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FIVE DECADES OF EDUCATIONAL ASSORTATIVE MATING*

ROBERT D. MARE
University of Wisconsin

The tendency for persons with similar amounts of schooling to marry one another is linked to other aspects of marriage behavior and to patterns of social stratification. Whether persons with similar amounts of formal schooling marry each other depends partly on their preferences and partly on the structure of the marriage market. An important aspect of the marriage market is the timing of the transition out of school and into marriage. Marriages between persons with different amounts of schooling are less likely for highly educated persons and for persons who marry shortly after leaving school. Census and Current Population Survey data from 1940 to 1987 indicate that the association between spouses' schooling increased between the 1930s and the 1970s and was stable or decreased in the 1980s. This trend occurred partly because the time gap between schooling and marriage shortened from the 1930s to the 1960s as a result of increased educational attainment and lowered age at marriage; the time gap lengthened in the 1970s and 1980s as a result of increased age at marriage. After estimated trends in educational assortative mating are adjusted for the length of time between school leaving and marriage, some evidence of increased homogamy from the 1930s to the 1980s remains. This may result from increasing competition in the marriage market for wives with good prospects in the labor market. Increases in educational homogamy may increase inequality among families and in the socioeconomic achievement of their offspring.

Historically, social scientists have considered the question of who marries whom to be a fundamental building block in understanding social structure and social life. Numerous empirical studies have described the tendency for persons to choose partners of similar social standing — on educational attainment (Rockwell 1976); ethnicity (Pagnini and Morgan 1990); religion (Johnson 1980); occupation (Hout 1982); and other social, psychological, and biological characteristics (e.g., Epstein and Guttman 1984). Nevertheless, studies of *changes* in patterns of assortative mating in contemporary societies are rare, despite recent changes in social factors that appear to be related to marriage, including educational attainment, women's participation in the labor force, fertility, cohabitation between unmarried persons, and average age at marriage.

I examine how some of these changes have affected the relationship between husbands' and wives' educational attainment over the past 50 years in the United States. The association between the schooling levels of newlyweds increased from the 1930s until the 1970s and then declined. These changes may have resulted from well-known trends in average levels of educational attainment and age at marriage.

Educational attainment is a particularly important dimension of assortative mating. It is both a consequence of family background and also a key determinant of labor market success and of other aspects of lifestyle (e.g., Hyman, Wright, and Reed 1975; Jencks et al. 1979). As a result, schooling affects mate selection and the organization of marriage markets. It broadly defines strata within which persons may prefer to marry and serves as a trait that may signal the desirabil-

*Direct all correspondence to Robert D. Mare, Department of Sociology, University of Wisconsin, Madison, WI 53706. An earlier version of this article was delivered at the annual meeting of the Population Association of America at Toronto, Ontario, Canada on May 3, 1990. Grants from the National Institute of Child Health and Human Development, the National Science Foundation, and the Institute for Research on Poverty of the University of Wisconsin supported this research. Computations were performed using the facilities of the Center for Demography and Ecology at the University of Wisconsin — Madison, which are supported by the Center for Population Research of the National Institute of Child Health and Human Development (HD-5876). I thank Robert Hauser, John Logan, Judith Seltzer, Linda Waite, Christopher Winship, the Editor, and *ASR* reviewers for comments on an earlier draft; and Julia Gray, Cheryl Knobeloch, and Meei-Shenn Tzeng for research assistance.

ity of partners (Blau and Duncan 1967; Warren 1966). And, because marriage and the completion of schooling often occur together, schools may affect the pool of potential spouses that a person meets (e.g., Eckland 1968).

SCHOOLING, MARRIAGE, AND ASSORTATIVE MATING

The Timing of Schooling and Marriage

Educational attainment and age at marriage may affect a person's chance of finding a spouse with similar social characteristics. Because school classes are educationally homogeneous, they structure students' potential acquaintances and raise the likelihood that persons with similar levels of education marry one another. Persons who marry while they are still in school or shortly after are likely to have met their spouses as students and to resemble them on educational attainment. In contrast, persons who marry well beyond their schooling years are more likely to meet potential spouses outside of their school class and to marry persons who differ from them on educational attainment. This implies that the longer the time between departure from school and marriage, the greater the chances that couples will form educationally heterogamous marriages.

Homogamy and Barriers to Intermarriage Among Education Groups

Educational homogamy may also vary with the educational attainment of marriage partners. The educational hierarchy creates barriers to marriage between persons with different amounts of schooling (e.g., between high school graduates and dropouts, between persons who attend college and those who do not, etc.). Homogamous marriages are, by definition, more common when it is difficult to marry across barriers, but some barriers may be a greater impediment than others. Throughout this century, typical ages at marriage have ranged from the late teens through the twenties. Thus, college students are more likely to meet prospective spouses while in school than are elementary or high school students. Moreover, when potential spouses do meet in school, they may be more likely to enter an educationally homogamous marriage when they meet at an advanced stage of the schooling process than when they meet at lower levels of schooling. This happens because, at successive levels of schooling, the ultimate educational status *of students still in school* is increasingly homogeneous (e.g., Mare 1980). Elementary and secondary schools contain students who will drop out with low levels of schooling as well as those who will pursue higher education. In contrast, colleges comprise only students who will attain at least some college. When two "high school sweethearts" marry, they are less likely to create an educationally homogamous marriage than two "college sweethearts." Because the remaining educational careers of the former couple are potentially longer, they are less certain and have greater potential for educational differences between spouses than they do for the latter couple.

These considerations imply that: (1) Marriages between persons who differ in educational attainment may be more common at some levels of the educational hierarchy than at others. Barriers to educational intermarriage may be weaker at low levels of the schooling distribution than at higher levels. (2) The effect of time gap between school departure and marriage on educational homogamy is greater at high levels of schooling than at lower levels. Because colleges have a greater homogenizing effect on marriage than elementary and secondary schools, marriage across barriers at the college level may be more sensitive to the amount of time between leaving school and marriage. Because it is easier to cross barriers to intermarriage early in the schooling process, delay of marriage after leaving school may not substantially alter these barriers. In contrast, because marriage across educational barriers later in the schooling process is harder, persons who delay marriage after leaving college are more likely to escape an educationally homogenous circle of acquaintances.[1]

CHANGES IN EDUCATIONAL ASSORTATIVE MATING

Observed changes in educational assortative mating may reflect changes in the univariate distributions of husbands' and wives' educational attainments and in the association between

[1] In contrast to the processes emphasized here, individuals' preferences and opportunities for assortative mating may be causes as well as consequences of the timing of their schooling and marriage. For example, some persons may attend college mainly for the marital opportunities that college provides. Others may delay marriage until they find a partner who is an appropriate "match." To take these effects into account would require much more complex models than those used here.

spouses' attainments once marginal changes have been taken into account (e.g., Hauser 1982; Johnson 1980). The proportion of marriages in which spouses have the same educational attainment declined over marriage cohorts during the first half of the twentieth century and increased slightly between 1950 and 1970 (Rockwell 1976), trends that appear to result mainly from changes in the distributions of spouses' schooling rather than in the association between spouses' attainments. Although prior research provides little guidance about how the association of spouses' attainments has changed,[2] well-known changes in the organization of early adult lives and in the status of women suggest that changes in the association may well have occurred.

The Effects of Changes in the Timing of Schooling and Marriage

Potentially important sources of change in educational assortative mating are trends in the timing of leaving school and marriage. Secular increases in average educational attainment have dramatically raised the average age at which persons leave school. Between the 1930s and the 1970s, in contrast, the average age at first marriage declined substantially (e.g., Cherlin 1981; Espenshade 1985). Since the 1970s, age at marriage has increased, but continued high levels of educational attainment imply that the gap between school-leaving and marriage in the 1980s is shorter than it was in the 1930s. The downward trend in age at marriage, coupled with the upward trend in educational attainment, implies an increasingly close link between school departure and entry into marriage since the 1930s (Winsborough 1978). Thus, the combined trends suggest that between the 1930s and the 1970s single persons were increasingly likely to meet potential spouses while they were still in school. Because school classes are educationally homogeneous, marriage markets may have become more structured by schools, increasing spouse resemblance on educational attainment.

Because barriers to intermarriage at high levels of schooling may be stronger and more responsive to the timing of school-leaving and marriage than barriers at lower levels of schooling, decrease in average age at marriage between the 1930s and the 1970s may have strengthened barriers to marriage between education groups more at the college than at the elementary and secondary levels. Since the 1970s, both educational attainment and age at marriage have increased. Whether the combined effect of these changes has increased the length of time between school-leaving and marriage is investigated below. That marriages are now occurring at much later ages suggests that, in the absence of other causes of change, the trend toward greater educational homogamy may have weakened.

Changing Competitiveness of the Marriage Market

Beyond changes in the timing of marriage and school departure, other changes may have influenced patterns of assortative mating. Increases in women's participation in the labor force and in the seriousness with which women pursue careers have altered the expectations of both sexes for marriage (England and Farkas 1986; Oppenheimer 1988). While these changes may partly account for later marriage and higher rates of marital disruption, they may also cause persons to seek partners more similar on socioeconomic status than they traditionally have sought. If men increasingly see women as breadwinners as well as mothers and homemakers, and women's preferences for men are unchanged, then men with the best prospects in the labor market will seek women who also have the best earnings potential.[3] Men with poorer labor market prospects may also seek women with good earnings potential, but because their competitive position is weaker, they must marry women with somewhat lower economic potential. Increasing competition for spouses with good economic prospects may increase the educational homogamy of mar-

[2] Johnson, Ahern, and Cole (1980), reviewing studies of spouse correlations on mental ability, suggest that: "Greater physical mobility, a decreased emphasis on some forms of selection (as in the increased proportion of . . . students attending colleges), as well as other social changes . . . might be expected to reduce spouse similarity in family background, ability, and educational level in the post World War II era" (p. 5). But the authors do not specify how these changes alter patterns of assortative mating. Moreover, the widely disparate studies that they review — which typically use small, nonprobability samples — are a weak basis for inferring trends.

[3] These changes, however, may be confined to the more advantaged sectors of the population. Among the least advantaged, the growing importance of women's careers may be less salient in decision-making about whether and whom to marry than whether either partner brings enough economic resources to sustain a marriage (Wilson 1987).

riages.[4] This implies a monotonic increase in educational homogamy since the 1930s, unlike the argument of the previous section, which suggested that educational homogamy may have weakened in the 1970s as age at marriage increased. If both processes affect the marriage market, then while observed homogamy may have declined in the 1970s and 1980s, it may have actually increased when the effect of the timing of marriage relative to schooling is taken into account.

DATA AND METHODS

To examine trends in educational assortative mating, I use the 1-percent Public Use Microdata samples (PUMS) of the 1940, 1960, 1970, and 1980 U.S. Censuses and the June 1985-1987 Current Population Surveys (CPS).[5] Each sample contains information on the joint distribution for husbands and wives of age, age or date of marriage, educational attainment, and other social characteristics.[6] I use two independent samples from each data source:

(1) Couples in which both husband and wife are aged 16-34 and married for the first time within approximately one year prior to the census or CPS ("newlyweds"). Marriages less than one year prior to the census or CPS reveal the incidence of marriages with various combinations of husbands' and wives' characteristics, which is determined almost exclusively by assortative entry into marriage. In contrast, many prior studies examine assortative mating in *prevailing* marriages, which is affected by marital disruption as well as entry into marriage (e.g., Johnson 1980; Hout 1982).

(2) Couples in which both spouses are aged 21-39 and were married for the first time approximately five to six years prior to the census or CPS. These marriages reflect both assortative mating and differential patterns of marital dissolution, but are included for several reasons. First, compared to newlyweds, couples married between five and six years earlier include relatively few persons whose schooling is not completed. Thus, they are comparatively free from the potential distortion in estimated assortative mating on education that may occur when schooling completed after marriage is ignored.[7] Second, these marriages provide additional cohorts for the time series. Together with marriages for newlyweds, they provide observations on cohorts marrying in 1935 and 1940 and every five years from 1955 to 1980, as well as 1980-1982 and 1985-1987. Finally, the time series of assortative mating for these marriages, when considered alone, is an independent replication of trends and patterns observed in the time series for newlyweds.[8]

[4] Another possible outcome of these changes is that individuals will be less likely to marry at all if their only other option is to marry someone with poor economic prospects. In such a marriage market, relatively few marriages between persons who are unequal in socioeconomic status will occur. As a result, the proportion of existing marriages that are educationally homogamous will increase. This argument is consistent with secular trends toward late marriage and increasing proportions who remain unmarried in the 1970s and 1980s.

[5] Because the extracts from the PUMS and CPS files were originally designed for a comparative analysis of assortative mating among blacks and nonblacks, they excluded marriages between the races. As a result, interracial marriages are omitted from the present analyses reported. Although it would have been preferable to include them, they constitute less than one percent of all marriages. It is extremely unlikely, therefore, that excluding interracial marriages affects the results.

[6] The 1950 census contains no information on educational assortative mating. Because educational attainment was asked only of sample persons and most households contained only one sample individual, educational attainment is not available for both members of a couple. In 1940 educational attainment was recorded for all persons. In the 1960, 1970, and 1980 censuses, educational attainment was a sample item, but since households were sampling units, rather than persons, educational attainment was recorded for all members of sample households.

[7] Substantial proportions of the population obtain further schooling after marriage. Among persons aged 30-49 in 1987, more than 40 percent of both sexes attended school at some time after entering their first marriage (Bumpass and Call 1989, Table 4).

[8] For the 1960, 1970, and 1980 censuses, the sample includes couples who married 0-12 and 60-72 months prior to the census. Because the 1940 census records age of first marriage in years rather than months, my 1940 samples include couples who married when their age was the same as or one year less than their age at the census date (for newlyweds) and when their age was five or six years less than their age at the census date. For marriages just prior to the census, this procedure guarantees that the sample includes all marriages occurring during the 12 months before the 1940 census, plus approximately one-half of marriages occurring 13-24 months prior to the census. For the older marriage group, this procedure guarantees that the sample includes all marriages occurring 60-72 months prior to the 1940 census and about one-half of marriages occurring 72-84 months prior to the 1940 census.

Although each PUMS file is a 1 percent sample,

The resulting samples include 43,248 newlywed couples and 35,434 marriages that occurred between five and six years before the census or CPS. (The number of newlyweds in each survey year is shown in Table 2.)[9]

Crossings Models

To analyze trends in assortative mating, I use methods that distinguish patterns that result from changes in the marginal distributions of husbands' and wives' traits from those patterns that reflect the association between spouses' traits (e.g., Hauser 1982; Johnson 1980). Among the many models for square contingency tables, such as those for assortative marriage, I rely mainly on "crossings models," which have been successfully applied to the analysis of assortative mating by Johnson (1980). These models reveal which educational differences between prospective spouses are serious barriers to intermarriage and which differences are relatively permeable boundaries.[10]

Formally, the crossings model is as follows. Let m_{ijt} denote the expected number of marriages between husbands in schooling category i and wives in schooling category j that are observed in year t; $d_i^H(d_j^W)$ be dichotomous (0,1) variables that denote whether or not a husband (wife) is in schooling category i (j); and d_t^T be dichotomous variables that denote whether a marriage is observed in year t (i = 10-11, 12, 13-15, ≥16; j = 10-11, 12, 13-15, ≥16; t = 1960, 1970, 1980, 1985-1987). Further, let d_k^C (k = 2, 3, 4, 5) be dichotomous variables for marriage across four educational barriers. If Y_H and Y_W denote the highest year of schooling completed for husbands and wives respectively,

$d_2^C = 1$ if ($Y_H < 10$ and $Y_W \geq 10$), or if ($Y_W < 10$ and $Y_H \geq 10$), otherwise $d_2^C = 0$;

$d_3^C = 1$ if ($Y_H < 12$ and $Y_W \geq 12$), or if ($Y_W < 12$ and $Y_H \geq 12$), otherwise $d_3^C = 0$;

$d_4^C = 1$ if ($Y_H < 13$ and $Y_W \geq 13$), or if ($Y_W < 13$ and $Y_H \geq 13$), otherwise $d_4^C = 0$;

$d_5^C = 1$ if ($Y_H < 16$ and $Y_W \geq 16$), or ($Y_W < 16$ and $Y_H \geq 16$), otherwise $d_5^C = 0$.

Then a log-linear model is:

$$\log m_{ijt} = \beta + \sum_i \beta_i^H d_i^H + \sum_j \beta_j^W d_j^W + \sum_t \beta_t^T d_t^T + \sum_{it} \beta_{it}^{HT} d_i^H d_t^T + \sum_{jt} \beta_{jt}^{WT} d_j^W d_t^T + \sum_k \beta_k^C d_k^C + \sum_{kt} \beta_{kt}^{CT} d_t^T$$

where the βs denote parameters to be estimated. The odds of crossing the several barriers to marriage between men and women from different educational strata are functions of the β parameters.

Net of the marginal distributions of spouses' schooling, the odds that a marriage observed in year t crosses barrier k is $\nu_{kt} = \exp(\beta_k^C + \beta_{kt}^{CT})$. The contribution of each of these odds of inter-

the 1940 couples included in the analysis are less than one percent of couples marrying one to two (or five to six) years prior to the 1940 census. My 1940 samples include only recently married couples for whom age at first marriage can be ascertained. Age at first marriage was obtained only for couples in which the woman was part of the 5 percent person sample of the 1940 census (U.S. Bureau of the Census 1973). Within the 1940 PUMS, all households contain at least one person who was part of the 5 percent sample, but not all sample households contain an ever married woman who was a sample person (U.S. Bureau of the Census 1983). My samples include only couples from the latter households.

Because the CPS samples are small relative to the census PUMS, I pooled the CPS samples for 1985, 1986, and 1987. Analyses of the June 1985-1987 CPS samples indicate that patterns of educational assortative mating are similar across the three surveys. In addition, the CPS samples include couples who entered their first marriage during the 24-month period or the 54-78-month period prior to the survey. I focus on first marriages rather than later or all marriages because the censuses provide no information on the date or age of later marriages and, in any case, at least some of the marriage market processes investigated here are more likely to pertain to first marriages.

[9] The sample numbers of marriages occurring between five and six years before the 1940, 1960, 1970, and 1980 censuses and the 1985-1987 CPSs are 4,910, 8,015, 8,601, 9,676, and 4,232 respectively.

[10] It is possible to analyze assortative mating using association models, which treat educational attainment as a quantitative variable and yield measures of association analogous to correlation coefficients between spouses' years of school completed (e.g., Goodman 1979; Hout 1982; Agresti 1990). In analyses not reported here, these models were applied to the assortative mating data. These models yield similar interpretations to the crossings models presented, but typically provide a somewhat poorer fit to the data.

Table 1. Parameters for Crossings Effects on Educational Assortative Mating

Wife's Years of Schooling	Husband's Years of Schooling				
	<10	10-11	12	13-15	≥16
<10	1	ν_2	$\nu_2\nu_3$	$\nu_2\nu_3\nu_4$	$\nu_2\nu_3\nu_4\nu_5$
10-11	ν_2	1	ν_3	$\nu_3\nu_4$	$\nu_3\nu_4\nu_5$
12	$\nu_2\nu_3$	ν_3	1	ν_4	$\nu_4\nu_5$
13-15	$\nu_2\nu_3\nu_4$	$\nu_3\nu_4$	ν_4	1	ν_5
≥16	$\nu_2\nu_3\nu_4\nu_5$	$\nu_3\nu_4\nu_5$	$\nu_4\nu_5$	ν_5	1

marriage to the expected number of marriages is illustrated in Table 1, which is adapted from Johnson (1980, p. 104). Each crossing parameter corresponds to a single move across adjacent levels of schooling of spouses. The greater the distance between prospective spouses, the more barriers they must cross. If the odds of marriage across each barrier are less than even (i.e., $\nu_{kl} < 1$ for all k), then the model implies that the difficulty of intermarriage varies directly with the differences between men and women in their educational attainment. Differences across observation years in the ν_{kl} provide evidence of changes in educational homogamy.

In practice, crossings models are inadequate to fully summarize patterns of assortative mating *within* each survey year, which include asymmetry (hypergamy or hypogamy) in assortative mating plus other symmetric associations that are not reducible to the four educational barriers discussed here. For assortative mating within years, therefore, I use less parsimonious models, discussed below. The crossings model, however, effectively captures patterns of change *between* years, and thus the analysis of change in assortative mating focuses on crossings parameters.

RESULTS: TRENDS IN SCHOOLING AND EDUCATIONAL ASSORTATIVE MATING

The rows and columns of Table 2 classify the education of newlyweds[11] according to the major institutional divisions of school systems and the intervals in which most school attrition has traditionally occurred (e.g., Duncan 1968). The row and column totals show that average educational attainment increased dramatically for both sexes over this period. In 1940, for example, fewer than 50 percent of newlyweds had completed high school whereas, by 1985-87, more than 85 percent had done so. Only 10-15 percent of newlyweds had some post-secondary schooling in 1940, in contrast to over 45 percent in 1985-87. Within each year, educational attainment for husbands is more variable than for wives. For example, relative to wives, more husbands have less than 10 years or more than 15 years of schooling. This pattern is most pronounced in 1940 and subsides until, in the 1980s, the education distributions of husbands and wives are approximately symmetric.

Table 2 also provides some of the basic data on changes in assortative mating since 1940. A simple measure of educational homogamy is the percentage of marriages involving men and women of the same educational strata. In 1940, about 52 percent of marriages are educationally homogamous, a quantity dominated by the large percentage of couples in which both spouses have fewer than 10 years of schooling. After an abrupt decline between 1940 and 1960 (Rockwell 1976), the percentage of marriages involving spouses in the same schooling categories rises monotonically, from 47 percent in 1960 to 53 percent in 1985-1987. A more liberal measure of homogamy, the percentage of marriages between spouses who differ by at most one educational level, also indicates increasing educational homogamy, rising monotonically from 83 percent of marriages in 1940 to 88 percent in 1980 and 1985-1987.

These crude measures suggest that educational homogamy has increased over the past 30 to 50 years, but they are not conclusive. The percentages of marriages that are homogamous neglect information about the ease with which persons can marry outside their own educational group, which is provided by the off-diagonal cells of the intermarriage tables. In addition, compari-

[11] The corresponding arrays for marriages occurring five to six years prior to the census and CPS dates are available from the author on request. These arrays indicate similar patterns of assortative mating.

Table 2. Assortative Mating on Educational Attainment for Newlyweds by Year: U.S., 1940-1987

Wife's Years of Schooling	Husband's Years of Schooling					
	<10	10-11	12	13-15	≥16	Total
1940:						
<10	28.83	4.37	3.53	0.62	0.42	37.77
10-11	7.23	4.96	4.67	0.72	0.22	17.80
12	7.01	5.80	14.29	3.92	2.30	33.33
13-15	0.74	0.52	1.97	1.97	2.05	7.26
≥16	0.25	0.12	0.52	0.64	2.32	3.85
Total	44.06	15.77	24.98	7.87	7.31	100.00
						(4,051)
1960:						
<10	9.32	2.94	2.85	0.47	0.19	15.78
10-11	4.70	5.04	6.94	1.42	0.37	18.47
12	5.84	6.41	22.61	6.93	3.01	44.81
13-15	0.63	0.76	3.35	5.15	3.81	13.69
≥16	0.10	0.08	0.84	1.54	4.69	7.25
Total	20.60	15.23	36.59	15.51	12.07	100.00
						(8,934)
1970:						
<10	3.47	1.61	2.29	0.40	0.11	7.88
10-11	2.07	3.89	5.53	1.31	0.17	12.97
12	2.96	4.82	24.50	9.89	3.19	45.36
13-15	0.36	0.82	5.26	9.30	5.22	20.97
≥16	0.06	0.21	1.50	2.96	8.10	12.82
Total	8.93	11.35	39.08	23.85	16.79	100.00
						(13,154)
1980:						
<10	2.68	1.51	1.92	0.44	0.09	6.65
10-11	1.51	3.16	5.00	0.94	0.16	10.77
12	2.23	4.33	25.51	8.26	3.03	43.35
13-15	0.42	1.03	7.08	9.48	5.51	23.52
≥16	0.09	0.14	1.66	3.37	10.46	15.72
Total	6.93	10.17	41.16	22.48	19.26	100.00
						(13,152)
1985-1987:						
<10	1.62	1.04	1.24	0.23	0.10	4.22
10-11	0.86	1.87	3.34	0.68	0.13	6.87
12	1.92	4.50	25.80	7.43	3.21	42.86
13-15	0.33	0.86	7.25	9.00	6.24	23.68
≥16	0.05	0.13	3.23	3.97	14.99	22.37
Total	4.78	8.39	40.86	21.30	24.67	100.00
						(3,957)

Note: Table entries may not sum to 100.00 because of rounding error. Numbers of cases are in parentheses.

sons of percentages in various categories in the joint distribution of spouses' schooling confound changes due to trends in associations between husbands' and wives' schooling with trends in the marginal distribution of schooling for each sex. In view of the dramatic changes in the distribution of schooling, these changes in marginal distributions may distort the assessment of trends in assortative mating.

Log-Linear Models

Table 3 reports the likelihood-ratio G^2 and BIC statistics for log-linear models of trends in assortative mating between 1940 and 1985-1987.[12] In general, the results for newlyweds and for marriages occurring five to six years before the census or CPS are similar, although the measure of global fit for most models is poorer for the latter group of marriages.

Model 2 in Table 3 allows for unrestricted association between the schooling of husbands and

[12] The BIC (Bayesian Information Criterion) statistic is an index of fit that adjusts the G^2 statistic for sample size. $BIC = G^2 - (d.f.)\log(N)$, where d.f. is the degrees of freedom of the model and N is the sample size. The more negative the value of BIC, the better the fit of the model to the data (Raftery 1986).

Table 3. Likelihood-Ratio Chi-Square Statistics for Selected Models of Trends in Assortative Mating on Educational Attainment: U.S. 1940-1987

Model[a]	Degrees of freedom	Newlyweds		Marriages 5-6 Years Ago	
		G^2	BIC	G^2	BIC
1. HY, WY	80	21,041.0	20,187	17,689.0	16,851
2. HY, WY, HW	64	101.8	-581	217.2	-453
3. HY, WY, S	70	149.8	-597	277.4	-456
4. HY, WY, S, P	69	106.7	-630	243.4	-479
5. HY, WY, C, P	75	638.4	-162	758.0	-28
6. HY, WY, S, P, CY	53	58.0*	-508	126.1	-429
7. HY, WY, S, PY, CY	49	55.4*	-468	121.0	-392
8. HY, WY, HW, CY	48	52.4*	-460	100.0	-403
9. HY, WY, P, SY	29	34.4*	-275	65.6	-238
10. HY, WY, SY, PY	25	30.5*	-236	57.5	-204

*$p > .10$

[a] Model terms (number of parameters): Y – Year (4); H – Husband's Schooling Level (4); W – Wife's Schooling Level (4); C – Crossing Parameters (4); S – Symmetry Parameters (10); P – Hypergamy/Hypogamy (1).

wives, but constrains this association to be constant over time. This model accounts for most of the association in the table, as indicated by the big drop in G^2 from Model 1, in which the educational attainments of husbands and wives are assumed to be independent. Although this model fails to fit the data by conventional standards ($p < .01$), the fit is nonetheless good for such large samples. Models 3, 4, and 5 include alternative restrictions on the cross-sectional association of spouses' schooling, but also assume no change in the pattern of assortative mating. Model 3 assumes that assortative mating patterns are symmetric, once the disparate marginal distributions of husbands' and wives' schooling are taken into account, i.e., the probability of a marriage between two persons with unequal schooling is unaffected by whether the husband or the wife has more schooling. By the G^2 criterion, Model 3 fits the data worse than Model 2 (for newlyweds, $G^2_3 - G^2_2 = 48$, d.f. = 6, $p < .01$). Model 4, however, which includes an additional parameter for asymmetry (P), fits the data much better than Model 3 and, for newlyweds, no worse than Model 2 ($G^2_4 - G^2_2 = 4.9$, d.f. = 5, $p = .4$). Model 4 allows for a uniform tendency for women to marry up (or down) (hypergamy or hypogamy) across combinations of spouses' schooling. Parameter estimates for this model (not shown here) indicate that, net of the marginal distributions of spouses' schooling, husbands are somewhat more likely to have more schooling than their wives than the reverse pattern. Model 5 also allows for asymmetry but replaces the symmetric association parameters with the crossings parameters for the four educational barriers discussed above. The fit is much worse, indicating that the crossings model is too simple to capture the cross-sectional pattern of educational assortative mating.

Models 6-10 relax the assumption that the association between spouses' schooling has been invariant over time. Model 6 includes the same parameters for the association of spouses' schooling as Model 4 plus time-specific crossings effects. This model fits the data better than Model 4 (for newlyweds $G^2_4 - G^2_6 = 48.7$, d.f. = 16, $p < .01$) and remarkably well overall ($p = .3$) for the newlywed sample. This result suggests that (1) patterns of educational assortative mating changed between 1940 and the mid-1980s and (2) changes in couples' abilities to marry across educational barriers are sufficient to capture the temporal variation in the assortative mating data. Model 7 augments Model 6 with parameters for year-specific levels of hypergamy or hypogamy, but these do not significantly improve the fit of the model ($G^2_6 - G^2_7 = 2.6$, 4 d.f., $p = .6$). The general tendency for women to marry men of higher educational status has not changed significantly over time. Model 8 contains the same parameters for change in assortative mating as Model 6, but, like Model 2, imposes no restriction

Table 4. Crossings Parameters for Educational Assortative Mating: U.S., 1940-1987

Schooling Barrier and Year	Newlyweds β (1)	Newlyweds v (2)	Newlyweds $z(\beta_t - \beta_{1940})$ (3)	Marriages 5-6 Years Ago β (4)	Marriages 5-6 Years Ago v (5)	Marriages 5-6 Years Ago $z(\beta_t - \beta_{1940})$ (6)
10+ / < 10 years of schooling:						
1940	-.804	.447	—	-.696	.499	—
1960	-.700	.496	1.93	-.584	.557	2.15
1970	-.673	.510	2.29	-.595	.552	1.75
1980	-.674	.510	2.09	-.827	.438	-2.03
1985-1987	-.722	.486	.77	-.717	.488	-.23
12+ / < 12 years of schooling:						
1940	-.644	.525	—	-.641	.527	—
1960	-.618	.538	.51	-.638	.528	.05
1970	-.738	.478	-1.90	-.779	.459	-2.69
1980	-.779	.459	-2.65	-.786	.456	-2.63
1985-1987	-.766	.464	-1.64	-.944	.389	-4.06
13+ / < 13 years of schooling:						
1940	-.918	.399	—	-.803	.448	—
1960	-1.080	.340	-2.33	-1.020	.360	-3.32
1970	-1.029	.358	-1.68	-1.012	.363	-3.31
1980	-1.001	.367	-1.26	-1.061	.346	-4.22
1985-1987	-.989	.372	-.97	-.979	.376	-2.62
16+ / < 16 years of schooling:						
1940	-.824	.439	—	-.749	.473	—
1960	-.953	.386	-1.23	-.925	.396	-1.87
1970	-1.022	.360	-2.01	-.972	.378	-2.51
1980	-1.110	.330	-2.91	-1.083	.339	-3.88
1985-1987	-1.047	.351	-2.13	-1.084	.338	-3.64

on the cross-sectional pattern of assortative mating. This model fits better than Model 2, but not better than Model 6. Models 9 and 10 allow for more general patterns of change than Models 6 through 8 by including year-specific parameters for symmetric association. These models do not fit better than models that confine the year-specific effects to the crossings parameters.[13]

The negative BIC statistics for Models 2 through 10 suggest that these models are all better than the saturated model and that Model 4, which assumes no changes in educational assortative mating, is most likely to be the true model among those listed. By the G^2 criterion, however, models that include year-specific crossings parameters fit the data well whereas Model 4 does not fit as well. Moreover, as shown below, the changes in the crossings parameters estimated in Models 6-8 are similar for newlyweds and for marriages five to six years before. That the changes in educational assortative mating are observed in two independent samples provides firm evidence for their existence.

Although the measures of global fit for marriages five to six years prior to the census or CPS are generally worse than those for newlyweds, the results for the two groups are similar and point to a similar conclusion: the incidence of marriages that cross the several educational barriers has changed significantly over time.[14]

[13] Models 9 and 10 implicitly include year-specific parameters for each diagonal cell. That they do not improve upon Models 6 or 8 suggests that there is no change in endogamy within educational strata once changes in education barriers are taken into account. In analyses not reported here, models that include year-specific diagonals and crossings parameters (but not the general year-specific effects included in Models 9 and 10) do not improve upon Model 6 or Model 8.

[14] The models for marriages occurring between five and six years before the census or CPS were estimated as replications of the corresponding models for newlyweds. Attempts to find other, better fitting models for these marriages were unsuccessful.

Crossings Parameters

Although Model 8 does not fit the data for newlyweds significantly better than Model 6, it does fit somewhat better for marriages occurring five or six years before the censuses and CPSs. The two models yield nearly identical estimates for changes in the crossings parameters. Table 4 reports the year-specific crossings parameters estimated in Model 8. These parameters measure trends in the ease with which persons marry across educational thresholds. Columns 1 and 4 of Table 4 list the β parameters for the log odds of marrying across educational barriers; columns 2 and 5 show the corresponding odds (v) and columns 3 and 6 show the normal (z) statistics for the null hypotheses of no difference in log odds of crossing educational barriers between 1940 and subsequent years.

These results suggest that the association between spouses' educational attainments has strengthened since 1940, although the trends are neither monotonic nor the same for all educational barriers. Increasing educational homogamy is most apparent for marriages in which one spouse has at least 16 years of schooling and the other has less than 16 years. Among newlyweds, the odds of a marriage occurring between a person with at least 16 years of schooling and a person with less than 16 years declined from .439 in 1940 to .330 in 1980 and increased slightly to .351 in 1985-87. The z-statistics indicate that changes over 10-year periods are not statistically significant, but the odds of marriage across the 16+/<16 year barrier are significantly higher in 1940 than in each observation year since. A similar pattern holds for marriages that occurred between five and six years prior to the census or CPS: The odds of marriage between college graduates and persons with less schooling are highest in 1940 and decline thereafter. For both sets of marriage cohorts, educational homogamy increased from 1940 to 1970 and may have stabilized or decreased somewhat in the 1980s.

Marriages in which one partner has at least some post-secondary schooling and the other does not (13+/<13) and in which one partner has at least 12 years of schooling and the other does not (12+/<12) also provide evidence of increased educational homogamy since 1940, although the decreases in intermarriage are smaller and less consistent than for the 16+/<16 barrier. For the 13+/<13 barrier, moreover, the increase in educational homogamy since 1940 is reversed in the 1980s, possibly as a result of an increased age at marriage during the most recent period.

Marriages between persons with less than 10 years of schooling and those with at least 10 years do not follow the same trends. The odds of marriage across the 10+/<10 barrier increase between 1940 and 1970 and subside thereafter. In 1940, a large proportion of persons had fewer than 10 years of schooling (see Table 2). The proportion in this education category has fallen dramatically and, *within this category*, the average educational level has increased (Duncan 1968). Marriage between persons with less than 10 years of schooling and those with 10 or more years may have increased mainly because of the changing composition of the lowest educational category. Persons with less than 10 years of schooling in 1970 are closer in their level of schooling to persons with 10 or 11 years of schooling than were their counterparts in 1940. This change in composition, rather than reduced barriers to intermarriage, appears to account for reduced educational homogamy at this level from 1940 to 1970.

The solid lines in Figure 1 show the estimates from the two sets of marriage cohorts of the odds of crossing barriers to educational intermarriage. Estimates for newlyweds are plotted on the year when they are observed, and marriages occurring five or six years before the observation year are plotted on the years when they occurred. Except for the 10+/<10 barrier, the trend lines suggest that these estimates can be plotted together in a single time series for each barrier. As noted, educational homogamy increases most for marriages between college graduates and persons with less than a college degree. Changes in intermarriage at intermediate educational levels (13+/<13 and 12+/<12) are smaller and more erratic, but suggest increasing homogamy between 1940 and the 1960s. For the 10+/<10 barrier, in contrast, intermarriage increases between 1940 and 1960 and fluctuates erratically thereafter. For the three highest educational barriers the trend toward increasing educational homogamy may have stopped or even reversed in the 1980s. In summary, marriage across educational barriers generally declined until the 1970s and then increased slightly. Changes were greatest at the highest educational barriers, which are most likely to be affected by changes in the timing of marriage relative to leaving school. These results suggest that trends in educational attainment and age at marriage may have increased educational homogamy between the depression years and the 1970s.

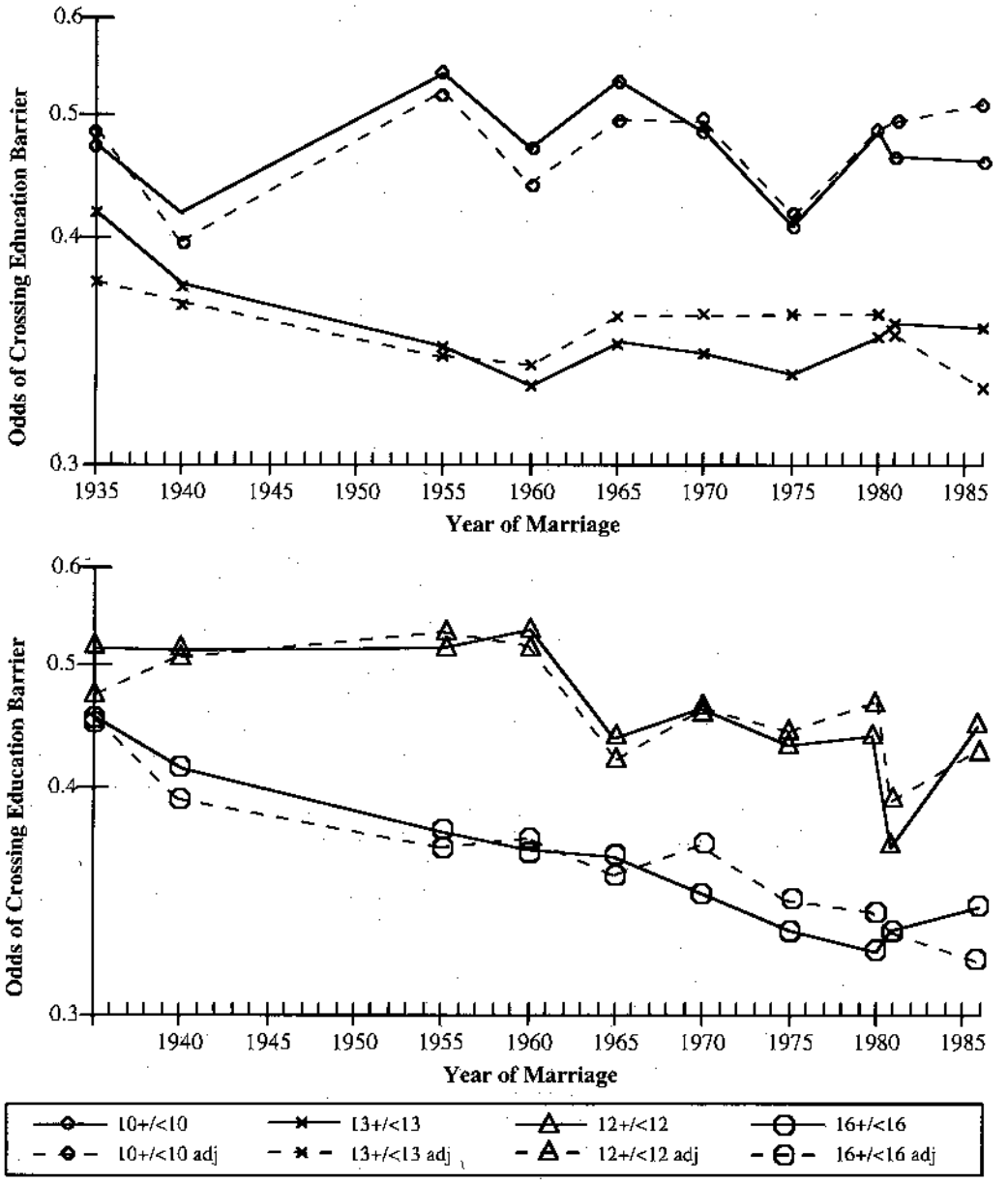

Figure 1. Crossing Parameters (v) for Educational Assortative Mating: Observed and Adjusted for Time Between Leaving School and Marriage

RESULTS: THE TIMING OF MARRIAGE AND EDUCATIONAL ASSORTATIVE MATING

For newlyweds of both sexes, age at marriage declined between 1940 and the 1960s and increased since 1970 to later than was typical in 1940 (Table 5). For example, the percentage of husbands who married at age 25 or above declined from almost 50 percent in 1940 to just over 26 percent in 1970, but rose to over 60 percent in 1985-1987. A parallel trend occurred for women, albeit at a lower level, since women typically marry younger than men. Marriage at the youngest ages (20 and under) reached nearly 55 percent for women in 1960 and fell to about 20 percent by 1985-1987. For men, marriage at these ages peaked at about 22 percent in 1960 and

Table 5. Percentage Distribution of Newlywed Husbands and Wives by Age at First Marriage: U.S., 1940-1987

Age at First Marriage	1940	1960	1970	1980	1985-1987
Husbands:					
16-18	1.16	5.17	4.82	3.22	0.73
19-20	8.47	16.42	17.61	14.76	4.95
21-22	19.30	26.71	27.41	23.04	14.18
23-24	21.67	20.26	23.90	22.86	18.95
25-26	17.65	13.45	12.18	15.54	20.65
27-34	31.75	17.99	14.07	20.57	40.54
Total	100.00	100.00	100.00	100.00	100.00
Wives:					
16-18	19.77	25.46	18.33	14.04	4.45
19-20	25.82	29.81	28.47	24.69	15.26
21-22	20.91	21.41	27.83	24.60	20.55
23-24	13.75	11.38	14.80	17.42	21.00
25-26	9.41	5.46	5.47	9.52	17.13
27-34	10.34	6.47	5.10	9.73	21.61
Total	100.00	100.00	100.00	100.00	100.00

Note: Columns may not sum to 100.00 because of rounding error.

1970, and then fell to less than 6 percent, roughly parallel to the trend for women.

These trends in age at marriage, in concert with the educational trends documented in Table 2, affect the time elapsed between school-leaving and marriage. Census and CPS data do not record the age at school-leaving, but it can be estimated from information on age at marriage and highest grade of school completed by assuming that individuals progress through school without delay of entry, interruptions, or grade repeats.[15] While this assumption is not strictly true, it is adequate to capture the effects of broad trends in the timing of school-leaving and marriage. Table 6 reports trends in the estimated years between leaving school and marriage for newlyweds from 1940 to 1985-1987. In every period, women marry more quickly after leaving school, a reflection of their younger age at marriage and approximately equal level of educational attainment compared to men. Between 1940 and 1970, the average length of time between school departure and entry into marriage declined substantially for both sexes. About 15 percent of wives who married in 1939-1940 did so within a year after leaving school, compared to almost 45 percent of wives who married in 1969-1970. Among husbands, the percentage marrying within a year after leaving school also increased dramatically, from about 2.5 percent in 1939-1940 to about 25 percent in 1969-1970. Since 1970, following significant increases in age at marriage, the time between school-leaving and marriage increased. Unlike age at marriage, however, which increased in the 1980s to a level beyond what it was in 1940, the delay between school-leaving and marriage rises to between its 1940 and 1960 levels. This results from the continued growth in schooling between 1940 and 1985-1987, which partially offset the effect of later age at marriage on the delay between school-leaving and marriage.

A Log-Linear Model

I estimate the effect of marriage timing on educational assortative mating by using a log-linear model with the following sets of parameters: (1) time-dependent distributions of spouses' levels of schooling; (2) unrestricted cross-sectional association between spouses' levels of schooling; (3) time-dependent crossings parameters for educational assortative mating; (4) time-dependent distributions of husband's and wife's length of time between schooling-leaving and marriage; (5) unrestricted cross-sectional association between spouses' lengths of time between leaving school and marriage; (6) time-dependent associations between husband's level of schooling and his time between leaving school and marriage, husband's level of schooling and wife's time between leaving school and marriage, wife's level of schooling and her time between leaving school

[15] The delay between school leaving and marriage is estimated as age at marriage – highest grade of school completed – 6.

Table 6. Percentage Distribution of Newlywed Husbands and Wives by Years Between Leaving School and Marriage: U.S., 1940-1987

Years Between Leaving School and Marriage	1940	1960	1970	1980	1985-1987
Husbands:					
≤1	2.57	14.28	24.69	14.37	5.61
2-3	7.80	21.43	23.50	26.33	15.95
4-5	14.34	21.46	21.99	23.95	20.90
6-7	17.58	16.06	12.88	15.67	19.31
>7	57.71	26.76	16.94	19.68	38.24
Total	100.00	100.00	100.00	100.00	100.00
Wives:					
≤1	14.24	38.30	43.42	33.75	17.03
2-3	21.95	28.81	29.44	32.00	27.42
4-5	22.86	14.56	14.63	16.42	21.56
6-7	16.27	7.68	5.66	8.84	15.11
>7	24.69	10.64	6.85	8.98	18.88
Total	100.00	100.00	100.00	100.00	100.00

Note: Columns may not sum to 100.00 because of rounding error.

and marriage, and wife's level of schooling and husband's time between leaving school and marriage; and (7) cross-sectional linear associations between crossings parameters for marriage across educational barriers and husband's and wife's time between leaving school and marriage.

Terms (1), (2), and (3) are the same as those in Model 8 for the table of husband's and wife's schooling and year (see Table 3). Terms (4), (5), and (6) allow for variation in husband's and wife's timing of marriage with year, with each other, and with husband's and wife's levels of schooling. For this analysis, terms (1), (2), (4), (5), and (6) are nuisance parameters for summarizing essential variation in the tables and are not reported here. Term (7) allows for the hypothesis that educational assortative mating, as measured by crossings parameters, varies with time between leaving school and marriage, and term (3) represents the change in educational assortative mating that remains once the timing of leaving school and marriage is taken into account. (If husband's and wife's times between leaving school and marriage are denoted as M and F respectively and the other dimensions are denoted as in Table 3, then this model can be written, HW, MF, CM_L, CF_L, CY, MY, FY, HMY, HFY, WFY, WMY; where the L subscript denotes linear association.)[16]

[16] The tables include 3,125 cells and the model has 461 parameters. For both newlyweds and persons who married five to six years before, the models appear to fit reasonably well — much better than models that ignore trends in the distributions of spouses' schooling and time between leaving school and marriage. For newlyweds, the scaled deviance (-2 times the difference in log likelihoods of the estimated and saturated models) is 3344; for persons marrying five to six years before, it is 3241 (on 2664 degrees of freedom for each group). Although these quantities seem satisfactory for such large samples, they should be interpreted cautiously because the five-way tables have many cells with zero frequencies. The scaled deviances for these tables may not follow chi-square distributions.

Marriage Timing and Educational Barriers to Marriage

The linear effects of time between leaving school and marriage on the odds of crossing the four barriers to educational intermarriage are generally consistent with the conjectures presented above (Figure 2).[17] First, the odds of crossing educational barriers to marriage are generally lower at the upper end of the schooling distribution, indicating higher levels of educational homogamy. Second, barriers to educational intermarriage typically decline as the time between leaving school and marriage increases.

Finally, the effect of time between leaving school and marriage is usually greatest for crossing barriers at the upper end of the schooling distribution. For barriers at the college level (13+/<13 and 16+/<16), the odds of intermarriage increase substantially with time between leaving

[17] The associations of time between leaving school and marriage and the crossings parameters are constrained to be linear for ease of presentation. Depar-

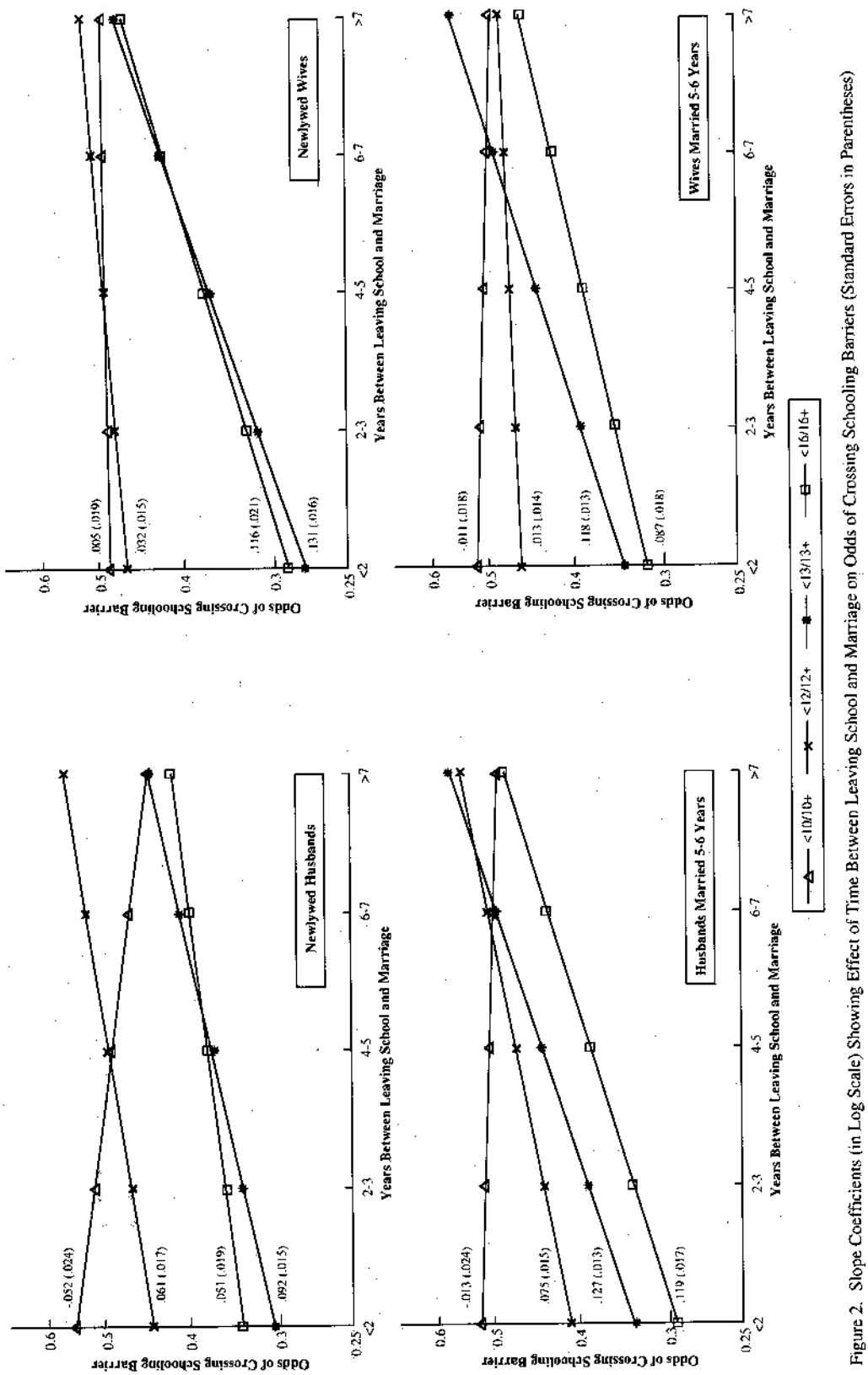

Figure 2. Slope Coefficients (in Log Scale) Showing Effect of Time Between Leaving School and Marriage on Odds of Crossing Schooling Barriers (Standard Errors in Parentheses)

Table 7. Crossings Parameters for Educational Assortative Mating, Adjusted for Marriage Timing: U.S., 1940-1987

Schooling Barrier and Year	Newlyweds			Marriages 5-6 Years Ago		
	β (1)	v (2)	$z(\beta_t - \beta_{1940})$ (3)	β (4)	v (5)	$z(\beta_t - \beta_{1940})$ (6)
10+ / < 10 years of schooling:						
1940	-.852	.427		-.674	.510	
1960	-.760	.468	1.32	-.614	.541	.92
1970	-.660	.517	2.60	-.657	.519	.23
1980	-.673	.510	2.36	-.815	.442	-1.68
1985-1987	-.631	.532	1.79	-.660	.517	-.13
12+ / < 12 years of schooling:						
1940	-.655	.519		-.713	.490	
1960	-.632	.531	.39	-.617	.539	1.59
1970	-.733	.481	-1.34	-.812	.444	-1.58
1980	-.724	.485	-1.19	-.765	.465	-.78
1985-1987	-.800	.449	-1.78	-.882	.414	-2.02
13+ / < 13 years of schooling:						
1940	-.953	.386		-.911	.402	
1960	-1.047	.351	-1.14	-1.032	.356	-1.49
1970	-.965	.381	-.16	-.969	.379	-.74
1980	-.964	.381	-.15	-.964	.381	-.69
1985-1987	-1.086	.338	-1.58	-.999	.368	-1.09
16+ / < 16 years of schooling:						
1940	-.880	.415		-.751	.472	
1960	-.945	.388	-.52	-.950	.387	-1.75
1970	-.953	.386	-.61	-.994	.370	-2.23
1980	-1.052	.349	-1.48	-1.034	.355	-2.71
1985-1987	-1.126	.324	-2.00	-1.086	.338	-3.06

school and marriage. At the college level, for both husbands and wives among newlyweds and persons marrying five to six years before, the odds of intermarriage are about 50 percent greater for persons who marry more than seven years after they leave school than for persons who marry less than two years after school departure. For the barriers at lower schooling levels, the effects of time between schooling and marriage are less clear cut. For marriages between high school graduates and high school dropouts (12+/<12) in both cohorts, husband's time since leaving school strongly affects intermarriage, but the effect for wife's time since leaving school is negligible. For the 10+/<10 barrier, time between leaving school and marriage has no effect on the odds of intermarriage for any of the groups.

These patterns indicate that relative timing of leaving schooling and marriage affects the strength of association between husband's and wife's schooling. They also suggest that varying heterogeneity in ultimate educational attainment among school classes affects the degree to which education differences are a barrier to marriage.

tures from linearity, though sometimes statistically significant, are small and do not affect the interpretations presented here. The coefficients reported in Figure 2 denote the effects of a change between adjacent categories of the distribution of times between leaving school and marriage on the log odds of crossing each barrier. Because most of the categories correspond to two-year intervals, the slopes approximate the effects of a two-year increment in time between leaving school and marriage. Patterns shown in Figure 2 for husbands (wives) are adjusted to the average time between leaving school and marriage for wives (husbands) and averaged over the five census and CPS observations.

Adjusted Trends in Educational Assortative Mating

Year-specific crossings parameters estimated for the model described above measure changes in the incidence of marriages across educational thresholds, adjusted for trends in length of time between leaving school and marriage for husbands and wives (Table 7). Column 1 contains the log odds of marrying across educational barriers for newlyweds, column 2 shows the corresponding odds, and column 3 shows the z-statistics for the hypotheses of no change in adjusted log odds of crossing educational barriers between 1940 and subsequent years. Columns 4 through 6 present the corresponding quantities for marriages five to six years before the census or CPS. The dashed lines in Figure 1 are the estimates of the adjusted odds from the two sets of marriage cohorts.

Once trends in the timing of leaving school and marriage are taken into account, changes in educational assortative mating are somewhat smaller than the unadjusted changes. The trend toward increased barriers to intermarriage remains strongest at the upper end of the schooling distribution. The adjusted odds of crossing the 16+/<16 barrier between 1940 and 1980 decreased slightly less than the unadjusted odds but in the 1980s, where the unadjusted odds level off or begin to increase, the adjusted odds continue to fall. The changes in parameters are small, but they suggest that (1) changes in the timing of marriage account for some of the decline in the incidence of marriage across the 16+/<16 barrier up to 1980 and in the turnaround after 1980, and (2) the increase in educational homogamy at the upper end of the schooling distribution is only partly due to changes in the timing of leaving school and marriage.

For the 13+/<13 barrier, changes in the timing of leaving school and marriage account for most of the decrease in marriage across the barrier. None of the contrasts in adjusted log odds of intermarriage between 1940 and the later years is statistically significant, and only in the 1980s is there any evidence of reduced intermarriage. This suggests that changes in the timing of marriage account for the observed turnaround after 1975 and that once the effect of marriage timing is taken into account, marriage across the 13+/<13 barrier is decreasing, similar to the 16+/<16 barrier. Further observations on intermarriage in the 1980s are required to establish this result with certainty.

For the 12+/<12 barrier, the adjusted trends show somewhat smaller changes than the unadjusted changes and the contrasts in adjusted log odds between 1940 and later observations are almost all statistically insignificant. Compared to the 13+/<13 barrier, the adjustment for the timing of marriage has modest effects on the estimated trends. For the 10+/<10 barrier, the adjustment for the timing of marriage has no systematic effect. These results for the lowest two educational barriers are consistent with the mixed or negligible cross-sectional effects of the timing of marriage on crossing these barriers (see Figure 2).

SUMMARY AND CONCLUSION

Barriers to marriage between persons with unequal amounts of formal schooling increased between the 1930s and the present. These increases may be the result of well-known trends in average educational attainment, age at leaving school, and age at marriage. The degree to which schools affect the selection of marriage partners is dictated by the degree to which leaving school and marriage occur closely together and by the educational attainments of marriage partners. Variation in the average age at leaving school and marriage and in educational attainment induce variation in educational assortative mating. Because college students are more homogeneous in their ultimate educational attainments than elementary or secondary school students, the time between leaving school and marrying affects the ease with which persons marry across education barriers more strongly at the upper end of the schooling distribution. In view of trends toward increasing proportions of persons attending at least some college, this suggests educational homogamy will be more sensitive to trends and fluctuations in the timing of marriage than it has been in the past.

Some of the trend toward increased educational assortative mating remains after the relative timing of leaving school and entry into marriage is taken into account, especially for marriages between college graduates and persons without college degrees. Several other changes in the timing and organization of men's and women's lives over the past five decades may have affected the likelihood of finding a spouse within the same educational stratum. Changes in rates of participation in the armed forces, in rates of childbearing before marriage, in the incidence of cohabitation between unmarried persons, in women's labor force participation, and in the sta-

tus of jobs held by women also affect the timing of marriage and exposure to potential spouses of varying educational statuses. Whether these trends account for changes in educational assortative mating requires more study.

Beyond the changing structure of early adult life, other trends may also influence patterns of assortative mating. As women participate in the labor force at higher rates and for larger fractions of their lives, their economic value to potential male spouses becomes more salient than in the past (Oppenheimer 1988). This suggests that men's and women's views of the marriage market are becoming increasingly symmetrical. Men may increasingly seek women with the best labor market prospects, and those men whose own labor market prospects are strong will fare best in the competition for these women. The result may be a higher correlation between educational attainments of husbands and wives.

Whatever the sources of change in the association between husbands' and wives' schooling, these changes may affect educational (and perhaps other socioeconomic) inequality within the parents' generation and the strength of the link between parents' education and that of their offspring. If barriers to marriage between educational strata increase, then between-family inequality will increase and the proportion of variation in children's socioeconomic attainment that is determined by parental social standing will also increase (e.g., Cavalli-Sforza and Feldman 1981; Epstein and Guttman 1984). However, these changes may be offset by secular declines in educational inequality among fathers and among mothers. The relative importance of these effects on family inequality and educational mobility requires further analysis. My results nonetheless suggest that future trends in age at marriage — for example, a reversion either to the post-World War II pattern of early marriage or to the depression pattern of late marriage — will affect both the structure of marriage and inequality within and between generations.

ROBERT D. MARE is Professor of Sociology and Director of the Center for Demography and Ecology at the University of Wisconsin — Madison. His current research focuses on the link between marriage markets and labor markets (with Christopher Winship), educational stratification and mobility, and methods for analysis of discrete data.

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