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PSYCHOLOGICAL FACTORS AS PREDICTORS OF MARITAL SATISFACTION

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Abstract — Questionnaires assessing marital satisfaction, personality, background, social attitudes, sexual attitudes, and sexual behaviour were independently administered to 566 males and 566 females who had been married to each other for from 0 to 40 years. The marital satisfaction (MS) variable was factored and transformed into an almost normally distributed variable that yielded a correlation of 0.73 between husbands' and wives' scores. The influence of all other variables on the MS of the couples was assessed with regression analyses. With all variables accounting for over two-thirds of the variance of MS, the sexual behaviour and sexual attitude variables contributed most heavily; background and personality moderately; and social attitudes only minimally. Similarity of husbands' and wives' responses had only small effects when the linear effects of the variables were controlled. Effects of complementarity of responses were completely non-existent. An analysis of assortative mating on the psychological variables included in the study indicated that couples select each other for similar sexual and social attitudes and MS itself prior to marriage. The personality variables showed little assortative mating. No tendency for the spouses to become more alike on any variable during the course of marriage was present in the data.

SECTION 1. INTRODUCTION

Research on marriage has centred around two issues — mate selection and marital success. The mate selection issue deals with whether prospective marriage partners choose each other for similarity or dissimilarity on a variety of physical, social, and psychological variables. The marital success issue deals with whether these variables predict success (or happiness or adjustment) in marriage.

These two issues are often not clearly distinguished. Winch (1958; Winch, Kstanes and Kstanes, 1954), for example, views mate selection as being in the service of marital success. Spouses choose each other for complementary needs. The needs of each spouse satisfy the different, complementary needs of the other. After having made their choice, the couple experience a happy or unhappy marriage to the effect that their needs are complementary. Although the complementary needs theory has been influential in stimulating research, empirical findings are usually contradictory to the theory (Tharp, 1963). Prospective spouses do not systematically choose each other for their differences but for their similarities.

In order to save the attractive idea of spouses selecting each other for complementary differences, sequential filter models (e.g. Kerckhoff and Davis, 1962) have been considered. In such formulations couples are initially attracted by their similarities, usually social or background similarities, and continue their courtship based on complementary differences, usually psychological. Filter models explain the usual positive correlations between husbands' and wives' characteristics as arising from their similar backgrounds while allowing selection based on differences to determine marital success. However, in a recent review, Huston and Levinger (1978) concluded that the filter model has not been supported by several studies designed to test it.

A similar conceptualization of mate selection is that "like attracts like" (Carter and Glick, 1976). This view is consistent with the usual finding that correlations between husbands' and wives' variables are positive although in many cases only slightly positive. Similarity, or homogamy (Tharp, 1963), has received far more support than complementary or filter models of mate selection (Barry, 1970). Mates are similar on a variety of psychological

variables including intelligence (Eysenck, 1979), psychopathology (Yom, *et al,* 1975) and attitudes (Eysenck, 1976). Not only do spouses select each other for similarity but the degree to which they are similar influences marital success (Cattell and Nesselroade, 1967). Unstably married couples are more dissimilar on certain personality variables than are stably married couples.

A related possibility is that, regardless of initial selection, the two spouses become more alike during the course of marriage, especially a happy one (Barry, 1970). This possibility may explain the tendency of MS to rise during roughly the third and fourth decades of marriage (Schram, 1979). During the first two decades of marriage, satisfaction declines, possibly as a result of children, boredom, or simply ageing. After that satisfaction increases, possibly as a result of the children leaving home, improved finances, or the couple's increased similarity and compatibility.

A final view of marital success (or adjustment) is that it is simply an extension of the psychological adjustment of the two spouses. Gottman (1979) argues against this view. He views interpersonal variables as far more important than "intrapsychic" variables for marital happiness. Nevertheless, personality variables, such as emotional stability, regularly correlate with self-ratings of marital happiness (Terman, 1938; Burchinal, Hawkes and Gardner, 1957; Dean, 1966; Murstein, 1976) and with marital stability (Cattell and Nesselroad, 1967).

The present study deals with MS and mate selection as distinct issues. While mate selection very probably influences MS the couple may select each other for economic or social reasons that are unrelated to their future satisfaction. It is possible that variables for which there is a high degree of selection are unrelated to satisfaction and that variables for which there is little selection influence satisfaction substantially. Of course, it is also possible that the same variables enter into mate selection and influence satisfaction.

Mate selection on all the psychological variables included in this study is addressed in one section. This section deals with the degree of correlation between husbands' and wives' scores on these variables as well as with the issue of whether the observed correlations arise from selection or change during the course of marriage.

Marital satisfaction is the primary concern of the study. This issue is addressed in six separate sections. Section 2 deals with the factors and distribution of a MS questionnaire based mostly on Locke and Wallace's (1959) work but with a few additional items. In five additional Sections (4–8) the contributions of personality, background, social attitudes, sexual attitudes, and sexual behaviour to MS are assessed. These sections deal with the influence of similarity or complementarity of the husbands' and wives' variables as well as the independent influence of each spouse on his (or her) own and the other spouse's MS. The relative influence of the two individuals' variables versus interactional patterns (i.e. similarity or complementarity) of variables or MS is assessed.

Methods

Subjects. The subjects for this study were 566 married couples. They were solicited through editorial announcements in a women's magazine and a national newspaper of the tabloid variety outlining a proposal to study happiness in marriage and asking couples to co-operate in this venture. The magazine caters for middle-class women, while the newspaper has a national appeal which closely agrees in its readership with national norms. The majority of replies came from the newspaper. The average age of the males was 36.86, and of the females, 34.25. The average couple had been married just over 8½ years, ranging from 0 to 40 years, and had an income of somewhat more than £5000 per year. (See Section 5 for more information). They were also similar to the previously published (Eysenck and Eysenck, 1975) norms on the *Eysenck Personality Questionnaire.* (See Section 4). Although similar to the population, this volunteer sample does not constitute a random sample of the population. However, the results obtained from this sample are not likely to be different in

any important way from those that might occur in a "true" but unobtainable random sample (Eysenck, 1975).

Procedure. After a couple replied to the announcement, they were sent two copies of a questionnaire including the MS, personality, background, social attitudes, sexual attitudes, and sexual behaviour items presented in the following sections. The couple were asked to agree on a 10 digit identification number which would insure their anonymity but allow their questionnaires to be matched. After placing this number on their questionnaires, they were asked to fill them in without consultation and return them by mail independently. The importance of following these instructions was stressed.

Percentages of responses to various items were published in the newspaper as feedback to the participants. The data were then analyzed by the procedures discussed in the remaining sections.

SECTION 2. MARITAL SATISFACTION

Questionnaire

The measure of marital satisfaction (MS) used in this study consisted of the 15 items of the Locke–Wallace (1959) Marital Adjustment Test plus six additional items. The items, the point values for scoring their responses, and their sources (LW or Added) follow. The point values and sources were not shown on the questionnaires filled in by the married couples.

All the questions in this section can be answered by placing a tick next to the appropriate answer. Please fill out all the items. If you cannot give the exact answer to a question, answer the best you can. *Give the answers that best fit your marriage at the present time.*

(LW) 1. Have you ever wished you had not married? Frequently — (0) occasionally — (3) rarely — (8)

(LW) 2. If you had your life to live over again would you: Marry the same person — (15) marry a different person — (0) not marry at all — (1)

(LW) 3. Do husband and wife engage in outside activities together? All of them — (10) some of them — (8) few of them — (3) one of them — (0)

(LW) 4. In leisure time, which do you prefer? Both husband and wife to stay at home — (10) both to be on the go — (3) one to be on the go and the other to stay home — (2)

(LW) 5. Do you and your partner generally talk things over together? Never — (0) now and then — (2) almost always — (10) always — (10)

(added) 6. How often do you kiss your partner? Every day — (10) now and then — (5) almost never — (2)

(added) 7. Tick any of the following items which you think have caused *serious* difficulties in your marriage: (one point per tick)

Partner's attempt to control my spending money
Other difficulties over money
Religious differences
Different amusement interests
Lack of mutual friends
Constant bickering
Interference of in-laws
Lack of mutual affection (no longer in love)
Unsatisfying sex relations
Selfishness and lack of co-operation
Partner paid attention to (became familiar with) another person
Adultery
Desire to have children
Sterility of husband or wife
Venereal diseases
Desertion
Non support
Drunkenness
Gambling
Ill health
Partner in jail
Other reasons

(LW) 8. How many things satisfy you most about your marriage? Nothing — one thing — two things — three or more — (not scored — separate factor)

(LW) 9. When disagreements arise they generally result in: Husband giving in — (0) wife giving in — (2) neither giving in (0) agreement by mutual give and take — (10)

(added) 10. What is the total number of times you left your partner or your partner left you because of conflict? Never — (10) once or more — (0)

State the appropriate extent of agreement or disagreement between husband and wife on the following items:

		Always agree	Almost always agree	Occasionally disagree	Frequently disagree	Almost always disagree	Always disagree
(LW)	14. Handling family finance	5	4	3	2	1	0
(LW)	15. Matters of recreation	5	4	3	2	1	0
(LW)	16. Demonstration of affection	8	6	4	2	1	0
(LW)	17. Friends	5	4	3	2	1	0
(LW)	18. Intimate relations (example: sex relations)	15	12	9	4	1	0
(LW)	19. Ways of dealing with in-laws	5	4	3	2	1	0
(added)	20. The amount of time that should be spent together	5	4	3	2	1	0
(LW)	21. Conventionality (example: good or proper conduct)	5	4	3	2	1	0
(LW)	22. Aims, goals and things believed to be important in life	5	4	3	2	1	0

(LW) 23. On the scale line below tick the mark which best decribes the degree of happiness, everything considered, of your marriage. The middle point, "happy" represents the degree of happiness which most people get from marriage, and the scale gradually ranges on one side to those few people who experience extreme joy in marriage and on the other to those few who are very unhappy in marriage.

(0)	(2)	(7)	(15)	(20)	(25)	(35)
*	*	*	*	*	*	*
Unhappy			Happy			Perfectly happy

Factor Analysis

The items on the Locke–Wallace (1959) Marital Adjustment Test plus six additional items were analyzed separately for the two sexes by the principal components method with Varimax rotation (Harman, 1967). The results of these analyses are shown in Tables 1 and 2.

For the females, there were four principal components with eigenvalues greater than one. The four components accounted for 52% of the original item variance with the first component accounting for 78% of that variance and the second, third, and fourth for less than 10% each.

The first component had loadings greater than 0.4 on items 1 and 2 concerning whether the respondent wished she had not married or would marry the same person again. The items concerning serious difficulties (#7) leaving partner (#10), divorce (#13), and happiness (#23) also loaded strongly on this factor. This component reflected the woman's concerns with her earlier decision *to marry* and her current thoughts about whether *to divorce.* This was the strongest component for the woman.

Table 1. Principal components of MS for 566 married women

	To Marry or Divorce	Agreement	Sex and Affection	Time Together
1. Wished not married?	0.70	0.23	0.20	0.19
2. Marry same person?	0.60	0.18	0.21	0.25
3. Activities together?	0.14	0.13	0.21	0.53
4. Leisure together?	0.25	0.06	0.14	-0.11
5. Talk things over?	0.31	0.17	0.21	0.43
6. How often kiss?	0.23	0.18	0.42	0.23
7. Serious difficulties	-0.48	-0.30	-0.24	-0.50
9. Result of disagreements?	0.24	0.19	0.20	0.23
10. Left partner?	0.40	0.06	0.06	0.21
11. Get on nerves?	0.34	0.36	0.30	0.23
12. Sex relations?	0.30	0.07	0.70	0.21
13. Divorce?	0.67	0.22	0.20	0.25
14. Agree finances	0.16	0.38	0.09	0.32
15. Agree recreation	0.14	0.36	0.19	0.42
16. Agree affection	0.19	0.39	0.58	0.17
17. Agree friends	0.13	0.48	0.04	0.27
18. Agree sex	0.17	0.27	0.69	0.19
19. Agree in-laws	0.06	0.31	0.12	0.21
20. Agree time together	0.22	0.44	0.21	0.45
21. Agree conduct	0.19	0.65	0.24	-0.00
22. Agree aims and goals	0.16	0.62	0.19	0.10
23. How happy?	0.45	0.28	0.42	0.36

Table 2. Principal components of MS for 566 married men

	Agreement	Sex and Affection	Together	To Marry or Divorce
1. Wished not married?	0.08	0.23	0.33	0.61
2. Marry same person?	0.08	0.15	0.50	0.42
3. Activities together?	0.25	0.15	0.47	0.08
4. Leisure together?	0.09	0.10	0.00	0.10
5. Talk things over?	0.25	0.13	0.54	0.06
6. How often kiss?	0.10	0.36	0.42	0.08
7. Serious difficulties	-0.57	-0.19	-0.20	-0.20
9. Result of disagreements?	0.21	0.15	0.20	0.16
10. Left partner?	0.29	-0.01	-0.04	0.44
11. Get on nerves?	0.42	0.26	0.28	0.32
12. Sex relations?	0.23	0.58	0.26	0.13
13. Divorce?	0.33	0.21	0.25	0.56
14. Agree finances	0.48	0.10	0.19	0.13
15. Agree recreation	0.53	0.16	0.20	0.13
16. Agree affection	0.29	0.69	0.24	0.09
17. Agree friends	0.54	0.14	0.17	0.15
18. Agree sex	0.33	0.68	0.18	0.19
19. Agree in-laws	0.49	0.16	0.06	0.12
20. Agree time together	0.50	0.34	0.27	0.17
21. Agree conduct	0.52	0.25	0.11	0.12
22. Agree aims and goals	0.54	0.23	0.16	0.14
23. How happy?	0.37	0.43	0.40	0.34

The second component had strong loadings for items 17, 20, 21, and 22, all of which concerned *agreement* between the spouses concerning friends, time spent together, proper conduct, and goals, respectively. The third component had strong loadings for items 12, 16, 18 and 23, the first three of which concerned *sex and affection.* The fourth component had strong loadings on items 3, 5, 7, 15 and 20, which (except for #7) dealt with whether the couple spent much time *together.*

For the males, there were also four principal components with eigenvalues greater than one. They accounted for 50% of the original item variance, with the first component accounting for 78% of the variance and the second, third, and fourth accounting for less than 10% each.

The first component had strong loadings for items 7, 11, 14, 15, 17 19, 20, 21, and 22.

Except for item 7 (difficulties) and item 11 (getting on each other's nerves), all the rest dealt with *agreement* between the spouses on a variety of issues. This was the strongest component for the men.

The second component was similar to the female's *sex and affection* component. The third was somewhat similar to the female's *time together* component with strong loadings on items 2, 3, 5, 6, 23. This component did not however, emphasize "time" together, but talking, kissing and performance outside activities *together*. The fourth was similar to the female's *decision to marry or to divorce* component, although this was a much weaker component for the males than for the females.

The pattern of the four components was very similar for the males and females and accounted for about the same percentage of item variance in the two sexes. The major differences between the sexes were that concern with the *decision to marry or divorce* was the most salient component in the women's responses while it was a relatively small component in the men's responses and that *agreement* on a variety of issues was the most salient component for the men and relatively minor for the women.

For both sexes the first component was overwhelmingly more important than all the others combined. Also, for both sexes, the happiness item (#23) showed substantial (about 0.3 or greater) loadings on all four factors. For these reasons it was decided to score the Marital Satisfaction Questionnaire as a single scale (MS) for both males and females. However, although the same four components compose MS for both sexes, the influence of these components on MS is quite different for the two sexes. Marital satisfaction is more likely to reflect the overall desirability of continuing the relationship for women while it reflects more the couple's agreement or lack of conflict for the men.

Previous research has indicated that the Locke–Wallace scale can reasonably be considered to measure a single marital adjustment factor (Kimmel and Van der Veen, 1974). In order to test whether the MS items used in this study could be considered to measure only one factor, the items were refactored using the method of hierarchical factoring of oblique factors described by Hendrickson and White (1966). Using this procedure, both the males and the females yielded four oblique primary factors with eigenvalues greater than unity. The first three for both sexes had intercorrelations greater than 0.50. At the highest level both the males and females yielded a single factor with large loadings for all items except item 4 for the females. As expected all items except item 7 had positive loadings. These factors are presented in Table 3. Based on these loadings, MS was tentatively scored by adding the points for all items except 7 and subtracting the points for item 7.

Table 3. Higher order factor for 566 males and 566 females on MS items

Item	Male Factor	Female Factor
1. Wished not married?	0.58	0.66
2. Marry same person?	0.51	0.63
3. Activities together?	0.41	0.58
4. Leisure together?	0.31	0.10
5. Talk things over?	0.45	0.61
6. How often kiss?	0.44	0.56
7. Serious difficulties	-0.62	-0.78
9. Results of disagreements?	0.40	0.47
10. Left partner?	0.44	0.38
11. Get on nerves?	0.66	0.63
12. Sex relations?	0.60	0.62
13. Divorce?	0.68	0.66
14. Agree finances	0.48	0.51
15. Agree recreation	0.54	0.59
16. Agree affection	0.66	0.65
17. Agree friends	0.54	0.50
18. Agree sex	0.70	0.64
19. Agree in-laws	0.51	0.40
20. Agree time together	0.70	0.70
21. Agree conduct	0.59	0.53
22. Agree aims and goals	0.60	0.55
23. Happy?	0.77	0.76

Transformation of (MS)

The scores on the Locke–Wallace (1959) Marital Adjustment Test (plus six additional items) (MS) were negatively skewed and peaked for both the males and females. Table 4 shows the means, standard deviations, kurtosis and skewness for the males and females. The kurtosis, a measure of how peaked or flat a distribution is and which is 0 for a normally distributed variable, was 4.43 for the males and 2.12 for the females. This indicates that both distributions are more peaked than normal distributions. Also, the skewness, which is 0 in normal distributions, was negative for both males and females.

Since the MS variable was to be used as the dependent (or Y) variable in regression analyses, an exponential transformation was employed to make the distributions more

Table 4.

Untransformed MS						
	M	SD	Min	Max	Kurt	Skew
Male	166.25	36.16	-21	219	4.43	-1.66
Female	164.46	38.27	-5	220	2.12	-1.37
Transformed MS						
	M	SD	Min	Max	Kurt	Skew
Male	6.94	2.03	1.01	11.13	-0.17	-0.33
Female	6.87	2.13	1.19	11.25	-0.44	-0.39

Table 5. Distribution of transformed MS

Exp ((MS -22)/100)	Males	Females
11+	6	3
10+	28	26
9+	62	67
8+	89	99
7+	109	98
6+	98	88
5+	76	70
4+	50	54
3+	27	31
2+	13	23
1+	8	7
	N = 566	566

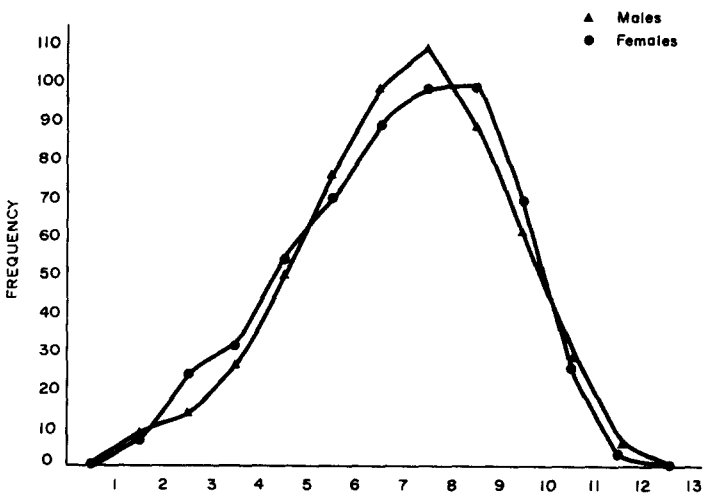

FIG. 1. Transformed MS scores of 566 males and 566 females.

normal. For consistency, the same transformation was applied to the male and female scores. First, 22 points were added to each score to eliminate negative numbers. This score was exponentiated to the natural log base, then divided by 100 to produce a distribution of conveniently sized numbers. Table 4 also shows the means, standard deviations, ranges, kurtosis, and skewness for the male and female transformed scores. The kurtosis and skewness are both slightly negative, but much closer to normal than in the original distributions. The distributions of transformed MS scorers are shown in Table 5 and Fig. 1. The transformed MS scores are used in all further analyses.

SECTION 3. ASSORTATIVE MATING

Analysis

The degree of assortative mating for the psychological variables employed in this study was initially assessed by correlating the husbands' scores with the wives' scores. While this procedure clearly represents the relationship between husbands' and wives' scores, it leaves the question about whether they selected each other for these characteristics prior to marriage or changed to become more (or possibly less) similar after marriage unanswered. This question can be addressed by determining whether the husband–wife correlations are the same for all lengths of marriage or different. If the correlations are the same, initial selection is supported. If the correlations increase with length of marriage, change in the direction of similarity is supported. If the correlations decrease with length of marriage, change in the direction of dissimilarity is supported.

Linear changes in husband–wife correlations are equivalent to interactions between the scores of one partner and length of marriage on the scores of the other partner. Consider the case of a psychological variable on which husbands and wives become more similar during marriage. Wives with high scores should have husbands with higher scores later in marriage than they had earlier. Those with low scores should have husbands with lower scores later in marriage. This situation is illustrated in Fig. 2. It can be seen that if the length of marriage (+ or 0) is multiplied by the females' score (+ or −), short marriages (0) with low scoring wives (−) or with high scoring wives (+) suggest average scoring husbands. Long marriages (+) with low scoring wives (−) or high scoring wives (+) suggest that the husband's score will be low or high, respectively.

In order to assess the degree to which the psychological variables become more similar with length of marriage, the partial correlation between the multiplicative interaction involving the length of marriage (centred) and the wife's score on the relevant psychological variable (centred) with the husband's score on the relevant variable was computed and tested (with the length of marriage and wife's score covaried (see Cohen, 1978). A significant

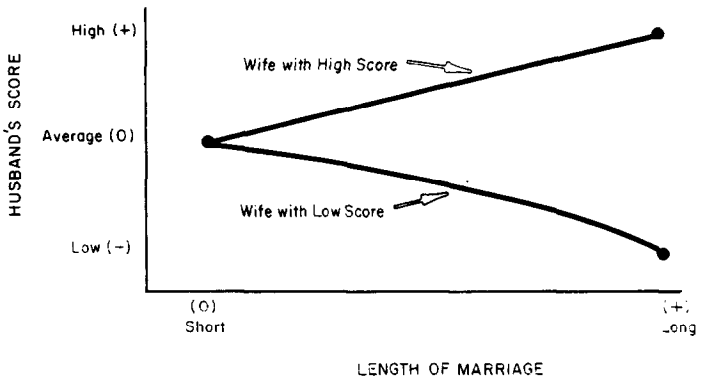

FIG. 2. Hypothetical interaction of wife's score and length of marriage on husband's score.

positive partial correlation, as would be produced by the example in Fig. 2 would indicate that the husbands become more similar to the wives during the course of marriage while a negative partial correlation indicates decreasing similarity during the course of marriage. Partial correlations near zero suggest that the correlation of the male and female variable is stable through the course of marriage. Equivalent partial correlations between the wives' scores and the interaction of husbands' scores and length of marriage were also computed.

This interaction procedure is superior to the alternative approach of dividing the sample into some number of subsamples and computing correlations for each subsample. For instance, if correlations were computed for each year of marriage (i.e. for those who had been married at least one year but less than three, etc.) some years would have more subjects than others. Since the error variance for a correlation increases as the number of subjects decrease, the correlations for the smaller samples would be more variable than those for the larger samples. Also the extent the psychological variable is correlated with length of marriage, its husband-wife correlation would be reduced in the smaller, more homogeneous samples. These small, highly variable, correlations would systematically underestimate the male-female correlations. The interaction approach, on the other hand, simply tests for the presence of increasing or decreasing similarity with length of marriage, and, if present, allows adjustment to the overall correlation to be made.

Results and Discussion

Correlations of male and female scores on the psychological variables, their correlation with length of marriage, and partial correlations of the interaction of length of marriage with female scores on male scores and length of marriage with male scores on female scores are shown in Table 6. Other correlations involving these variables are shown in Table 7.

The correlations between husbands and wives are low for the personality variables — P, E, N and L — although they are significant for all but E. The correlations are higher for the sexual attitudes factors — libido and sexual satisfaction — and higher still for the social attitudes factors — tender-mindedness and radicalism — which are at about the same level as the correlation between husbands' and wives' IQ (Eysenck, 1979). The highest husband-wife correlation is for marital satisfaction (MS).

Table 6. Assortative mating analysis of psychological variables for 566 couples

	Correlations			Partial Correlations (Length and Spouses Score Covaried)	
	Male with Female	Length of Marriage with Male Score	Length with Female Score	Length x Female on Male	Length x Male on Female
Personality					
Psychoticism	0.14**	-0.10*	-0.05	-0.01	-0.01
Extraversion	-0.01	-0.07	-0.05	-0.00	-0.01
Neuroticism	0.13**	0.01	-0.08*	0.04	0.04
Lie	0.26**	0.20**	0.15**	-0.04	-0.07
Sexual Attitudes					
Libido	0.43**	-0.21**	-0.34**	0.05	-0.12**
Sexual satisfaction	0.41**	-0.18**	-0.15**	0.03	-0.02
Social Attitudes					
Tender-mindedness	0.56**	0.11**	0.12**	0.04	0.05
Radicalism	0.51**	-0.07	-0.08	0.03	0.02
Marital satisfaction	0.73**	-0.11**	-0.19**	0.00	0.04

Table 7. Correlations of husbands' and wives' psychological variables for 566 couples

		Male										Female									
		P	E	N	L	Lib	SS	MS	T	R	Age	P	E	N	L	Lib	SS	MS	T	R	Age
Male	P	1.00																			
	E	0.10	1.00																		
	N	0.18	−0.22	1.00																	
	L	−0.23	−0.13	−0.20	1.00																
	Lib	0.24	0.23	0.03	−0.23	1.00															
	SS	−0.18	0.22	−0.38	−0.00	−0.02	1.00														
	MS	−0.27	0.09	−0.24	0.11	−0.20	0.51	1.00													
	T	−0.22	−0.14	−0.04	0.11	−0.43	−0.10	0.05	1.00												
	R	0.11	−0.03	−0.01	−0.05	0.23	−0.13	−0.13	0.19	1.00											
	Age	−0.13	−0.07	−0.07	0.19	−0.23	−0.10	0.02	0.12	−0.07	1.00										
Female	P	0.14	−0.01	0.16	−0.03	0.08	−0.14	−0.24	−0.11	0.07	−0.07	1.00									
	E	−0.04	−0.01	−0.07	0.01	0.02	0.07	0.01	−0.06	−0.01	−0.03	0.05	1.00								
	N	0.14	0.01	0.13	−0.06	0.11	−0.10	−0.23	−0.13	0.01	−0.11	0.20	−0.22	1.00							
	L	−0.01	−0.03	−0.07	0.26	−0.09	0.02	0.08	0.01	−0.14	0.12	−0.20	−0.05	−0.10	1.00						
	Lib	0.09	0.06	−0.01	−0.15	0.43	0.18	0.05	−0.31	0.15	−0.29	0.17	0.23	0.05	−0.25	1.00					
	SS	−0.06	0.00	−0.10	−0.04	−0.06	0.41	0.45	−0.05	−0.04	−0.08	−0.18	0.14	−0.34	0.02	0.25	1.00				
	MS	−0.19	0.04	−0.19	0.02	−0.14	0.40	0.73	−0.00	−0.09	−0.01	−0.27	0.05	−0.27	0.12	0.06	0.58	1.00			
	T	−0.14	−0.09	0.00	0.05	−0.30	−0.08	0.02	0.56	0.07	0.10	−0.16	−0.06	−0.12	0.07	−0.41	−0.09	−0.01	1.00		
	R	0.01	−0.07	0.01	−0.05	0.13	−0.08	−0.10	0.11	0.51	−0.07	0.14	0.06	0.01	−0.16	0.24	−0.03	−0.15	0.11	1.00	
	Age	−0.14	−0.05	−0.05	0.20	−0.22	−0.17	−0.00	0.18	−0.04	0.77	−0.04	−0.03	−0.10	0.14	−0.34	−0.13	−0.07	0.22	−0.06	1.00

Key to Code

P Psychoticism; E Extraversion; N Neuroticism; L Lie; Lib Libido; SS Sexual Satisfaction; MS Marital Satisfaction; T Tender Mindedness; R Radicalism.

Note: for r's greater than or equal to 0.08, $p < 0.05$ (two-tailed test)
for r's greater than or equal to 0.11, $p < 0.01$ (two-tailed test).

The correlations of these variables with length of marriage show similar patterns for the males and the females. P decreases with increasing length of marriage for males, N decreases for females, and L increases for both. Libido, sexual satisfaction, and MS decrease with length of marriage, while tender-mindedness increases and radicalism decreases slightly. All of these correlations are similar to correlations of these variables with age. Comparing these correlations with correlations with age (see Table 7) shows that only MS has stronger correlations with length of marriage than with age for both sexes.

The partial correlations testing for interactions between one spouse's score on a psychological variable and the length of marriage on the score of the other spouse were, with only one exception, insignificant. In general, the spouses do not become more (or less) similar to each other during the course of marriage. The one exception was the interaction between the male's libido with length of marriage on the female's libido, which was significant. There is a small tendency for the female's score to *move away from* the male's during the course of marriage. For instance, wives of high libido males show greater decreases in libido during the marriage than do wives of low libido males. The corresponding interaction of wives' libido and length of marriage on husband's libido was in the opposite direction, although insignificantly so.

The assortative mating analysis indicates that the male–female correlations for the psychological variables in this study can reasonably be considered the results of selection by one or both spouses for similarity on the variables. The near zero effects of interactions of these variables with length of marriage on the same variable for the other spouse rule out the possibility that the correlations are the results of the two spouses becoming more similar during the course of marriage. In fact, the only significant interaction, involving the male's libido score, suggested exactly the opposite — that females' libido scores move away from their husbands' scores somewhat.

Two qualifications must be made concerning the conclusion that the male–female correlations result only from assortative mating. First, the data are cross-sectional rather than longitudinal. Changes in correlations from year to year (or in the present study, failure to change) may result from different patterns of assortative mating in past years as well as changes occurring during marriage. In the present study, the stability of the correlations *could* have occurred as the result of changes and different patterns of previous selection exactly balancing each other, although this seems very unlikely.

The second qualification concerns the possibility that changes in one or both spouses might have occurred in courtship. Since all the couples in this study were married, the analysis could not have found changes toward (or away from) similarity before the beginning of marriage.

The degrees of assortative mating for the four sets of variables were clearly different. The personality variables showed very little assortative mating. Extraversion seems not to enter into mate selection at all. P and N were only slightly involved in mate selection with the husbands and wives sharing less than 2% of the variance on each. The L score, or responding in a socially desirable manner, showed somewhat higher assortative mating. The sexual attitudes factors — libido and sexual satisfaction — showed higher assortative mating with husbands and wives sharing approximately 17–18% of the variance of each factor. The social attitudes factors — tender-mindedness and radicalism — showed still greater assortative mating with husbands and wives sharing between a quarter and a third of the variance of each of these variables. Marital satisfaction showed the greatest degree of assortative mating with spouses sharing over half the variance of this scale. Marital satisfaction, like the other variables, was not differentially influenced by the spouse's score during the course of the marriage. Given its high assortative mating coefficient (0.73), it appears to be the most direct measure (of the variables included in this study) of what the spouses selected each other for.

With the exception of MS, the correlations of all the variables with length of marriage are very similar to their correlations with the subject's age. These variables, then, rise (lie and tender-mindedness) or fall (libido, radicalism, P for males, N for females) with increasing age rather than with the length of marriage itself. Marital satisfaction, however, does not significantly decline with age for males ($r = 0.02$) or for females ($r = -0.07$). Its decline with longer marriages must be considered a function of the length of marriage rather than of age.

SECTION 4. PERSONALITY AND MARITAL SATISFACTION

Numerous studies have shown relationships between personality — particularly personality traits distinguishing between normal and abnormal persons — and marital satisfaction (MS) or success (Terman, 1938; Zaleski and Galkowska, 1978; Eysenck, 1980; Zaleski, 1981). A few authors (e.g. Gottman, 1979) have interpreted their results as not indicating a link between individual pathology and marital dissatisfaction, but even in these sources, significant correlations between personality variables and MS appear.

Similarity between the personalities of husbands and wives has been a central focus of marriage research for the past several decades. Similarity has been treated as a cause of MS (Cattell and Nesselroade, 1967), and as a result of the marriage relationship itself (Schumm, Figley and Fuhs, 1980). The opposite of similarity, complementarity theory (Winch, 1958), has been mentioned earlier.

The personalities of the two spouses may also contribute independently to MS. Jacob, Feiring and Anderson (1980) presented evidence that positive and negative affect factors of the two spouses contribute independently to the relationship with the contribution from each spouse being about equal. The negative factors appeared to contribute more information than the positive factors. Reviews by Tharp (1963) and Barry (1970), while indicating contributions of personality to MS, suggest that the husband's personality contributes more than the wife's. Eysenck (1980) indicates that different variables — N and P for the wives and E for the husbands — are related to divorce.

Personality generally shows low assortative mating coefficients (Eysenck, 1980). Although couples select each other based on intelligence, education and socioeconomic status (Murstein, 1976), they appear to consider personality variables to only a small degree in making their selections. Although lower than for other psychological variables, there appears to be more assortative mating for abnormal factors, such as psychoticism and neuroticism, than for normal factors, such as Extraversion (Eysenck, 1976; Yom *et al.*, 1975).

The analysis presented in this section assesses the contribution of Eysenck's (Eysenck and Eysenck, 1975) three personality dimensions to MS. The *Eysenck Personality Questionnaire* was administered and scored according to instructions in the manual. This questionnaire produces a score for Extraversion (E), Neuroticism (N), Psychoticism (P) and Lie (L) scales. Briefly, E indicates the degree to which a person is sociable; P indicates the degree of hostility, coldness and egocentricity; N indicates the degree to which a person worries or is fearful; and L indicates the tendency to give socially desirable responses. Extended interpretations and uses of these scores can be found in Eysenck and Eysenck (1975, 1976) and Wakefield (1979).

Regression Analyses

Regression analyses (Kerlinger and Pedhazur, 1973) were performed to test the contribution of personality to MS in three ways. First, the linear contributions of males' and females' P,E,N, and L were tested. Second, the effects of similarity of the personality scores of the couple were tested. To do this, the female score was subtracted from the male score to produce an index of similarity. Small differences indicate similarity, while positive differences indicate higher scores for the male and negative differences indicate higher scores for the females. Following Cohen (1978), the effects of the difference score were tested in two steps. First the linear contribution was tested. This test indicates whether a personality difference in favour of the male or the female is related to MS. It also controls the linear effects of the personality differences for the second step. The second step tests the quadratic (squared) effect of personality differences on MS. If the squared term is significant and the signs of its regression coefficient and partial correlations are negative, similarity in personality is associated with maximum MS scores. (See Fig. 3). If the signs are positive, similarity would be associated with minimal MS scores and would suggest that complementary (different) personality scores lead to higher MS. The difference between the

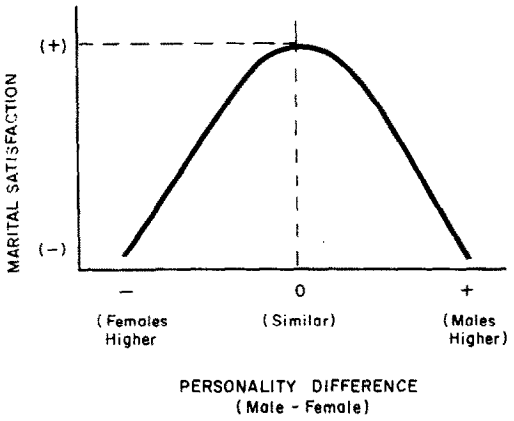

FIG. 3. Quadratic regression curve showing similarity on a personality variable associated with maximum marital satisfaction.

husband's and wife's scores associated with maximal or minimal MS can then be computed (Hotelling, 1941). Of course failure to attain significance indicates no similarity or complementary effect.

An additional analysis covaried the level (sum) of the male and female personality scores before testing for similarity. This analysis was designed to test whether similarity (or complementarity) of scores enhanced MS throughout the range of scores. A significant test for similarity following this control would indicate an effect of similarity independent of the level of personality scores. An insignificant test would indicate that whatever similarity (or complementarity) effect had been found without the control for level was not independent of the level of personality scores.

The final analysis tested for personality interactions among the male and female P,E,N, and L scores on MS. After centering the personality scores about their means, all combinations of two scores (i.e. male P with male E, and male P with female E etc) were multiplied together. The linear effects of the personality scores were covaried, and the interactions were tested.

To produce clear results each analysis was performed for male MS, female MS, total (male and female) MS, and the difference (male–female) in MS. These analyses were, of course, not independent.

Results

Means, standard deviations, and correlations between male and female scores on MS and the four personality variables are shown in Table 8. The means and standard deviations in this table are similar to those previously presented for the EPQ (Eysenck and Eysenck, 1975) which are shown in parentheses. The correlation between the MS scores of the males and females was quite large (0.73) and indicated that over half the variance of MS is shared by the two partners. The difference between the MS scores of the males and females was small and insignificant. Correlations between personality scores, while significant for P,N, and L, were small.

The correlation between the male and female personality scores and MS are presented in Table 9. P and N are negatively correlated with MS for both the owner and the partner. That is, subjects scoring high on P or N and their spouses had lower MS than other subjects. E was unrelated to MS, while L was positively correlated with the MS score of its owner only.

Combined, the personality scores of the two spouses produced a multiple correlation of 0.43 with total MS with the males' and females' scores being about equally important. Similar multiple correlations are produced for the males' MS and the females' MS. The P and N scores of the two partners contributed (negatively) to MS. There was a tendency for P and L to affect the difference in MS between the two partners with the partner with the lower

Table 8. Means standard deviations and correlations between scores for 566 married couples

	Males		Females		Correlation
	M	SD	M	SD	
MS	6.94	2.03	6.87	2.13	0.73**
P	3.68 (3.78)†	2.70 (3.09)	2.48 (2.63)	2.17 (2.36)	0.14**
E	12.02 (13.19)	4.94 (4.91)	11.60 (12.60)	5.04 (4.83)	-0.01
N	10.21 (9.83)	5.26 (5.18)	13.98 (12.74)	4.87 (5.20)	0.13**
L	7.00 (6.80)	4.00 (4.14)	8.46 (7.73)	3.93 (4.18)	0.26**

†Numbers in parentheses are means and standard deviations from Eysenck and Eysenck (1975) normative sample.
** $p < 0.01$.

Table 9. Correlations between personality scores and MS

	M				F			
	P	E	N	L	P	E	N	L
Male MS	-0.27**	0.09*	-0.24**	0.11**	-0.24**	0.01	-0.23**	0.08
Female MS	-0.19**	0.04	-0.19**	0.02	-0.27**	0.05	-0.27**	0.19**
Total MS	-0.24**	0.07	-0.23**	0.07	-0.27**	0.03	-0.27**	0.11**
Male MS–Fem MS)	-0.09*	0.06	-0.04	0.11**	0.07	-0.06	0.07	-0.06

*$p < 0.05$. **$p < 0.01$.

P score and the higher L score having the higher MS. These multiple correlations are presented in Table 10.

Table 11 presents the effects of differences in P (male–female) on MS. There were no linear effects on male, female, or total MS. For the difference in MS, there was a significant correlation indicating that the partners with the lower P score had the higher MS. There were significant partial correlations of the squared differences with male, female, and total MS, indicating that similarity on P produced higher MS. The optimal male MS occurred when the male was 0.14 points higher than the female on P, that is, when they were essentially equal. The optimal female MS occurred when the male was 1.50 points higher on P, which is approximately the same as the general difference between the males and females on P. This difference is 0.61 of a standard deviation on P. For total MS, the optimal difference for P was 0.89 points, or 0.36 standard deviations, with the males having the higher scores.

Additional regression analyses were performed to find out whether the similarity effect of P was independent of the level of P; that is, whether similarity on P enhanced MS for high *and* low scores on P. To do this, the male and female P scores were added and this sum was entered as a covariate to control for level of P prior to the similarity analysis. As shown in the final column of Table 11, the control for level reduced the similarity effect to insignificance. Therefore, the similarity effect of P on MS arises from the desirability of low scores on P for both spouses. Similarity at higher levels yields only insignificant increases in MS.

Table 12 presents the same information for differences in N and MS. There were no significant linear effects of this difference on MS. There were significant effects of the squared term indicating that MS was higher when the partners were similar on N. The optimal male MS occurred when the female was 3.25 points higher than the male on N, or 0.64 of a standard deviation. This is approximately the typical difference found between males and females on N. The optimal female MS occurred when the females were 0.31 (essentially 0) points higher than the males on N. The optimal total MS occurred when the female was exactly 2 points higher than the male on N, or 0.39 standard deviations. As with P, additional regressions were performed to find out whether the similarity effect occurred at all levels on N. As the last column of Table 12 shows, the enhancement of MS by similarity on N was unaffected by the level of N. Therefore, spouses with similar high N scores as well as those with similar low N scores have higher MS than spouses less well matched on N.

Tables 13 and 14 present the same information for differences in E and L. For E, there were no significant linear or similarity effects of differences in E or MS. For L, the only significant correlation indicated that the partner with the higher L score tended to have the higher MS.

Table 10. Multiple linear regression (R's) of MS on personality

	Male PENL	Female PENL	Combined
Male MS	0.34**	0.30**	0.41**
Female MS	0.26**	0.35**	0.40**
Total MS	0.32**	0.35**	0.43**
Male MS - Fem MS	0.15*	0.11 (NS)	0.21**

*$p < 0.05$. **$p < 0.01$.

Table 11. Psychoticism (P_M-P_F) similarity analyses

	Linear Correlation	Similarity (partial r_2 (MS, P_M-P_F) P_M-P_F)	(P_M-P_F) at Max MS	Partial r for Similarity with level of P Covaried
Male MS	-0.07 (NS)	-0.17**	0.14	-0.03 (NS)
Female MS	0.02 (NS)	-0.20**	1.50	-0.07 (NS)
Total MS	-0.02 (NS)	-0.20**	0.89	-0.06 (NS)
Male MS-Fem MS	-0.12**	0.05 (NS)		—

**$p < 0.01$. NS not significant.

Table 12. Neuroticism (N_M-N_F) similarity analyses

	Linear (N_M-N_F)	Similarity	(N_M-N_F) at Max MS	Partial r for Similarity with Level on N Covaried
Male MS	-0.01 (NS)	-0.12**	-3.25	-0.12**
Female MS	0.04 (NS)	-0.08*	-0.31	-0.08 (NS)
Total MS	0.01 (NS)	-0.11**	-0.20	-0.11**
Male MS-Fem MS	-0.08 (NS)	-0.04 (NS)	—	—

**$p < 0.05$. **$p < 0.01$. NS not significant.

Table 13. Extraversion (E_M-E_F) similarity analyses

	Linear (E_M-E_F)	Similarity	(E_M-E_F) at Max MS
Male MS	0.05 (NS)	-0.07 (NS)	—
Female MS	-0.01 (NS)	-0.06 (NS)	—
Total MS	0.02 (NS)	-0.07 (NS)	—
Male MS-Fem MS	0.08 (NS)	-0.01 (NS)	—

NS not significant.

Table 14. Lie (L_M-L_F) similarity analyses

	Linear (L_M-L_F)	Similarity	(L_M-L_F) at Max MS
Male MS	0.02 (NS)	-0.03 (NS)	—
Female MS	-0.08 (NS)	0.00 (NS)	—
Total MS	-0.03 (NS)	-0.01 (NS)	—
Male MS-Fem MS	0.14**	-0.04 (NS)	—

NS not significant. ** $p < 0.01$.

Finally, of 24 two-way interactions of personality scores tested against MS with the linear effects of all personality scores covaried, only two yielded significant relations. There were multiplicative effects of male P and male N on female MS (partial r = -0.13), total MS (partial r = -0.10) and the difference between male and female MS (partial r = 0.11). This interaction indicated that wives of P and N males or low P and N males were lower on MS than were the wives of husbands with only one of these scores elevated. The other significant interaction involved female E and female L on male MS (partial r = 0.08) and the difference in MS (partial r = 0.09). Husbands of high E and high L wives or low E and low L wives were higher on MS than were husbands of wives with only one of these scores elevated. It is noted that none of the interactions involving one male and one female personality score was significant.

Discussion

Of the four personality variables (P, E, N, and L), two (P and N) yielded small but significant relationships with MS in several different ways, while E and L were only involved in a small interaction effect on MS, and L was related to the difference between the MS of the spouses.

The involvement of P with MS starts with a small significant (0.14) assortative mating coefficient, consistent with previous findings (Yom *et al.*, 1975). High P scores lower the MS of both the high P scorer and his or her spouse. In fact the relationship between P and the MS of the scorer and the spouse is somewhat stronger than the relationship between the P scores of the two spouses. Although high P for either spouse is detrimental to the MS of both spouses, for low levels of P, it is better for MS if the P scores of the spouses are similar. This effect is accounted for by the negative effect of high levels of either P score on MS. For relatively low levels of P, MS is optimized for the male when the two partners are about equal on P, and for the female when the male is 1.5 points higher, or approximately the average difference between males and females.

The involvement of N with MS shows patterns that are similar to those of P. First, there is a small, but significant, assortative mating coefficient (0.13). High N scores also lower the MS of both the high N scorer and his or her spouse to a somewhat larger degree than the relationship between the N scores of the two spouses. There is also a similarity effect for N on MS, but regardless of the level of N. Marital Satisfaction is optimized for the male when the female is 3.25 points higher than the male, or approximately the average difference between males and females. For the female, MS is optimized when the two partners are about equal on N. This pattern is shown in Fig. 4.

This pattern of optimal points for differences in N and P suggests that the effects of N and P may be somewhat different from the husbands' and wives' viewpoints. Since high levels of

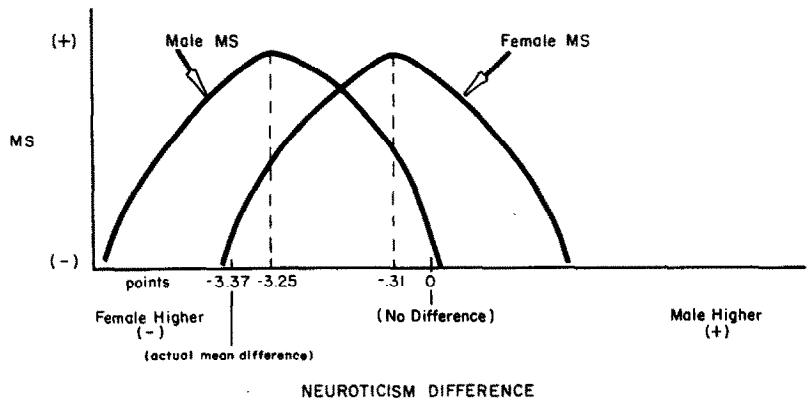

FIG. 4. Relationship between neuroticism differences and marital satisfaction of males and females.

N and P are both detrimental to MS, a husband whose P score is higher than his wife's or a wife whose N score is higher than her husband's is lower on MS than might otherwise be the case. Also, a husband whose wife's P score is higher or a wife whose husband's N score is higher suffers a lowered MS. However, a husband whose wife's N score is the average amount higher than his or a wife whose husband's P score is the average amount higher than hers finds the situation satisfactory. A possible explanation for this difference is that women, from the man's viewpoint, are expected to be more neurotic and men, from the woman's viewpoint are expected to be higher on P (or toughminded or masculine). In fact, if this higher score is not present, the partner may be somewhat uncomfortable that his or her spouse is not enough like a woman or like a man. Of course, excessively large differences lower MS. Apparently, slight pathology typical of the opposite sex is accepted (and even expected) in one's spouse, while slight pathology typical of one's own sex is less easily tolerated.

E, surprisingly, had virtually no relationship with MS. There is no assortative mating on this variable (−0.01). It is not correlated with MS for either males or females, and differences in the E scores of the spouses do not affect MS. There is no similarity or complementarity effect of E on MS. The only influence E has is through a small interaction with L in the females' personality scores on the male's MS. For women with high L scores, high E scores are associated with higher MS, while for some women with low L scores, high E scores are detrimental. Apparently if the things a woman says are mostly socially desirable (high L) the man is more satisfied if she says them (high E). If the things she says are not socially desirable (low L), the man is more satisfied if she does not (low E). The corresponding interaction for male's E and L scores on female MS was not significant.

L has the largest assortative mating coefficient (0.26) and a small correlation with MS for the scorer but not with MS for the spouse. Thus, differences in MS are related to differences in L scores with the higher L score and the higher MS tending to belong to the same partner. A small part of the variance of MS (about 1%) is accounted for by a tendency to mark socially desirable responses reflected in the L score. There was no similarity or complimentarity effect of L on MS.

When all significant effects of the personality scores of the two spouses and their combinations are considered, 20% of the variance of MS is accounted for. The L score accounts for about 1% of the variance of MS, and N and P account for virtually all of the rest.

SECTION 5. BACKGROUND AND MARITAL SATISFACTION

Background Questionnaire

The following background questions were independently asked of the husbands and wives in the sample. Points given for each response are shown next to the boxes in which the responses were made. Means and standard deviations in Table 15 refer to those points.

The identification No. we have both decided on is

Please write your sex (M or F) here

We need to know your birthdate, so please write this legibly in the space provided.

(Day)_____(Month)_____(Year)_____

Family income last year before tax £_____

Please tick appropriate box.

How did you first meet your partner? Neighbourhood friendship ☐
home of friend ☐ private recreation ☐ commercial recreation ☐ (4) travel or resort ☐
school or college ☐ business contact ☐ church or social organisation "pick-up" ☐
computer dating ☐ some other way ☐ (each response scored 1 = yes, 0 = no)

How long did you know your partner before you became engaged?_____months_____years

How long from the time of engagement until you were married?_____months_____years

How well did you know your husband before marriage? Very well ☐ (3)
moderately well ☐ (2) only slightly well ☐ (1)

How long have you been married?_____months_____years

How many times have you been married? one ☐ (1) Two ☐ (2) More ☐ (4)

Were either of your parents divorced? Yes ☐ (2) No ☐ (1)

How happy were your parents together? Extraordinarily happy ☐ (2) Decidedly more happy than the average ☐ (4) Somewhat less happy than the average ☐ (3) decidedly less happy than the average ☐ (2) Extremely unhappy ☐ (1)

Before marriage the amount of conflict between you and your father was: None ☐ (5) very little ☐ (4) moderate ☐ (3) good deal ☐ (2) almost continuous ☐ (1)

Before marriage, the amount of attachment between you and your father was: None ☐ (5) very little ☐ (4) moderate ☐ (3) a good deal ☐ (2) very close ☐ (1)

Before marriage the amount of conflict between you and your mother was: None ☐ (5) very little ☐ (4) moderate ☐ (3) a good deal ☐ (2) almost continuous ☐ (1)

Before marriage, the amount of attachment between you and your mother was: None ☐ (5) very little ☐ (4) moderate ☐ (3) a good deal ☐ (2) very close ☐ (1)

My childhood on the whole was: Extremely happy ☐ (5) more happy than average ☐ (4) about average ☐ (3) rather unhappy ☐ (2) extremely unhappy ☐ (1)

The type of training in my home was: Exceedingly strict ☐ (5) firm but not harsh ☐ (4) usually allowed to have my own way ☐ (2) had my own way about everything ☐ (1) sometimes strict, sometimes lax ☐ (3)

Amount of punishment: Was punished severely for every little thing ☐ (5) was punished frequently ☐ (4) was occasionally punished ☐ (3) rarely ☐ (2) never ☐ (1)

The sex instruction which I received from adults before I was 18 was:
Entirely adequate ☐ (5) reasonably adequate ☐ (4) rather inadequate ☐ (3) very inadequate ☐ (2) non whatever ☐ (1)

My sex information before I was 18 received chiefly from: Parents ☐ doctor ☐ teachers ☐ other adults ☐ other children ☐ (1 = yes, 0 = no).

Analyses

Two regression analyses were performed to test the contribution of the background question to Marital Satisfaction (MS). First the linear contributions of the males' and females'

background responses were tested. Then, the effects of similarity of their responses were tested using the procedure described for the personality scores.

Results and Discussions

Means, standard deviations, and correlations between the males' and females' responses to the background questions are shown in Table 16. The many very large correlations, from 0.72 to 0.97, occur for items that might be considered "factual" and that the two partners should be expected to answer identically. For example, the question about how long the couple was married (8.56 years for the males vs. 8.75 for the females) produced a correlation of 0.96 between males' and females' responses. The same is true of the first 11 items as well as the last item on the family income.

Only five questions that should not necessarily have produced identical responses yielded significant correlations. There were small relationships between the degree to which the two spouses thought they knew each other before marriage (0.35) and the number of times each had previously been married (0.32). There were even smaller relationships between the amount of punishment each spouse recalled from childhood (0.11) and whether they obtained sexual information from other children (0.11). There was a large correlation between the ages of the spouses (0.77) with the average male being 36.86 years old and the average female in the sample being 34.25 years old. The remaining background questions dealing with the spouses' childhood relationships with their parents and their source of sexual instruction indicated no correspondence at all between the husbands' and wives' responses.

Table 15. Means, standard deviations, and correlations between background questions for 566 couples

	Males		Females		Male–Female
	M	SD	M	SD	Correlations
MS	6.94	2.03	6.87	2.13	0.73**
First meet partner					
Neighbourhood	0.07	0.25	0.08	0.28	0.83**
Home of friend	0.11	0.32	0.10	0.30	0.83**
Private recreation	0.18	0.39	0.20	0.40	0.72**
Commerical recreation	0.05	0.22	0.05	0.22	0.72**
Travel	0.02	0.15	0.03	0.16	0.78**
School	0.07	0.25	0.07	0.26	0.92**
Business	0.14	0.35	0.13	0.34	0.87**
"Pick up"	0.09	0.29	0.08	0.28	0.74**
Computer date	0.02	0.15	0.03	0.16	0.81**
Months known before engagement	20.45	27.42	20.54	27.81	0.97**
Length engagement (months)	12.26	12.16	12.20	11.56	0.81**
How well known before marriage	2.22	0.95	2.41	0.63	0.35**
How long married (yrs)	8.56	8.06	8.75	8.08	0.96**
Times married	1.16	0.50	1.15	0.40	0.32**
Parents divorced?	1.07	0.28	1.11	0.32	0.01 (NS)
Parents happy?	4.14	1.45	4.12	1.51	0.02 (NS)
Conflict with father?	3.66	1.16	3.58	1.22	-0.03 (NS)
Attachment with father?	2.85	1.06	2.66	1.17	0.01 (NS)
Conflict with mother?	3.74	1.08	3.39	1.12	0.01 (NS)
Attachment with mother?	2.54	1.00	2.37	1.06	-0.04 (NS)
Happy childhood?	3.36	0.91	3.32	0.96	0.01 (NS)
Training in home	3.62	0.88	3.64	0.91	0.06 (NS)
Amount of punishment	2.75	0.77	2.81	0.77	0.11**
Sex instruction	2.16	1.31	2.64	1.25	0.02 (NS)
Source of sex information					
Other children	0.63	0.48	0.53	0.50	0.11**
Other adults	0.13	0.33	0.10	0.29	0.07 (NS)
Teachers	0.15	0.36	0.19	0.39	-0.00 (NS)
Doctor	0.01	0.08	0.01	0.10	-0.01 (NS)
Parents	0.09	0.28	0.22	0.41	-0.00 (NS)
Age (yrs)	36.86	10.45	34.25	10.08	0.77**
Income (£)	5664	3617	5140	3781	0.82**

* $p < 0.05$. ** $p < 0.01$. NS not significant.

Table 16. Correlations between background questions and MS

	Male Questions				Female Questions			
	Male MS	Fem MS	Tot MS	Diff (Male MS–Fem MS)	Male MS	Fem MS	Tot MS	Diff (Male MS–Fem MS)
Meet Partner								
Neighbourhood	0.04	0.04	0.05	−0.00	0.05	0.01	0.03	0.06
Home of friend	−0.04	0.00	−0.02	−0.05	−0.03	0.01	−0.01	−0.05
Private recreation	−0.02	−0.05	−0.04	0.04	−0.00	0.01	0.00	−0.01
Commercial rec	−0.03	−0.01	−0.02	−0.04	−0.05	−0.02	−0.04	−0.03
Travel	−0.04	−0.09*	0.07	0.07	−0.08*	−0.06	−0.07	−0.02
School	0.04	0.03	0.04	0.01	−0.02	−0.01	−0.01	−0.02
Business	0.06	0.01	0.04	0.07	0.05	0.00	0.03	0.07
"Pick up"	−0.02	0.02	−0.00	−0.06	−0.00	0.02	0.01	−0.04
Computer date	0.03	0.01	0.02	0.02	0.04	0.03	0.04	0.00
Months before engagement	0.07	0.02	0.05	0.07	0.06	0.00	0.03	0.08*
Length of engagement	0.06	0.04	0.05	0.03	0.04	0.06	0.06	−0.03
How well known before marriage	0.13**	0.05	0.10	0.10	0.20**	0.28**	0.26**	−0.13**
How long married	−0.12**	−0.19**	−0.17**	0.11**	−0.10*	−0.18**	−0.15**	0.11*
Times married	0.16**	0.11**	0.14**	0.06	0.15**	0.12**	0.14**	0.03
Parents divorced	0.05	−0.01	0.02	0.09*	0.01	−0.07	−0.03	0.10*
Parents happy	0.15**	0.07	0.12**	0.10**	−0.01	0.05	0.03	−0.08*
Conflict with father	−0.15**	−0.05	−0.11**	−0.13**	−0.10*	−0.14**	−0.13**	0.06
Attachment with father	0.07	0.07	0.08*	−0.00	0.06	0.12**	0.10*	−0.08*
Conflict with mother	−0.14**	−0.07	−0.11**	−0.08*	−0.09*	−0.11**	−0.11**	0.04
Attachment with mother	0.06	0.06	0.06	−0.01	0.07	0.13**	0.11**	−0.09*
Happy childhood	0.17**	0.07	0.12**	0.13**	0.10*	0.18**	0.15**	−0.11**
Training in home	0.12**	0.06	0.10*	0.09*	0.08*	0.06	0.07	0.01
Amount punishment	−0.08*	−0.11**	−0.10*	0.04	−0.04	−0.08*	−0.06	0.06
Quality of sex instruction	0.09*	0.00	0.05	0.12**	0.09*	0.15**	0.13**	−0.09*
Source of sex information								
Other children	−0.07	−0.06	−0.07	−0.01	−0.00	−0.04	−0.02	0.04
Other adults	0.09*	0.03	0.06	0.07	−0.03	−0.00	−0.02	−0.02
Teachers	0.00	0.01	0.01	−0.01	−0.01	0.00	−0.00	−0.02
Doctor	−0.15**	0.02	−0.07	−0.23**	0.02	−0.05	−0.01	0.10*
Parents	0.05	−0.01	0.02	0.08*	0.05	0.08*	0.07	−0.04
Age	0.02	−0.01	0.00	0.04	−0.00	−0.07	−0.04	0.10*
Income	0.08*	0.06	0.08*	0.03	0.06	0.09*	0.08*	−0.04

*$p < 0.05$. **$p < 0.01$.

If the questions about the marriage itself (i.e. where did they meet) are eliminated it appears that there was little, if any, assortative mating for background in the sample. The only variables showing assortative mating were age (0.77), previous marriages (0.32), punished as a child (0.11) and receiving sex instruction from other children (0.11).

Table 16 shows the correlation between the males' and females' background questions and their MS. There are few significant correlations between the circumstances of meeting the partner and MS or between the length of time before engagement and the length of the engagement with MS. However, the couples' feeling that they know each other well (regardless of how long it takes) correlates significantly with MS. Length of marriage is negatively related to MS, while the number of previous marriages is positively related to MS. (Variety, apparently is the spice of life, or at least of marriage — and equally so for both sexes).

Contrary to other findings (Mott and Moore, 1979), whether the parents of the spouse had divorced had no effect on the later MS of their children, and only the males' MS was related to whether their parents seemed happy. However, conflict with their parents was detrimental to the MS of both males and females, while attachment between the child and the parents influenced MS only for the females.

Recalling a happy childhood was positively related to MS for both sexes. Strict training was positively related to MS for the males, while severe punishment was negatively related to MS for both sexes. Adequate male sex instruction was related to his own MS, while adequate female sex instruction enhanced the MS of both partners. The source of sexual instruction makes little difference to MS, with the exceptions that males receiving sex instruction from other adults were somewhat higher on MS and those receiving it from doctors (possibly indicating relatively severe problems) were lower on MS.

Age was unrelated to MS while reported income was positively correlated, to a small degree, with MS. These findings are consistent with much recent research (e.g. Glenn and Weaver, 1978) that typically reports no strong socioeconomic relationship with marital happiness.

Table 17 shows the multiple correlations of the background information with MS. Combined, the background information of both partners produced a multiple correlation of 0.50 with MS. In other words, the background information accounts for 25% of the variance of MS. The background information accounted for approximately an equal percentage of the variance of the difference between the males' MS and the females' MS. An example of an item contributing to different MS for the two partners is receiving sexual information from a doctor. When males report this, they are lower on MS than their wives. When females report this, they are lower on MS than their husbands.

Table 17. Multiple Linear Regressions (R's) of MS on background

	Male Background	Female Background	Combined
Male MS	0.41**	0.34**	0.48**
Female MS	0.34**	0.44**	0.51**
Tot MS	0.37**	0.41**	0.50**
Male MS–Female MS	0.38**	0.29**	0.48**

**$p < 0.01$.

The analysis for similarity effects of the spouses' backgrounds are shown in Table 18. Overall, the similarity effects were not significant. Two small effects were agreement that the couple met in the home of a friend and similarity in the strictness of their childhood training. However, overall, it must be said that similarity between the backgrounds of spouses does *not* contribute to their MS.

An additional analysis was performed for the length of the marriage and MS to test the possibility of a non-linear relationship between the two variables. Since the males' and females' responses to the length of marriage question were not perfectly related, the average of the two was used. The couples in the sample had been married an average of 8.66 years, with a standard deviation of 7.99 years and a range from 0 to 40 years. The distribution of

marriage lengths was positively skewed indicating that there were more couples who had been married less than the average length than there were couples who had been married longer.

Using the same regression techniques as were used for the similarity analyses, significant squared length terms were found for the male, female, and total MS variables. For the males, the squared term was actually stronger (partial r = 0.19) than the linear (r = 0.11) decline of MS with length of marriage. The males' MS declined until they had been married 16.94 years and then began to increase as shown in Fig. 5.

The females also yielded a significant squared length term (partial r = 0.13) in addition to

Table 18. Background differences (male–female) similarity analysis

	Linear Correlations between Total MS and Background Differences	Similarity effects for Total MS
Meet Partner		
Neighbourhood	0.02	-0.04
Home of friend	-0.01	-0.09*
Priv. recreation	-0.05	-0.06
Com. recreation	0.02	-0.01
Travel	0.01	-0.07
School	0.13**	-0.02
Business	0.02	-0.07
"Pick-up"	-0.02	-0.04
Computer date	-0.03	-0.01
Months known beforehand	0.06	0.00
Length engagement	0.00	-0.03
How well-known before marriage	-0.07	-0.06
How long married	-0.05	0.00
Times married	0.02	0.03
Parents divorced	0.04	0.01
Parents happy	0.06	-0.06
Conflict with father	-0.02	-0.06
Attachment with father	0.02	-0.06
Conflict with mother	-0.00	0.08
Attachment with mother	0.04	-0.04
Happy childhood	-0.02	-0.04
Training in home	0.01	-0.09*
Amount punishment	-0.03	-0.01
Sex instruction	-0.06	0.03
Source of sex information		
Other children	-0.03	-0.00
Other adults	0.06	0.00
Teachers	0.01	0.00
Doctor	-0.03	-0.05
Parents	-0.05	0.04
Age	0.06	0.03
Reported income	-0.02	-0.01

*$p < 0.05$. **$p < 0.01$.

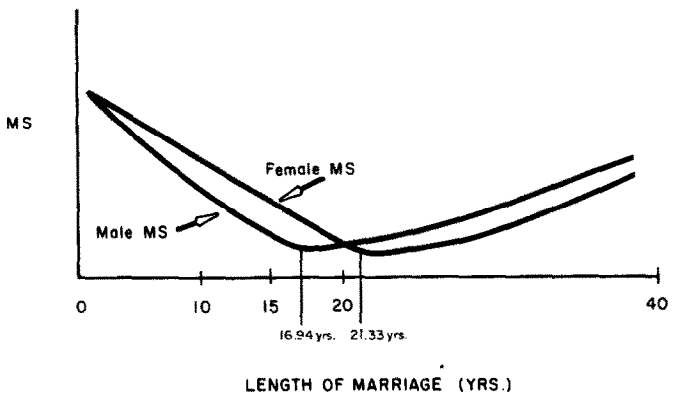

FIG. 5. Relationship between length of marriage and MS of males and females.

the linear decline of MS with length ($r = -0.19$). Their MS declined until they had been married for 21.33 years and then began to increase.

For both sexes together, the significant partial r for the squared term was 0.17. Their total MS was minimal at 18.75 years, which is intermediate between the males' and females' minima. This is consistent with the findings of other researchers (Schram, 1979; Spanier, Lewis and Cole, 1975).

The contribution of background information to MS was comparable in size with the contribution of personality to MS. Accounting for 25% of the variance of MS, background was less important to MS than either sexual attitudes or sexual behaviour but far more important than social attitudes.

The contribution of the background variables was entirely independent for the two spouses. There were no effects of similarity of the spouses' backgrounds. Questions dealing with childhood relationships with parents, training, and punishments were related to MS. Those dealing with circumstances surrounding the first meeting of the spouse and their engagement were irrelevant to MS. Any meeting place or any length of engagement was as likely to result in high MS as any other. Similarity, source of sex instruction (except in the case of doctors) was not important for MS.

The progress of MS over the course of marriage followed similar patterns for the males and females. Starting high, MS declined steadily for about 17 years for the males and about 21 years for the females. From those points, MS gradually increased. Since the data for this study are not longitudinal, this pattern of a two decade decline in MS followed by a two decade increase does not actually reflect the history of any one marriage. Further longitudinal research is required to determine whether this pattern actually occurs or whether this pattern merely results from more of the less happy marriages ending, leaving only relatively satisfied couples together in the third and fourth decades of marriage (see Schram, 1979).

SECTION 6. SOCIAL ATTITUDES AND MARITAL SATISFACTION

Eysenck (Eysenck and Wilson, 1978) has presented a two-dimensional framework for considering social attitudes. The first dimension is the familiar dimension of political attitudes ranging from left (radical) to right (conservative). This dimension is called radicalism (R) with high scores indicating leftist (communist–socialist) attitudes and low scores indicating right wing (conservative–fascist) attitudes. The second dimension distinguishes between tenderminded (evolutionary, compromising) attitudes and toughminded (revolutionary, extreme measures) attitudes. Toughmindedness has been shown to be related to psychoticism, dogmatism, authoritarianism, aggressiveness, and Machiavellianism (Eysenck and Wilson, 1978). In this study, tenderminded (T) attitudes receive high scores and toughminded attitudes low scores. The items and scoring of these scales are presented by Eysenck (1976) and Giorgi (1979) and will not be repeated here.

Only a few studies of social attitudes include variables relevant to marriage. While direct correlations of social attitudes and marital satisfaction (MS) seem not to be available, a few (e.g. Eysenck, 1976; Staples, 1978) have shown social attitudes to be related to sexual behaviour and sexual attitudes. The importance of these variables to MS is addressed later in this study.

Analyses

Two regression analyses were performed to test the contribution of the Social Attitudes variables, radicalism (R) and tendermindedness (T), to MS. First, the linear contributions of the males' and females' R and T scores were tested. Then, the effects of similarity of the

attitudes scores of the couples were tested using the procedure described for the personality scores.

Results and Discussion

Means, standard deviations, and correlations between male and female scores for MS, R and T are shown in Table 19. The correlation between the R scores of males and females was 0.51, and the correlation between the T scores was 0.56. These correlations are approximately the same as assortative mating coefficients for intelligence (Eysenck, 1979). R and T were significantly but not strongly correlated for males (0.19) and females (0.11).

The correlations between the male and female attitudes and MS are presented in Table 20. R is negatively correlated with the MS of the scorer as well as his or her spouse. That is, radical subjects and their spouses had lower MS than the more conservative subjects and their spouses. T was not significantly correlated with MS.

Since the R scores of the couples were highly correlated, combining the scores of couples together with multiple regression did not improve their relationship with MS. As shown in Table 21, both male attitudes (R and T) had approximately the same relationships with male MS, female MS, and total MS as male R alone had in Table 20. The same is true of both female attitudes taken together. Combining the male and female attitudes together also failed to increase their relationships with MS over that of the R score of one partner alone. All attitudes together do not account for substantially more of male MS than the males' R alone. Likewise, the females' R score accounts for as much of female MS as do all the male and female attitudes combined. Since they are highly correlated, either the male or female R score alone accounts for total MS as well as do all attitude scores taken together. The significant multiple correlation between the four attitudes combined and the difference between male MS and female MS is the result of the more radical partner reporting the lower MS.

Table 19. Means, standard deviations, and correlations between social attitudes and MS scores for 566 couples

	Males		Females		Male–Female Correlations
	M	SD	M	SD	
MS	6.94	2.03	6.87	2.13	0.73**
R	43.71	8.36	44.63	7.42	0.51**
T	89.43	14.60	96.34	13.63	0.56**

*$p < 0.05$. **$p < 0.01$.

Table 20. Correlations of male and female social attitudes with MS

	R (Male)	T (Male)	R (Fem)	T (Fem)
Male MS	-0.13**	0.05	-0.10*	0.02
Fem. MS	-0.09*	-0.00	-0.15**	-0.01
Tot MS	-0.12**	0.03	-0.14**	0.00
(Male MS–Fem MS)	-0.04	0.08	0.07	0.04

*$p < 0.05$. **$p < 0.01$.

Table 21. Multiple linear regression (R's) of social attitudes on MS

	Male Attitudes	Fem Attitudes	Combined
Male MS	0.15**	0.11*	0.16**
Fem MS	0.10 (NS)	0.15**	0.15*
Tot MS	0.13**	0.14**	0.16**
Male MS–Fem MS	0.10 (NS)	0.08 (NS)	0.14*

*$p < 0.05$. **$p < 0.01$. NS not significant.

Table 22 presents the effects of differences in R (male–female) on MS. There were no linear effects of differences in R on male MS, female MS, or total MS. The correlation with the differences between the MS of males and females is once again the result of the more radical partner reporting the lower MS. There was no effect of similarity of R scores on MS.

Table 23 presents the same information for differences in T and MS. There was no linear effect of differences in T on MS. There were significant negative partial correlations of the squared difference term with MS, indicating that similarity on T enhances the MS of both the male and the female. The MS of the male was maximised when the female's score was 3.47 points (0.25 standard deviations) higher than his on T. The female's MS was maximized when her score on T was 6.00 points (0.42 standard deviations) higher than her husband's. Total MS was maximized when the female scored 4.83 points above the male on T.

Table 22. Radicalism (R_M–R_F) similarity analysis

	Linear Correlations	Similarity Partial r (R_M–R_F) MS (R_M–R_F)	(R_M–R_F) at Max MS
Male MS	-0.04 NS	-0.02 NS	—
Fem MS	0.04 NS	-0.04 NS	—
Tot MS	0.00 NS	-0.03 NS	—
Male MS–Fem MS	-0.11**	0.03 NS	—

**$p < 0.01$. NS not significant.

Table 23. Tenderminded (T_M–T_F) similarity analysis

	Linear	Similarity	Diff. at Max	Partial r for Similarity with Level of T Covaried
Male MS	0.04 NS	-0.13**	-3.47	-0.13**
Fem MS	0.01 NS	-0.14**	-6.00	-0.14**
Tot MS	0.02 NS	-0.15**	-4.83	-0.15**
(Male MS–Fem MS	0.04 NS	0.03 NS	—	—

**$p < 0.01$. NS not significant.

Additional regressions were performed to find out whether the similarity effect occurred at all levels of T. As the last column of Table 5 shows, the enhancement of MS by similarity on T was unaffected by the level of T. Therefore, similarly toughminded spouses as well as similarly tenderminded spouses have higher MS than do spouses less well matched on T.

The two Social Attitudes variables affected MS in different ways, although both showed similarly high assortative mating (0.51 for R and 0.56 for T).

R was negatively related to MS with no effect of similarity of the two spouses' R scores on MS. Partners with high R scores tended to marry each other and then to report relatively low MS. Also, partners with low R scores tended to marry each other and then to report relatively high MS. In cases of mismatch, the MS of each partner was about the same as it would have been if he or she had married someone whose R score was closer to his or her own score; that is, the high R scorer had low MS and the low R scorer high MS. Although spouses rather strongly select each other for similarity on R, the closeness of the match does not influence MS.

T, on the other hand, showed no linear relationship with MS. Neither high nor low scorers on T had higher MS scores. T did show an effect of the similarity of the two spouses on MS (see Fig. 6). The optimal MS occurred when the two partners were matched on T but with the females scoring a few points higher. The females' MS is optimized when the full average sex difference (6 points) on T separates them from their husbands. The males report optimal MS when their wives are about half this amount above them on T. In general, MS is highest when the wife is more, but not too much more, tenderminded than her husband. These results

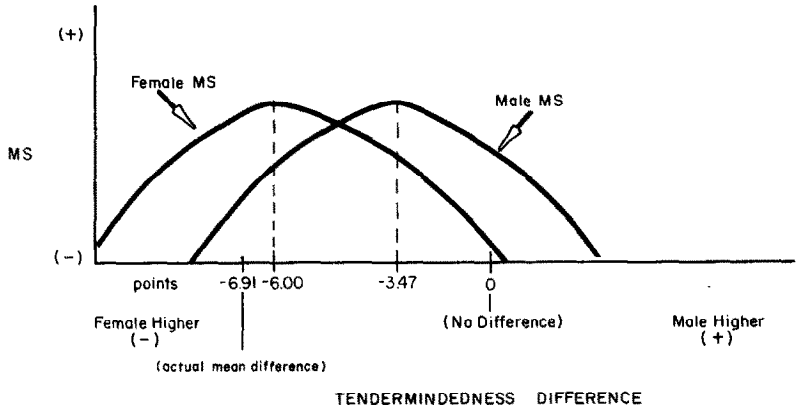

FIG. 6. Relationship between tendermindedness differences and MS of males and females.

follow the same pattern as the results for the personality variable P which is similar in many respects to T (Eysenck and Wilson, 1978).

It should be pointed out that the effects of social attitudes on MS, although significant, are small. Taken together the similarity effect for T and the negative effect of (high scores on) R accounts for just under 5% of the variance of MS.

This contribution might be higher if there were random mating for T. This would produce more cases of larger differences between spouses' T scores and might lead to more cases of lower MS resulting from lack of similarity on T. It is difficult to see how a lower assortative mating coefficient for R, on the other hand, would affect its contribution to MS. Since there appears to be no similarity effect, each of the two spouses would continue to have higher or lower MS depending only on his or her own R score, and quite independently of the spouse's R.

SECTION 7. SEXUAL ATTITUDES AND MARITAL SATISFACTION

Eysenck (1976) has identified two superfactors of sexual attitudes for males and females. The first factor is sexual libido (L) which is a measure of sexual motivation or drive. Persons with high scores on this factor report frequent sexual thoughts and strong sexual feelings and interests. The second factor is sexual satisfaction (SS) which is independent of L for males and slightly correlated with L for females. Persons with high scores on this factor report that they are satisfied with and enjoy sex. The items and scoring keys for these scales are presented by Eysenck (1976) and will not be repeated here.

Analyses

Two regression analyses were performed to test the contribution of the two sexual attitude variables, Libido (L) and Sexual satisfaction (SS), to Marital satisfaction (MS). First the linear contributions of the males' and females' L and SS scores were tested. Then, the effects of similarity of the scores of the couple were tested using the procedures described for the personality scores.

Results and Discussion

Means, standard deviations, and correlations between the males' and females' scores for MS, L, and SS are shown in Table 24. The correlations between the L scores of males and

Table 24. Means, standard deviations, and correlations between scores for 566 couples

	Males		Females		Male-Female Correlations
	M	SD	M	SD	
Marital satisfaction	6.94	2.03	6.87	2.13	0.73**
Libido	44.66	12.83	32.47	13.54	0.43**
Sexual satisfaction	-12.44	6.57	-14.02	7.27	0.41**

**$p < 0.01$.

females was 0.43 and the correlation between their SS scores was 0.41. These correlations represent substantial assortative mating although not as strong as for social attitudes or intelligence. As was found by Eysenck (1976), L and SS were independent (-0.02) for the present sample of males, but correlated (0.25) for the females. Also, male SS was related to female L (0.18) but female SS was unrelated (-0.06) to male L.

Table 25 shows the correlation between the males' and females' sexual attitudes and their MS. SS for both the males and females correlate positively with all measures of MS. Although high SS for either sex is associated with high MS for either sex, high male SS is associated with somewhat higher male MS than female MS, and high female SS is associated with somewhat higher female MS than male MS. SS for either sex also correlates highly with MS for the opposite sex. In fact, these correlations (0.40 and 0.45) are virtually the same as the correlation between the SS of the two sexes (0.41). Male L is negatively correlated with MS for both sexes; that is for couples in which the male has a high L score, both partners have lower MS. Female L is unrelated to MS.

Table 25. Correlations of sexual attitudes with MS

	L_M	SS_M	L_F	SS_F
Male MS	-0.20**51**	0.05	0.45**	
Fem MS	-0.14**	0.40**	0.06	0.58**
Tot MS	-0.18**	0.49**	0.06	0.55**
(Male MS-Fem MS)	-0.07	0.12**	-0.01	-0.21**

**$p < 0.01$.

Table 26 shows the multiple correlation of both sexual attitudes with MS. Combined, the sexual attitudes of both partners produce a multiple correlation of 0.64 with MS, accounting for 41% of the variance of MS. Since male and female L and SS were correlated, the sexual attitudes of one partner accounted for his or her MS almost as well as the sexual attitudes of both partners. For females only, SS contributed to the relationship with MS as can be seen by comparing the almost identical simple correlations between female SS and MS in Table 25 with the multiple correlations between female sexual attitudes and MS in Table 26. For males, SS contributed to MS, and L contributed (negatively) to MS.

Table 27 presents the effects of differences in L (male–female) on MS. Linear effects indicated that relatively lower male L (or higher female L) is associated with higher MS for both males and females. Differences in L are not related to differences in MS. There was also a significant negative partial correlation between the squared differences term and MS, indicating that similarity on L produced higher MS for both sexes. In males, MS was maximised when the males were (only) 2.49 points higher than their wives on L. This was only 20% of the average difference between the L scores of the two partners (12.19 points). For the females, MS was highest when the male was (only) 4.94 points higher than she was on L, or 41% of the average difference. In most cases in this sample, the male's L was too high relative to the female's to allow optimal MS. Additional regressions were performed to find out whether the similarity effect occurred at all levels of L. As the last column in Table 27 shows, the enhancement of MS by similarity on L was unaffected by the level of L. Therefore, spouses with similar high L scores as well as those with similar low L scores have higher MS than spouses less well matched on L.

Table 28 presents the same information for differences in SS and MS. The linear effects suggest that females have higher MS when they have higher SS than their husbands, although the males' MS is not linearly related to differences in SS. There are significant similarity effects of SS for both males' and females' MS. In males, the optimal MS occurs when they are 1.97 points higher than their wives on SS. This is approximately the same as the typical difference (1.58 points) between males and females on SS. Females, on the other hand had optimal MS when they were 4.31 points higher than their husbands on SS. For this to occur, the female would have to be 5.89 points (or 0.85 standard deviations) higher on SS than she would typically be (given her husband's SS), and this, on a variable with a substantial correlation (0.41) between husbands' and wives' scores. Additional regressions were performed to find out whether the similarity effect occurred at all levels of SS. As the last column of Table 28 shows, the similarity effect was completely eliminated by the control for level of SS. That is, the enhancement of MS from similar SS is entirely attributable to high levels of SS being associated with high MS. Couples who have similar high SS reported high MS, while those with similar low SS reported low MS, just as did those couples which included only one spouse with low SS.

Eysenck's (1976) sexual attitudes dimensions contributed strongly to MS, accounting for 42% of its variance either directly or through similarity effects.

For L, there was a moderate degree of assortative mating (0.43). Male L, but not female L, is negatively related to MS for both sexes. Higher levels of male L were detrimental to MS while the level of female L considered alone was unrelated to MS. Similarity on L enhanced MS, although the required degree of similarity for optimal MS occurred infrequently in the sample. For optimal MS, the males' L score was about 4 points higher than his wife's while the typical difference between males' and females' L scores was three times this amount (see

Table 26. Multiple linear regressions (R's) of MS on sexual attitudes

	Male Sex Attitudes	Fem Sex Attitudes	Combined
Male MS	0.55**	0.45**	0.60**
Fem MS	0.43**	0.58**	0.62**
Tot MS	0.52**	0.56**	0.64**
(Male MS–Fem MS)	0.33**	0.22**	0.33**

**$p < 0.01$.

Table 27. Libido (LM–LF) similarity analyses

	Linear	Similarity	(LM–LF) at max	Partial r for Similarity with Level of L Covaried
Male MS	-0.23**	-0.20**	2.49	-0.21**
Fem MS	-0.18**	-0.20**	4.94	-0.20**
Tot MS	-0.22**	-0.22**	3.73	-0.22**
Male MS–Fem MS	-0.06 (NS)	0.01 (NS)	—	—

**$p < 0.01$. NS not significant.

Table 28. Sex satisfaction (SS_M–SS_F) similarity analyses

	Linear (SS_M–SS_F)	Similarity	(SS_M–SS_F) at Max	Partial r for Similarity with Level of SS Covaried
Male MS	0.02 (NS)	-0.25**	1.97	0.01 (NS)
Fem MS	-0.20**	-0.25**	-4.31	0.01 (NS)
Tot MS	-0.10*	-0.27**	-1.24	0.01 (NS)
Male MS–Fem MS	0.31**	0.02 (NS)	—	0.01 (NS)

*$p < 0.05$. **$p < 0.01$. NS not significant.

Fig. 7). While a slightly higher male than female L is optimal for MS, the usual sex difference on this variable is well outside the optimal range. While lower male sexual drive (L) relative to his wife's is related to lower MS, a far more frequent concomitant of lowered MS is male sexual drive that far exceeds his wife's.

For SS, there was also a moderate degree of assortative mating (0.41). SS is strongly related to MS. In fact, SS is as strongly related to the partner's MS as to the partner's SS itself. Similarity of SS also enhanced MS. For males, the optimal difference (for MS) between his and his wife's SS was about the same as the typical sex difference. For the females, however, the optimal difference between her and her husband's SS was very discrepant from the typical difference. While the male is typically slightly higher than the female on SS, her optimal MS requires that she be considerably higher than he is on SS. Apparently, for the males, the relative sexual satisfaction required for optimal MS is fairly readily attained while for the females, the relative sexual satisfaction required for optimal MS is rather unlikely. As expected, this similarity only holds when both spouses are relatively highly sexually satisfied. Those with similar low sexual satisfaction have lower MS.

It is interesting to note that the sexual attitudes of both partners (and their similarity) are almost as strongly related to total MS (42%) as male MS is to female MS (53%). However, the sexual attitudes of one spouse alone are far less related to his or her MS (30% for the male, 34% for the female) or the MS of his or her spouse (18% for males' sexual attitudes, 20% for the females'). While a person's own sexual attitudes are most highly related to his or her MS, the sexual attitudes of his or her spouse (especially on SS) and the degree of similarity between them (especially on L) are also important.

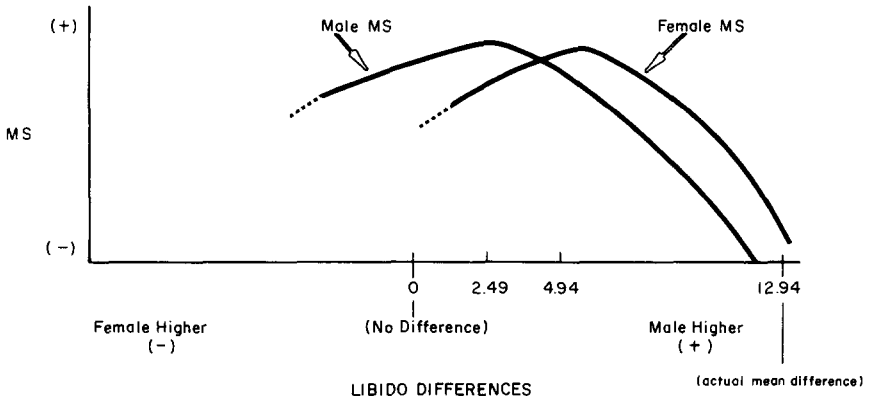

FIG. 7. Relationship between libido differences and MS of males and females.

SECTION 8. SEXUAL BEHAVIOUR AND MARITAL SATISFACTION

Sexual Behaviour Questions

The following sexual behaviour questions were independently asked of the husbands and wives in the sample. Where applicable, points given for each response are shown. Means and standard deviations in Table 29 refer to these points.

About how many times per month (assume 30 days per month) have you had sexual intercourse during the last year? (Put down the number that tells the average number *per month*)_____

About how many times *per month* would you prefer to have sexual intercourse?_____

Do you think your partner is more or less passionate than you are? Much more ☐ (5) somewhat more ☐ (4) same ☐ (3) somewhat less ☐ (2) much less ☐ (1)

Do you sometimes refuse intercourse when your partner desires it? Very frequently ☐ (5) frequently ☐ (4) sometimes ☐ (3) rarely ☐ (2) never ☐ (1)

When this happens, what is their attitude? Insistent or irritable ☐ (3) displeased but for not too long ☐ (2) agreeable and considerate ☐ (1)

How long does a single intercourse usually last? (Do not count the time of preliminary "petting"). Estimate average length of time in minutes_____min.

In sexual intercourse with your partner do you: (men please answer A, women B)

A) *FOR MEN* ever experience impotence, i.e. inability to carry out the act? Never ☐ (4) sometimes ☐ (3) usually ☐ (2) always ☐ (1)

B) *FOR WOMEN* experience an orgasm: i.e. a climax of intense feeling followed by quietude and a feeling of relief? Never ☐ (4) sometimes ☐ (3) usually ☐ (2) always ☐ (1)

How much release or satisfaction do you usually get from sexual intercourse with your partner? Entirely complete ☐ (6) fairly complete ☐ (5) moderate ☐ (4) little ☐ (3) none ☐ (2) am left nervous and unsatisfied ☐ (1)

Do you feel that (men please answer A, women B)

A) *FOR MEN:* your wife is over modest or prudish in her attitude towards sex? Yes ☐ (2) No ☐ (1)

B) *FOR WOMEN:* your husband is too demanding and oversexed in his attitude towards sex? Yes ☐ (2) No ☐ (1)

Did you have intercourse with your partner before marriage? Yes ☐ (2) No ☐ (1)
Did you have intercourse with any other partners before your first marriage?
None ☐ (0) one ☐ (1) two ☐ (2) three ☐ (3) four ☐ (4) five ☐ (5) more than five ☐ (6)

Do you frequently experience desire for intercourse with someone else than your partner? Very frequently ☐ (5) frequently ☐ (4) sometimes ☐ (3) rarely ☐ (2) never ☐ (1)

Was your first intercourse: (men please answer A, women B)

A) *FOR MEN:* intensely enjoyable ☐ (4) satisfactory ☐ (3) merely tolerable ☐ (2) definitely unsatisfactory ☐ (1)

B) *FOR WOMEN:* enjoyable ☐ (4) merely tolerated ☐ (3) shocking ☐ (2) disgusting ☐ (1)

Do you think your partner is *more* or *less* sexually passionate than you are? Much more ☐ (5) somewhat more ☐ (4) same ☐ (3) somewhat less ☐ (2) much less ☐ (1)

Put one tick before each of the things you find more or less unsatisfactory in intercourse with your partner, and two ticks before each thing which is decidedly unsatisfactory. Men please answer column A only, and women please answer column B only. (Called "complaints" in Table 29 — 1 point per tick).

COLUMN A — MEN	COLUMN B — WOMEN
Shows too little enthusiasm	Shows too little enthusiasm
Vagina too large	Penis too large
Vagina too small	Penis too small
Vagina not moist enough	Has difficulty in getting an erection
Cannot always reach an orgasm (climax)	Has difficulty in keeping an erection
Never reaches an orgasm	Cannot always reach an ejaculation
Too slow in reaching an orgasm	Never has an ejaculation
Has orgasm too quickly	Too slow in reaching an ejaculation

Wants to go to sleep or get up too soon after orgasm
Desires intercourse too frequently
Desires intercourse too rarely
Has too little regard for my satisfaction
Is too animal like in her passion
Expresses too little tenderness during intercourse
Does not "pet" enough before beginning intercourse
Likes to engage in unnatural practices

Has ejaculation too quickly
Wants to withdraw penis too soon after ejaculation
Wants to go to sleep or get up too soon after intercourse
Desires intercourse too frequently
Desires intercourse too rarely
Has too little regard for my satisfaction
Is too animal like in his passion
Expresses too little tenderness during intercourse
Does not "pet" enough before beginning intercourse
Likes to engage in practices to which I object.

Regression analyses

Two regression analyses were performed to test the contribution of sexual behaviour questions to marital satisfaction (MS). First, the linear contribution of the males' and females' sexual behaviour responses were tested. Then the effects of similarity of their responses were tested using the procedure described for the personality scores.

Results and Discussion

Means, standard deviations, and correlations between the males' and females' responses to the sexual behaviour questions are shown in Table 29. Both the males and females reported having sexual intercourse almost every other day. This frequency is similar to that reported in an English survey of a decade ago (Gorer, 1971). However, the correlation between their reports (0.27) while significant, was lower than might be expected from accurate reports of a frequency that would be the same for both, unless some subjects included extra-marital intercourse in this response. The preferred frequency of sexual intercourse was higher than the actual frequency for both males and females. Their preferred frequencies correlated to the same degree as their actual frequencies. The negative correlations between the responses to the question about whether their partner was the more

Table 29. Means, standard deviations, and correlations between sexual behaviour questions for 566 couples

	Males		Females		Male–Female
	M	SD	M	SD	Correlation
MS	6.94	2.03	6.87	2.13	0.73**
Intercourse per month	14.78	34.01	13.49	16.97	0.27**
Preferred intercourse per month	19.18	14.40	16.07	19.82	0.27**
Partner more or less passionate	2.71	0.97	3.38	1.04	-0.38**
Do you refuse intercourse?	1.80	0.79	2.53	0.97	-0.13**
Partners attitude to refusal	1.19	0.93	1.51	0.87	0.16**
Length of single intercourse (minutes)	12.42	10.63	11.54	9.71	0.61**
Impotence (M) Orgasm (F)	3.61	0.59	2.16	0.91	-0.01 (NS)
How much satisfaction?	5.37	0.97	5.12	1.13	0.18**
Wife modest (M) Husband demanding (F)	1.26	0.45	1.17	0.38	0.16**
Intercourse before marriage	1.84	0.37	1.85	0.39	0.84**
Intercourse with others before marriage	2.53	2.60	1.63	2.15	0.32**
Desire for someone else?	2.71	1.17	2.08	1.14	0.40**
First intercourse enjoyable?	2.95	0.97	3.18	0.85	0.14**
Partner more or less sexually passionate	2.59	1.15	3.34	1.07	-0.32**
Complaints	3.17	4.13	3.06	4.47	0.35**

**$p < 0.01$. NS not significant.

passionate one (–0.38) showed some agreement about which was in fact more passionate. The same is true of their responses to the last item (–0.32).

Refusal of intercourse is negatively correlated (–0.13) while the partners' attitudes toward the refusal are somewhat related (0.16). The length of a single intercourse is similarly reported at about 12 minutes by both the males and females, and there is a substantial correlation (0.61) between their reports. Male impotence (or lack of it) and female orgasm (or lack of it) are unrelated. Satisfaction is positively correlated (0.18) but hardly perfectly related. The same is true of reports that the wife is too modest or the husband too demanding (0.16). The high correlation (0.84) between the spouses' reports of whether they had intercourse (together) before marriage indicates less than perfect recall. Intercourse with others before marriage (which is more frequent for males) (see Goad, 1980), desire for someone else, and number of complaints were all moderately correlated. Whether the first intercourse was enjoyable was only slightly (0.14) correlated for the two spouses.

Table 30 shows the correlations between the sexual behaviour questions and MS. For both sexes the amount of satisfaction from intercourse is most highly related to MS. Desire for someone else and number of complaints are negatively related to MS for both sexes. Not surprisingly, the females' refusal of intercourse is more strongly related to low MS than is the males'. The females' reports of male impotence are negatively related to both spouses' MS, while the males' reports of female orgasm are only slightly related to his own MS. Premarital intercourse is unrelated to MS for the male and only slightly negatively related to MS for the female.

Table 31 shows the multiple correlations between the males' and females' sexual behaviour. Combined, the sexual behaviours produce a multiple correlation of 0.76 with MS and thus account for 58% of its variance. In fact, sexual behaviours are about as highly related to male MS (0.71) and female MS (0.75) as the two are related to each other (0.73). Since the reported sexual behaviours are correlated, the sexual behaviours of one partner are almost as highly related to his (0.65) or her (0.72) MS as are both spouses' reports taken together.

Sexual behaviour also accounts for 22% ($R = 0.47$) of the difference between male and female MS, particularly, if either partner reports more satisfaction from intercourse or refuses intercourse. Complaints are related to lower MS on the wife's part, while having less association with her husband's MS. The same appears to be the case for the females' desire for someone else.

Tables 32–35 present the similarity analyses for the four measures of MS. For the first three (male MS, female MS, and total MS), the results are very similar. Effects of similar responses of the two spouses occurred for the same seven items. Two items involved whether the partner was passionate. Similar responses on these items by the two spouses were associated with higher MS. When the female reported that the male was slightly more passionate than he reported her to be, MS was at its highest. Similarity in responses on the item about refusal of intercourse with the male refusing more frequently (rather than the other way) was associated with maximal MS. Likewise, similar attitudes toward the refusals were associated with maximal MS. All of these similarity effects persisted when the overall levels of sexual behaviour were covaried.

A similarity effect was detected for amount of satisfaction from intercourse. The males' MS was maximised when he received somewhat more satisfaction and the females' MS was maximised when she received somewhat more satisfaction. This similarity effect did not hold when level of sexual behaviour was covaried. As expected, only similarity at high levels of satisfaction are optimal for MS. Another similarity effect occurred on the item asking about the (over) modesty of wives or the (too) demanding attitude of husbands. An initial similarity effect was reduced by covarying the level of sexual behaviour. Similar responses that their spouses were *not* too modest or demanding were optimal. The same result occurred for the item concerning desire for someone other than the partner. An initial similarity effect vanished when level was covaried. Optimal MS occurs when both partners do not desire another partner.

In addition to the similarity effects shown in Tables 32, 33 and 34, there are a number of linear effects between the differences between male and female responses and MS. The MS

Table 30. Correlations between sexual behaviour questions and MS

	Male Questions				Female Questions			
	Male MS	Fem MS	Tot MS	Diff	Male MS	Fem MS	Tot MS	Diff
Intercourse per month	0.10*	0.12**	0.12**	−0.05	0.17**	0.22**	0.21**	−0.09*
Preferred intercourse per month	−0.06	0.00	−0.03	−0.08*	0.14**	0.17**	0.16**	−0.05
Partner more passionate	0.22**	0.22**	0.24**	−0.02	0.08*	0.06	0.07	0.03
Refuse intercourse?	−0.09*	−0.01	−0.06	0.10*	−0.33*	−0.45**	−0.42**	0.19**
Partners attitude to refusal	−0.20**	−0.19**	−0.21**	−0.00	−0.34**	−0.44**	−0.42**	0.15**
Length of single intercourse	0.11**	0.06	0.09*	0.06	0.12*	0.13**	0.13**	−0.02
Impotence (M) Orgasm (F)	0.12**	0.05	0.09*	0.09*	−0.27**	−0.28**	−0.29**	0.04
How much satisfaction?	0.44**	0.29**	0.39**	0.18**	0.37**	0.48**	0.46**	−0.17**
Wife modest (M) Husband demand (F)	−0.30**	−0.26**	−0.30**	−0.05	−0.23**	−0.31**	−0.29**	0.14**
Intercourse before marriage	0.00	−0.04	−0.02	0.05	−0.01	−0.03	−0.02	0.02
Intercourse with others before marriage	−0.03	−0.01	−0.02	−0.02	−0.03	−0.10*	−0.07	0.11**
Desire for someone else?	−0.43**	−0.37**	−0.43**	−0.05	−0.34**	−0.43**	−0.42**	0.16**
First intercourse enjoyable?	−0.02	−0.08*	−0.05	0.10*	0.06	0.08*	0.08*	−0.03
Partner more sexually passionate?	0.21**	0.19**	0.21**	0.00	0.04	0.03	0.04	0.01
Complaints	−0.37**	−0.34**	−0.38**	−0.01	−0.24**	−0.36**	−0.32**	0.18**

*$p < 0.05$. **$p < 0.01$.

Table 31. Mulitple linear regression (R's) of MS on sexual behaviours

	Male Sex Behaviours	Female Sex Behaviours	Combined
Male MS	0.65**	0.56**	0.71**
Female MS	0.54**	0.72**	0.75**
Total MS	0.63**	0.69**	0.76**
(Male MS–Female MS)	0.27**	0.31**	0.47**

**$p < 0.01$.

Table 32. Sexual behaviour differences (male–female) for male MS (similarity analysis)

	Linear	Similarity	Difference at Max MS	Similarity (with Level Covaried)
Intercourse per month	0.01	-0.02	—	(-0.14**)
Preferred intercourse per month	-0.17**	-0.05	—	—
Partner more passionate	0.08	-0.25**	-1.87	-0.11*
Refuse intercourse	0.18**	-0.24**	0.87	-0.11*
Partner's attitude to refusal	0.10	-0.24**	-0.28	-0.17**
Length of intercourse	-0.00	-0.03	—	—
Impotence (M) Orgasm (F)	0.29**	-0.01	—	—
Satisfaction	0.00	-0.17**	1.06	0.10*
Modest/demanding	-0.09*	-0.11**	-0.64	0.07 (NS)
Intercourse before marriage	0.02	-0.04	—	—
Intercourse with others before marriage	-0.00	0.02	—	—
Desire for someone else?	-0.09*	-0.10*	-1.22	0.02 (NS)
First intercourse enjoyable?	-0.06	-0.08	—	—
Partner more sexually passionate?	0.11**	-0.20**	-3.58	-0.09*
Complaints	-0.09*	-0.06	—	—

*$p < 0.05$. **$p < 0.01$.

Table 33. Sexual behaviour differences (male–female) for female MS (similarity analysis)

	Linear	Similarity	Difference at Max MS	Similarity (with Level Covaried)
Intercourse per month	0.01	0.07	—	—
Preferred intercourse per month	-0.16**	0.05	—	(0.09)*
Partner more passionate	0.09*	-0.24**	-1.98	-0.10*
Refuse intercourse	0.32**	-0.27**	1.57	-0.14**
Partner's attitude to refusal	0.18**	-0.26**	-0.11	-0.20**
Length of intercourse	-0.07	-0.02	—	—
Impotence (M) Orgasm (F)	0.26**	0.06	—	—
Satisfaction	-0.19**	-0.18**	-0.97	0.05 (NS)
Modest/demanding	0.01	-0.11*	-0.07	0.07 (NS)
Intercourse before marriage	-0.01	0.05	—	(0.10*)
Intercourse with others before marriage	0.07	0.04	—	(0.08*)
Desire for someone else?	0.05	-0.15**	1.12	-0.06 (NS)
First intercourse enjoyable?	-0.12**	-0.04	—	—
Partner more sexually passionate?	0.10*	-0.23**	-0.75	-0.13**
Complaints	0.04	-0.06	—	—

*$p < 0.05$. **$p < 0.01$.

for both spouses together (Table 34) was higher when the female preferred to have intercourse more frequently than the male, received more satisfaction from intercourse than the male, and reported that the first intercourse was more enjoyable than reported by the male. (Since the possible responses were slightly different for males and females on the last item mentioned, their responses are not exactly comparable. Nevertheless, relative to other couples, higher female enjoyment of first sexual intercourse corresponded with higher MS). Higher MS also occurred when the male reported that his wife was more passionate (than she reported him to be), he refused intercourse more frequently than his wife, his wife was more irritable about refusal, (than she reported him to be) he had never experienced impotence and his wife reported frequent orgasms.

The linear relationships for females (Table 33) were exactly the same as those for the total MS mentioned above. For the male (Table 32), there were three small discrepancies from this pattern. The male reported higher MS when the female reported that he was demanding but he reported that she was not overly modest, when the females' desire for intercourse with someone else was (relative to other couples) greater than his own, and when the female had fewer complaints than he had.

Table 35 shows relationships between differences in reports of sexual behaviour and differences in MS. The partner who refused intercourse less frequently and was less irritable about the other's refusal had the higher MS of the two. The partner who recalled the longer time of single intercourse and reported the greater satisfaction from intercourse had the higher MS. The partner who did not report either over modesty or a too demanding attitude for his or her spouse had the higher MS. The partner with relatively fewer premarital sexual partners and the less desire for another current sexual partner had the higher MS. The partner with the (relatively) more enjoyable first intercourse and with fewer complaints was also higher on MS.

The four similarity effects shown in Table 35 which indicate that similar responses on these items maximize male MS at the expense of female MS, or equivalently, minimize female MS relative to male MS. Reporting similar frequencies and preferred frequencies of intercourse result in greater male MS than female MS. Since the optimal differences in responses for the

Table 34. Sexual behaviour differences (male–female) for total MS (similarity analysis)

	Linear	Similarity	Difference at Max MS	Similarity (with Level Covaried)
Intercourse per month	0.02	0.03	—	(–0.11*)
Preferred intercourse per month	–0.18**	–0.00	—	—
Partner more passionate	0.09*	–0.27**	–1.91	–0.12**
Refuse intercourse	0.27**	–0.28**	1.26	–0.14**
Partner's attitude to refusal	0.15**	–0.27**	–0.19	–0.21**
Length of intercourse	–0.04	–0.03	—	—
Impotence (M) Orgasm (F)	0.29**	0.03	—	—
Satisfaction	–0.11*	–0.19**	–0.03	0.08 (NS)
Modest/demanding	–0.05	–0.12**	–0.32	0.08*
Intercourse before marriage	0.00	0.01	—	—
Intercourse with others before marriage	0.03	0.04	—	—
Desire for someone else?	–0.02	–0.13**	0.46	–0.02 (NS)
First intercourse enjoyable?	–0.10*	–0.07	—	—
Partner more sexually passionate?	0.11**	–0.23**	0.03	–0.13**
Complaints	–0.03	–0.07	—	—

*$p < 0.05$. **$p < 0.01$.

Table 35. Sexual behaviour differences (male–female) for difference (male–female) in MS (similarity analysis)

	Linear	Similarity	Difference at Max MS	Similarity (with Level Covaried)
Intercourse per month	–0.00	–0.11**	248.80	–0.10**
Preferred intercourse per month	–0.01	–0.14**	–48.67	–0.11*
Partner more passionate	–0.03	–0.01	—	—
Refuse intercourse	–0.20**	0.05	—	—
Partner's attitude to refusal	–0.12**	0.03	—	—
Length of intercourse	0.09*	–0.02	—	—
Impotence (M) Orgasm (F)	0.02	–0.10*	2.22	–0.09*
Satisfaction	0.27**	0.01	—	—
Modest/demanding	–0.13**	–0.00	—	—
Intercourse before marriage	0.05	–0.12**	–2.92	–0.09*
Intercourse with others before marriage	–0.10*	–0.03	—	—
Desire for someone else?	–0.19**	0.07	—	—
First intercourse enjoyable?	0.10*	–0.05	—	—
Partner more sexually passionate?	–0.00	0.04	—	—
Complaints	–0.18**	0.00	—	—

*$p < 0.05$. **$p < 0.01$.

questions are clearly outside their possible ranges, it is better to consider these two partial r's as representing small quadratic trends at extremes of the distributions rather than as effects of similarity throughout their ranges. Similar responses to the impotence/orgasm item yielded low female MS relative to male MS. In other words, a husband who was "never" impotent and a wife who "never" experienced orgasm yielded lower female MS relative to male MS as did a husband who was impotent and a wife who was orgasmic. Understandably, males can live with these combinations more satisfactorily than can females. Similar responses to the item asking whether the couple had sexual intercourse with each other prior to marriage yielded higher male MS relative to female MS. Differences in responses to this item were associated with lower male MS than female MS. All these effects occurred with or without the level of sexual behaviour being covaried.

The contribution of sexual behaviour to MS was the largest of any of the five sets of variables. Male and female sexual behaviour reports and the similarity between them accounted for 62% of the variance of the combined male and female MS as well as 26% of the variance of the less reliable difference between the MS of the spouses.

Frequent intercourse and high levels of satisfaction from intercourse were strongly associated with MS for both sexes. Desire for another partner and numerous complaints about the current spouse were associated with low MS. The husband reporting that the wife is more passionate is associated with higher MS for both partners while the wife's refusal of intercourse is associated with lower MS for both partners.

Similarity effects accounted for only about 4% of the variance of MS independently of the linear effects of sexual behaviour. It is understandable that these effects were small since several of the items asked for both spouses to report on a fact (i.e. frequency of intercourse). Although there is a "correct" answer to these questions that limits the range of possible answers, small discrepancies in the responses do reflect on the level of MS of the couple.

SECTION 9. SUMMARY

The percentages of Marital Satisfaction (MS) variance accounted for by each of the five sets of variables considered are presented in Table 36. In the last column, it can be seen that the sexual behaviour variables as a group were the most highly related to MS, followed by sexual attitudes. Following the sexual variables, background and personality variables accounted for approximately the same percentages of MS variance. The contribution of social attitudes to MS, although significant, was very small.

The linear effects of the five sets of variables accounted for virtually all the variance of MS that was related to the variables. In the case of the background variables all the related MS variance (25%) was a linear function of the husbands' and wives' reponses. Similar predominance of linear relations with MS is also true of the other sets of variables; for

Table 36. Percentages of variance (R^2) of MS accounted for by analyses previously reported

	Linear Effects				Similarity Effects		Combined
	Husband	Wife	Husband & Wife	No Control	Level Uncontrolled	All linear controlled	Linear + Controlled Similarity
Background	14	17	25	12	6	0	25
Personality	10	12	18	5	4	2	20
Social Attitudes	2	2	3	3	3	2	5
Sexual Attitudes	27	31	41	18	12	1	42
Sexual Behaviour	40	48	58	33	14	4	62
Combined Variables	—	—	65	—	—	2	67

personality, 18 of 20% is linear, for social attitudes 3 of 5%, for sexual attitudes 41 of 42%, and for sexual behaviour 58 of 62%.

In light of the preponderant linear contribution of the variables, there is very little MS variance independently accounted for by similarity effects — between 0–4%. However, the similarity effects can appear substantial if the linear effects of the variables are not controlled. In the most severe case, where any difference between husband and wife, either directional (e.g. wife higher than husband) or absolute (actually squared in these analyses), is used to test for positive or negative effects of similarity on MS, between 3 and 33% of the MS variance is accounted for by each of the five sets of variables (see No Control column in Table 36). These are the results most likely to be found when the effects of similarity in personality, attitudes, etc. are considered in isolation from the simple linear effects of the variables. For example, it might be found (and in fact was in this study) that when the male's libido is far greater than his wife's, their MS is low. This result might be interpreted as indicating that when the male's libido is more *similar* to his wife's, their MS is higher. This statement is true, but it can be partially accounted for by considering the related fact that high male libido is detrimental to MS regardless of the female's libido. This statement reflects a simple linear relationship between male libido and MS. (It should be noted that with proper control, a genuine similarity effect for libido was detected.) This kind of similarity effect occurs in studies that compare the MS of a group of "similar" and "dissimilar" couples.

At a somewhat more sophisticated level, similarity effects may be tested after controlling for directional differences between males and females. In this case, between 3 and 14% of the MS variance is said to be the result of similarity (see Level Uncontrolled column in Table 36). For example, it might be found (and was in this study) that similar scores on Psychoticism (after controlling for directional effects which were negligible for this variable) were associated with higher MS. This result might reasonably be interpreted as showing the positive effects of similarity on P. However, if the levels of P for the husband and wife are controlled, the "similarity" effect disappears. In this case, the only positive (for MS) similarity effect occurs when both partners have similarly *low* P. This is exactly the same as the simple linear relationship between P and MS that shows high P associated with low MS and low P with high MS (e.g. Zaleski, 1981; Zaleski and Galkowska, (1978). This kind of similarity occurs in studies that balance the directions of scores (husbands higher or wives higher) before testing the effects of the size of difference on MS, but allow the levels of the variable to vary without control.

When linear effects are fully controlled, similarity may be assessed independently of linear effects. These independent similarity effects are, of course, much smaller than those that include linear effects, ranging from 0 to 4% for the five sets of variables. They are, however, not redundant with the linear effects. Independent similarity effects were found for the Neuroticism, Libido, and Tender-mindedness variables, as well as for several of the sexual behaviour questions that appeared to reflect Libido (e.g. partner more passionate, refuse intercourse). For these variables, couples with similar scores have higher MS independent of their levels on the variable or the direction of the male–female difference. Of course, the linear effects of N and Libido on MS operate in addition to the similarity effects; thus, a couple with similarity high scores on N (or Libido) has higher MS than a couple with generally high N (or Libido) scores that are not as closely matched (for similarity), but they have lower MS than a couple with similar low N (or Libido) scores (from the linear relationship).

Since similarity theories of MS are often contrasted with complementarity theories, it should be noted that no variable considered in this study showed a complementarity effect on MS. Possibly a few of the directional differences might be (mis-) interpreted as complementarity effects on MS, but when direction of differences and direction and level of scores were controlled, differences between the partners on a given variable were always either unrelated to (in most cases) or detrimental to MS. While positive effects of similarity of scores on MS are small, positive effects of complementary scores are non-existent.

While the analyses presented have shown rather small similarity effects, this does not mean that these effects can be completely ignored. The small similarity effects occurred in a population with substantial assortative mating on many of the variables. If the assortative

mating for a variable were reduced, the variance of the male–female differences would increase and the variance of the squares of these differences (which reflect similarity after appropriate controls) would increase dramatically, resulting in far larger similarity effects. Of course, in an individual case where the male–female difference in a variable with a similarity effect is unusually large, the detrimental effect of lack of similarity can be substantial, although it may be small in the general population.

An attempt was made to combine all significant variables in a single simultaneous prediction equation for MS. Because of the large number of variables involved, several highly correlated husband and wife variables in the background and sexual behaviour groups were added to reduce the number of variables before analysis. This procedure resulted in an *under-estimate* of the total linear effects of the variables. For example, the linear effects of the background variables actually accounted for 25% of the variance of MS, but adding the husband and wife scores to reduce the number of variables resulted in their accounting for only 19% in the combined analysis. Overall, the linear combination of the five sets of variables accounted for (a minimum of) 65% of the variance of MS, as shown in Table 3.

The similarity effects, with the linear effects partialled out, accounted for an additional 2% of the variance of MS. Since the similarity effects were assessed by the square of the difference between the husband's and wife's score in both their original analyses and the combined analysis, the size of these effects was not underestimated in the combined analysis. The similarity effects were simply very small in comparison with the linear relationships of the husbands' and wives' five sets of variables and their MS scores.

Overall, the five sets of variables combined were only slightly more related to MS than were the sexual behaviour variables alone (although the combined set was an underestimate). The combined variables were, however, much more related to MS than any of the other four sets alone.

The contributions of the five sets of variables to the variance of MS are illustrated in Figs 8–12. The circle in each figure represents 100% of the MS variance. Taking Locke and Wallaces' (1959) corrected split half reliability of 0.90 as a reasonable estimate of the reliability of the MS scale which is mostly composed of their items, 10% of the variance of MS is simply measurement error. Since all the variables considered in this study accounted for 67% of the variance of MS, another 23% of the variance is reliable but not related to any

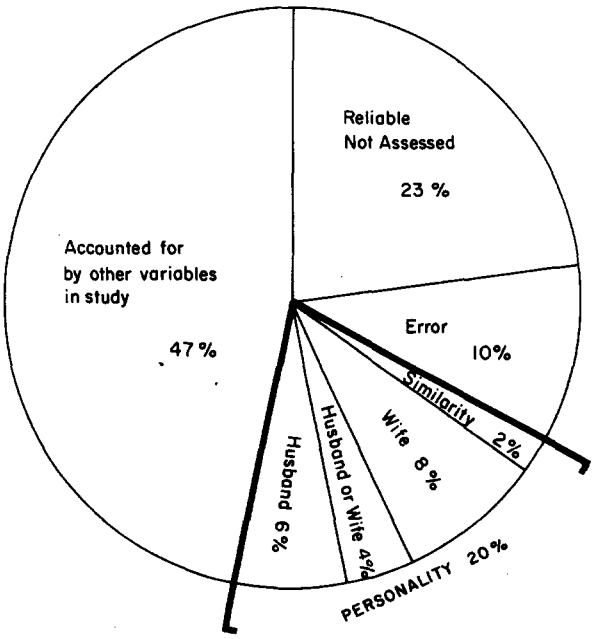

FIG. 8. Contribution of personality variables to MS variance.

variable considered. The 10% error section and the 23% reliable but not assessed section are included in all five figures.

Figure 8 illustrates the contribution of the personality variables to MS. They accounted for 20% of MS variance. Since the husband's and wife's personalities were somewhat correlated, their responses accounted for 4% of the variance in an overlapping (or redundant) fashion. The husband's scores accounted for another 6% and the wife's for another 8%. The independent similarity effect is not to be confused with the overlapping section which represents variance accounted for redundantly because the spouses *are* somewhat similar. The similarity effect represents variance accounted for by the couples' variation in similarity independently of husband's and/or wife's effects. This effect accounted for only 2% of MS variance.

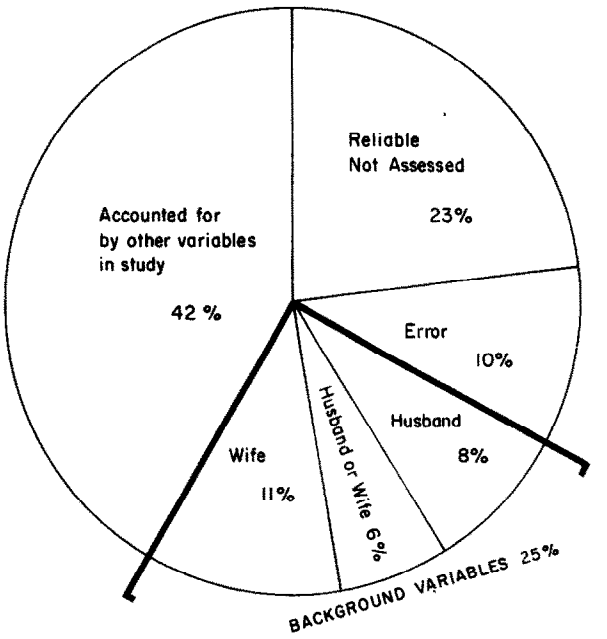

FIG. 9. Contribution of background variables to MS variance.

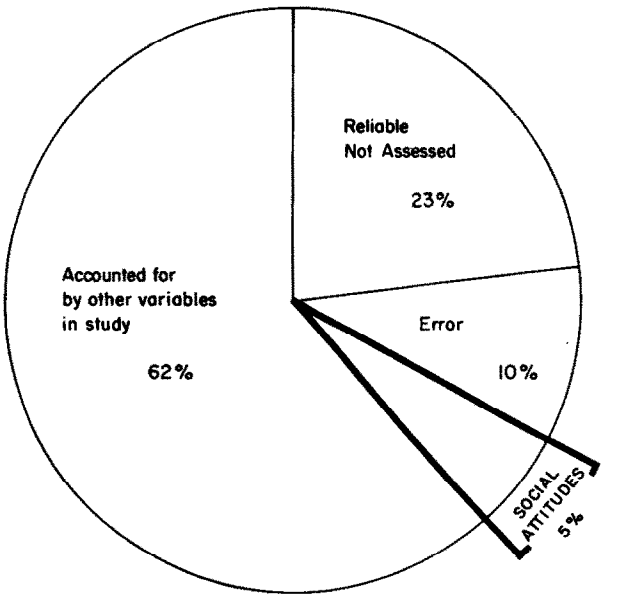

FIG. 10. Contribution of social attitudes to MS variance.

Figure 9 illustrates the contribution of background variables to MS variance. It is similar to the contribution of personality except that there is no significiant similarity effect in the background variables. Figure 10 shows the small influence of social attitudes. Figures 11 and 12 show the much larger contributions of sexual attitudes and behaviour to MS variance. In fact the contribution of sexual behaviour to MS almost completely includes the contributions of all other variables considered.

Three general observations can be made from these figures. First, similarity effects are far less important for MS than simpler effects arising directly from either the husband's or wife's responses. Although similarity effects (and its non-existent opposite, complementarity) are widely discussed (Tharp, 1963; Huston and Levinger, 1978), far more information about a marriage can be obtained by considering its two members individually than can be obtained

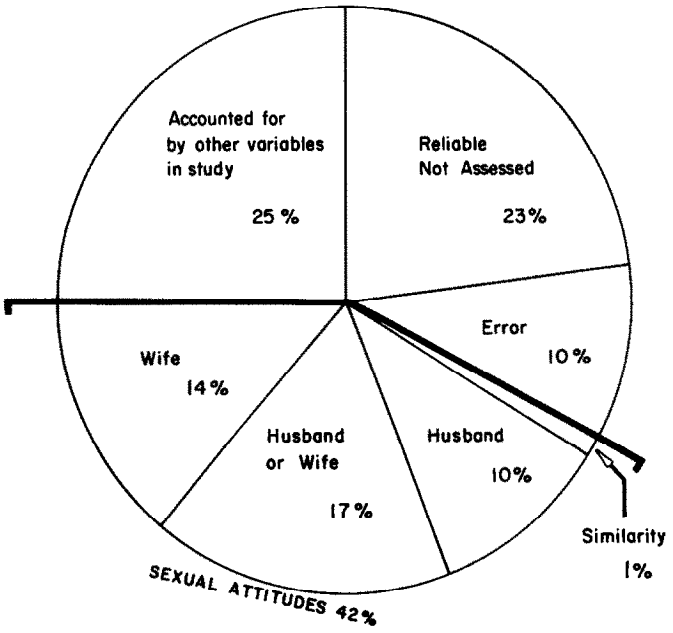

FIG. 11. Contribution of sexual attitudes to MS variance.

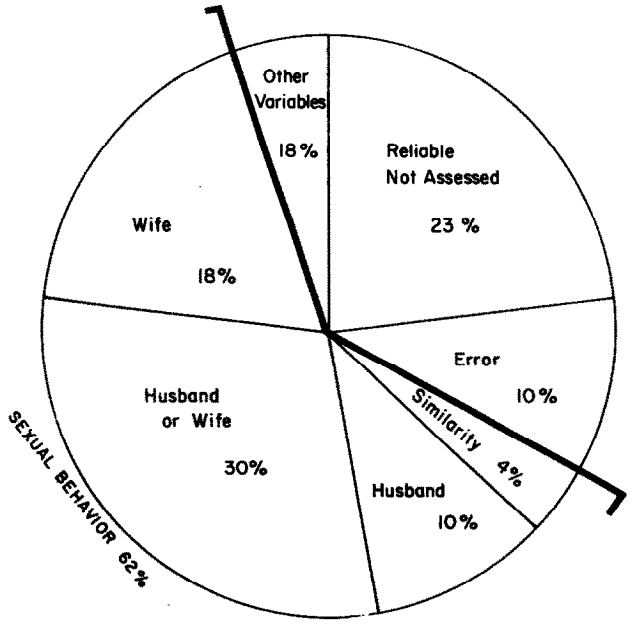

FIG. 12. Contribution of sexual behaviour to MS variance.

by considering their patterns of similarities (or complementarities). Second, the wife's responses are somewhat more related to MS than are the husband's.

The third point relates to the support we have found for the Eysenck and Wilson (1979) *asymmetry* hypothesis, which states that variables (such as P or N) which are in general detrimental to MS are less detrimental when spouses differ on these variables in the direction typical of their respective sex in the population. In other words, women in general have higher N scores than men, while men have higher P scores; the asymmetry hypothesis asserts (and our results support) that high N scores are less detrimental to MS when they are found in the female member of the pair, while high P scores are undetrimental to MS when they are found in the male member of the pair.

The figures given in Table 36 suggest that an astonishingly high proportion of the total MS variance is accounted for by our questionnaires (67% of the *total* variance, or 74% of the "true" variance.) This represents a rather higher figure than was expected, particularly when it is realized that we had no assessment of such very important variables as personal attractiveness (Wilson, 1981, Wilson and Nias, 1976). The addition of variables of this kind, obviously impossible to obtain in questionnaire studies might have raised the proportion of variance accounted for even higher.

The sum of the combined contributions made by linear factors and controlled similarity (Table 36) is well in excess of 100, amounting to 154%. This suggests that the five categories used (background, personality, social attitudes, sexual attitudes, sexual behaviour) are far from independent, and previous research (e.g. Eysenck, 1976; Eysenck and Wilson, 1978) as well as our own data (e.g. Table 7) support this view. Thus the personality variable P correlates with libido, sexual dissatisfaction, toughmindedness, radicalism, etc. This fact makes it difficult to say which are the most important factors in producing MS; Personality seems less important than sexual attitudes and behaviour, but genetic analysis suggests that personality is causally responsible (in part) for sexual attitudes and behaviour (Eysenck, 1976). Thus part of the variance apparently contributed to MS by sexual attitudes and behaviour (themselves closely related) is likely to be due to individual differences in personality. Considerations of this kind clearly modify the impression given by the detailed figures in Table 36.

Ultimately what our data suggest is that much of the satisfaction (or otherwise) a person derives from his or her marriage is contributed by his or her personality; stable, low P individuals with not too high a Libido are likely to be satisfied in their marriage almost regardless of whom they marry, while unstable, high P individuals with high Libido are likely to be dissatisfied. This conclusion should not be taken to extremes, but it does set limits to *matching* procedures and to the usefulness of advice given to married couples whose marriage is in difficulties. Matching prospective couples would have been much easier if the similarity or the complementariness hypothesis had received strong support; failure to find such support leaves us with the not too helpful suggestion that there are many people whom it would not be wise for anyone to marry!

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