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Status, Autonomy, and Training in Occupational Mobility[1]

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The effect of socioeconomic background on occupational attainment is well established. But the effect of status does not account for all of the association between occupational origins and destinations. The amount of autonomy accorded to workers and the degree of specialization in the training required of them are also important for mobility. Men whose fathers were entrepreneurs or were employed in other positions that require little supervision are more likely than men whose fathers were closely supervised to enter occupations that offer at least some degree of on-the-job autonomy. Autonomy and training are especially important for immobility. Men whose fathers were autonomous or specially trained are more likely than other men to be immobile. A model incorporating the effects of socioeconomic status, on-the-job autonomy, and specialized training is fitted to the 1962 and 1973 Occupational Changes in a Generation data. The model fits the data well with few parameters. Subpopulations defined by race, age, and education are also analyzed. The analysis provides new insight into the weakening of the association between origins and destinations between 1962 and 1973, the convergence of black and white mobility patterns, and the role of education as an intervening variable in the mobility process.

Social mobility is one of the most studied topics in all of social science. Interest in mobility goes back at least to the turn of the century. Sorokin (1927, pp. 416–17) catalogs 23 mobility tables calculated for data collected between 1900 and 1925. The earliest are French tables for 1900 reported by Limousin and Coste. Yet new findings and analytical developments come faster and more furiously in this field than in any other in sociology.

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This intense activity is warranted by mobility's place in our understanding of social stratification. Because the structure of intergenerational mobility gauges the persistence of material advantage from one generation to the next, answers to fundamental questions about opportunity, class, and privilege depend on the correct specification of that structure.

Until recently, the focus of mobility research has been the occupational mobility matrix as a self-contained entity. The intergenerational flow of manpower from one occupational group to another, the prevalence of occupational immobility, and the rank ordering of occupational categories have dominated this field. Blau and Duncan (1967, p. 8) characterized the thrust of prior mobility studies this way: "Although the results of this analysis describing the mobility pattern occasionally related to other variables, such as education or fertility, the major preoccupation is typically the internal analysis of mobility tables, and relatively little attention is devoted to the systematic investigation of the relationships between other factors and occupational mobility. The tendency to conceive of mobility as a single variable and examine it largely without relating it to other variables has severely restricted the fruitfulness of mobility research."

In the 1960s, Duncan and his associates revolutionized stratification research by "decomposing the concept of occupational mobility into its constituent elements: social or career origins and occupational destinations" (Blau and Duncan 1967, p. 9). The decomposition allowed researchers to express the relations in the mobility table as a causal relation. Other variables were added to the causal sequence, and elaborate models containing a dozen or more variables were proposed (e.g., Sewell and Hauser 1980). These developments led to a divergence of mobility research on the one hand and attainment research on the other. Mobility research continues to mine for nuggets of new data within the mobility table itself, while attainment research continues the search for intervening variables.

Several developments published in this *Journal* in the past five years have bridged the gap between mobility research and status-attainment research. Duncan's (1979) uniform association model and its applications by Breiger (1981), Yamaguchi (1982), and Logan (1983) foster a reconciliation because they share with attainment research the causal imagery of origins determining destinations and because they capture the effects of socioeconomic status within the mobility table in a single parameter or a small number of additional parameters. The power gained by employing few parameters is the potential for multivariate analysis. Yamaguchi and Logan both utilize this aspect of scaled models to incorporate the effects of education on the mobility process. If too many parameters are used for modeling mobility, the sampling errors of those parameters become very large when the cross-classification is elaborated to many dimensions. In contrast, comparing a few mobility parameters across

categories of year, cohort, color, or education is a powerful tool that gets us back to the trail blazed by Blau and Duncan, that is, it "enables us to dissect the process of occupational mobility by determining how various factors condition the influence of origins on occupational success" (Blau and Duncan 1967, p. 10).

This paper contributes three modeling innovations which lead to new substantive results. The first innovation is the use of category scores with more substantive content than in the previous applications of the uniform association model. This innovation leads to the second—the introduction of dimensions other than socioeconomic status. In this paper autonomy and training are added to socioeconomic status as dimensions of the association between father's occupation and son's current occupation. These two together lead to the third. A perennial problem in mobility modeling is a greater than expected number of cases along the diagonal of the table. This paper combines its scaling and multivariate aspects to account for most of this surplus. Together these modeling innovations produce new insights into the weakening of the association between fathers' and sons' occupations over the 1962–73 interval; the convergence of black and white mobility patterns; age and cohort variation in status, autonomy, and training; and the intervening role of education in the attainment process.

THE NEW GENERATION OF MOBILITY MODELS

Duncan's uniform association model specifies a single parameter that "shifts the destination distribution upward or downward [in socioeconomic status] as the origin is shifted up or down" (Duncan 1979, p. 802). This parameter is the only one that applies to the association between origins and destinations in the mobility table, although other parameters are included in the model to fit the marginal distributions of fathers and sons. The uniform association parameter is similar to the regression coefficient in that it produces a linear and additive relationship between independent and dependent variables—in this case fathers' status and the log-odds on sons' attaining a higher status occupation, respectively. Duncan stresses the similarity (see also Haberman 1979, pp. 396–97; Logan 1983; Hout 1983). An important distinction between uniform association and regression that is implicit in Duncan's formulation though not mentioned by him is that, while the regression coefficient predicts the mean status of sons at each level of father's status under the assumption that the error variance is constant throughout the range of the independent variable, the uniform association parameter predicts the entire distribution of the dependent variable across the given categories.

Duncan applies the uniform association model to mobility in Britain

in 1949. It does not fit at conventional levels of significance. The main source of poor fit is immobility; more sons fall into their fathers' occupational categories than the model predicts. Deleting the diagonal cells from the table[2] produces a significant improvement, but the linearity assumption must be relaxed by application of the row-effects model before an acceptable fit is attained (see also Goodman 1979).

Breiger (1981) applies the uniform association and row-effects models to American mobility data. He finds that, although the models do not fit the full 17 × 17 tables he starts with, combining certain categories produces an acceptable fit for the row-effects model. Goodman (1981) criticizes the criteria Breiger uses to combine categories. In short, Breiger's method leads to combinations of categories that are not statistically independent and thus to an understatement of the association between origins and destinations. Goodman's criteria require that the odds on origin i versus another origin i' must be constant for all destinations except i and i', while the corresponding odds for destination i versus destination i' must be constant for all origins except i and i'. Breiger's criteria allow substantial variation in those odds. His criteria are much weaker; they require constant odds only within the intersections of class aggregates formed by collapsing categories. Because of this approach, Breiger masks the part of the association that shifts the odds from class to class (see Hout 1983, pp. 72–76).

Yamaguchi (1982) introduces a distinction between generalized and specific resources for occupational mobility. Education is his example of a generalized resource. It increases the odds on higher status destinations for men of all social origins. Specific resources like property, however, affect only some combinations of origins and destinations. By fitting special parameters to cells linked by specific resources, Yamaguchi obtains an acceptable fit of his modified model to the American data. His contribution is the introduction of concerns that are independent of class and status into the attempt to model the mobility table. This paper advances his contribution by generalizing aspects that he considers specific. The generalized autonomy and training effects introduced here account for a portion of the association between origins and destinations that is essentially the same as that fitted by his specific effects.

Logan (1983) develops partial uniform association models for three-way cross-classifications of origins, destinations, and education. His results are very similar to those of attainment researchers who use regression methods. He does note significant residual immobility that is not attributable to education. The most serious drawback of Logan's research is

[2] Fitting a parameter to each diagonal cell provides the same result as deleting diagonal cells.

the level of aggregation that he must use because his sample has relatively few cases. This paper extends his research by examining partial mobility tables that contain more occupational detail and dimensions other than socioeconomic status.

THE DIMENSIONS OF OCCUPATIONAL MOBILITY

Socioeconomic status is the most important dimension of occupational mobility. Indeed, much of what we know about the distribution of status in American society comes directly or indirectly from the study of occupational mobility. Even researchers who take pains to model mobility tables without reference to the order of the categories (e.g., Hauser et al. 1975*a*, 1975*b*; Hauser 1978, 1979; Featherman and Hauser 1978, pp. 76–78, 147–50; Goldthorpe, Llewellyn, and Payne 1980) refer to status-related concepts such as "upward" and "downward mobility." In short, the first objective in any mobility study is to determine how socioeconomic origins influence socioeconomic destinations.

Granting the primacy of status in occupational mobility does not deny the possibility that other aspects of occupational roles may also influence mobility. In fact, evidence abounds that socioeconomic status does not exhaust the systematic covariance between origins and destinations in the mobility table (Blau and Duncan 1967, pp. 67–75; Klatzky and Hodge 1971; Hope 1972; Horan 1974; Vannemann 1977; Featherman and Hauser 1978, pp. 30–37; Spaeth 1979). Although previous studies of nonstatus dimensions of mobility differ among themselves in sample and method, they all find two factors that contribute to the pattern of mobility. The first dimension in each analysis is clearly socioeconomic status. The substance of the second dimension is much less clear. After reviewing their results and many of the others cited here, Featherman and Hauser (1978, p. 34) conclude that the second dimension—whatever it is—is "weak and volatile with respect to measurement and analytic procedures," and they advocate closing the issue.

Closing the issue of a second dimension of occupational mobility is premature. Despite researchers' difficulties in finding substantive interpretations for their results, each analysis has turned up something in the pattern of mobility that is orthogonal to socioeconomic status. Although the results may have been "volatile," the volatility may be an artifact of method more than a finding of substance. All of the statistical models applied to the multidimensional problem to date—smallest-space analysis, canonical correlation, and cluster analysis—are exploratory; they give the researcher no control over the dimensions to be extracted from the data. Under those circumstances, interpretation of the results is closer to divination than to hypothesis testing.

Furthermore, the methods generate second dimensions that are orthogonal to the first dimension by construction. The possibility that any variables that are important for mobility are uncorrelated with socioeconomic status is remote. So it is no great surprise that the substance of second-dimension results is difficult to divine; researchers are not looking at the second variable itself but at its residual stripped of covariance with socioeconomic status. Nor is it surprising that results differ according to the data and methods used. The correlation between status and the second variable is almost sure to differ from data set to data set, and each method purges that correlation somewhat differently in the course of calculating the coefficients which form the basis of interpretations.

The point of this paper is to specify the substance of the second dimension a priori and to develop a model that realizes the given specification. This is accomplished by a confirmatory approach that posits a second dimension and submits it to the data for acceptance or rejection.

The second dimension to be tested is autonomy. Autonomy in the form of control over the work process is a fundamental part of occupational differentiation in modern society. Some workers are supervised by others as they do their jobs. Other workers are relatively free of the constraints of supervision. The proposition tested here is that the odds on a son being in a position of autonomy (freedom from supervision) instead of a position that requires supervision increase as the autonomy of his father's occupation increases.[3]

Role modeling by the son leads to the association between father's autonomy and son's autonomy. The son first learns about earning a living by observing his father. While specific skills are not acquired in this way by most sons, an orientation toward what makes up "earning a living" is acquired. Does earning a living mean setting up shop and living on the proceeds, or does it mean finding a good, secure position with a reliable employer? Miller and Swanson (1958) label these contrasting outlooks entrepreneurial and bureaucratic, respectively. They find that the entrepreneurial orientation toward self-sufficiency or the bureaucratic orientation that favors security is a basic outlook developed at an early age. More important, placement on the entrepreneurial-bureaucratic spectrum is correlated with the objective conditions of the father's employment. The more entrepreneurial a man's occupation is, the more self-sufficient is his outlook (Miller and Swanson 1958).

The autonomy of the father's job affects the son not only directly through role modeling but also indirectly through child-rearing practices

[3] Of course, not all workers with supervisors are low in autonomy (Hall 1968). Factors other than supervision are important for autonomy, too, but most of those influences are controlled by including socioeconomic status and specific vocational preparation in the model.

and values that parents hold for their children (Miller and Swanson 1958; Kohn 1969). In entrepreneurial households children are raised to be self-sufficient; in bureaucratic households social skills are favored. Each type of family sees its goal as instrumental for occupational success. And it is. Entrepreneurs must be self-sufficient; bureaucrats must be adroit in interpersonal dealings.

Kohn (1969; Kohn and Schooler 1969) elaborates this work, concluding that, for socialization and self-concept, autonomy is a more important dimension of occupation than is socioeconomic status: "Occupational position matters for values and orientations because it determines the conditions of self-direction that jobs provide or preclude. . . . In industrial society, where occupation is central to [workers'] lives, occupational experiences that facilitate or deter the exercise of self-direction permeate their views, not only of work and of their role in work, but also of the world and of self" (Kohn and Schooler 1969, p. 677). Friends and associates of the parents might lessen some of the effects of the father as a role model by serving as alternative role models were it not for the fact that workers select their social contacts from their own side of the entrepreneurial-bureaucratic divide (Laumann 1966, 1973).

Of course, the effects of autonomy are material as well as psychological. Fathers with their own business or professional practice may assist sons with gifts, loans, and access to commercial credit to a greater extent than men more dependent on salary income. Although most men would like to help their sons, ready access to cash and credit is one of the fruits of autonomy. In short, capital assets and the freedom to use them increase the odds on autonomy for the sons of self-employed and similarly autonomous fathers relative to the same odds for the sons of salaried workers at the same level of income.

Perhaps other researchers would consider variables other than autonomy important for mobility.[4] Autonomy was selected for this analysis for a combination of theoretical and empirical reasons. Mills (1946) marks autonomy as crucial to the distinction between the "old" and "new" middle classes—the entrepreneurs and independent professionals, on the one hand, and the salaried white-collar workers, on the other. The entrepreneurial/bureaucratic distinction is identified by Lipset and Bendix (1952) as an important facet of intragenerational mobility. Blau and Duncan's (1967, pp. 67–73) concepts of "intuition" and "rational principles" are consonant with the entrepreneurial/bureaucratic distinction of Mills, Lipset and Bendix, Miller and Swanson, and Kohn and Schooler.

Another approach that has arrived at this destination is that of Kluegel

[4] The choice of independent variables is not limited to status and one other variable. The model can estimate the effects of up to $R - 1$ dimensions (where R is the number of rows in the table).

(1978), Spaeth (1979), Wolf and Fligstein (1979*a*, 1979*b*), and Kerckhoff, Campbell, and Trott (1982). All are concerned with the inability of occupational status to account for aspects of occupational differences in earnings. Their findings show consistently that, while autonomy (and related concepts like power and authority) is correlated with status, it has independent effects on earnings. The research in this paper extends this line of work by specifying the intergenerational component of autonomy.

IMMOBILITY

Immobility presents theories and models of social mobility with serious problems. The orientation of mobility theories and models is toward change. Yet a significant number of any cohort follow their fathers' footsteps into the same or similar occupations. Mover-stayer models (Spilerman 1972; Singer and Spilerman 1974, 1976; Clogg 1981), quasi-independence models (Goodman 1965, 1969, 1972; Pullum 1975), quasi-uniform association and related models (Duncan 1979; Goodman 1979; Breiger 1981), and the diamond model (Hope 1982) are all ad hoc treatments of immobility. While these models achieve their goal of estimating mobility parameters that are not contaminated by residual immobility, they are unsatisfying because they control for immobility without accounting for it.

The model proposed in this paper uses two independent variables to predict the amount of immobility for a given occupational category. The two explanatory variables are autonomy and training. Questions about the importance of these variables for immobility are among the oldest concerns in mobility research. Sorokin (1927, p. 419) quotes a 1908 Italian mobility study: "F. Chessa in his *Trasmissione Ereditaria dei Professioni* came to the tentative conclusion that 'hereditary transmission of occupation is stronger in those occupations which demand a greater technical experience and specialization or a more or less large amount of money for their performance than in the occupations which do not demand either of these conditions.' . . . These statements . . . however, are still only tentative and need to be tested by further studies." Autonomy is included as a cause of immobility under the supposition that the effects described above intensify for occupations most similar to the father's own occupation. Role modeling and material support are probably both more effective at short range. The other predictor of immobility is training—not how much but how specialized the training required by an occupation. Specialization is one of the hallmarks of postindustrial society (Bell 1973). The leading indicator of specialization is the requisite amount of training that precedes employment. Some occupations require a great deal of specific vocational preparation, for example, surgeon, carpenter, or computer programmer. Others require more general skills, for example, jour-

nalist, machine operator, or farm laborer. Although it is highly correlated with general educational requirements of an occupation (Cain and Treiman 1981), specific vocational preparation is proposed as an important independent influence on immobility.

The effect probably works through socialization and through occupational networks. Whether a father is a generalist or a specialist at work influences his son's orientation (Kohn 1969). That is the socialization part. The network part of the training effect works through the tendency of specialists to band together in networks held together by formal organizations like professional associations and craft unions. These networks provide sons of incumbents with useful information about training opportunities and job openings, information not available to other men's sons. More important, they inculcate occupational subcultures (Collins 1975, p. 62). A certain amount of nepotism can be expected to boost immobility among the sons of specialists, too. The effect of clout is not given its due in most stratification research. Here it is treated by inference only, but at least it is not ignored.

This substantive approach to scaling the relative size of diagonal cells to variables of interest—such as autonomy and training—is an advance over prevailing practice. Many studies delete the diagonal or, equivalently, treat each diagonal cell as a special case with its own parameter (Goodman 1965, 1969, 1972, 1979; Blau and Duncan 1967, pp. 44–48; Hauser et al. 1975*a*, 1975*b*; Featherman and Hauser 1978, pp. 76ff; Duncan 1979; Clogg 1981; Breiger 1981). Duncan (1979) and others have decried the ad hoc nature of this approach. Clogg (1981), however, argues that each diagonal cell contains a residual class of "stayers"—individuals who will not change their original category owing to unspecified social inertia. This is not a viable interpretation. It has both conceptual and methodological flaws. First, the concept of social inertia, vague as it is, hardly applies to most of the excess immobility that is observed. For example, consider the occupations "judge" and "high school teacher." In most classifications, judges and high school teachers are coded in the same category: salaried professional, upper nonmanual, white collar, and so on. Yet in what sense is the son of a judge who becomes a high school teacher exhibiting social inertia? In principle, statistical models could be developed to adjust for this phenomenon somehow, but so far they have not been. The proportion of stayers in the diagonal cells of a mobility table should increase as the number of occupational categories is increased because more categories means less heterogeneity. In practice, the opposite occurs. As the classification is refined, leaving true stayers as a higher proportion of sons in the diagonal cells, the estimated proportions of stayers decline (e.g., Clogg's [1981] comparison of 5×5 and 8×8 tables for Britain). Clogg is not to be singled out on this count. Other applications

of the mover-stayer concept (Spilerman 1972; Singer and Spilerman 1974, 1976) have the same problem of heterogeneity and implausible estimates.

THE MODEL

The model proposed here is a generalization of Duncan's (1979) uniform association model. The uniform association model can be written in terms of expected frequencies, odds, or odds ratios (Goodman 1979). Expected frequencies are given by the log-linear equation

$$\log(F_{ij}) = a_0 + a_{1i} + a_{2j} + bX_iX_j, \tag{1}$$

where $\Sigma_i a_{1i} = \Sigma_j a_{2j} = 0$, $\log(F_{ij})$ is the natural logarithm of the expected count in row i and column j; the a_{1i} fit the row marginals, the a_{2j} fit the column marginals, b is the uniform association parameter, and $X_iX_j = ij$ (the product of the row and column numbers). As Haberman (1974) points out, using the row and column numbers as scores is an arbitrary choice; other scores could be used if other information made a substitution reasonable. For example, we could set $X_iX_j = S_iS_j$ (the product of the Duncan [1961] SEI scores for categories i and j). This is the first extension of the uniform association model adopted here. Haberman calls it the linear-by-linear interaction model.

Further extensions of the linear-by-linear interaction model are proposed. First, a second linear-by-linear term is added to capture the hypothesized effect of autonomy on mobility. Furthermore, a set of terms is added to capture the hypothesized effects of autonomy and training on immobility:

$$\log(F_{ij}) = a_0 + a_{1i} + a_{2j} + b_1S_iS_j + b_2A_iA_j + d_1D_iS_i^2 + d_2D_iA_i^2 + d_3D_iT_i, \tag{2}$$

where A_i is autonomy in occupation i, T_i is training in occupation i, and $D_i = 1$ if $i = j$ and 0 otherwise.[5] Expected log-odds on one destination (j) versus another (j') under this extended model of status, autonomy, and training (referred to hereafter as the SAT model) are given by

$$\begin{aligned}\Phi_{ij} &= \log(F_{ij}/F_{ij'}) \\ &= (a_{2j} - a_{2j'}) + b_1S_i(S_j - S_{j'}) + b_2A_i(A_j - A_{j'}) \\ &\quad + d_1D_iS_i^2 + d_2D_iA_i^2 + d_3D_iT_i,\end{aligned} \tag{3}$$

[5] Note that eq. (2) includes the effect of status on immobility despite the lack of justification for such an effect in the text. This term is included as a control for the correlation between general educational requirements of an occupation and the specialized training of substantive interest.

where $D_i = 1$ if $i = j$, -1 if $i = j'$, and 0 otherwise. Equation (3) states that for the son of a man in occupation i, the odds on one destination relative to another are a log-linear function of the status and autonomy of that occupational origin, the difference between the statuses of the two destinations compared, the difference in autonomy between the two destinations compared, and the expected rate of immobility for men from that origin which is given by the status, autonomy, and training of the origin. In the tables, the b's are labeled "scaled-association" parameters and the d's are labeled "scaled-diagonal" parameters.

DATA AND METHODS

Data for this paper are from the Occupational Changes in a Generation (OCG-I) survey directed by Blau and Duncan (1967) and its replication (OCG-II) directed by Featherman and Hauser (1978). Sampling, measurement, and other technical information are available from those sources. Data are weighted to approximate the counts that might be expected under simple random sampling (Featherman and Hauser 1978, pp. 507–14). The counts obtained in this manner are referred to as "effective counts."

The occupations analyzed in this paper are father's (or other head's) occupation at the time when the respondent was 16 years old and the respondent's occupation at the time of the survey. Both father's and respondent's current occupations are identically coded into 1960 census codes (for both 1962 and 1973) and recoded to the 17-category classification introduced by Blau and Duncan (1967, pp. 23ff) and used in nearly all of the previous attempts to analyze nonstatus dimensions of mobility.

The scores for status, autonomy, and training are means and odds for men in the 17 occupational categories during the 1970s. *Status* scores (S_i) are the means for Duncan's (1961) socioeconomic index (SEI) for OCG-II respondents' current occupations in 1973. The other two variables are not available in the OCG data. Data from the pooled 1972–80 NORC General Social Survey (National Opinion Research Center [NORC] 1980) are used. Male respondents were selected on the basis of age and employment to construct a sample of men 20–64 years old in the experienced civilian labor force, so that these measures refer to the same population as the status scores and mobility tables. *Autonomy* scores (A_i) are derived from answers to a question which asks whether the respondent is supervised on the job. Responses are coded as the odds on having a supervisor.[6] *Training* scores (T_i) are the mean of the specific vocational preparation (SVP) for occupations in the 17 occupational categories (Temme 1975).

[6] The square of odds on having a supervisor is multiplied by -1 so that d_2 has the sign appropriate to *autonomy*.

Scores used in this analysis are shown in Appendix table A1.

Preliminary analyses showed that cells involving farm occupations have significantly larger residuals than cells involving other occupations. Instead of deleting farm-origin men, as is often done (e.g., Blau and Duncan 1967; see p. 177 for their reasons), I add a set of four dummy variables to equations (2) and (3). These dummy variables apply to classes of interstratum mobility into and out of farming. The cells to which each of the dummy variables apply are given in a note to table 2 below. Note that the model is still symmetrical because each dummy variable applies to both farm origins and destinations. Note also that coefficients are in metric form, so, whereas the coefficients for some farm dummies are greater than 1.0 and the status coefficients are small, the scales are not comparable, nor are the coefficients.[7]

RESULTS

Table 1 assesses the fit, to the two replicate surveys, of the SAT model in equations (2) and (3) as augmented by the dummy variables for farm. The column heading L_0^2 refers to the model of independence. The large numbers in this column attest to the substantial association between father's and son's occupations. The heading L_m^2 refers to the SAT model. The numbers in this column are much smaller than those in the L_o^2 column, indicating that the model accounts for most of the association in each year: 86.9% in 1962 and 85.8% in 1973. Even though the model fails to attain the conventional level of significance, it is quite powerful, capturing all but about 15% of the association with just nine parameters. Further evidence of the goodness of fit is the small index of dissimiliarity

TABLE 1

GOODNESS OF FIT FOR SAT MODEL BY YEAR: MEN 20–64 YEARS OLD

Year	L_0^2	L_m^2	$L_0^2 - L_m^2$	Δ	N
With diagonal:					
1962	3,462.51* (256)	453.16* (247)	3,009.35* (9)	.033	10,740
1973	4,868.08* (256)	691.23* (247)	4,176.85* (9)	032	21,635
Without diagonal:					
1962	1,800.51* (239)	411.53* (233)	1,388.98* (6)	.031	10,740
1973	2,455.05* (239)	620.82* (233)	1,834.23* (6)	.029	21,635

NOTE.—Numbers in parentheses are degrees of freedom
* $P < .05$.

[7] Models were fitted using FREQ (Haberman 1979, pp. 571–85).

between effective counts and those expected under the model for each year. The Δs show that only 3% of the effective count is misclassified by the model.

To test whether the approximately 15% of the association not accounted for by the SAT model is attributable to failure of the attempt to model immobility, I fitted a quasi-SAT model to a table without diagonal cells. The results in the bottom panel of table 1 show that the diagonal does not contribute more than its share to the residual. While roughly half of the association between father's and son's occupation lies on the diagonal,[8] less than one-fifth of the residual association is on the diagonal. Deleting the diagonal improves the fit by less than two percentage points, and it reduces Δ in each year by at most .003. Nonetheless, the fit of the quasi-SAT model is a significant improvement over that of the SAT model,[9] so parameter estimates for both models are presented.

Parameter estimates are in table 2. They show very clearly the strength of the model. Each variable is significant, and each coefficient has the expected sign. As expected, the results show that an increase in origin status increases the odds on higher destination status. A very important result is the significant weakening of the status effect between 1962 and 1973. In their extensive analysis of the same data, Featherman and Hauser (1978, pp. 137–38, 217) conclude that the link between the generations loosened over this period, but they were unable to pin down the nature of the loosening. The results given here suggest that the change was exactly the kind of across-the-board reduction to which their methods are relatively insensitive. While the blocking methods that they apply are sensitive to threshold effects and other nonlinearities, a linear shift may not be detectable. It is interesting to note that their regression analyses do pick up the linear shift (Featherman and Hauser 1978, pp. 227–32).

Autonomy also has a strong, positive effect. Although the value of the autonomy coefficient for 1973 is less than that for 1962, the difference is not significant at the .05 level. Thus, part of the reason that uniform association, quasi-uniform association, and their modifications do not fit the OCG data is that mobility in the United States is multidimensional. A complementary interpretation focuses on the occupational classification employed: these results also indicate that the 17-category scheme is not a unidimensional classification. Future mobility research might be directed toward the development of a new classification scheme that is a unidimensional status hierarchy.

[8] The proportion of the association on the diagonal is one minus the ratio of L_0^2 without the diagonal to L_0^2 with the diagonal: for 1962 $(1 - 1{,}800.51/3{,}462.51) = .480$ and for 1973 $(1 - 2{,}455.05/4{,}868.08) = .496$.

[9] The test is the difference between L_m^2 with and without the diagonal: for 1962 $L_m^2 = 41.63$ ($df = 14$, $P < .05$) and for 1973 $L_m^2 = 70.41$ ($df = 14$, $P < .05$).

TABLE 2

PARAMETER ESTIMATES FOR SAT MODEL BY YEAR: MEN 20–64 YEARS OLD

PARAMETER	WITH DIAGONAL		WITHOUT DIAGONAL	
	1962	1973	1962	1973
Scaled association:				
Status (b_1)[a]	.780*	.561*	.772*	.557*
	(.032)	(.019)	(.032)	(.019)
Autonomy (b_2)[a]	.398*	.331*	.396*	.328*
	(.037)	(.027)	(.037)	(.028)
Scaled diagonal:				
Status (d_1)[a]	−.161*	−.136*	. . .	. . .
	(.023)	(.015)		
Autonomy (d_2)[b]	.153*	.137*	. . .	. . .
	(.034)	(.024)		
Training (d_3)	.158*	.151*	. . .	. .
	(.012)	(.008)		
Farm with:[c]				
Upper nonmanual	−1.163*	−1.097*	−1.175*	−1.069*
	(.086)	(.062)	(.097)	(.070)
Lower nonmanual	−.854*	−1.001*	−.867*	−.960*
	(.078)	(.067)	(.089)	(.074)
Upper manual	−.733*	−.719*	−.736*	−.697*
	(.071)	(.056)	(.081)	(.063)
Lower manual	−.692*	−.744*	−.689*	−.703*
	(.063)	(.051)	(.074)	(.059)

NOTE —Numbers in parentheses are standard errors

[a] Coefficients multiplied by 100.

[b] Coefficients multiplied by 10

[c] The occupational categories are: upper nonmanual = professionals, managers, and nonretail salesmen, lower nonmanual = proprietors, clerks, and retail salesmen, upper manual = craftsmen (all industries); lower manual = service workers, operatives, and laborers (all industries); and farm = farmers, farm managers, and farm laborers

* $P < .05$.

The effects of autonomy and training on immobility are positive, as expected. They show no signs of weakening between 1962 and 1973. The hypotheses that role modeling and specialization are important for immobility are supported by these data. The negative effect of status on immobility is not an expected result. Status is among the diagonal variables only as a control for the general educational component of training, so none of the specific hypotheses guiding this analysis is affected by this unanticipated result. Part of the negative effect of status is attributable to high immobility among farmers' sons (i.e., immobility net of marginal shifts away from farming). There is more to this effect than farming, though, as it remains significant when farm-origin men are deleted. Another approach to interpreting the diagonal is the estimation of modified

immobility ratios (Duncan 1979). These modified immobility ratios are obtained by deleting diagonal cells and fitting the off-diagonal parts of the model. Estimates of modified immobility ratios are presented in Appendix table A2.

The dummy variables for farming indicate that, net of the marginal shifts away from farming and the general pattern of status and autonomy effects, there is less movement out of the farm stratum than would otherwise be expected. There is also less movement into farming than would otherwise be expected. The effects are neatly stratified. The effect is stronger for nonmanual occupations (the difference between upper and lower nonmanual is not significant) than for manual occupations.

In discussing the fit of the model, I noted that deleting the diagonal improved the fit slightly but significantly. Deleting the diagonal does not greatly affect parameter estimates. Estimates of the status and autonomy effects are insensitive to treatment of the diagonal. Nor do the farm effects change much. Diagonal cells are retained for the remainder of the analysis.

CONVERGING MOBILITY OF BLACKS AND WHITES

The effect of father's status on son's status is weaker for black men than for white men (Blau and Duncan 1967, pp. 208–27; Duncan 1968; Featherman and Hauser 1976). For black men this weak association results from a kind of perverse openness of mobility channels that balances upward and downward mobility within the narrow range of statuses occupied by most black men. Although Featherman and Hauser (1976) find evidence that the color gap in returns to origins (and schooling) is narrowing, "differentials in returns to education and family resources remain" (p. 647). This pattern is particularly invidious because it so often sorts black men into industries and authority relations with the lowest returns to education (Stolzenberg 1975, 1978; Wright and Perrone 1977). In this section, new insights into differential mobility chances are gleaned from the SAT model. Wilson (1978) hypothesizes that increased opportunities for blacks have led to a stronger association between socioeconomic origins and destination among blacks, but his data do not support his contention (see Hout 1984).

Tables 3 and 4 give the goodness of fit and parameter estimates for the SAT model by race (black and white; men of other races have been excluded owing to small numbers of cases) and year. Since the OCG data are the primary source of the findings summarized in the preceding paragraphs, it is not surprising to find a pattern in the status results that is similar to what Featherman and Hauser found using regression models. The racial gap in the effect of status on mobility closes between 1962 and 1973 because of countercurrents in the white and black populations. The

TABLE 3

GOODNESS OF FIT FOR
SAT MODEL BY RACE AND YEAR· MEN 20–64 YEARS OLD

Year and Race	L_0^2 (df = 256)	L_m^2 (df = 247)	$L_0^2 - L_m^2$ (df = 9)	Δ	N
1962.					
White...	3,035.92*	422.54*	2,613.38*	035	9,795
Black.....	307.92*	186 09	121.83*	068	822
1973:					
White..... .	4,314 27*	678.67*	3,635 60*	.034	19,478
Black.....	362.81*	153.61	209.20*	.042	1,875

* $P < 05$

TABLE 4

PARAMETER ESTIMATES FOR
SAT MODEL BY RACE AND YEAR. MEN 20–64 YEARS OLD

	1962		1973	
	White	Black	White	Black
Scaled association:				
Status[a]	.761*	.247	.527*	.499*
	(.033)	(.168)	(.020)	(.091)
Autonomy[a]	.372*	.671*	.335*	.254*
	(.038)	(.188)	(.028)	(.110)
Scaled diagonal:				
Status[a]	−.154*	.020	−.132*	−.032
	(.024)	(.151)	(.016)	(.075)
Autonomy[b]	.151*	.110	.127*	.133
	(.035)	(.168)	(.025)	(.102)
Training	.156*	.069	.148*	.100*
	(.012)	(.045)	(.009)	(.033)
Farm with:				
Upper nonmanual	−1.074*	−2.498*	−1.082*	−1.764*
	(.090)	(.530)	(.064)	(.265)
Lower nonmanual	−.796	−1.159*	−.969*	−1.480*
	(.082)	(.335)	(.070)	(.247)
Upper manual	−.675*	−1.163*	−.717*	−.733*
	(.075)	(.286)	(.058)	(.210)
Lower manual	−.731*	−.790*	−.793*	−.862*
	(.068)	(.194)	(.054)	(.181)

NOTE.—Numbers in parentheses are standard errors
[a] Coefficients multiplied by 100.
[b] Coefficients multiplied by 10.
* $P < .05$.

effect of status declines for whites while it increases for blacks, reducing the differential in the process.

Autonomy affects the mobility of white men in both years but affects the mobility of black men only in 1962 (although the autonomy coefficient for blacks in 1973 is not significantly different from that of whites, it is not significantly different from zero either). Detailed examination of the 1962 father-to-current-job table for black males (not shown) reveals that this effect is due to intergenerational circulation of black men in two distinct channels. In one channel are men whose fathers worked in manufacturing. These men circulate among manufacturing occupations (with no effect of father's skill level on son's skill level). In the other channel are men with farm origins. They are likely to be working in farming or other nonmanufacturing occupations. Farming and other nonmanufacturing occupations have high autonomy relative to manufacturing jobs. Thus the existence of these channels is responsible for the strong autonomy effect in 1962. By 1973 farm origins are much less common (down from 46% to 17% of sons), and the remaining men of farm origins are recruited into manufacturing occupations as well as into nonmanufacturing occupations. Furthermore, nonmanufacturing occupations recruit more from manufacturing in 1973.

Blacks have very low rates of net mobility (Featherman and Hauser, 1978, pp. 325–27). The low rates are due to high circulation mobility rather than to immobility. This is reflected in the near lack of significant diagonal effects. Only the effect of training on immobility in 1973 is significant.

The discussion to this point understates the extent to which mobility chances of black and white men converge between 1962 and 1973. Convergence is evident not only in the status dimension—a conclusion already reached by Featherman and Hauser (1976, 1978, p. 128)—but in other dimensions as well. Hout (1984) shows that the convergence of status effects is attributable to upward mobility between 1962 and 1973, not to the entry of new workers into higher-status occupations. The effects of autonomy on mobility and immobility are not significantly different from the corresponding effects for whites. Nor is the difference between blacks and whites in the effect of training on immobility significant. In fact, recalculating L_m^2 from expected frequencies for black males that are obtained by substituting the values of the five SAT parameters estimated for whites into the equation for blacks increases L_m^2 by only 8.83.

The SAT model fits the data for black males, but it does not fit (at the .05 level) for white males. The indexes of dissimilarity (Δ) for whites show that it does pretty well—misclassifying only about 3.5% of the cases in each year. But the departures from expectation that remain are, nonetheless, significant.

The lack of fit could indicate one of three things. More dimensions may be important, the functional form of the relationships may be misspecified, or the population may not be homogeneous with respect to some aspects of the mobility process. Evidence on black-white differences indicates heterogeneity. Subsequent sections of this paper show heterogeneity by age and education within the white population. These findings do not rule out the first two possibilities, but they do show heterogeneity to be a very important component of the lack of fit in the general population.

AGE AND COHORT DIFFERENCES

Life-cycle differences in the salience of current occupation and cohort differences in the context of the mobility process may well combine to produce heterogeneity among men of different ages in a cross-sectional survey. This heterogeneity can be further enhanced by long-term trends in the structure of the U.S. economy. Circulation mobility may well increase as production becomes concentrated in large-scale, rationally organized enterprises (Stolzenberg 1978; Chandler 1979; Bergesen 1981) and as the economy shifts from the production of goods to the production of services (Bell 1973; Featherman and Hauser 1978, pp. 227–32). In particular, these trends can be expected to weaken the effects of both status and autonomy as scale increases and rational universalism replaces more traditional terms of employment (Treiman 1970; Stinchcombe 1975). Trends in the effect of training are more difficult to anticipate. On the one hand, specialized training is becoming an important component of many jobs in new industries. On the other hand, jobs in older industries are being deskilled. Furthermore, the effect of training on immobility stems in part from the control incumbents have over the labor supply, and that control came under fire in the building trades and the professions between 1962 and 1973.

To assess age, period, and cohort differences in mobility processes (recognizing the intractability of separating the three in this kind of analysis), I divided each sample of white males into 11-year age groups. The unconventional width of the age groups reflects the 11-year gap between surveys. Cohorts may be traced by comparing a coefficient for men in one age group in 1962 with men in the next age group in 1973, for example, men born 1921–31 were 31–41 years old in 1962 and 42–52 years old in 1973. Men 64 or 65 years old are excluded. The results of fitting the SAT model to mobility tables for these age groups appear in tables 5 and 6. To save space, coefficients for the farm dummy variables are not reported.

The SAT model fits the data at the .05 level for white men over 30 years old but not for younger men. The fit for younger men, however, is not much worse; the proportion of cases misclassified is not appreciably

greater for men 30 and under. There is not much pattern to the residuals for 1962. None of the residuals with a z-score (Haberman 1979, pp. 272–75) greater than 1.96 involves more than 20 cases, that is, the significant residuals are all in small cells. For 1973, two interesting patterns appear. First, the sons of upper nonmanual fathers are more likely to have service occupations than the model predicts. Second, immobility is unusual for manufacturing occupations: there is less immobility than expected for craftsmen, more than expected for operatives and laborers.

The coefficients in table 6 show that the intergenerational link between father's and son's status is strong in each age group in both years. It is stronger for men over 30 years old than for younger men. The decrease in the effect of status noted above is apparent in all age groups. The decrease is greater for men younger than 42 than for older men.

Comparing cohorts gives a different perspective on the pattern of changes. The only significant intracohort change is the decrease of .160 for men born 1921–31 (31–41 years old in 1962). The strong effect of status for this cohort is an aberration in an otherwise orderly progression of intercohort changes. From the 1899–1909 cohort to the 1943–53 cohort, the effect of status on mobility loses nearly half its value.

Deciding between a cohort perspective and a period perspective is difficult in general and very difficult in this situation. In this case I lean toward the period interpretation. Given the importance of early promotions for the socioeconomic career coupled with variance in age of labor force entry, the increase in the status effect around 30 years of age is to be expected as part of the life cycle. None of the differences among later

TABLE 5

GOODNESS OF FIT FOR SAT MODEL BY AGE AND YEAR: WHITE MEN

Year and Age (Years)	L_0^2 (df = 256)	L_m^2 (df = 247)	$L_0^2 - L_m^2$ (df = 9)	Δ	N
1962:					
20–30	803.62*	287.92*	515.70*	.060	2,265
31–41	1,140.20*	283.64	856.56*	.054	2,874
42–52	930.29*	254.61	675 68*	.049	2,674
53–63	757.42*	238.37	519.05*	.055	1,886
1973:					
20–30	1,371.48*	381.18*	990.30*	.044	6,147
31–41	1,279.00*	289.16*	989.84*	043	4,666
42–52	1,200.72*	285.55*	915 17*	.041	4,747
53–63	1,073.53*	269.74	803.79*	.046	3,562

* $P <$ 05

TABLE 6

PARAMETER ESTIMATES FOR SAT MODEL BY AGE AND YEAR: WHITE MEN

	SCALED ASSOCIATION				SCALED DIAGONAL					
	Status[a]		Autonomy[a]		Status[a]		Autonomy[b]		Training	
AGE (Years)	1962	1973	1962	1973	1962	1973	1962	1973	1962	1973
20–30	.673*	.449*	.298*	.359*	−.186*	−.171*	.157*	.079	.163*	.162*
	(.062)	(.032)	(.082)	(.053)	(.049)	(.026)	(.070)	(.042)	(.026)	(.016)
31–41	.840*	.641*	.366*	.248*	−.184*	−.142*	.212*	.203*	.184*	.174*
	(.060)	(.042)	(.069)	(.057)	(.042)	(.031)	(.065)	(.052)	(.023)	(.018)
42–52	.776*	.678*	.424*	.322*	−.161*	−.114*	.106	.155*	.143*	.138*
	(.068)	(.046)	(.071)	(.055)	(.051)	(.033)	(.068)	(.053)	(.025)	(.019)
53–63	.826*	.715*	.247*	.395*	−.072	−.100*	.050	.097	.121*	.115*
	(.085)	(.056)	(.089)	(.067)	(.058)	(.040)	(.088)	(.063)	(.029)	(.021)

NOTE.—Numbers in parentheses are standard errors.

[a] Coefficients multiplied by 100.

[b] Coefficients multiplied by 10.

* $P < .05$.

age groups is significant. The period perspective is preferable because it is consistent with all of the data. The cohort perspective must reconcile the size of the effect of status on mobility in the 1921–31 cohort.

The effect of autonomy on mobility is strong and positive for all age groups (cohorts) in both years. The only significant change between 1962 and 1973 is for men 31–41 years old. None of the three intracohort changes is significant. Despite that simplicity, the cohort perspective is not preferable as an explanation of the autonomy effects. The sawtooth pattern of intercohort differences does not correlate with cohort size, wartime mobilization, economic growth at the time of labor force entry, or other variables that might be important for cohort differences.

The effect of status on immobility decreases with age in each year. It does not change over time. There is no pattern to the intercohort differences, and the intracohort changes can be explained with reference to the decreasing effect over the life cycle.

The effect of autonomy on immobility increases first and then decreases with age. The effect of training on immobility appears to decline with age, although none of the differences is significant at the .05 level.

Note that the effects of status, autonomy, and training on immobility all diminish over the life cycle. From this result one might suppose that immobility is less important for older men. In fact, a larger proportion of older men than younger ones are immobile in 1962, and the relationship between immobility and age is curvilinear in 1973 (see table 7). The decrease in immobility between surveys is due almost entirely to the decline of farming.

Two possibilities regarding the persistence of immobility in the face of diminishing diagonal effects suggest themselves: (*a*) immobility of older men is related to a variable or variables not included in the model, or (*b*) the immobility so closely parallels mobility as the latter is related to status and autonomy that no special diagonal parameters are necessary to fit the association between immobility and these variables. If alternative *a*

TABLE 7

IMMOBILITY BY AGE AND YEAR: WHITE MEN

Age (Years)	1962	1973
20–30	14.3	15.3
31–41	16.0	14.6
42–52	16 2	13 4
53–63	18.1	14 6

is right and some excluded variable is responsible for the immobility of older men, its influence will show up in the form of larger residuals for the diagonal cells of older men than of younger men. Standardized residuals for diagonal cells are presented in table 8. These data cast considerable doubt on alternative *a*. The oldest group has only one significant diagonal residual in each year. Alternative *b* is preferable. Scaled diagonal parameters for status and autonomy are needed to capture the pattern of immobility for younger men, but over the course of the socioeconomic life cycle, immobility gets integrated into the same patterns of status and autonomy relations that affect mobility.

EDUCATION AND MOBILITY

Most of the total effect of father's occupational status on son's occupational status is mediated by the son's education. This suggests that status may not be an important dimension of mobility for men with similar amounts of education. Tables 9 and 10 present the results of disaggregating the dta for white males by education. Black men are excluded because the difference between blacks and whites in the effect of education on occupational status is too great (Featherman and Hauser 1976) to combine blacks and whites, and there are too few blacks for a separate analysis at this level of detail. Men younger than 31 are also excluded because of the differences by age discussed in the preceding section.

The SAT model fits the data in each education group. The model misclassifies from 3.7% to 9.1% of the cases, but none of the L_m^2s is significant at the .05 level. Considering the numbers of cases involved, the fits are excellent.

Education diminishes distinctions based on origin status. In every education group the effect of status is less than the weighted averages of .810 in 1962 and .671 in 1973 for white men over 30 years old (see table 6). The leveling effect of education intensifies as length of schooling increases; the effect of status decreases with increasing education. For men with a college degree, status has no effect on mobility.[10] Most of the decrease in the effect of status discussed in preceding sections is the result of large decreases for men without high school diplomas coupled with an upward shift in the distribution of education away from those categories in which the effect of status is strongest.

The relationship between autonomy and mobility is relatively unaffected by education. Only among college graduates in 1962 is the autonomy effect for one educational category different from the effect for the others, and that difference is not statistically significant.

[10] Note, moreover, that the educational transition most affected by status of origin is the transition to college degree (Featherman and Hauser 1978, p. 244).

TABLE 8

STANDARDIZED RESIDUALS FOR
SAT MODEL BY AGE AND YEAR: WHITE MEN FROM FOUR AGE COHORTS

OCCUPATION	1962				1973			
	20–30	31–41	42–52	53–63	20–30	31–41	42–52	53–63
1. Professionals, self-employed	1.06	3.12*	2.57*	2.46*	2.96*	3.74*	2.36*	−.23
2. Professionals, salaried	1.30	25	−.22	−1.04	.31	.44	.47	1.72
3. Managers	−3.01*	−3.35*	−.91	.07	−1.09	−2.84*	−2.90*	−2.66*
4. Salesmen, nonretail	.32	2.86*	1.31	.50	1.04	2.73*	2.17*	1.68
5. Proprietors	1.59	−.56	−.82	−1.01	.01	−1.61	.71	1.63
6. Clerks	1.79	−.85	−1.29	−.85	.36	.06	1.25	−.06
7. Salesmen, retail	−.62	1.30	−1.32	.22	.40	−.74	1.46	.78
8. Craftsmen, manufacturing	−.83	.31	−.02	− 55	−2.48*	.78	−1.58	−1.08
9. Craftsmen, other	−1.15	.19	−.04	−.55	−1.20	−1.32	−1.57	−.78
10. Craftsmen, construction	1.48	.51	.67	.75	1.77	−.28	2.15*	−.30
11. Service workers	−.15	2.69*	1.00	−.65	−1.60	−.04	1.71	−.52
12. Operatives, nonmanufacturing	−.46	−1.22	−.50	.60	.44	.87	−.63	1.41
13. Operatives, manufacturing	−.76	−.02	.27	1.34	2.17*	−.92	.52	.70
14. Laborers, manufacturing	1.31	−.29	3.52*	.38	2.53*	.24	1.24	.26
15. Laborers, nonmanufacturing	.65	−.40	.59	1.18	−.38	.92	.09	−.77
16. Farmers and farm managers	.38	−.30	−.35	.16	1.24	2.39*	−.60	.31
17. Farm laborers	−.53	1.02	.02	−.68	−1.10	.79	−.31	−.12

* $P < .05$.

Immobility parameters depend on education. Only four of 10 status coefficients are significant. Considering that status is among the predictors of immobility only to control for the possible general educational component of the training measure, it is somewhat surprising that any status effects are significant. The effect of autonomy on immobility is weakest for high school dropouts. The rest of the variation in the effect of autonomy on immobility is insignificant. The effect of training on immobility deviates little from its average for men over 30 years old, except among college graduates, for whom the effect of training is not significant. Indeed, none of the immobility effects among college graduates is significant.

CONCLUSIONS

Occupational mobility is a multidimensional process. Status is central to mobility, but the opportunity for self-direction on the job is also important. Men whose fathers ran their own businesses, professional practices, and farms are themselves more likely than other men to enter occupations that promise a degree of autonomy. The complementary assertion is equally true. Men whose fathers worked on an assembly line or in a closely supervised white-collar position tend toward occupations that are closely supervised but promise a degree of job security in return.

Occupational immobility deserves special attention. Occupations that require specialized training are the ones with the greatest immobility. Incumbents in these occupations use training requirements to control the

TABLE 9

GOODNESS OF FIT FOR SAT MODEL BY EDUCATION AND YEAR. WHITE MEN 31–64 YEARS OLD

Year and Education (in Years)	L_0^2 (df = 256)	L_m^2 (df = 247)	$L_0^2 - L_m^2$ (df = 9)	Δ	N
1962:					
0–8	607.41*	222.87	384.54*	.045	2,213
9–11	442.39*	193.61	248.78*	060	1,430
12	609.95*	248.18	361.77*	.058	2,112
13–15	279.52	205.09	74.43*	.091	746
16+	218.14	162.37	55.77*	.061	1,028
1973:					
0–8	463.20*	211.90	251.30*	.042	2,356
9–11	425.27*	202.35	222.92*	.050	2,049
12	846.18*	258.62	587.56*	.037	4,769
13–15	413.94*	240.24	173.70*	.064	1,683
16+	381.30*	251.87	129.43*	.043	2,473

* $P < .05$.

TABLE 10

PARAMETER ESTIMATES FOR SAT MODEL BY EDUCATION AND YEAR: WHITE MEN 31–64 YEARS OLD

EDUCATION (in Years)	SCALED ASSOCIATION				SCALED DIAGONAL					
	Status[a]		Autonomy[a]		Status[a]		Autonomy[b]		Training	
	1962	1973	1962	1973	1962	1973	1962	1973	1962	1973
0–8	.504*	.338*	.301*	.392*	−.120	−.285*	.228*	.176*	.176*	176*
	(.132)	(.131)	(.086)	(.090)	(.111)	(.143)	(.079)	(.081)	(.027)	(.025)
9–11	.550*	.194*	.456*	.348*	−.192	.000	.065	.093	.138*	.101*
	(.118)	(.099)	(.095)	(.081)	(.105)	(.086)	(.084)	(.070)	(.034)	(.027)
12	286*	.301*	.358*	.260*	−.111	−.137*	.122	.179*	.148*	.151*
	(.076)	(.050)	(.075)	(052)	(.061)	(.042)	(.073)	(.050)	(.028)	(.018)
13–15	.247*	.204*	.199	.339*	− 194*	−.274*	.213	.232*	.175*	.198*
	(.114)	(.070)	(.134)	(.094)	(.095)	(.061)	(.153)	(099)	(.054)	(.035)
16+	.029	.096	.554*	.335*	−.090	.046	.552	.140	.137	.049
	(.039)	(.081)	(.146)	(.099)	(.106)	(.072)	(.226)	(.135)	(.073)	(.052)

NOTE —Numbers in parentheses are standard errors.

[a] Coefficients multiplied by 100

[b] Coefficients multiplied by 10

*$P < .05$

supply of qualified applicants. The combination of father's knowledge, network ties, and clout in this situation gives an advantage to sons of incumbents not available to sons of men in less specialized fields who (*a*) want to enter the specialized occupations or (*b*) cannot control competition from men with different backgrounds who wish to fill positions in the sons' occupations of origin.

The link between father's occupation and son's occupation loosened between 1962 and 1973. The loosening was due to a drop in the effect of status on mobility for white men. The change touched all age groups. Education was important for the change because the educational distribution shifted toward the categories in which status is unimportant and because the effect of status decreased most for white men with less than high school education.

The results in this paper replicate the findings of others that blacks and whites have appreciably different mobility patterns. Net upward mobility for blacks was greater in 1973 than in 1962. This is reflected in the increase in the effect of status on black men's mobility. The period was marked by a general convergence in mobility chances of black and white men. The substantial differences in the effects of status, autonomy, and training that were evident in 1962 disappeared by 1973. Too much should not be made of this trend because blacks still get less return on their investments in schooling than whites do. The convergence in mobility chances is a trend toward equality based in part on diminished stratification among whites and in part on increased stratification among blacks (Wilson 1978).

Education mediates much of the intergenerational transmission of status. The effect of status decreases as education increases. Origin status does not affect destination status among college graduates. But education does not account for the importance of autonomy for mobility or of autonomy and training for immobility. The effect of autonomy on mobility is especially important for college graduates, reflecting the considerable advantage enjoyed by sons of self-employed professionals in the pursuit of their own career choices.

This paper makes three contributions to mobility research. It specifies a theory of role modeling that spells out the implications of occupational differences in socialization practices for mobility. Formally, this paper integrates the concerns of a number of writers with nonstatus dimensions of mobility and attainment (Spaeth 1978; Kluegel 1979; Wolf and Fligstein 1979*a,* 1979*b;* Hodge 1981) in a model that simultaneously estimates status and nonstatus effects on mobility. Finally, this research extends the work of others on the topics of change in mobility chances, differences between black and white men, and the importance of education for mobility and attainment.

APPENDIX

TABLE A1

SCORES ON STATUS, AUTONOMY, AND TRAINING: MEN 20–64 YEARS OLD

Occupation	Socioeconomic Index (Duncan SEI) (S)	Minus Odds on Having a Supervisor (A)	Specific Vocational Training (T)
1. Professionals, self-employed	80.479	−.263	7.555
2. Professionals, salaried	73.756	−9.000	7.115
3. Managers	69.029	−3.592	7.242
4. Salesmen, nonretail	62.552	−1.525	5.076
5. Proprietors	49.573	−.163	6.572
6. Clerks	44.243	−14.900	4.222
7. Salesmen, retail	38.052	−3.000	4.055
8. Craftsmen, manufacturing	38 037	−16.333	6 678
9. Craftsmen, other	32.010	−5.121	5.237
10. Craftsmen, construction	26.218	−2 732	6.851
11. Service workers	19.518	−8.350	4.053
12. Operatives, nonmanufacturing	19.714	−6.577	3.906
13. Operatives, manufacturing	18.518	−15.312	3.933
14. Laborers, manufacturing	7.751	−10.250	2.870
15. Laborers, nonmanufacturing	8.207	−5 000	2.959
16. Farmers and farm managers	14.438	−.135	6.627
17. Farm laborers	7.880	−2.125	3.892

TABLE A2

MODIFIED IMMOBILITY RATIOS (LOG FORM) FOR DIAGONAL CELLS FOR SAT MODEL WITHOUT DIAGONAL BY YEAR

Occupation	1962	1973
1. Professionals, self-employed	1.229	1 183
2. Professionals, salaried	.128	.307
3. Managers	−.008	.152
4. Salesmen, nonretail	.742	758
5. Proprietors	.585	688
6. Clerks	.006	.184
7. Salesmen, retail	.290	.638
8. Craftsmen, manufacturing	.363	.308
9. Craftsmen, other	.552	.448
10. Craftsmen, construction	1.113	1.050
11. Service workers	.620	.519
12. Operatives, nonmanufacturing	.387	.528
13. Operatives, manufacturing	.231	.266
14. Laborers, manufacturing	.867	.739
15. Laborers, nonmanufacturing	587	.424
16. Farmers and farm managers	997	1.134
17. Farm laborers	.657	.467

NOTE.—Modified immobility ratios are ratios of observed frequencies to the frequencies that would be expected for the diagonal cells given the marginal and scaled association parameters estimated for the SAT model without the diagonal cells

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