated in the bottom 10 in Study 1 and received the lowest rank in Study 2. Interestingly, however, *religious* consistently showed the largest preference variance in both studies. By way of contrast, *exciting personality* was ranked second on the average for the undergraduate sample (Study 2), but did not even make the top 50% in the ratings by married couples (Study 1).

The tests for sex differences indicate the degree to which the previously obtained findings are robust across a differently composed sample (young unmarried college students) via a different measuring instrument. As shown in Table 5, *physically attractive* was more preferred by men than by women ($p < .0001$) as a desirable mate characteristic. In contrast, *good earning capacity* ($p < .0001$) and *college graduate* ($p < .004$) were more preferred by women than by men as desired characteristics in mates. All three sex differences were found in Study 1 as well, which is suggestive of robustness and generality to these differential preferences; this is a finding to be taken up in the General Discussion section.

## General Discussion

This research contributes to knowledge about mate choice at three levels of analysis: (a) identifying potential mate characteristics that are relatively more and less consensually desired; (b) uncovering nine factorially derived dimensions along which mate preferences differ across individuals and examining the relations between these individual preferences and the characteristics of

Table 5
*Preferences Concerning Potential Mate*

| Rank | Characteristic[a] | Male subjects | | Female subjects | | Sex differences | |
|---|---|---|---|---|---|---|---|
| | | *M* | *SD* | *M* | *SD* | *t*(97) | *p* |
| 1 | Kind and understanding | 2.43 | 2.55 | 2.08 | 1.59 | 0.81 | *ns* |
| 2 | Exciting personality | 3.63 | 2.66 | 3.28 | 2.27 | 0.71 | *ns* |
| 3 | Intelligent | 3.78 | 2.00 | 3.44 | 1.51 | 0.94 | *ns* |
| 4 | *Physically attractive* | 4.04 | 2.32 | 6.26 | 2.49 | −4.59 | .0001 |
| 5 | Healthy | 5.49 | 2.34 | 5.84 | 2.57 | −0.71 | *ns* |
| 6 | Easygoing | 5.67 | 2.62 | 5.72 | 2.95 | −0.08 | *ns* |
| 7 | Creative | 8.33 | 2.79 | 7.56 | 3.32 | 1.25 | *ns* |
| 8 | Wants children | 8.01 | 2.47 | 8.82 | 2.81 | −1.50 | *ns* |
| 9 | *College graduate* | 9.41 | 2.18 | 7.94 | 2.70 | 2.98 | .004 |
| 10 | *Good earning capacity* | 9.92 | 2.19 | 8.04 | 2.59 | 3.90 | .0001 |
| 11 | Good heredity | 9.71 | 2.62 | 10.34 | 2.07 | −1.31 | *ns* |
| 12 | Good housekeeper | 10.22 | 2.29 | 10.56 | 2.10 | −0.76 | *ns* |
| 13 | Religious | 10.24 | 3.53 | 11.12 | 3.16 | −1.30 | *ns* |

*Note.* Rank signifies the consensual rank for the sample as a whole. Significance levels for the *t* values are two-tailed.
[a] Characteristics with significant sex differences are italicized.

obtained mates; and (c) documenting replicable sex differences with respect to preferred mate characteristics. These three levels are discussed in turn.

### *Consensual Preferences*

The consensual level of analysis yields a rank order of characteristics from most desired to least desired in a mate. This basic descriptive information reveals which characteristics are likely to be highly sought in potential mates. We advanced no prior hypotheses regarding the characteristics on which individual place a high premium. Indeed, cultural values and other factors could, in principle, result in nearly any characteristic being relatively preferred or scorned. Obtained results, however, suggest a rough consensual ordering of characteristics that may enter into equity and exchange processes in the mating market.

Consider the three characteristics consensually placed at the top in Study 2: *kind–understanding, exciting personality,* and *intelligent.* One can predict that cross-character assortment will occur more for these characteristics than between these and those lower on the preference continuum such as *creative–artistic* or *good housekeeper.* Across generations, these equitable cross-character pairings tend to produce offspring in whom consensually desired characteristics covary, if one assumes that there is some form of parental transmission (genetic or environmental). It becomes more difficult to find intelligent–boring mates than it is to exciting–intelligent or boring–unintelligent mates.

At a more general level, how can consensual preferences be explained? No current theories exist to account for this value ordering. Several hypotheses may be offered for future study. One hypothesis is social and has reference to compatibility and matrimonial satisfaction. Characteristics such as *kind, understanding, exciting,* and *easygoing* may be preferred for the simple reason that unkind, unexciting, and inflexible partners pose serious problems for marital satisfaction and may lower the odds of marriage survival. In contrast, *good earning capacity, good heredity,* and *good housekeeping* may be characteristics that are less important for the survival and happiness of the pair. Thus characteristics that serve as cues to marital survival and satisfaction may be more preferred than characteristics that are uncorrelated or negatively correlated with these marriage criteria.

Another hypothesis can be derived from evolutionary biology: Characteristics that serve as proximate cues to reproductive investment in potential mates (including parental investment; Trivers, 1972) are preferred more than characteristics that are uncorrelated or negatively correlated with reproductive investment capability. One would predict that intelligence, physical attractiveness, and health, for example, would be more highly correlated with reproductive investment capability than would less preferred characteristics such as religious or good housekeeper. Individuals who in the past have enacted preferences for characteristics that are positively correlated with a mate's reproductive investment may have been selected and thus represented genetically more than individuals who have been indiscriminant or who have enacted preferences that do not correspond to the reproductive investment abilities of a potential mate.

It is interesting to note that the social and evolutionary hypotheses are not intrinsically incompatible. Mate characteristics that lead to marital happiness and survival may be precisely those that correlate with reproductive (including parental) investment. Thus the most important research direction is to identify empirically the relations between characteristics of the obtained mate and the personal satisfaction, marital survival, and reproductive outcomes that characterize obtained pairings.

### *Individual Differences in Mate Preferences*

Factor analyses of responses to the 76-character preference form in Study 1 yielded nine interpretable dimensions along which individuals differ in mate preferences. Although the resulting factors seem clear and intuitively compelling, we do not claim that they represent an exhaustive set of mate preferences. Instead, the utility of these factors can be evaluated via their relations with other variables, particularly with the characteristics of the obtained mate.

What are the relations between mate preferences and the characteristics of the obtained spouse? Several results suggest close correspondence. Individuals who preferred a *socially ex-*

*citing* spouse tended to have spouses who scored high on extraversion, gregariousness, and self-acceptance, and low on social anxiety. Men who desired mates with high *professional status* tended to have wives who scored high on CPI Capacity for Status, and men who preferred *easygoing–adaptable* wives tended to have wives who scored high on CPI Flexibility and who got up late in the day.

But the numerous sex differences in preference correlates are not as straightforward. For example, men who preferred *artistic–intelligent* wives tended to have wives who scored high on self-acceptance, ambitiousness, autonomy, masculinity, and stability. In contrast, women who prefer *artistic–intelligent* husbands tended to have husbands who scored high on neuroticism, laziness, emotionality, and femininity. Why the *artistic–intelligent* mate preference covaries with autonomy and self-acceptance for women but with neuroticism for men remains a mystery.

### *Sex Differences in Mate Preferences*

Three replicated sex differences were found in these studies. Men more than women preferred mates who were physically attractive. Women more than men preferred mates who showed good earning potential and who were college educated. Similar findings have been noted by others (e.g., Berscheid & Walster, 1974; D. M. Buss, 1985; Langhorne & Secord, 1955; Symons, 1979). Because these sex differences are robust across diverse samples, the intriguing question is why they exist.

### *Hypothesis 1: Structural Powerlessness and Sex Role Socialization*

This hypothesis is that women are typically excluded from power and are viewed as objects of exchange. Because of their restricted paths for individual advancement, women seek in mates those characteristics associated with power such as earning capacity and higher education. Hypergamy, the tendency for women to marry upward in socioeconomic status, thus composes the primary traditional channel for upward mobility for women. Men, in contrast, place a premium on the quality of the "exchange object" itself, and so value physical beauty (e.g., enhanced value as a sex object). Physical attractiveness becomes a central means for designating relative value among exchange commodities.

Traditional socialization practices are presumed to maintain and support these structural differences, and are used to inculcate role-appropriate values in males and females. This general hypothesis leads to several testable predictions: (a) that sex differences in preferences should diminish as the power balance in society approaches equity between sexes; (b) that those women who do have access to power by possessing monetary resources and education will value good earning capacity less than will women who do not have access to the accoutrements of power (i.e., they will show preferences that are more similar to those of men); (c) that men and women who have been subjected to less traditional sex role socialization will not show this sex difference as strongly as will those raised more traditionally; and (d) that cultural variations will produce variations in the mate characteristics that are preferred. Not addressed by this formulation is the question of the origins of sex role socialization practices and of the existing economic power structure. As such, it concerns a relatively proximate level of explanation.

### *Hypothesis 2: Cues to Reproductive Investment*

A second general hypothesis has recourse to evolutionary biology (D. M. Buss, 1984c, in press). Individuals who have valued cues that discriminate mates most capable of reproductive investment from those less capable of reproductive investment have been selected in the past. Male and female mate preferences differ because historically the cues to reproductive investment differ for the sexes. Both men and women who have enacted preferences in the past that correspond to reproductive investment in mates will be more represented genetically in the current generation than will individuals who have been indiscriminant or who have enacted preferences that do not correlate with reproductive advantage.

Specifically, women's reproductive value and fertility are closely tied to age and to health (Symons, 1979). Aspects of physical appearance such as smooth and clear skin, good muscle tone, lively gait, white teeth, and lustrous hair are proximate cues to age and health. Therefore, past selection has favored men who enact a preference for those physical attributes (beauty) that are strong cues for age and health, and hence for reproductive capacity.

In contrast, a man's reproductive value cannot be evaluated as accurately from physical appearance (Symons, 1979). Because age imposes fewer constraints on a man's capacity for reproduction, preference for characteristics that covary with male age affords no strong selective advantage. Reproductive investment, however, extends beyond insemination and fertility. Specifically, access to resources provided by monetary power can contribute (a) immediate material advantages of offspring, (b) enhanced reproductive advantage provided to the offspring through acquired social and economic advantages, and (c) genetic reproductive advantages provided for offspring if the qualities that contribute to earning power are partly genetically based.

In principle, this form of reproductive investment could be provided by either men or women. However, two considerations make this form of reproductive investment more characteristic of men. First, men tend to have greater access to monetary resources than do women. Second, and perhaps more important, there is greater variance among men than among women in their possession of this resource. Both considerations lead to the prediction that women will place greater importance on this cue to reproductive investment than will men.

In sum, this hypothesis is that a selective advantage has been afforded to those individuals who have enacted a preference for mates who are capable of reproductive investment. Because a women's fertility and reproductive value are more closely tied to age and health, men value female beauty because it signifies relative youth and hence reproductive fertility. In contrast, a selective advantage has been given to women who have preferences for men who can provide the environmental and genetic investments that are associated with strong earning power (see D. M. Buss, in press, for an extended discussion and empirical examination of these hypotheses).

Because of the ease by which such evolutionary explanations can be generated, it is crucial to formulate specific predictions

that can be subjected to empirical test. The following predictions may be derived from the premises just given: (a) Standards of female beauty will correspond to the age at which women are most reproductively capable; (b) there will be a much weaker correlation between male age and standards for male physical attractiveness; (c) men will prefer women most at the age of reproductive capability; (d) the cues for physical attractiveness should be correlated with the quality of female health, which in turn should be correlated with reproductive value; (e) women who acquire a high-earning mate will have more, and more reproductively successful, progeny than will women who do not acquire a high-earning mate.

Interestingly, the two hypotheses are not inherently incompatible. According to the reproductive investment hypothesis, like the structural powerlessness hypothesis, parents would socialize boys and girls differently. Both sexes would be encouraged to prefer in potential mates those characteristics that signify reproductive investment, and these would differ for men and women. Indeed, parents who are most successful at inculcating these preferences in their children would by definition achieve a selective advantage over parents who fail to instill these preferences. The two hypotheses differ primarily in that "reproductive investment" links present patterns to prior evolutionary considerations, whereas "structural powerlessness" leaves unspecified the more ultimate causes.

Our research must be viewed as a preliminary step toward understanding mate preferences and their role in the human mating system. Research efforts can be profitably directed toward more complex aspects of the tripartite scheme presented here. Specifically, the possible existence of threshold effects, asymmetric preferences, and interactive effects should be examined. Finally, future research must probe more deeply into the early stages of mate choice and more broadly into the cross-cultural generality of the preferences expressed by American samples.

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Received August 12, 1984
Revision received April 12, 1985 ■