

# Assortative Mating by Cultural and Economic Occupational Status<sup>1</sup>

Matthijs Kalmijn  
*Utrecht University*

This study examines two micro-level hypotheses about status homogamy: (1) the *cultural matching hypothesis* (people prefer to marry someone of similar cultural status) and (2) the *economic competition hypothesis* (people prefer to marry someone of high economic status). Detailed occupations of newlyweds in the 1970 and 1980 censuses are analyzed. Scales of cultural and economic occupational status are developed, and log-linear models of scaled association are used to analyze 70 × 70 occupational marriage tables. It is found that assortative mating by cultural status is more important than assortative mating by economic status, the economic dimension of status homogamy is more important when people marry late, and economic status homogamy has increased between 1970 and 1980 at the expense of cultural status homogamy.

Whether measured by social class, occupational prestige, or level of education, there is quite a strong resemblance between the status positions of newlyweds (Hout 1982; Jacobs and Furstenberg 1986; Kalmijn 1991; Mare 1991). Assortative mating by status, or status homogamy for short, is usually explained in terms of the opportunities people have to meet someone of the same status, the involvement of “third parties” such as parents and friends in the selection process, and the preference of individuals who are choosing one another (Kalmijn 1991). Past research on status homogamy has been marked by debate about the exact nature of these individual preferences. Two hypotheses have been suggested: the *matching hypothesis*, which argues that people prefer to marry someone of similar status (Kerckhoff and Davis 1962; DiMaggio and Mohr 1985), and the *competition hypothesis*, which argues that people prefer to marry someone of high status (Elder 1969; Mare 1991). At the surface, the two

<sup>1</sup> This research is supported by a grant from the University Committee on Research in the Humanities and Social Sciences at Princeton University. I thank Paul DiMaggio, Michèle Lamont, and the *AJS* reviewers for valuable comments. Correspondence may be sent to Matthijs Kalmijn, Department of Sociology, Heidelberglaan 2, 3584 CS Utrecht, The Netherlands.

types of preferences lead to the same pattern of assortative mating. When people prefer someone of high status, high-status candidates are most likely to receive marriage proposals; proposers with high status are in the best position of having their offer accepted. Hence, the most attractive spouses end up choosing among themselves, while the least attractive spouses are essentially “stuck” with one another. Both matching and competition thus lead to a pattern of status similarity within marriage.

If people’s status positions are examined more closely, however, the two hypotheses have different implications. The matching hypothesis is based on the notion that similarity in long-term relationships ensures a common basis of conversation, provides confirmation of one’s norms and values, and reduces friction within marriage that may arise from dissimilarity in tastes. Hence, this hypothesis is largely concerned with the cultural aspects of a person’s status position. The competition hypothesis, in contrast, is based on the notion that the choice of a spouse is governed by the benefits of sharing the economic resources a partner brings to the marriage. In this scenario, the marriage market is governed by competition for economic resources. The question of whether matching or competition explains status homogamy can thus be answered in part by disentangling the cultural and economic dimensions of status homogamy.

In this study, I test the two hypotheses by examining the detailed occupations of recently married husbands and wives in the 1970 and 1980 censuses. Inspired by Bourdieu’s (1979) work on cultural capital and stratification in France, I use occupations to divide status characteristics into an economic dimension and a cultural dimension. Earlier European studies have shown that these dimensions are imperfectly correlated (De Graaf, Ganzeboom, and Kalmijn 1989). Occupations such as managers of manufacturing firms and financial sales representatives, for example, have high economic status but relatively low cultural status, whereas occupations like teachers and artists have high cultural status but low economic status. Because the occupational structure can be characterized as a two-dimensional hierarchy, detailed occupations provide an important—though certainly not exclusive—means by which cultural and economic factors in marriage choice can be separated empirically.

I focus on occupations for two reasons. First, occupations provide more diverse kinds of information to the analyst of marriage patterns than do general indicators of status like education and socioeconomic status. While occupational homogamy has been studied extensively in the past, most authors focus on only four or five occupational groups (see, e.g., Hunt 1940; Centers 1949; Hope 1972; Hout 1982). These analyses provide important information on the major class divisions in society, but ignore a large amount of variability within groups. My study is

an improvement over previous analyses in that I focus on occupational selection in detail (marriage tables of 70 rows and columns). Second, it is difficult to find direct measures of both spouses' cultural and economic characteristics at the time of marriage. DiMaggio and Mohr (1985) have shown that familiarity with high culture during high school is positively related to the education of the spouse one eventually marries. While their study is an innovative attempt to assess how cultural capital affects spouse selection, their conclusions are tentative because measures of spouses' cultural characteristics were unavailable. Other studies examined data on both husbands' and wives' participation in high culture, but focused on existing marriages rather than on newlyweds (De Graaf 1991). While such studies have the advantage of analyzing both sides of the marriage, they cannot distinguish between partner selection on the one hand and adaptive socialization or spousal influence during marriage on the other. Under these conditions, occupations provide a suitable alternative. Census data have information on both spouses' occupations, and by limiting the sample to newlyweds we can examine their occupations close to the time of marriage.

The theoretical concern of my study lies in the way status boundaries in society are formed. Researchers in this field have traditionally followed the stratification literature by arguing that high correlations between the status positions of spouses are evidence of rigid stratification systems much in the same way that high correlations between fathers' and sons' statuses reveal a lack of mobility (Hout 1982; Jones 1987; Ultee and Luijkx 1990). This interpretation implicitly assumes that the marriage market is governed by competition for scarce resources. Put differently, homogamy prevails because lower-status groups are denied the desired access to the intimate social circles of higher-status groups. If the choice of a spouse is driven by a tendency to seek cultural similarity, however, lower-status groups will be endogamous, not so much because they are denied access to higher groups, but primarily because they do not seek access to these groups in the first place (DiMaggio and Mohr 1985). In more general terms, marriage selection based on economic competition suggests that status-group closure in marriage is evidence of vertical exclusion, whereas selection based on cultural matching suggests that status-group closure is evidence of what has been called "self-elimination" (Lamont and Lareau 1988; Lamont 1992). Although direct evidence on the formation of status boundaries is difficult to obtain, studying assortative mating by cultural and economic status provides a first step in this direction.<sup>2</sup>

<sup>2</sup> Many years ago, E. O. Laumann (1966) raised a similar question in his study of social stratification in the Boston metropolitan area. Using subjective data on social distance and objective data on occupations, he found more support for the competition

## THEORETICAL BACKGROUND AND HYPOTHESES

Both sociologists and economists have traditionally seen the family as a unit that produces status, economic well-being, and offspring (Edwards 1968; Becker 1981). Sociologists argue more explicitly that the family also produces what can be called “relational goods,” such as social confirmation and affection. Marriage is beneficial because these goods can either not be produced individually (e.g., offspring and affection) or can be produced more effectively in a collective fashion (e.g., status and economic well-being). Because economic and cultural resources play a central role in the production of marital goods, these characteristics are immediately relevant to the choice of a spouse as well. Who marries whom also depends on a range of social-psychological characteristics, such as need complementarity, compatibility in personality characteristics, and physical attractiveness, but since these factors are not strongly correlated with status, they are less relevant for explaining patterns of status homogamy.

## Economic Resources

When income is shared by the family members, people maximize their income by looking for spouses with the most attractive economic resources. The nature of this competition varies with the role women play in society. Microeconomic theories of assortative mating argue that when the gender gap in earnings is high, there will be an exchange between male economic resources and female resources in other respects (Becker 1981). Assuming marriage is based on the benefits that stem from the division of paid and domestic labor in the household, the earnings disadvantage of women in the labor market gives men a comparative advantage in paid labor, so that the wife's time is used more productively when it is spent on household labor. As a result, men and women are said to exchange paid and domestic labor resources. Sociologists have long made similar arguments about occupational prestige (Edwards 1968). Studies of the “marital mobility” of women, for example, argue that when women share equally in the status of the family, they have an incentive to look for men with prestigious occupations (Tyree and Treas 1974). These men, in turn, are willing to accept a spouse of lower prestige as long as the prestige of families in society depends primarily on men's occupations. In this perspective, marriage is sometimes regarded as an exchange of male occupational prestige and female qualities in other

---

hypothesis (which he called the *prestige hypothesis*) than for the matching hypothesis (which he called the *like-me hypothesis*).

domains, such as high class origins (Rubin 1968) and physical attractiveness (Stevens, Owens, and Schaefer 1990).

When sex roles become more liberal, these forms of exchange begin to lose their meaning. Parallel to a rapid increase in female labor force participation in the last decades, there has been a shift in the nature of married women's work. Whereas in the past wives often worked on an irregular basis to supplement temporarily low incomes of their husbands, in contemporary society their work more often reflects an independent career choice. Changes in the nature of women's work have led several authors to believe that women's economic resources are becoming increasingly attractive to men (Davis 1984; Schoen and Wooldredge 1989; Mare 1991). The wife's human capital may facilitate the husband's access to networks that are helpful in his career, her earnings may subsidize his human capital investments, and the economic security she offers may lessen the need to settle for short-term career benefits, thereby increasing his opportunity to choose more attractive, long-term career objectives. If female labor outside the home reflects women's individual desires to work rather than life-cycle-generated economic needs of the family, the prestige of the wife's occupation may also become increasingly important for the status of the family. As Kingsley Davis said in his essay on the sex-role revolution, "In industrial societies, it used to be that a woman would be asked what her husband does for a living. Now increasingly, men are being asked what their wives do" (Davis 1984, p. 397).

In sum, the economic perspective on the family implies that in a society with traditional sex roles, women are competing among themselves for men with attractive economic resources, whereas men are competing for women with attractive resources in other domains. After the sex-role revolution, men are believed to compete for economically attractive women just as women have always competed for economically attractive men. Because economic competition in the marriage market has become more symmetrical, it has become more intense as well.

### Cultural Resources

An alternative hypothesis about marriage selection is that people prefer to marry someone who is similar with respect to cultural resources. Cultural resources include a variety of values and behaviors, such as child-rearing values, political attitudes, cultural literacy, taste in art and music, and styles of speech. Because cultural resources govern the way people interact with each other, they are of particular importance for the production of relational goods, such as affection and social confirmation, in marriage. That people prefer cultural similarity in personal relationships has been confirmed in a range of experimental social-psychological studies.

Similarity of values and opinions leads to mutual confirmation of behavior and worldviews (Newcomb 1956; Byrne 1971), similarity of taste enlarges opportunities to participate in joint activities (Werner and Parmelee 1979), and similarity of knowledge creates a common basis for conversation, which enhances mutual understanding (Davis 1981). Although sociologists have primarily used social psychological theories of attraction to explain the development of friendships (Verbrugge 1977), these insights are obviously relevant for the choice of a spouse as well.

In theory, the distinction between cultural matching and economic competition can be challenged by positing that spouses compete for cultural resources just as they do for economic resources. This would be plausible if cultural capital could be “converted” into economic capital through the educational system (Bourdieu 1979). For example, people may have an incentive to search for a person who is engaged in high culture, either because this yields prestige in the community or because it helps one’s children get ahead in school. Such arguments are not immediately plausible, however, because they ignore the interactional element of personal relationships. Large discrepancies in knowledge muddle the communication process and diverging values and worldviews reduce the amount of mutual confirmation people can obtain. In addition, one of the more salient characteristics separating people with different amounts of cultural capital is the way they speak and communicate (Bernstein 1971). Strong differences in language codes hamper mutual understanding and may give both parties a feeling of estrangement in social interaction.

### Occupations as Badges in the Marriage Market

Searches on the marriage market generally involve considerable uncertainty about the long-term characteristics of a future spouse (Oppenheimer 1988). Although a period of dating or cohabitation obviously reduces these uncertainties, the changes people experience as they get older cannot be predicted well in advance. Uncertainty is especially salient on the marriage market because having been married for a while and having been “productive” in marriage (e.g., by having children) may reduce one’s attractiveness to new marriage candidates after divorce. A common strategy of reducing uncertainty is to focus on characteristics that can be known with certainty and that provide clues of future resources. Characteristics that can be noticed without much difficulty are education, occupation, family background, and ethnicity. These attributes are not merely statistical proxies in the empirical study of homogamy, but “badges” that individuals wear to show others what kind of person they are. Spouse selection can thus be regarded as a filtering process (Goode 1964).

People first use proxies to reduce the entire pool of candidates to a limited set of individuals and subsequently find their spouse by interacting within these homogeneous networks. The second part of the process is also the phase in which more psychological factors like love and need complementarity come into play (Winch 1958).

Of the various badges that are worn in the marriage market, occupation is a particularly important one. The kind of work a person does serves as a mark of one's financial prospects; it tells us something about the kind of norms, values, and tastes a person will develop, and it functions as an indicator of the prestige one receives in the community (Treiman 1977). Because so much of contemporary daily life is organized around work, the kind of work prospective marriage partners do is also an important indicator of how their life together will be organized (Openheimer 1988). While occupations have occasionally been criticized for being a weaker empirical predictor of values and lifestyles than educational attainment (Davis 1982), such critiques typically depend on crude classifications of occupations. Detailed examinations of occupational effects (Peterson and Simkus 1992; Porter 1967) generally show that occupational cultures do exist. More important, recent European studies have shown that when occupational status is disentangled into cultural and economic dimensions, it has important and differential effects on a range of lifestyles and values net of the influence of education (Bourdieu 1979; De Graaf et al. 1989). My study follows these earlier studies and uses the earnings levels of detailed occupations as measures of the economic resources of newlyweds; it uses the schooling levels of detailed occupations as measures of newlyweds' cultural resources.

Occupations also have well-known limitations. First, it can be argued that the jobs women hold before marriage are unreliable or at least incomplete indicators of their social status (Rubin 1968). Many married women did not work for pay after marriage, and if they did, their occupation would sometimes be different from the occupation they held before marriage. While this is a plausible criticism under conditions of traditional sex roles, the rise in married women's labor force participation and the increasing age at marriage make it increasingly possible to say that both men and women are "known by their work." Second, life-course research has shown that the transition to adult economic and familial roles is a long and sometimes messy process (Rindfuss, Swicegood, and Rosenfeld 1987). For example, many teenagers and young adults hold jobs while in school, and such jobs tend to have little relationship with their ultimate occupation. In this case, prospective brides (or grooms) have better information on the future characteristics of their spouse than the occupational data suggest. Temporary and other marginal forms of employment may also continue for a while after people

leave school. In this case, the stopgap nature of a man's job may truly reflect uncertainty about his ultimate career destination (Oppenheimer 1988).

### Hypotheses

Using the aforementioned measures of cultural and economic occupational status, four hypotheses will be examined empirically.

**HYPOTHESIS 1.**—*If cultural matching is more important on the marriage market than is economic competition, we would expect similarity with respect to occupational schooling (cultural status) to be greater than similarity with respect to occupational earnings (economic status).*

**HYPOTHESIS 2.**—*If economic competition on the marriage market has increased over time, we would expect to find an increase in similarity with respect to occupational earnings without a corresponding increase in similarity with respect to occupational schooling.*

**HYPOTHESIS 3.**—*Insofar as partner choice is oriented toward traditional sex roles within marriage, we may expect a trade-off between economic and cultural resources. More specifically, we would expect men with high occupational earnings to marry women with high occupational schooling (cultural status) more often than they marry women with high occupational earnings (economic status).*

**HYPOTHESIS 4.**—*The relevance of occupation as a marker in the marriage market increases as people get older and gain experience in the labor market. Hence, we would expect both cultural and economic dimensions of occupational homogamy to become more important over the individual life cycle.*

### ANALYSES AND FINDINGS

After developing a scale of cultural and economic occupational status, I examine the occupations of recently married couples in the 1970 and 1980 censuses. I first describe the occupational marriage patterns in an exploratory fashion and subsequently use the empirically derived two-dimensional status scale in a series of log-linear models to test the four hypotheses.

#### Two Dimensions of Occupational Status

To develop scales of occupational status, I use data on the civilian labor force in the 1% public use microsamples of the 1970 and 1980 U.S. censuses. In each census, I combine the more than 400 occupational titles into 70 occupational groups. Detailed occupations are merged when they are roughly similar with respect to industry and type of work. Insofar as possible, I keep occupations separate that are similar in type of work but

different in earnings or education (e.g., postal clerks vs. other mail clerks, policemen vs. other protective service workers). Managerial and administrative occupations are grouped on the basis of major industry because earnings differences within this group strongly depend on type of industry (e.g., managers of retail trade vs. managers of manufacturing companies). Even though the detailed census classification has changed between 1970 and 1980, the 70 occupational groups are reasonably comparable across censuses.

I follow the spirit of Duncan's original approach to scaling occupations, but I separate the two ingredients that are combined in the conventional socioeconomic index of occupations (Duncan 1961; Stevens and Cho 1985). The earnings of the workers in an occupation provide a measure of a person's economic status position, and the levels of schooling of the workers in an occupation are an indicator of a person's cultural status position. Because occupations vary in age composition (Kaufman and Spilerman 1982), the relationship between occupational earnings and schooling is downwardly biased. Occupations with many young workers, such as food service workers, tend to have low earnings due to well-known life-cycle effects on earnings, but relatively high levels of education due to the historical increase in schooling. I therefore standardized all measures for age by regressing years of schooling completed and the natural logarithm of annual earnings on a set of dummy variables for detailed occupations and a second-order polynomial specification of age. The scale scores are the earnings and education levels of each occupation as predicted by these individual-level regressions. Scales are constructed for the male and female civilian labor force separately.<sup>3</sup>

Figure 1 presents the cultural and economic occupational status scales for the male labor force. As can be seen from the scatterplot, the two measures are imperfectly correlated ( $r = .74$ ). All administrators and managers, except those in retail trade, have high earnings but relatively low levels of schooling, whereas most occupations in the educational and cultural sectors have relatively low earnings and high levels of schooling (teachers, artists, social workers, and writers). Physicians rank highest on both dimensions, while legal specialists take second place in both.

<sup>3</sup> Regressions are run separately for the 1970 and 1980 census. The final scale is the average of the two. Earnings refer to annual income from wages, salary, and self-employment in the calendar year before the census. Persons with zero earnings are excluded. I did not take into account weeks and hours worked because the economic status scale is intended to reflect an individual's overall expected economic position in society, which is affected by labor supply. Occupational earnings are defined as the expected annual earnings for men and women who are in the middle of their career (men and women 40 years old). Occupational schooling is defined similarly.

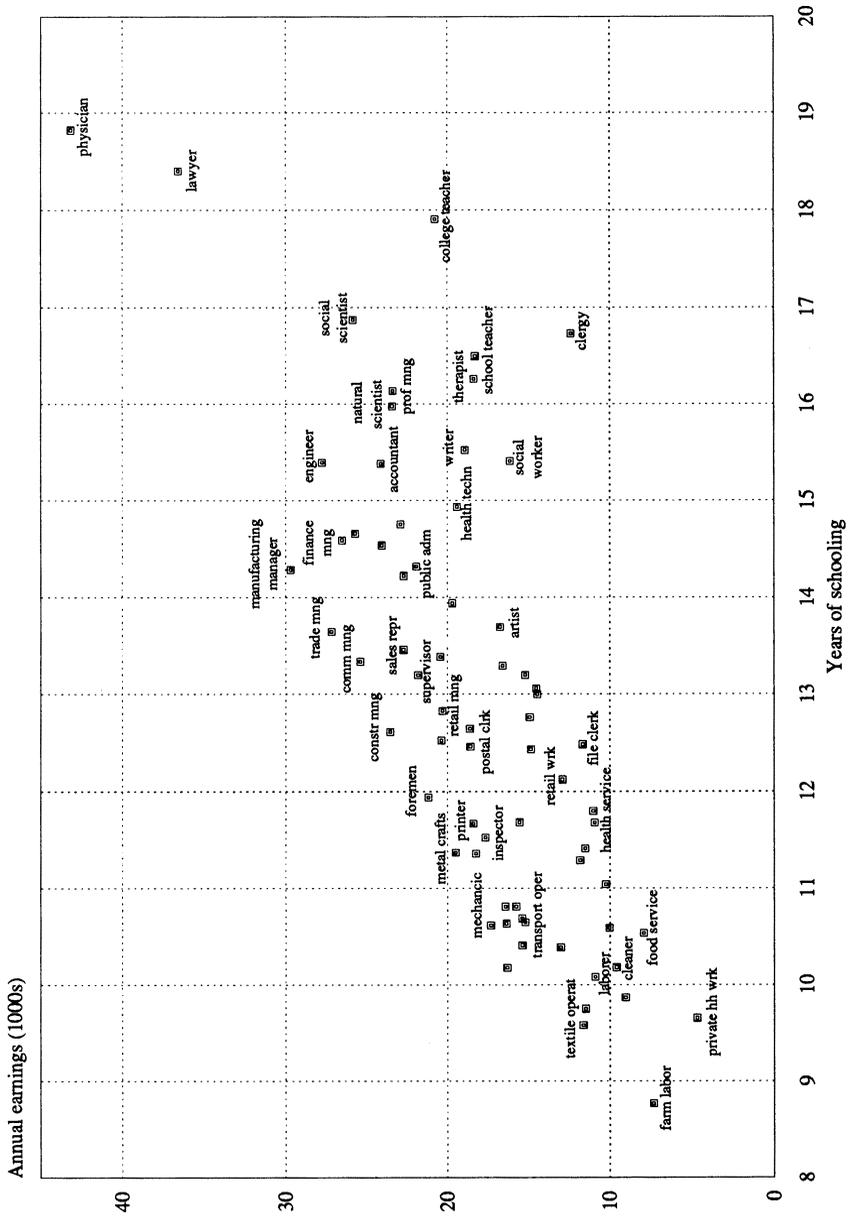


FIG. 1.—Earnings and schooling levels of 70 occupations: male labor force

The scatterplot confirms Bourdieu's (1979) work on France and work by De Graaf et al. (1989) on the Netherlands, which have shown that the occupational structure consists of two, partially independent hierarchies: a cultural and an economic status ladder. Bourdieu also argues that the two dimensions of status are primarily distinct at the top, and he even speaks of two mutually exclusive French elites: a cultural elite consisting of occupants of the educational system and the arts, and an economic elite consisting of occupants of the higher positions in business, industry, and trade. My scales show that this is generally true for the stratification system in the United States as well. For professional, technical, managerial, and administrative occupations, the Pearsonian correlation between cultural and economic status is .46; for lower-level occupations it is .69.

While the dimensions overlap the least at the top, there are also examples of disparities between cultural and economic status in the middle of the hierarchy. Most service occupations and retail sales workers are relatively high on the cultural dimension, whereas foremen, and craftsmen in metal and printing industries, are relatively high on the economic dimension. The low earnings of food and personal service workers are probably due to the fact that many of these workers work part-time. That manufacturing workers have higher earnings than other, similarly educated occupations in part reflects the higher degrees of unionization in these industries. The scatterplot for the female labor force looks fairly similar, but the correlation between the two dimensions is somewhat lower ( $r = .67$ ).<sup>4</sup> Full occupational scores are available upon request.

### Data and Measurement

To analyze occupational homogamy, I examine the cross-classification of husbands' and wives' detailed occupations. The analysis is limited to married persons between the ages of 16 and 34 who live together and have been married for about two years (two-year marriage cohorts).<sup>5</sup> By focusing on recently married couples, my estimates will not be affected by the influence that spouses may have on each other's career during

<sup>4</sup> The correlation between male and female characteristics of occupations is .98 for the cultural dimension and .91 for the economic dimension. That the two cross-sex correlations are different suggests that if everyone were to marry within his or her occupation (which is impossible in practice), the cultural dimension of homogamy would be stronger than the economic dimension. Because this may artificially affect my comparisons, I also fitted models based on male status scales for both husbands and wives. The findings from these analyses were essentially the same.

<sup>5</sup> Because census data do not provide information on the exact dates of birth and marriage, I selected couples in which the wife's age at the time of the census is at most two years higher than her age at marriage.

marriage.<sup>6</sup> Limiting the sample to newlyweds also rules out bias that may arise from attrition through separation and divorce. Because second and later marriages tend to have different levels of homogamy than first marriages (Jacobs and Furstenberg 1986), the sample is limited to men and women who married for the first time.

In each census, people who were at work at the time of the census reported the occupation they had in the week prior to the census. Persons who were unemployed at that time but worked in the past and persons not in the labor force who worked at some point in the decade preceding the census reported their last occupation. While the labor force participation of married women was still on the low side in the 1970s, throughout this century the employment of single women has been about as high as that of single men (Sweet and Bumpass 1987, p. 73). Since I focus on recently married women, those who quit their job upon entering marriage are included in the labor reserve and report the occupation they had before marriage. This approach is an improvement over previous studies of occupational homogamy, most of which excluded large numbers of—predominantly female—homemakers (Hout 1982).

The drawback of focusing on newlyweds is that some persons never worked before marriage (about 10% of the women and 5%–7% of the men). Additional analyses show that persons who never worked marry at an earlier age, and are more likely to marry while in school or soon after finishing school. Women who never worked are also more likely than others to marry men who never worked. We could regard these persons as homemakers or assign them a general status score based on their education, but this probably would have little differential effect on the two forms of occupational homogamy. While husbands and wives who marry early tend to be more similar with respect to education (Mare 1991), there are no immediate reasons to believe that those who never worked would be more similar with respect to economic status than with respect to cultural status (or vice versa). With the data at hand, however, it is not possible to assess the direction and extent of this bias directly. The best alternative is to obtain indirect information on possible biases by examining the importance of life-cycle factors for persons who do have occupational data.

### A Description of Occupational Marriage Selection

Which occupations are most endogamous? And which occupations intermarry most often? Using the pooled 1970 and 1980 marriage tables, I

<sup>6</sup> Because census data do not contain information on unmarried couples, mutual influence or adaptive socialization during a period of cohabitation before marriage cannot be taken into account.

present in table 1 the percentages of husbands and wives who marry within their occupation. Overall, few people marry within their group (6%), but this is largely a consequence of the detailed nature of the classification. Because occupation-specific percentages are strongly affected by the relative size of an occupational group, I also present odds ratios. In the present application, odds ratios are defined as the ratio of the odds that a person with a given occupation marries within rather than outside the group to the odds that a person with another occupation marries a person with that specific occupation. The higher this ratio, the stronger the degree of endogamy. Odds ratios are an appealing measure of endogamy because they are not affected by the relative size of the group under consideration.

The highest levels of in-marriage are observed for professional and technical occupations, and within this group, lawyers, religious workers, physicians, and college teachers are most endogamous. Managers and administrators are the second most endogamous group, while sales and clerical workers are the least endogamous. Next to differences in odds ratios between major occupational groups, we observe substantial variation within major groups.

It is often presumed that people tend to marry within their occupation because they meet their spouse at work. Whether the workplace fosters endogamy largely depends on the extent to which the workplace is segregated by sex and (detailed) occupation. Table 1 shows that there are sharp sex differences in occupation-specific in-marriage percentages, and most of these are consistent with what we would expect given the occupational segregation of young men and women. For example, 41% of male school teachers marry a teacher, but only 16% of female school teachers do so. Lawyers show the opposite pattern: 47% of female lawyers are married to lawyers, whereas only 12% of male lawyers are married within their group. Whether endogamy is also affected by the occupational heterogeneity of the workplace is more difficult to assess, although some cases provide supportive evidence. Postal clerks, for example, are the most endogamous clerical occupation, and policemen are the most endogamous service occupation. Both groups tend to work in occupationally less heterogeneous settings than other clerical and service workers. The highly endogamous marriage choices of farm laborers probably reflect a mixture of workplace effects on the one hand and more general constraints such as rural isolation on the other.

Because, in general, few people marry within their group, it is instructive to examine which occupations intermarry. From my theoretical perspective, lawyers and physicians are a particularly interesting case because if they intermarry, they cannot "match" on the two dimensions simultaneously (unless lawyers marry teachers). As table 2 shows, the

TABLE 1  
PERCENTAGE OF NEWLYWEDS MARRIED WITHIN OCCUPATION

OCCUPATION	HUSBANDS		WIVES		Odds Ratio
	%	<i>N</i>	%	<i>N</i>	
<b>Professional/technical:</b>					
Legal specialists .....	11.9	294	47.3	74	166.5
Religious specialists .....	3.9	128	27.8	18	150.9
Physicians .....	7.1	294	28.4	74	69.7
College teachers .....	10.3	339	18.1	193	34.9
Physical scientists .....	5.0	322	15.0	107	27.6
Therapists .....	10.8	148	5.6	287	21.5
Social scientists .....	2.5	121	4.9	61	21.1
Social and recreation workers .....	10.8	192	6.2	340	18.4
Computer specialists .....	5.9	523	15.0	207	17.1
Writers and librarians .....	7.0	157	4.5	245	15.5
Artists .....	7.7	440	10.1	338	13.1
School teachers .....	41.3	1,374	16.1	3,520	10.5
Engineers .....	1.4	1,282	21.2	85	10.0
Accountants .....	4.7	663	8.5	364	7.0
Nurses and health technicians .....	26.0	400	4.3	2,442	6.9
Technicians .....	4.0	1,706	12.2	566	3.9
Miscellaneous professionals .....	.0	104	.0	26	.0
<b>Managers/administrators:</b>					
Farm managers .....	4.7	531	62.5	40	157.6
Construction managers .....	.6	173	16.7	6	56.1
Public administrators .....	3.2	157	6.9	72	23.6
Communications utilities .....	2.2	139	5.6	54	20.8
Wholesale trade managers .....	.8	238	4.3	46	9.3
Finance managers .....	4.0	556	8.3	265	8.1
Personnel workers .....	3.0	230	3.6	194	8.1
Manufacturing managers .....	1.7	519	7.8	115	8.0
Retail sales managers .....	4.5	1,277	13.2	438	5.9
Professional services .....	2.5	317	3.3	239	5.4
<b>Sales/clerical:</b>					
Postal clerks .....	2.0	254	6.7	75	13.8
Other mail clerks .....	1.7	116	1.3	150	5.7
Sales and clerical supervisors .....	3.7	622	5.9	388	5.0
Public relations workers .....	.9	114	1.2	81	5.3
File and library clerks .....	8.4	203	1.9	903	4.9
Adjusters and investigators .....	3.4	320	2.6	431	4.0
Retail sales workers .....	15.7	1,663	5.3	4,886	3.9
Financial sales representatives .....	2.1	703	5.4	279	3.9
Information clerks/receptionists .....	7.3	137	1.0	1,021	3.7
Other sales representatives .....	1.2	953	6.4	171	3.5
Telephone operators .....	3.7	27	.2	544	3.4
Distribution clerks .....	3.3	1,237	6.9	594	2.9
Office machine operators .....	1.5	266	1.4	294	2.5
Administrative support clerks .....	14.7	675	2.6	3,744	2.1
Financial clerks .....	7.4	366	1.2	2,241	1.6
Secretaries .....	20.6	97	.3	7,568	1.4

TABLE 1 (Continued)

OCCUPATION	HUSBANDS		WIVES		Odds Ratio
	%	N	%	N	
<b>Crafts:</b>					
Printing crafts .....	1.6	370	4.9	123	6.7
Auto mechanics .....	.2	1,232	14.3	14	6.4
Metal crafts .....	.5	842	9.3	43	5.8
Foremen .....	1.0	1,085	8.5	130	4.1
Miscellaneous craftsmen .....	2.4	1,198	8.7	332	3.8
Other mechanics .....	.6	1,967	13.6	81	3.7
Construction crafts .....	.4	3,595	23.1	65	3.7
<b>Operatives:</b>					
Textile operatives .....	34.8	319	7.5	1,478	18.2
Metal machine operatives .....	2.4	908	12.0	184	7.3
Material moving operatives .....	.3	973	9.4	32	5.1
Hand working operatives .....	6.0	1,658	10.3	965	3.4
Inspectors and testers .....	2.6	464	3.1	386	3.4
Transport operatives .....	.7	2,328	13.1	122	3.0
Other machine operatives .....	7.0	2,897	15.3	1,317	3.0
<b>Laborers:</b>					
Farm laborers .....	13.0	631	29.0	283	35.3
Construction laborers .....	.6	947	20.7	29	13.1
Agricultural laborers .....	1.3	449	5.9	102	6.7
Miscellaneous laborers .....	2.8	1,753	14.7	333	4.7
Freight and stock handlers .....	.3	630	5.3	38	4.2
Baggers and packagers .....	2.6	643	2.6	664	2.0
<b>Service workers:</b>					
Policemen and firemen .....	1.0	668	30.4	23	31.6
Private household workers .....	12.5	16	.5	419	16.4
Health service workers .....	18.9	217	2.3	1,763	6.3
Cleaners .....	5.8	852	8.6	573	5.5
Food service workers .....	23.4	743	5.1	3,382	4.2
Personal service workers .....	12.0	366	2.7	1,660	3.9
Protective service workers .....	.4	261	1.6	62	3.0

five female occupations that are most frequently married to physicians consist of a mixture of occupations that are high in economic status but low in cultural status (trade managers), occupations that are high in cultural status and relatively low in economic status (college teachers), and occupations that are high in both respects (lawyers). A clearer picture forms when we examine who marries a female physician. Of all male occupations, college teachers and social scientists are most likely to be married to a female physician. Since both groups rank high in the cultural hierarchy but fairly low in the economic status ladder, similarity with regard to cultural status seems to play a more important role in marriage

## Cultural and Economic Status

TABLE 2

PERSONS MOST FREQUENTLY MARRIED TO LAWYERS, PHYSICIANS, MANAGERS,  
AND SCHOOL TEACHERS

Women Married to Physicians	(%)	Men Married to Physicians	(%)
Wholesale trade managers .....	4.3	College teachers .....	1.2
Physical scientists .....	3.7	Social scientists .....	.8
College teachers .....	3.6	Health technicians .....	.8
Nurses .....	3.4	Receptionists .....	.7
Lawyers .....	3.4	Therapists .....	.7
All wives .....	.6	All husbands .....	.2
<hr/>			
Women Married to Lawyers	(%)	Men Married to Lawyers	(%)
Social scientists .....	6.3	Physical scientists .....	.9
Public administrators .....	4.9	Mail clerks .....	.9
Finance managers .....	4.9	Physicians .....	.7
Writers .....	4.5	Public administrators .....	.6
Therapists .....	4.5	Sales supervisors .....	.2
All wives .....	.6	All husbands .....	.2
<hr/>			
Women Married to Managers	(%)	Men Married to School Teachers	(%)
Communications managers .....	9.3	Lawyers .....	22.1
Public administrators .....	8.3	Professional service managers .....	21.8
Personnel specialists .....	8.2	Therapists .....	21.6
Professionals (misc.) .....	7.7	Clergy .....	20.3
Public relations specialists .....	7.4	Professionals (misc.) .....	20.2
All wives .....	3.1	All husbands .....	7.4

NOTE.—Managers are limited to manufacturing, finance, construction, and wholesale trade.

selection than similarity with regard to economic status. The groups most likely to marry male lawyers are social scientists, public administrators, finance managers, and writers (see table 2).

It is also interesting to examine who marries female school teachers, a cultural status group with low earnings, and who marries managers of manufacturing, finance, construction, and wholesale trade, a high economic status group with comparatively little schooling. The list of female occupations marrying male managers points to economic rather than cultural similarity (personnel specialists, public relations workers, and communications managers). The list of male occupations that most often marry female school teachers, on the other hand, is characterized by either high status in both dimensions (lawyers and professional service managers) or by high cultural and low economic status (religious workers and therapists).

## LOG-LINEAR ANALYSIS OF OCCUPATIONAL MARRIAGE SELECTION

Log-linear models of scaled association are frequently used to analyze association in square contingency tables with ordered categories (Goodman 1979). I rely on multidimensional extensions of these models introduced by Hout (1984). The set of  $n_{ij}$  observed counts in the 4,900 ( $70 \times 70$ ) combinations of husband's ( $i$ ) and wife's ( $j$ ) occupation can be regarded as arising from a multinomial sampling distribution with  $E(n_{ij}) = m_{ij}$ . It is plausible to assume that  $m_{ij}$  is a function of differential opportunity on the one hand and mutual selection preferences on the other. With differential opportunity I refer to effects that stem from the relative size of male and female occupations in the marriage table. With selection preferences, I refer to people's preferences to marry within the group (endogamy) and their preferences to marry occupations that are close to them when marrying outside the group (homogamy).

To formulate a log-linear model, I first define a set of variables:  $X_i$  is a vector of dichotomous variables referring to husbands' occupation ( $X_i = 1$  when husband's occupation is  $i$ ;  $X_i = 0$  otherwise);  $Y_j$  is a vector of dichotomous variables referring to wife's occupation ( $Y_j = 1$  when wife's occupation is  $j$ ;  $Y_j = 0$  otherwise);  $C_i$  and  $C_j$  represent the cultural status scores for male and female occupations;  $E_i$  and  $E_j$  represent the economic status scores for male and female occupations; and  $P$  is a dichotomous variable indicating whether the occupational combination is endogamous ( $P = 1$  if  $i = j$ ;  $P = 0$  otherwise). The model can now be defined as

$$\ln(m_{ij}) = \sum_{i=1}^{70} \alpha_i^x X_i + \sum_{j=1}^{70} \alpha_j^y Y_j + \gamma P + \gamma^e P E_a + \gamma^c P C_a \\ + \delta^e E_i E_j + \delta^c C_i C_j.$$

The  $\alpha$  parameters adjust for the marginal distributions and take into account that marriage selection depends on the relative size of male and female occupations in the table. The  $\gamma$  parameters model occupational endogamy. Following Hout (1984),  $\gamma$  can be called a "general endogamy" parameter; it measures the overall degree of in-marriage. Parameters  $\gamma^c$  and  $\gamma^e$  can be called "scaled endogamy" parameters and measure how the strength of endogamy varies along the cultural and the economic status dimensions.<sup>7</sup> The  $\delta$  parameters, which can be called "scaled asso-

<sup>7</sup> To simplify the model, I averaged the male and female scores in the interaction effects with  $P$ . Thus  $C_a$  represents the average cultural status score, and  $E_a$  represents the average economic status score.

ciation” parameters, model occupational homogamy. The  $\delta^c$  parameter measures how cultural status differences affect the degree of intermarriage while controlling for economic differences between occupations. Similarly, the  $\delta^e$  parameter measures how economic status differences affect the degree of intermarriage while controlling for cultural differences between occupations. To assess which of the two status factors are stronger impediments to intermarriage, I transformed all status scales into scores with zero mean and unit variance.<sup>8</sup>

The model above can be interpreted by considering the odds ratios in the  $2 \times 2$  subtables composed of rows ( $i$ ) and ( $i + d$ ) and columns ( $j$ ) and ( $j + d$ ) in the larger table. Because of the presence of endogamy parameters, we need to distinguish  $2 \times 2$  tables that do not involve diagonal cells ( $i \neq j$ ) from subtables that do ( $i = j$ ). I first discuss the former case. Compare the odds of marrying a woman with status  $C_j + C_d$  rather than  $C_j$  for two men who are  $C_d$  points apart (all parties have equal scores on  $E_i$ ). The easier it is for a man to marry up the scale, compared to how easy that is for a “lower” man, the stronger the association in the subtable, and the less intermarriage (or more homogamy) across distance  $C_d$ . (Men and women can be interchanged.) Based on the above model, the logarithm of this odds ratio is defined as

$$\theta_1 = \ln \frac{m_{(i+d)(j+d)} / m_{(i+d)j}}{m_{i(j+d)} / m_{ij}} = \delta^c C_d^2 \quad \text{for } i \neq j.$$

The association in this  $2 \times 2$  subtable is a direct function of the squared distance and the  $\delta^c$  parameter. In other words,  $\delta^c$  measures the degree of homogamy for one unit of distance along  $C_i$ .

Subtables that involve diagonal cells have a different interpretation. For the  $2 \times 2$  subtable of teachers and lawyers, for example, we can compute the ratio of the odds that a lawyer marries a lawyer (rather than a teacher), to the odds that a teacher marries a lawyer (rather than a teacher). If lawyers and teachers are  $C_d$  points apart, and assuming they have equal scores on  $E_i$ , this odds ratio is defined as,

$$\theta_2 = \ln \frac{m_{(i+d)(i+d)} / m_{(i+d)i}}{m_{i(i+d)} / m_{ii}} = \delta^c C_d^2 + 2\gamma + \gamma^c(C_i + C_{i+d}) + \gamma^e(E_{i+d} + E_i).$$

Hence, intermarriage between two occupational groups is not only affected by association parameters, but also by endogamy parameters. If

<sup>8</sup> Scores are standardized for occupations, not for individuals. The use of unweighted scores guarantees that association coefficients are independent of the marginal distributions (Becker and Clogg 1989).

the last three terms in the above equation are positive, the association in subtables involving the diagonal is stronger than the association in subtables that do not involve the diagonal. This degree of “inertia” consists of two parts, a general degree of endogamy,  $\beta$ , and a degree of endogamy that depends on the cultural and economic status scores of the occupations involved.

Because the marriage tables contain 4,900 cells, they are quite sparse. About half of the cells are empty and the ratio of cases to cells is between 4:1 and 5:1. As a result, any conventional measure of fit is biased. While it is still valid to compare likelihood-ratio chi-square values across models if the difference in the number of degrees of freedom is small (Fienberg 1985, p. 176), concern remains as to whether my estimates are reliable. Zero cells are assumed to have nonzero expected counts because every combination can occur in principle. In reality, there may be some variation in the counts of the observed empty cells, but sparse multinomials do not contain information on this variation (Bishop, Fienberg, and Holland 1989). A way of distinguishing observed zero counts from one another is to use other data. In the present context, the marriage table for all married couples, regardless of marital duration and marriage order, provides useful information because it contains few empty cells. About 10% of the cells in the full table are empty and the ratio of cases to cells is between 50:1 and 60:1. Rather than adding a small positive constant to each cell, as is common practice in the literature, I fit models on so-called smoothed multinomials, that is, a combination of the original table and the marriage table for all couples in the particular census. The tables are added using a weighting scheme suggested by Bishop et al. (1989, pp. 401–2). The relative weight of the external cell probabilities in the combined tables is about .10. Bishop et al. (1989) show that estimates of the cell counts in these smoothed multinomials can be regarded as pseudo-Bayes estimates.<sup>9</sup> Likelihood-ratio chi-square statistics ( $G^2$ ) and Bayesian information coefficients (BICs) are presented in table 3. The BICs measure how plausible the model is independent of sample size (Raftery 1986). Saturated models have a BIC of 0, and the more negative the score, the better the model.<sup>10</sup>

<sup>9</sup> The relative weight of the external cell probabilities is generally lower when the dissimilarity between the probabilities of the original and the external table is greater. Smoothed counts are defined as  $s_{ij} = N/(N + K) \times (m_{ij} + Kr_{ij})$ , where  $m_{ij}$  are the original counts,  $r_{ij}$  are the cell probabilities of the external table, and  $K = (N^2 - \sum m_{ij}^2)/\sum (m_{ij} - Nr_{ij})^2$  (see Bishop et al. 1989, pp. 401–2).

<sup>10</sup> Models are estimated in SPSS-loglinear, which uses a Newton-Raphson algorithm to obtain maximum-likelihood estimates.

TABLE 3  
LOG-LINEAR MODELS OF OCCUPATIONAL MARRIAGE SELECTION

MODEL AND DESCRIPTION	df	1970 COHORT			1980 COHORT		
		$L_2$	BIC	$\delta$	$L_2$	BIC	$\delta$
A, independence .....	4,761	9,452	-38,423	. . .	9,904	-38,328	. . .
B, SEI homogamy .....	4,760	6,135	-41,730	35.1	6,703	-41,518	32.3
C, Two-dimensional homo- gamy .....	4,759	5,217	-42,638	44.8	6,149	-42,063	37.9
D, C + general endogamy	4,758	4,544	-43,301	51.9	4,996	-43,206	49.6
E, D + linear variation in endogamy .....	4,756	4,536	-43,288	52.0	4,977	-43,204	49.7
F, D + quadratic variation in endogamy .....	4,754	4,483	-43,322	52.6	4,970	-43,191	49.8
G, C + occupation-specific endogamy .....	4,689	4,148	-43,003	56.1	4,531	-42,972	54.3
H, D + exchange of status	4,756	4,515	-43,310	52.2	4,936	-43,245	50.2
N .....			23,288			25,115	

NOTE.—See text for explanation of models,  $\delta = 100 \times (L_A^2 - L^2)/L_A^2$ .

Cultural and Economic Dimensions of Occupational Homogamy

The two-dimensional homogamy model (model C) explains 45% of the  $G^2$  under the model of independence in 1970 and 38% of the  $G^2$  under independence in 1980, confirming that both marriage cohorts are characterized by strong degrees of occupational homogamy. To assess the validity of using a two-dimensional specification, I compare model C to an “SEI homogamy” model. An SEI model is obtained by replacing the two association coefficients by a single association coefficient that is based on the average cultural and economic status scores (model B). By averaging the scores, model B essentially assumes cultural and economic effects are equal and thus becomes a special case of model C. Table 3 shows that the  $G^2$  of the SEI model is significantly higher, indicating poorer fit, while the BIC is less negative, showing that the SEI model is a less plausible model given the data. In other words, occupational homogamy can be described in a parsimonious way by two different dimensions of status.

To compare the relative importance of cultural and economic status homogamy, I present parameter estimates of model C in the first column of table 4. Both scaled association coefficients are positive and statistically significant. Since the two sets of status scores are standardized, the coefficients can be compared directly. In both years, the coefficient of cultural status association is stronger than the coefficient of economic

TABLE 4  
PARAMETER ESTIMATES OF OCCUPATIONAL MARRIAGE SELECTION

	Model C	Model D	Model F
1970 Cohort:			
Economic homogamy .....	.105 (.015)	.094 (.015)	.076 (.016)
Cultural homogamy .....	.570 (.011)	.516 (.011)	.517 (.012)
General endogamy .....	. . .	.934 (.033)	.684 (.061)
Endogamy by			
economic status .....	. . .	. . .	.148 (.069)
(economic status) <sup>2</sup> .....	. . .	. . .	.091 (.036)
cultural status .....	. . .	. . .	-.220 (.047)
(cultural status) <sup>2</sup> .....	. . .	. . .	.209 (.035)
1980 Cohort:			
Economic homogamy .....	.159 (.012)	.121 (.011)	.113 (.013)
Cultural homogamy .....	.485 (.011)	.442 (.012)	.442 (.012)
General endogamy .....	. . .	1.188 (.031)	1.159 (.047)
Endogamy by			
economic status .....	. . .	. . .	.228 (.053)
(economic status) <sup>2</sup> .....	. . .	. . .	-.020 (.027)
cultural status .....	. . .	. . .	-.166 (.049)
(cultural status) <sup>2</sup> .....	. . .	. . .	.090 (.035)
Change between 1970 and 1980:			
Economic homogamy .....	+.054 (.019)	+.027 (.019)	+.037 (.021)
Cultural homogamy .....	-.085 (.016)	-.074 (.016)	-.076 (.017)
General endogamy .....	. . .	+.254 (.045)	+.475 (.077)
Endogamy by			
economic status .....	. . .	. . .	+.080 (.087)
(economic status) <sup>2</sup> .....	. . .	. . .	-.111 (.045)
cultural status .....	. . .	. . .	+.054 (.068)
(cultural status) <sup>2</sup> .....	. . .	. . .	-.119 (.049)

NOTE.—Nos. in parentheses are estimated SEs.

status association. Due to the strong positive correlation between the two dimensions of status, the estimates are negatively correlated and the standard error of their difference will be large. A Z-test against the hypothesis of equality, however, is statistically significant at the 1% level, confirming that cultural homogamy is indeed stronger ( $Z = 20.7$  in 1970 and  $16.6$  in 1980).

How have the two dimensions of homogamy changed between 1970 and 1980? In 1980, the cultural dimension of homogamy still dominates, but the economic status association coefficient has increased significantly whereas the cultural status association coefficient has decreased. Since the overall degree of association, as measured by the SEI coefficient, has decreased somewhat (from  $.76$  in 1970 to  $.66$  in 1980), we can conclude that the increase in economic status as a factor in marriage choice has come at the expense of the cultural dimension of homogamy.

Because the samples are large, statistical significance is a limited guide in evaluating the strength of these results. As a substantive criterion, I calculate expected odds ratios under model C. Odds ratios in model C measure the odds that a high-status man marries up in status, relative to the odds that a lower-status man marries up. The odds ratio of bridging a cultural status distance of 1 SD in 1980 is 1.62 ( $e^{.485}$ ). One standard deviation represents the difference between college teachers and accountants, for example. For bridging a cultural status difference of 2 SDs, the odds ratio is 6.96, which is already quite strong ( $e^{4 \times .485}$ ). For crossing an economic status distance of 1 SD, the distance between engineers and college teachers, for example, the odds ratio is 1.17, reflecting almost no association. The association increases to 1.89 for 2 SDs of economic status distance. While both types of association are substantively important, the cultural dimension clearly dominates. When considering marrying across cultural and economic distances simultaneously, we can simply multiply the odds ratios or add their logarithms ( $e^{.485 + .159}$ ).

### Occupational Endogamy

The homogamy model assumes that marriage patterns are a function of the distances between groups, regardless of where in the table these distances are bridged. To assess if intermarriage becomes less common when moving away from the diagonal, I add a general endogamy parameter to model C. Table 4 shows that there is a significant degree of endogamy in the marriage table, and this has increased between 1970 and 1980. To assess whether endogamy varies across occupations, I compare the fit of a model for general endogamy (model D) to the fit of a model for occupation-specific endogamy, which includes a single endogamy parameter for each occupation (model G). The difference in  $G^2$  between these models represents the variation in endogamy and is statistically significant in both years (396 in 1970 and 465 in 1980, both with a loss of 69 *dfs*). When relying on BICs, however, we see that the occupation-specific model is a slightly poorer representation of the data than the general endogamy model.

To assess whether occupation-specific differences in endogamy are a function of cultural and economic status, I include interaction effects of endogamy and cultural and economic status (model E), and interaction effects of endogamy and squared economic and cultural status scores (model F). Model E assumes that endogamy parameters (in logarithmic form) change in a linear fashion with status, model F allows this relationship to be parabolic. Only a small part of the occupational variation in endogamy can be explained by the interaction effects of status and en-

dogamy (15% in 1970 and 6% in 1980). The quadratic model (model F) fits better than the linear model, but the BIC shows that this is only true in 1970. Parameters of model F are presented in the third column of table 4.

The effects of economic status and squared economic status are positive. Hence, the degree of endogamy becomes stronger when people move up on the economic status ladder. One interpretation of this finding lies in the nature of the selection process. Strictly speaking, the logic of competition implies that those at the top are proposed to by everyone beneath them in the hierarchy, while they themselves cannot compete for spouses with higher-status positions. In essence, although they are in great demand they can only settle for people like themselves. As a result, it is possible that they develop strategies of enclosure that prevent them from marrying down. For people at the bottom of the status hierarchy, enclosure strategies would only prevent them from marrying up, which may explain why closure there is less important.

Table 4 further indicates that the effect of cultural status is negative while the effect of squared cultural status is positive. According to model F, the minimum level of endogamy occurs for occupations with a cultural status score of .526 in 1970 and .941 in 1980. Because most occupations have cultural status scores in the  $-1.5$ – $+2.5$  range, this indicates that groups in or just above the middle of the cultural hierarchy are less closed than groups at the top and bottom of the cultural hierarchy. It is not entirely clear how to interpret this U-shaped pattern, except by reference to “edge” effects (Marsden 1988). Because persons at the extremes of the distribution have a smaller pool to choose from, they may be more compelled to choose within their group. Given the modest improvements in fit, however, the relationship between the closure of an occupational group and its cultural or economic status is not exactly strong.

#### Exchange of Cultural and Economic Occupational Status?

Thus far, competition has been defined as the tendency to search for a spouse with high economic resources. Several authors have suggested that when sex roles are traditional, competition in the marriage market may take the form of an exchange between male economic resources and female domestic resources, physical attractiveness, or high class background. The exchange hypothesis can also be applied to women’s cultural resources. Given the importance of cultural capital for styles of consumption in the home and leisure activities (Bourdieu 1979), and considering the strong effect of parental cultural capital on children’s educational attainment (De Graaf 1986), cultural resources can be regarded as a domestic resource for which men would compete. To evaluate whether

women are more likely to marry up in economic status when they have more favorable cultural status characteristics, I consider the following model,

$$\ln(m_{ij}) = \sum_{i=1}^{70} \alpha_i^r X_i + \sum_{j=1}^{70} \alpha_j^c Y_j + \gamma P + \delta^e E_i E_j + \delta^c C_i C_j \\ + \eta^{ec} E_i C_j + \eta^{ce} C_i E_j.$$

The model above can be interpreted by considering the odds of marrying a man of economic status  $E_i + E_d$  as opposed to marrying a man of status  $E_i$  (with the same cultural status). Compare the odds for women with different cultural status positions and similar economic positions. An exchange can be said to occur when a woman of cultural status  $C_j + C_d$  has more chance of marrying up in economic status than a woman of cultural status  $C_j$ . The ratio of these odds, according to the model, is (in logarithmic form)  $\eta^{ec} E_d C_d$ . Hence, a positive  $\eta^{ec}$  indicates that women offer their cultural status in exchange for men's economic status. If  $\eta^{ec}$  is negative, women's cultural status can be seen as a handicap in finding a man of high economic status. To be complete, the model also includes the reverse exchange ( $\eta^{ce}$ ). Note that since all scales are standardized, marital mobility is conceptualized in relative terms.

Adding the two covariates to model D leads to a modest improvement in fit (model H, table 3). The coefficients, however, are small, and the opposite of what we would expect. The estimate of  $\eta^{ec}$  is  $-.080$  in 1970 and  $-.076$  in 1980, whereas the estimate of  $\eta^{ce}$  is  $.030$  in 1970 and  $.088$  in 1980. This suggests that there are no clear trade-offs between women's cultural resources and men's economic resources. On the contrary, having high cultural status seems to be somewhat of a handicap for women in the competition for men of high economic status. Alternatively, one can interpret the unexpected negative value of  $\eta^{ec}$  as evidence that high economic status serves as a handicap in the search for women of high cultural status.

### Life-Cycle Variation in Assortative Mating by Occupation

Since young men and women often work at jobs that have little relation to their adult careers, we would expect that occupation becomes a more important factor in the marriage market as people gain experience in the labor market. In tables 5 and 6, I examine the role of life-cycle stage by comparing couples who married shortly after leaving school to couples who married long after they left school. Previous analyses of homogamy have shown that people who marry while in school or shortly after leav-

TABLE 5  
FIT OF LOG-LINEAR MODELS BY TIME SINCE LEAVING SCHOOL

Cohort and Model	≤ Two Years	Three–Six Years	≥ Seven Years
1970 Cohort:			
A .....	– 38,357	– 39,146	– 37,529
C .....	– 40,238	– 40,540	– 38,242
D .....	– 40,536	– 40,760	– 38,372
N .....	9,574	9,084	4,630
1980 Cohort:			
A .....	– 38,633	– 39,259	– 37,813
C .....	– 40,203	– 40,754	– 38,450
D .....	– 40,556	– 41,221	– 38,784
N .....	9,338	10,645	5,118

NOTE.—For a description of the models, see table 3.

ing school are more likely to marry homogamously with respect to education than others (Mare 1991). One of the reasons, Mare suspects, is that schools and, in particular, colleges function as social settings that provide opportunities of meeting a spouse within the educational group. In the present context, the time between marriage and leaving school can be regarded as an indicator of labor market experience at the time of mar-

TABLE 6  
PARAMETER ESTIMATES BY TIME SINCE LEAVING SCHOOL

Cohort and Model	≤ Two Years	Three–Six Years	≥ Seven Years
1970 Cohort:			
Model C:			
Economic homogamy .....	.069 (.022)	.124 (.026)	.171 (.036)
Cultural homogamy .....	.545 (.016)	.578 (.020)	.570 (.029)
Model D:			
Economic homogamy .....	.066 (.022)	.107 (.026)	.146 (.035)
Cultural homogamy .....	.482 (.016)	.536 (.020)	.529 (.029)
General endogamy .....	.922 (.049)	.930 (.056)	.973 (.075)
1980 Cohort:			
Model C:			
Economic homogamy .....	.149 (.018)	.158 (.020)	.163 (.029)
Cultural homogamy .....	.483 (.017)	.501 (.018)	.466 (.026)
Model D:			
Economic homogamy .....	.119 (.018)	.118 (.020)	.114 (.029)
Cultural homogamy .....	.444 (.017)	.457 (.018)	.417 (.026)
General endogamy .....	1.087 (.051)	1.187 (.049)	1.397 (.066)

NOTE.—Nos. in parentheses are estimated SEs.

riage. The longer a person has been out of school, the more settled he or she will be in a job, and the more strongly he or she will be embedded in the work setting as opposed to the school setting. While this measure captures potential, as opposed to real, labor market experience, I prefer it to age at marriage, which is strongly related to the length of schooling and hence to occupational status.

Because the cross-classification is large (4,900 cells), it was not possible to fit the full multinomial of spouses' occupation and time since leaving school. Instead, I estimate models A, C, and D separately for three life-cycle groups: (a) couples in which the husband married two years or less after leaving school (including husbands still in school), (b) couples in which the husband married three to six years after leaving school, and (c) couples in which the husband married seven or more years after leaving school.<sup>11</sup> Models are fitted to smoothed multinomials, where the cross-classification for all couples in a particular census, regardless of marriage order and age at marriage, are used to smooth the counts. Measures of fit are presented in table 5; parameter estimates are presented in table 6.

If occupations are less relevant for marriage selection early in the career, we would expect that the interaction structure in the table is closer to statistical independence for those who married early. Because the sample sizes vary, I rely on the BIC measure to assess deviation from independence. Table 5 shows that the independence model has the worst fit (the least negative BIC) for those who married seven years or more after leaving school. Deviations from independence are similar in the two groups of early marriers. This shows that the association between husband's and wife's occupation is stronger for people who marry late (relative to their educational career). A closer look at the hypothesis can be obtained by focusing on the parameter estimates. When considering a model for homogamy, we observe that, in both years, the economic dimension of status homogamy becomes stronger the longer people have been out of school. The cultural dimension of status homogamy, however, is not systematically affected by the delay between marriage and schooling. When considering a model for both homogamy and endogamy, we further notice that occupational endogamy increases as people gain experience in the labor market.

The differential impact of life-cycle stage can be interpreted by considering the kinds of uncertainty people face when they are searching for a spouse. On the one hand, it may be difficult for people to take economic factors into account at the time of marriage, simply because people at that age are often in the beginning of their career. Cultural tastes and

<sup>11</sup> Time since leaving school is estimated by age at marriage less years of schooling completed less six.

values, on the other hand, tend to be well developed at an early age, largely because they are so strongly shaped by the schooling process. As a result, uncertainty about people's future cultural lifestyles is probably less grave than uncertainty about their future economic status. The difference between these uncertainties declines as people marry later. This interpretation is consistent with the finding that the economic dimension of status homogamy increases in strength with the delay between marriage and schooling, while the cultural dimension of homogamy does not. That occupational endogamy increases as people have more (potential) labor market experience suggests that opportunity plays a role here as well. The longer unmarried people have been out of school, the more strongly they are embedded in a work setting, and the more likely it is that they will meet a spouse at work.

#### CONCLUSION

The strong degree of assortative mating by cultural status, as measured by occupational schooling, suggests that the tendency to seek cultural similarity plays a central role in the selection process. Such preferences for similarity can be understood as an attempt to develop a common lifestyle in marriage that produces social confirmation and affection. The cultural dimension may also be more important because, at the time of marriage, there is generally less uncertainty about a person's future cultural lifestyle and tastes than there is about his or her future earnings and economic security. In a more general sense, the importance of cultural status for aggregate patterns of homogamy is difficult to reconcile with the way stratification researchers have interpreted status homogamy in the past. Although I have not provided direct evidence on competition vis-à-vis matching, the marriage patterns observed above are more in line with a view of status groups as cultural entities that keep their distance from each other than with a view of status groups as economic entities that rely primarily on exclusion to prevent lower groups from gaining access. The neo-Weberian scenario of self-elimination is in line with recent cultural critiques of the stratification literature (Lamont and Lareau 1988). Research on the American upper middle class, for example, has shown that people do not exclusively rely on criteria such as ambition, money, and socioeconomic success to judge the people that surround them (Lamont 1992). Cultural and moral differences are important in why Americans maintain distance from others, and such criteria have more to do with a differentiation of symbolic meanings than with a widely agreed-upon hierarchy of symbols.

Even though cultural status similarity is generally more salient than economic status similarity, the economic dimension, as measured by occupational earnings, is not trivial and has become more important over

time. While the time period examined here is short, these findings provide some support for the hypothesis that competition in the marriage market has increased. One interpretation of such a change lies in the sex-role revolution, and in particular in the increasing number of dual earner families and the positive relationship between education and labor force participation among married women (Sweet and Bumpass 1987). Following the logic of the new home economic approach to the family, these changes could well have made women's economic resources increasingly attractive to men, thus leading to a more symmetrical form of competition for economic resources (Schoen and Wooldredge 1989; Mare 1991). That economic status plays a more important role when people marry late (in comparison to when they left school) suggests that economic factors could become more important in the near future. This finding is particularly relevant when considering the case of highly educated women who chose to pursue career success before beginning a family. Such a gradual erosion of the traditional organization of life-course transitions could increase the degree to which economic dimensions of status govern the process of spouse selection.

Additional interpretations should be considered as well. Part of the decline in marriage rates since the 1960s is counteracted by a rise in cohabitation (Bumpass, Sweet, and Cherlin 1991). It is not yet known whether cohabitation functions as a substitute or a precursor to marriage, and most accounts suggest that there is a substantial degree of heterogeneity in the motives, backgrounds, and behaviors of those who cohabit. Nonetheless, when asked why they lived together without being married, about half the cohabiting couples answered that it allowed them to assess whether they were compatible before marriage (Bumpass et al. 1991). If cohabitators are indeed more concerned with cultural factors and less with economic ones than those who marry, the shift I observe from 1970 to 1980 may partly be due to the rise in cohabitation. If, on the other hand, cohabitation is most popular among women for whom economic independence is most important, as the new home economic approach suggests, the exclusion of unmarried couples may lead to an underestimation of the economic dimension of occupational homogamy. Research on partner similarity in cohabitation is scarce, but recent evidence suggests that unmarried partners have a greater tendency toward educational homogamy than married partners (Schoen and Weinick 1993). Whether this reflects a greater emphasis on the cultural characteristics of a spouse than on his or her economic prospects is not yet known.

## REFERENCES

- Becker, Gary S. 1981. *A Treatise on the Family*. Cambridge, Mass.: Harvard University Press.

- Becker, Mark P., and Clifford C. Clogg. 1989. "Analysis of Sets of Two-Way Contingency Tables Using Association Models." *Journal of the American Statistical Association* 84:142–51.
- Bernstein, Basil. 1971. *Class, Codes, and Control*, vol. 1. London: Routledge & Kegan Paul.
- Bishop, Yvonne M. M., Stephen E. Fienberg, and Paul W. Holland. 1989. *Discrete Multivariate Analysis: Theory and Practice*. Cambridge, Mass.: MIT Press.
- Bourdieu, Pierre. 1979. *Distinction*. London: Routledge.
- Bumpass, Larry L., James A. Sweet, and Andrew Cherlin. 1991. "The Role of Cohabitation in Declining Rates of Marriage." *Journal of Marriage and the Family* 53:913–27.
- Byrne, David. 1971. *The Attraction Paradigm*. New York: Academic Press.
- Centers, Richard. 1949. "Marital Selection and Occupational Strata." *American Journal of Sociology* 54:530–35.
- Davis, Deborah. 1981. "Implications for Interaction versus Effectance as Mediators of the Similarity-Attraction Relationship." *Journal of Experimental Social Psychology* 17:96–116.
- Davis, James A. 1982. "Achievement Variables and Class Cultures: Family, Schooling, and Forty-nine Dependent Variables in the Cumulative GSS." *American Sociological Review* 47:569–86.
- Davis, Kingsley. 1984. "Wives and Work: Consequences of the Sex Role Revolution." *Population and Development Review* 10:397–417.
- De Graaf, Nan Dirk. 1991. "Distinction by Consumption in Czechoslovakia, Hungary, and The Netherlands." *European Sociological Review* 7:267–90.
- De Graaf, Paul M. 1986. "The Impact of Financial and Cultural Resources on Educational Attainment in the Netherlands." *Sociology of Education* 59:237–46.
- De Graaf, Paul M., Harry B. G. Ganzeboom, and Matthijs Kalmijn. 1989. "Cultural and Economic Dimensions of Occupational Status." Pp. 53–74 in *Similar or Different? Continuities in Dutch Research on Social Stratification and Social Mobility*, edited by W. Jansen, J. Dronkers, and K. Verrips. Amsterdam: SISWO.
- DiMaggio, Paul, and John Mohr. 1985. "Cultural Capital, Educational Attainment, and Marital Selection." *American Journal of Sociology* 90:1231–61.
- Duncan, Otis Dudley. 1961. "A Socioeconomic Index for All Occupations." Pp. 109–38 in *Occupations and Social Status*, edited by Albert J. Reiss, Jr. New York: Free Press.
- Edwards, John. 1968. "Familial Behavior as Social Exchange." *Journal of Marriage and the Family* 3:518–26.
- Elder, Glenn H., Jr. 1969. "Appearance and Education in Marital Mobility." *American Sociological Review* 34:519–33.
- Fienberg, S. E. 1985. *The Analysis of Cross-Classified Categorical Data*. Cambridge, Mass.: MIT Press.
- Goode, William J. 1964. *The Family*. Englewood Cliffs, N.J.: Prentice-Hall.
- Goodman, Leo A. 1979. "Simple Models for the Analysis of Association in Cross-Classifications Having Ordered Categories." *Journal of the American Statistical Association* 74:537–52.
- Hope, Keith. 1972. "Marriage Markets in the Stratification System." Pp. 105–20 in *The Analysis of Social Mobility: Methods and Approaches*, edited by K. Hope. Oxford: Clarendon.
- Hout, Michael. 1982. "The Association between Husbands' and Wives' Occupations in Two-Earner Families." *American Journal of Sociology* 88:397–409.
- . 1984. "Status, Autonomy, and Training in Occupational Mobility." *American Journal of Sociology* 89:1379–1409.
- Hunt, Thomas C. 1940. "Occupational Status and Marriage Selection." *American Sociological Review* 5:495–504.

- Jacobs, Jerry J., and Frank F. Furstenberg, Jr. 1986. "Changing Places: Conjugal Careers and Women's Marital Mobility." *Social Forces* 64:714–32.
- Jones, F. L. 1987. "Marriage Patterns and the Stratification System: Trends in Educational Homogamy since the 1930s." *Australian and New Zealand Journal of Sociology* 23:185–98.
- Kalmijn, Matthijs. 1991. *From Family Origins to Individual Destinations: The Changing Nature of Homogamy in the United States*. Ph.D. dissertation. University of California, Los Angeles, Department of Sociology.
- Kaufman, Robert L., and Seymour Spilerman. 1982. "The Age Structure of Occupations and Jobs." *American Journal of Sociology* 87:827–51.
- Kerckhoff, Alan C., and Keith E. Davis. 1962. "Value Consensus and Need Complementarity in Mate Selection." *American Sociological Review* 27:295–303.
- Lamont, Michèle. 1992. *Money, Morals, and Manners: The Culture of the French and the American Upper-Middle Class*. Chicago: University of Chicago Press.
- Lamont, Michèle, and Annette Lareau. 1988. "Cultural Capital: Allusions, Gaps and Glissandos in Recent Theoretical Developments." *Sociological Theory* 6:153–68.
- Laumann, Edward O. 1966. *Prestige and Association in an Urban Community*. Indianapolis: Bobbs-Merrill.
- Mare, Robert D. 1991. "Five Decades of Educational Assortative Mating." *American Sociological Review* 56:15–32.
- Marsden, Peter V. 1988. "Homogeneity in Confiding Relations." *Social Networks* 10:57–76.
- Newcomb, Theodore M. 1956. "The Prediction of Interpersonal Attraction." *American Psychologist* 11:575–86.
- Oppenheimer, Valerie K. 1988. "A Theory of Marriage Timing: Assortative Mating under Varying Degrees of Uncertainty." *American Journal of Sociology* 94:563–91.
- Peterson, Richard A., and Albert Simkus. 1992. "How Musical Tastes Mark Occupational Status Groups." Pp. 152–86 in *Cultivating Differences: Symbolic Boundaries and the Making of Inequality*, edited by M. Lamont and M. Fournier. Chicago: University of Chicago Press.
- Porter, James N., Jr. 1967. "Consumption Patterns of Professors and Businessmen: A Pilot Study of Conspicuous Consumption and Status." *Sociological Inquiry* 37: 255–82.
- Raftery, Adrian E. 1986. "Choosing Models for Cross-Classifications." *American Sociological Review* 51:146–47.
- Rindfuss, Ronald R., C. Gray Swicegood, and Rachel A. Rosenfeld. 1987. "Disorder in the Life Course: How Common and Does it Matter?" *American Sociological Review* 52:785–801.
- Rubin, Zick. 1968. "Do American Women Marry Up?" *American Sociological Review* 33:750–60.
- Schoen, Robert, and John Wooldredge. 1989. "Marriage Choices in North Carolina and Virginia, 1969–71 and 1979–81." *Journal of Marriage and the Family* 51: 465–81.
- Schoen, Robert, and Robin M. Weinick. 1993. "Partner Choice in Marriages and Cohabitations." *Journal of Marriage and the Family* 55:408–14.
- Stevens, Gillian, and Joo Hyun Cho. 1985. "Socioeconomic Indexes and the New 1980 Census Occupational Classification Scheme." *Social Science Quarterly* 14:142–68.
- Stevens, Gillian, Dawn Owens, and Eric C. Schaefer. 1990. "Education and Attractiveness in Marriage Choices." *Social Psychology Quarterly* 53:6–70.
- Sweet, James A., and Larry L. Bumpass. 1987. *American Families and Households*. New York: Russell Sage.
- Treiman, Donald J. 1977. *Occupational Prestige in Comparative Perspective*. New York: Academic Press.

## American Journal of Sociology

- Tyree, Andrea, and Judith Treas. 1974. "The Occupational and Marital Mobility of Women." *American Sociological Review* 39:293–302.
- Ultee, Wout C., and Ruud Luijkx. 1990. "Educational Heterogamy and Father-to-Son Occupational Mobility in 23 Industrial Nations: General Societal Openness or Compensatory Strategies of Reproduction." *European Sociological Review* 6: 125–49.
- Verbrugge, Lois M. 1977. "The Structure of Adult Friendship Choices." *Social Forces* 56:576–97.
- Werner, Carol, and Pat Parmelee. 1979. "Similarity of Activity Preferences among Friends: Those Who Play Together Stay Together." *Social Psychological Quarterly* 42:62–66.
- Winch, Robert F. 1958. *Mate Selection: A Study of Complementary Needs*. New York: Harper.