

A SYMPOSIUM

Socialization and the Life Cycle

HONORING PROFESSORS

A. Lee Coleman

James W. Gladden

E. Grant Youmans

March 10-11, 1978

Student Center

University of Kentucky

Lexington, Kentucky 40506

—Sponsored by the Graduate School and the Department of Sociology of the University of Kentucky

PROGRAM

(All sessions in President's Room, UK Student Center)

Friday evening, March 10

8:15 p.m.

Presiding:

Wimberly C. Royster

Dean of The Graduate School
University of Kentucky

Welcome:

Lewis W. Cochran

Vice President for Academic Affairs
University of Kentucky

Presentation:

F. Ivan Nye

Professor of Sociology
Florida State University

"Socialization in the 1970s: Overemphasis on Individualism?"

Saturday morning, March 11

9:30 a.m.

Presiding:

C. Oran Little

Associate Dean, College of Agriculture
Associate Director
Agricultural Experiment Station
University of Kentucky

Presentation:

Archibald Haller

Professor of Sociology
University of Wisconsin

"The Status-Attainment Process"

Saturday morning, March 11 (continued)

11:00 a.m.

Presiding:

Art Gallaher Jr.

Dean of the College of Arts and Sciences
University of Kentucky

Presentation:

Robert J. Havighurst, Chairman

Committee on Human Development
University of Chicago

"Socialization in the Adult Life Course"

Saturday afternoon

12:15 p.m.

Lunch. Small Ballroom

Make reservations by March 9. Please send check for \$4 for luncheon to Department of Sociology, University of Kentucky, Lexington, Ky. 40506 or call (606) 257-2951 or (606) 258-4798.

Presiding:

Willis A. Sutton

Professor and Chairman
Department of Sociology
University of Kentucky

Presentation:

F. Ivan Nye

Professor of Sociology
Florida State University

"Social Policy Research: An Emerging Specialty"

STATUS ATTAINMENT PROCESSES: PSYCHOLOGICAL ASPECTS

Introduction

The paper that I am about to speak from is one of many products of a large research effort that has been going for quite a few years. It concerns the processes by which people are channeled into various ranked positions in those social structures we call status hierarchies. These are extremely complex matters, and you might think that the explanations that are offered are too simple.

What many of us who work in this area are trying to do is to develop a way of looking at status attainment phenomena which is simple enough to think with; which is comprehensive enough to provide intellectually satisfying explanations of the process wherever it is found; which are not inconsistent with the main lines of thinking in the social sciences; which are fair to a view of the social enterprise which treats social structures as constantly created, recreated, and changing products of human interaction; and which meets the test of empirical verifiability.

This particular paper presents data from one of the studies that has been carried out at the University of Wisconsin and at Michigan State University. It is a result of efforts of many people, among them Luther B. Otto, Joseph Woelfel, Alejandro Portes, William H. Sewell, David L. Featherman, Michael Carter, and Kenneth Spenner. Its special emphasis is on rechecking and comparing evidence concerning certain social psychological processes in status attainment. As you may know a rather consistent view of process has emerged over the years. Here we check in a rough way the robustness of the main processes posited by it and then go on to suggest new lines of work that need to be done to fill it out.

Throughout this paper we use some key words. These will be quite familiar to those of you who do research and who teach in this area. But they may be new to others, so let's say a word or two about them. Here "aspirations" mean variables describing differences among youths in the hierarchical status levels they see as pertinent to themselves. For each status variable there exists an hierarchical aspiration variable: Parallel to objective educational attainment, there exists an educational aspiration variable. Parallel to occupational status there exists an occupational aspiration variable. Though it hasn't yet been brought into play yet in research in this area, parallel to the hierarchy of income differences among families, there exists an income aspiration variable. There are probably others, but, if so, little is known about them as yet. "Significant others" is another key idea. These are the persons who influence a youth's aspirations and attainments. So far, two types have been clearly identified in this area: Definers and Models. There may be others, but as yet they have not been clearly specified. Definers influence youth's status attainment processes by communicating status to these the status expectations these hold for them. Like status aspirations of youth, for every status variable such as the educational hierarchy, the occupational hierarchy, and the income hierarchy, there exists a corresponding hierarchy of definers' status expectations. A status expectation is the level that a definer sees as reasonable for a youth's attainment. It may be a hope, a prediction, a statement of what is feasible, etc. The most important definers seem to be parents and teachers, but there are others, of course. Models are those who illustrate statuses to youths. Some exhibit the statuses they hold (parents, teachers, other adults); some exhibit their status aspirations (school peers).

Background

In the American Occupational Structure, Blau and Duncan (1967) documented the extent of status inheritance operating in contemporary U.S. society, i.e., that son's achievements are not independent of family's relative standing in the prestige hierarchy. In so doing they provided empirical support for widely held hypotheses about the role of education as a mechanism for distributing people into different social strata (Sorokin, 1927) and as an agent of socialization for inculcating societal values, norms, and achievement orientations (Parsons, 1959). More recent efforts have attempted to provide a more detailed explanation of the process by which parental socioeconomic advantage is passed on to sons, and to try to begin to understand the contributions to attained status which are not inherited from one's parents.

The social psychological conception holds that parental socioeconomic statuses and other, as yet unknown, antecedents are transmitted to sons by way of three sequenced social psychological mechanisms that sequentially: 1) the adolescent's academic performance, 2) the status indications (expectations of definers and exemplifications of models) provided to him by significant-others, and 3) his own status aspirations. Aspirations are seen as a central mechanism in the process. They are formed and modified in social interaction. The individual assesses his educational and occupational potentials in light of his own displays of his mental ability and academic performance. The effects of his "self-reflection" are supplemental by the reflective activity of his definers; these significant-others assess his attributes and performance when communicating the expectations they hold for him. Formed before adolescence, educational and occupational status aspirations guide status attainments. The model is

fairly successful at explaining the effects of background statuses. Applied to data on Wisconsin youth, it mediates all but about a third of the total effect of background statuses on educational attainment and virtually all of the effect on occupational attainment except for 57 percent of the total effect of father's occupational prestige which remains unexplained. The specification is least successful as an explanation for son's earnings where approximately two-thirds of the effect is direct. The predictive power of the theoretical model is evident in that it accounts for 54 percent of the variance in educational attainment, 43 percent of the variance in occupational attainment and 7 percent of the variance in earnings (Sewell and Hauser, 1975). Alexander et al. (1975) have recently provided strong independent support for the theory. Their analysis is based on a national sample.

But different data sets include somewhat different variables. And even when they are conceptually the same, the operational definitions often differ. They may also differ by age cohort and by the span of time covered. The Sewell et al. cohort consists of Wisconsin high school seniors from the 1957 graduating class, and their time span was seven years. The Alexander et al. cohort consists of the nation's 1957 high school sophomores, and the time span was 15 years. Our own data, consist of the 80 percent (N=340) of Lenawee County Michigan's 17-year-olds when we first contacted in 1957, the time span was 15 years (to 1972). An explanation that is worthy of serious consideration should be robust enough to survive some differences regarding the inclusion of variables, their measurement, age-cohorts, and time spans.

We skip over the details of measurement and go directly to the results regarding the Lenawee County sample. To help one understand the general

perspective, we have provided a rough diagram of the sequence of variables which now seems to be pretty well agreed upon among the researchers. The presumed causal sequence moves from the left-hand column to those on the right. Bracketed variables are some of the more important ones implied by the theory but as yet not incorporated into appropriate data sets.

Causal Structure of Attainment Antecedents

We first focus on the relationships among the common antecedents of the three attainment variables—education, occupational status, and income (Table 1). For whatever reasons—test bias, differences in the social

Table 1 about here

environment, or other factors—a positive association between performance on intelligence tests and socioeconomic status is generally reported in the literature. Our data agree. Parental statuses account for 8 percent of the variance in son's measured mental ability score. Better educated mothers also stimulate son's academic performance levels; but paternal influence is indirect via mental ability. High status fathers influence their sons by providing a social context which emphasizes scholastic values and motivations whereas mothers are more directly involved in teaching and in monitoring performance. Parental influence coupled with one's ability account for 26 percent of the variance in one's high school grades (Otto, 1975; 1976).

The theory is that significant-others—especially parents and friends—bring to bear upon the formation and adjustment of the youth's aspirations value orientations which are at least partially consistent with the family's socioeconomic position. Their expectations are further governed by their observations of the youth's ability and adolescent role performance. Our analysis indicates that the level of educational encouragement parents give

their sons is indeed affected by their own socioeconomic statuses, and it is also affected by the youth's demonstrated levels of ability and performance. These findings are consistent with the hypothesis that parental educational expectations and encouragement are among the social psychological mechanisms by which the status of parents tends to be transmitted to their sons. Parental socioeconomic statuses, mental ability and academic performance account for 17 percent of the variance in parental educational expectations for their children.

The same antecedents account for even more of the variance in peer influence ($R^2 = 20$ percent), but the pattern of effects differs. Fathers' statuses have no direct influence on friends' educational plans. Whatever influence they have on friends occurs through mothers and in setting the social context within which the son's ability and performance will be encouraged by others. Mothers, however, exert more of a direct controlling influence on the peer models to which their sons are exposed, perhaps by influencing patterns of associations. Likewise, the mean educational aspirations of the youth's friends have a significant regression on his ability and grades. These analyses provide further support for the hypothesis that status expectations or status exemplifications bearing upon a youth's aspirations are influenced by his own ability and past performance in school.

The analyses reported thus far provide evidence for our theoretical specification of anticipated efforts. But important questions concerning the antecedents of aspirations remain unanswered: Is there evidence that the youth also weighs his demonstrated ability and past performance in forming his aspirations? Do the two intervening processes—youth's academic performance and significant-other influences—fully mediate the effect of

socioeconomic origins on aspirations? Are aspirations formed and modified in interaction with others (a social psychological explanation) or might they be internally constructed (a psychological explanation) and largely immune to social influences? The last two columns in Table 1 inform these queries.

First of all, the two-stage process does not exhaust the mechanisms whereby parental socioeconomic advantage is translated into educational and occupational aspirations. Parents' statuses, notably those indicated by father's occupational prestige and/or education, have a significant positive and direct effect on aspiration levels statistically controlling on all other antecedents. This suggests that there may be linkages which, though not yet formally identified, further assist the status transmission process. (At least part of this missing linkage is probably due to effects of significant-other's occupational expectations or exemplifications, which are treated elsewhere (see Woelfel and Haller, 1971)). Second, our analysis reveals consistent evidence that the youth takes his own past performance into account in formulating his aspiration levels. (The partial betas are .321 and .296, respectively). In formulating occupational aspirations he also appears to reflect on his mental ability (partial $\beta = .144$); (although it is still a mystery how, net of his academic performance, he can obtain the evidence regarding his mental ability which he obviously must have in order to reflect upon it). His adolescent role performance is made more salient through the evaluations given by those most influential to him. Finally, parents and friends have a positive direct role in molding the youth's educational and occupational aspirations, increasing the explained variance from 40 to 48 percent for educational aspirations and from 38 to 45 percent for occupational aspirations. Thus, significant-others function as

more than mere intermediaries in the process of status transmission. They are also agents in the aspiration formation process. Part of their contribution to his aspirations comes from their own statuses, part comes from their evaluation of the youths' ability, and part comes from courses as yet unidentified.

In summary, our analysis provides strong support for crucial elements of the social psychological theory of the status attainment process, to wit: son's aspirations are positively associated with family socioeconomic statuses; son appears to reflect upon his mental ability and academic performance in formulating his educational and occupational aspirations; his significant-other's status, expectations, and the status examples they provide are positively related to the youth's later socioeconomic status and are influenced by his demonstrated ability and performance. This two-stage process helps to explain but does not fully explicate how background socioeconomic status influences levels of aspirations: With respect to father's occupational prestige 51 percent of the effect on educational aspirations and 25 percent of the effect on occupational aspirations remains unexplained; with respect to father's education 66 percent of the effect on educational and occupational aspirations is unaccounted for; and with respect to mother's education 26 percent of the effect on educational aspirations and 17 percent of the effect on occupational aspirations is not explained by the model.

Antecedents of Attainment

Our focus now shifts to an analysis of the process of socioeconomic attainment, again concentrating on the LC data.

Education. That family position in the stratification order would be positively associated with level of educational attainment is expected and

is supported by our data (Table 2). Family socioeconomic statuses account for 18 percent of the variance in the level of education achieved by the

Table 2 about here

son 15 years after high school. Thirty-two percent of the effect of father's occupational prestige and 17 percent of father's and mother's educational influence is mediated by mental ability which increases the variance accounted for in educational attainment by another 10 percent ($R^2 = .281$). Similarly, academic performance, which may have direct effects or effects mediated by significant others and/or aspirations, accounts for an additional 18 percent of the variance in education. But it does not explain the remaining direct influence of social origins: 57 percent of the effect of father's occupational prestige, 84 percent of the effect of father's education and 43 percent of the effect of mother's education.

The theory holds that a second link in the status transmission process is composed of certain kinds of influence due to significant-others. This link includes the status expectations held for the youth by his parents and teachers and the status aspirations exemplified by his best friends. With respect to each parental status indicator, these variables pertaining to significant-others mediate between 6 and 17 percent of the total effect, controlling on all other antecedents. In addition, significant-others add an independent 5 percent to the predictive power of the education model.

Lest one conclude that fathers have a direct effect on son's educational attainments but that mothers do not, the true nature of the parental relationships is unmasked when aspirations are introduced as the third explanatory mechanism in the educational attainment process. That aspirations—both educational and occupational—have significant effects on educational

attainment (statistically controlling on parental socioeconomic statuses, mental ability, academic performance and significant-other influences) is evident from the substantial increase in the variance. The youth's status aspirations comprise the third stage of the theoretical model. When they are added, the model largely, though not quite totally, explains the status transmission process with respect to education. Of the total effects of father's occupation and father's and mother's education, all but 17, 43 and 16 percent are explained by the three-stage social psychological mechanisms. In addition, the total effect of mental ability is virtually fully explained (96 percent) by academic performance, significant-other influences and aspirations; but a substantial proportion (54 percent) of the total effect of academic performance on educational attainment is direct—i.e., it is not mediated by significant-other and self-assessments which adjust aspiration levels. The direct effects of significant-other influences are substantially moderated by aspirations. In fact, perhaps a third of the positive relationship between significant-other influences and education may be counteracted by an unmasked negative direct effect of parental educational encouragement. (This finding suggests the possibility that some youths may be a bit hampered in making career decisions by conflicting indications communicated by significant-others.)

In summary, we find substantial support for the social psychological explanation of the educational attainment process. Educational attainment is positively related to background socioeconomic statuses and that influence is largely mediated by the three-stage process sequentially involving mental ability and academic performance, significant-other influences and aspirations. Earlier analysis supported the thesis that youth's aspirations are

adjusted by self-reflection and the assessments of significant-others which influence the status indications they communicate. The present analysis shows that aspirations have a substantial net effect on educational attainment, completing a predictive model that explains 62 percent of the variance in educational attainments and, more importantly, explains most of the status inheritance effect.

Occupational status. In the normal sequence of status attainments, level of occupational prestige is positively affected by respondent's educational attainment and directly affects his earning power. The extent of occupational status inheritance operating in a population can be indicated by the relationship between father's and son's occupational prestige, statistically controlling on all other parental status variables. The total effect is substantial ($p = .24$). Moreover, the extent of status inheritance is enhanced by the total effect of mother's education on son's occupational attainment. Parental socioeconomic position accounts for 12 percent of the variance in son's eventual occupational attainments. Mental ability mediates 20 percent of the total effect of father's occupational prestige and 17 percent of the total effect of mother's education. It increases the variance accounted for in occupational prestige by about a third.

Youth's past academic performance exerts a strong independent effect on occupational status (the variance accounted for nearly doubles, to $R^2 = 34$ percent). Yet the findings remain consistent with our theory that past performance guides the youth in setting his aspiration levels and provides essential input to significant-others' status indications. Mental ability and academic performance mediate 28 percent of the total affect of father's occupation and 90 percent of the total effect of mother's education. Moreover, 67 percent of the effect of mental ability on occupational attainment is indirectly transmitted via youth's grade point average.

Eleven percent of the total proportion of variance accounted for in occupational attainment is contributed by significant-other indications. (These are probably underestimated due to the absence of measures of significant-other's occupational status indications.) The total relationship between academic performance and occupational attainment is expected to be both direct (i.e., unmediated by hypothesized linkages) and indirect (i.e., mediated via significant-other influences). Significant-others collectively transmit 14 percent of the total effect of scholastic performance on occupational attainment. Together with GPA they absorb 83 percent of the total influence of mental ability. Significant-other effects are, in turn, largely mediated by the operation of the third stage mechanism, aspirations. Consider, for example, that all of the occupational effects of parental expectations and 38 percent of the corresponding peer effects are mediated by aspirations. As predictors of occupational attainment, aspirations increase the variance accounted for by seven percent ($R^2 = .45$).

The fully specified model indicates that education is the principal mechanism for occupational status attainment, however. Independently of other processes, educational attainment explains an additional 11 percent of the total effect of father's occupation, 39 percent of the total effect of academic performance, 27 percent of the influence of occupational aspirations and 78 percent of the influence of educational aspirations. In summary, we have estimated a model that accounts for 50 percent of the variance in occupational attainment. The findings, we think tend to support the social psychological interpretation of the occupational attainment process. Nonetheless, the model accounts for 54 percent of the total effect of father's occupational prestige indicating that about half of son's occupational

attainment remains unexplained by the social psychological conception of the occupational transmission process.

Earnings

The social psychological explanations of the attainment process which have been proffered to date have been least successful in accounting for the variance in and specifying the mechanisms for the economic dimension, perhaps because the explanatory variables were selected for their relevance to educational and occupational attainment rather than to earnings (Sewell and Hauser, 1972). In the LC data-set as well as those Alexander, et al. (1975) and Sewell and Hauser (1972, 1975), this set of variables explained no more than 12 percent of the variance in earnings in this as well as the other projects. More detailed comparisons with the predictive power of previous studies are made below.

None of these data sets—nor any others, so far as we know—includes indication of youths' aspirations and their significant-others' expectations for income attainments. Hence, these data-sets lack some of the variables most central to the social psychological theory as it applies to income status attainment (Haller and Portes, 1973: 75-86). This being the case, there is little we can do with these data to operationalize a social psychological specification of the earnings process. In addition, the LC data lack a family income indicator, which Sewell and Hauser (1975) found to be most strongly associated with son's earnings ten years after high school. In its absence our analysis appears to show that mother's level of education has the most pronounced influence on son's earnings 15 years later. Further, most of that effect is direct; the social psychological processes that informed our understanding of educational and occupational

attainments explain only 32 percent of mother's educational influence. The key linkages are academic performance and significant-other influences. Respondent's mental ability has a total effect that is largely mediated by academic performance and significant-other influences; peers have an effect that is half mediated by aspirations and educational attainment; and about a third of the influence of education on earnings is mediated by occupational status. Most of the effect of education on earnings occurs within occupations, however.

In summary, present data do not permit a satisfactory specification for either predicting or explaining the earnings process early in one's career, although our specification does account for at least as much variance in earnings as do the models estimated for the previous data sets. Obviously the data cannot therefore provide a fair test of the position. Here, social origins appear to account for only six percent of the variance in earnings and only mother's educational level provides statistically significant total (and direct) effect. Mental ability, peers' educational aspirations and education are the only other variables that display a significant total effect. There is evidence that the social psychological variables we have included may function as mechanisms in the causal sequence culminating in earnings, although the effect is modest. Moreover, the fully specified model accounts for only 12 percent of the variance in earnings.

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In the following section we discuss our findings in the context of previous research and assess the accumulated evidence for the social psychological explanation of the status attainment process.

The social psychological theory purports to be an explanation of the process of status attainment. Is the explanation it provides complete, is it partial, or is it altogether false? Does it provide a contribution to

the explanation of status inheritance? Of special importance is the question of whether the multistage process explains the reality of status inheritance. Status inheritance is defined as the empirical association between origin socioeconomic statuses and destination statuses or attainments. We take the proportion of the total effect explained by the process as the statistical indicator of the adequacy of the explanation. By decomposition we are able to also determine the relative explanatory power of the specific mechanisms within and between the models applied to this and the other samples. The indicator we use is the percentage of the total effect mediated by the measures of a theoretical construct.

Table 3 provides a tabular comparison of the explanatory power of each

Table 3 about here

theoretical mechanism and the additive effect of the complete process. To save time we shall skip the details.

In summary, the social psychological mechanisms operate with reasonable consistency across comparable models estimated for the three data sets. The data exhibit the greatest range in the explanatory power of intervening mechanisms. The Sewell estimates are noteworthy for the especially strong mediating role of significant-other educational influences; and the LC estimates tend to be strongest as estimates of the mediating role of aspirations on attainments.

There are other differences in estimates across samples that are noteworthy, in that only two of the studies show similar effects. (In the Sewell and LC data, unlike the Alexander study, mother's education has a significant total effect on educational and occupational attainment; and the Sewell and Alexander studies agree in that, unlike the LC estimates,

father's education has a significant total effect on son's occupational attainment.) These differences suggest caution with respect to the generalizability of Hauser's (1972) finding that background socioeconomic indicators operate unidimensionally with respect to aspirations and attainment. The finding holds in neither the Alexander nor the LC data.

Differences with respect to the total effects of family income on attainments and the total effects of background socioeconomic statuses on earnings are not considered because of the noncomparability of indicators and the relative lack of associations between origin statuses and son's earning power.

Conclusion

On the whole, the analysis of the Lenawee County data provides an independent corroboration of the social psychological theory of the status attainment process. These data and those of the Sewell and Alexander analyses are consistent with the three-stage process of status inheritance that the theory predicts, both with respect to the separate and additive effects of the predicted linkages. The LC estimates of the explanatory power of the social psychological process tend to equal or surpass those previously reported in the literature. Likewise, as a predictive model the Lenawee County estimates of "explained" variance (see Table 4), equal or exceed those previously reported. We believe that this is done more to refinements in measurement than to differences in the phenomena. Taken together the

Table 4 about here

Sewell, Alexander and LC studies provide strong support for the general lines of the social psychological explanation of the status attainment

process. This support is the more notable in that it is based on conceptual cross-validations, not exact replications.

The only possible serious challenge to this general conclusion is that of Wilson and Portes (1975). But difficulties with their own analysis make it advisable to hold in abeyance their conclusion "structural," rather than social psychological factors, determine status attainment.

Nonetheless, a few remarks indicating research lines which could improve our capacity to assess and extend status attainment theory might be in order. First, it would seem that the social psychological variables, although effective, operate in slightly different ways in each of three samples. This may be due to differences among couples, differences in the quality of measurement, or differences in the availability of certain variables. But it seems more likely that it is due mostly to the fact that all data sets lack indicators to measure some of the social psychological variables called for by the theory. As the theory applies to educational, occupational, and income attainments, a data-set capable of fully expressing (Haller and Portes, 1973) would have to include—besides mental ability and academic performance—valid and reliable indicators of each of the 12 status-related variables formed by cross-classifying three types of status by four types of status "isomorphs." The three statuses are educational status, occupational prestige, and income. The four isomorphs are the status exemplifications presented by one's models, the corresponding status expectations of one's definors, the corresponding pre-attainment status aspirations one comes to hold for himself, and the corresponding objective statuses one attains prior to occupational attainment. The theory holds that in a fully operationalized model the highest partialled relationships will be found among isomorphic variables. Thereafter, the highest partialled relationships

2. will be found for the prior status variable and for the corresponding status isomorphs. The objective status variables would have to be measured at the life cycle point of maximum status differentiation among cohort members. That is, immediately after the members of the cohort have arrived at age of maximum status distinction among themselves. In today's world, for educational status this would be about age 25; for occupational prestige status perhaps age 35; and for income status about age 45 (Haller, Spenner, and Miller, unpublished). For such a data-set the theory predicts especially strong linkages between successive isomorphs (exemplifications, expectations, aspirations, and attained statuses) of the same root status variables, and from educational to occupational to income statuses. Obviously, no extant data-set includes well-measured indicators of more than one-half of these variables on the same cohort; indeed in none has income been measured any later than age 32. It is well known that parameters may be misestimated in models, which are misspecified due to missing variables and due to data that are not wholly valid and reliable. Until all of the variables called for by the theory are measured properly and are brought together in the analysis of single data-sets drawn upon to permit generalization to definable cohorts, studied longitudinally—until this happens it will be impossible to provide a full test of the social psychological position.

We have already touched on a second point. But it's worth repeating. In none of the three analyses focused upon herein has it been possible to explain much variance in income status, in contrast to educational and occupational status. This is probably partly due to the lack of income-specific antecedent variables. But there is evidence that income differentials may still be unstable among men as young as these. Featherman (1971) and Kelley (1973), as well as Haller and Spenner (1977), have shown that the

income effects of educational and occupational status are much greater among middleaged men (say, 45) than among men who are younger. A complete analysis would take this fact into account. There are some other caveats here, too. Some of the "human capital" researchers tell us to expect linear effects of experience (itself a set of variables) and of quadratic effects of both education and experience.

Third, the apparent differences in the ways the social psychological variables function in the different samples used herein might be due to misspecifications and problems of measurement inherent in the available data-sets. Until more complete data-sets can be obtained there is no way to determine whether this is true. Even if a full test strongly supports the theory in that it yields a complete explanation of status inheritance in which the internal mechanisms are consistent among samples and in that it yields consistent estimates of "non-transmitted" mechanisms of status attainment, it still might be possible that the social psychological theory would provide an incomplete, though perhaps entirely valid, explanation of the status attainment process. We say this for two reasons. First, in addition to ability and performance, nearly all the status isomorph variables appropriate to educational and occupational status attainment are present and relatively well measured in all these samples. Yet the estimates of educational and occupational status variance accounted for by them ranges from a low of $R^2 = .42$ (Alexander, occupation) to a high of $R^2 = .62$ (LC, education). If the theory is correct, adding the missing variables will do little to raise this because they should be highly correlated with the variables already present. Furthermore, in a separate analysis of the LC data (Otto, 1973) it was found that measurement unreliability does not attenuate the "true" coefficients of determination very

much, certainly not more than about 10 percent. Unless researchers posit a rather high degree of random variation (indeterminacy) in this sector of human behavior, about on the order of $A^2 \geq .30$, they may well be faced with the need to develop a new set of concepts and measures to be coupled to those of the social psychological theory in order to provide a complete explanation of educational and occupational status attainment.

Fourth, a distinction has been drawn (Woelfel and Haller, 1971) between significant-others who are models, in that they exemplify a status to a person, and those who are definers, in that—directly or indirectly—they tell one which statuses are more, and which are less, appropriate for him. In this paper the variables by which both exert their influence have been referred to as the "status indications" provided by one's significant-others. Implicit in the theory is the hypothesis that one of the mechanisms by which parents transmit their statuses is by exemplifying them to their offspring; to some extent they serve as status models as well as status definers. In other words, the theory holds that the very statuses which are (to a degree) transmitted function social psychologically as status examples. But whether and to what degree it is the parents' modeling of their own statuses function which serves as the initial mechanism by which their statuses are partially transmitted to their offspring is a question which has hardly been raised, much less answered. There are other possibilities. These concern parental statuses as resources controlling differential access to status attainment resources. In addition to modeling their statuses and to communicating their expectations, educated parents may teach cognitive skills which are especially useful in educational attainment, and they may be more effective than others at arranging educational opportunities for their children. Parents in high prestige occupations

may also teach their children how to take unusual advantage of their occupational opportunities, or may be more effective than others at contriving high status occupational alternatives for them. Wealthier parents may have more skill at making money, which they can pass on to their offspring. Or they may be able simply to give more money to them. Of course, a parent who is high on one variable might, therefore, have a resource available to enhance his offspring's attainment in another. Money can buy an education, at least to some extent; occupational prestige might be translated into educational pull; educated parents might have a better—and communicable—understanding of how to launch a son's successful career, etc. Future research should begin to try to identify and to separate the status inheritance components which are due 1) to modeling, 2) to the cognitive and structural resources a status variable provides for attainment regarding that variable itself, and 3) to the resources that parental status on a given dimension provides for their children's attainment. At this point, however, it is not at all just how to carry out such an analysis, if indeed it can be done at all.

Finally, it should be recalled that every major stratification theorist (e.g., Marx, Weber, Sorokin and various contemporary writers) has posited the existence of status dimensions which differ from education, occupational prestige, and income in important ways. Most are more inclusive. (For example, income is often thought to be part of an economic dimension.) Also, each includes, under various names and terms, a dimension which could be called "political influence." Assuming that such thinkers were or are perceptive observers, status attainment researchers must sometime come to grips with this and other as yet unfamiliar dependent status variables. Some of these may be completely new, which others will be different, or more inclusive, forms of those already under study.

Table 1. Standardized Regression Coefficients and Coefficients of Determination for Antecedents of Socioeconomic Attainments (Decimals Omitted).

Variables ^a	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉
X ₁ -FOCC	*171	042	*135	059	*114	038
X ₂ -FED	073	-003	*129	-005	*093	*105
X ₃ -MED	*120	*176	071	*146	051	031
X ₄ -MA		*431	*107	*186	069	*144
X ₅ -AP			*167	*237	*321	*296
X ₆ -PEDE					*221	*224
X ₇ -FEDP					*178	*171
R ²	082	263	169	203	475	454

^aX₁ father's occupation; X₂ father's education; X₃ mother's education; X₄ mental ability; X₅ academic performance; X₆ parents' educational encouragement; X₇ friends' educational plans; X₈ educational aspirations; X₉ occupational aspirations.

*Absolute value of coefficient is at least twice as large as the standard error and the relationship is defined as statistically significant.

TABLE 2

Standardized Regression Coefficients and Multiple Correlation Coefficients for the Recursive Structural Models of Education, Occupation and Earnings (Decimals Omitted).

Variables ^a	X_{10} EDUCATION					
X_1 -FOC	*176	*120	*100	*076	030	
X_2 -FED	*143	*120	*121	*112	062	
X_3 -MED	*223	*184	*097	059	035	
X_4 -MA		*325	*112	062	012	
X_5 -AP			*495	*429	*266	
X_6 -FEDE				*075	-041	
X_7 -FEDP				*226	*135	
X_8 -EDASP					*344	
X_9 -OCASP					*178	
R^2	184	281	461	513	619	

Variables ^a	X_{11} OCCUPATION					
X_1 -FOC	*242	*193	*174	*151	*122	*111
X_2 -FED	060	039	040	029	-012	-035
X_3 -MED	*125	091	012	-022	-039	-052
X_4 -MA		*287	*095	050	003	-002
X_5 -AP			*448	*387	*261	*160
X_6 -FEDP				090	-002	014
X_7 -FEDE				190	*118	067
X_8 -EDASP					*166	036
X_9 -OCASP					*248	*181
X_{10} -ED						*378
R^2	118	194	341	383	449	503

Variables ^a	X_{12} EARNINGS						
X_1 -FOC	060	038	034	017	006	002	-011
X_2 -FED	048	038	039	030	016	007	011
X_3 -MED	*183	*170	*152	*131	*125	*120	*125
X_4 -MA		*130	086	058	044	042	042
X_5 -AP			102	064	022	-019	-037
X_6 -FEDE				074	244	050	049
X_7 -FEDP				*108	084	063	056
X_8 -EDASP					073	020	016
X_9 -OCASP					064	037	017
X_{10} -ED						*154	113
X_{11} -OCC							110
R^2	059	075	083	099	106	115	121

^a X_1 , father's occupation; X_2 , father's education; X_3 , mother's education; X_4 , mental ability; X_5 , academic performance; X_6 , parents' education encouragement; X_7 , friends' educational plans; X_8 , educational aspirations; X_9 , occupational aspirations; X_{10} , education; X_{11} , occupation; X_{12} , earnings.

*Absolute value of coefficient is at least twice as large as the standard error and the relationship is defined as statistically significant.

Proportion of Total Effects Explained (Background Socioeconomic Status Indicators on Socioeconomic Attainments) by Intervening Variables in the Wisconsin, Equality of Educational Opportunity and Lenawee County Samples* (Percentage Signs Omitted).

INDEPENDENT VARIABLES	EDUCATION				OCCUPATION				EARNINGS			
	WIS	EEO	LC	(LC)**	WIS	EEO	LC	(LC)**	WIS	EEO	LC	(LC)**
FATHER'S OCCUPATION via:												
mental ability	15	07	32	(36)	11	05	20	(20)	-	-01	-	-
academic performance	07	-01	11	(19)	05	-01	08	(11)	-	00	-	-
significant other influence	29	21	14	(04)	17	19	10	(04)	-	12	-	-
aspirations	12	12	26	(29)	07	13	12	(11)	-	02	-	-
education					16	25	05	(03)	-	15	-	-
occupation									-	11	-	-
TOTAL INDIRECT EFFECTS	62	39	83	(89)	54	61	54	(49)	-	38	-	-
FATHER'S EDUCATION via:												
mental ability	39	48	16	(16)	43	30	-	-	-	-08	-	-
academic performance	-02	20	-01	(00)	-02	15	-	-	-	03	-	-
significant other influence	18	02	06	(03)	16	02	-	-	-	01	-	-
aspirations	07	04	35	(37)	07	03	-	-	-	01	-	-
education					22	10	-	-	-	03	-	-
occupation									-	09	-	-
TOTAL INDIRECT EFFECTS	63	74	57	(56)	86	60	-	-	-	11	-	-
MOTHER'S EDUCATION via:												
mental ability	26	-	18	(17)	31	-	27	(28)	-	-	08	(08)
academic performance	06	-	39	(41)	07	-	63	(68)	-	-	10	(11)
significant other influence	25	-	17	(14)	24	-	27	(24)	-	-	11	(12)
aspirations	15	-	11	(11)	12	-	14	(14)	-	-	03	(04)
education					18	-	10	(12)	-	-	03	(03)
occupation									-	-	-03	(-03)
TOTAL INDIRECT EFFECTS	72	-	84	(83)	92	-	142	(144)	-	-	32	(34)
FAMILY INCOME via:												
mental ability	23	43	#	(17)	25	53	#	(19)	07	-06	#	(07)
academic performance	02	14	#	(-09)	02	19	#	(-11)	01	02	#	(-02)
significant other influence	36	24	#	(36)	31	42	#	(40)	02	13	#	(17)
aspirations	17	05	#	(16)	13	05	#	(16)	04	01	#	(05)
education					13	12	#	(20)	02	03	#	(07)
occupation									01	-03	#	(02)
TOTAL INDIRECT EFFECTS	78	85	#	(59)	84	132	#	(84)	17	09	#	(34)

*Estimates are made following the procedure proposed by Alvin and Hauser (1975) for interpreting causal theories in sociology. Zero-order correlations for the Wisconsin data are reported in Sewell and Hauser (1975:93). Zero-order correlations for the Quality of Educational Opportunity data were kindly provided by Karl Alexander of John Hopkins University.

**Modified Lenawee County estimates which assume the Wisconsin associations for family income and teacher education encouragement.

#Indicates that the relationships do not appear in the Lenawee County data.

-Indicates that the total effect is not statistically significant, therefore indirect effects are not calculated.

Table 4. Coefficients of Determination (R^2): LC, WIS, and EEO Samples^a

Status Variables	R^2		
	LC	WIS	EEO
Education	.62	.54	.45
Occupation	.51	.43	.42
Earnings	.12	.08	.12

^aSee Table 1 and the section on Data, Variables, and Methods for a description of the regressors. Education is included among the latter when occupation is the dependent variable; both of the former are included among the regressors for earnings.

APPENDIX

Zero-order Correlations, Means and Standard Deviations for Indicators¹ Used in Estimating Structural Equation Models in the Wisconsin, Equality of Educational Opportunity and Lenawee County Studies (Decimals Omitted in Correlations).

Variables ²	WISCONSIN ¹													
	X _a	X _b	X _c	X _d	X _e	X _f	X _g	X _h	X _i	X _j	X _k	X _l	X _m	X _n
X ^a -FOCC														
X ^b -FED	439													
X ^c -MED	287	320												
X ^d -PINC	448	321	247											
X ^e -MA	181	246	205	178										
X ^f -AP	131	154	140	121	557									
X ^g -TEDE	154	150	140	173	347	415								
X ^h -PEDE	261	248	231	241	345	315	437							
X ⁱ -FEDP	219	237	210	233	288	307	339	398						
X ^j -EDASP	266	270	257	275	426	450	447	522	493					
X ^k -OCASP	242	227	227	238	428	460	399	477	455	755				
X ^l -ED	290	306	273	273	446	512	406	472	474	656	580			
X ^m -OCC	268	252	215	231	376	414	331	358	360	473	476	623		
X ⁿ -EARN	083	082	064	173	163	159	113	121	091	178	190	204	211	
$\bar{X}$	33.63	10.31	19.51	6500.00	100.67	96.01	.444	.608	.361	.387	49.38	13.30	43.30	757
S.D.	22.54	3.02	2.88	3158.50	14.54	13.64	.497	.488	.480	.487	26.51	1.72	23.41	260
EQUALITY OF EDUCATIONAL OPPORTUNITY ²														
X ^a -FOCC														
X ^b -FED	438													
X ^c -MED														
X ^d -PINC	410	466	392											
X ^e -MA	206	317	204	317										
X ^f -AP	138	229	104	228	471									
X ^g -TEDE	130	154	131	190	107	218								
X ^h -PEDE	268	263	216	354	250	354	377							
X ⁱ -FEDP	273	251	211	314	260	305	305	436						
X ^j -EDASP	284	307	267	343	303	391	292	488	521					
X ^k -OCASP	289	232	137	249	281	371	235	389	350	442				
X ^l -ED	324	348	260	346	480	505	221	377	418	485	393			
X ^m -OCC	294	296	172	253	351	394	219	309	366	386	364	610		
X ⁿ -EARN	212	243	180	251	071	091	075	196	122	158	117	212	228	
$\bar{X}$	43.35	10.36	10.94	.1097	7.81	2.72	1.68	2.30	5.10	2.02	59.88	14.72	53.52	11303
S.D.	20.23	3.71	2.88	.8529	3.95	.86	.60	.65	1.60	.83	24.98	2.66	23.33	4554
LENAAEE COUNTY														
X ^a -FOCC														
X ^b -FED	461													
X ^c -MED	311	547												
X ^d -PINC														
X ^e -MA	241	217	212											
X ^f -AP	199	206	279		478									
X ^g -TEDE														
X ^h -PEDE	276	288	253		263	292								
X ⁱ -FEDP	194	192	267		343	377		341						
X ^j -EDASP	349	353	345		400	542		465	452					
X ^k -OCASP	285	329	315		441	532		455	444	679				
X ^l -ED	311	346	356		419	621		361	487	700	639			
X ^m -OCC	308	240	233		362	539		325	413	554	570	658		
X ⁿ -EARN	140	177	230		183	200		191	221	255	248	291	265	
$\bar{X}$	32.64	2.27	2.56		20.68	2.03		6.37	2.50	1.15	36.19	13.48	47.05	1255
S.D.	21.78	1.35	1.25		5.14	.84		1.72	1.96	1.26	12.56	2.50	25.21	543

* We use the indicators in a generic sense and do not imply identical operationalizations.

¹ FOCC - father's occupation; FED - father's education; MED - mother's education; PINC - parental income; MA - mental ability; AP - academic performance; TEDE - teacher's education encouragement; PEDE - parents education encouragement; FEDE - friends' educational plans; EDASP - educational aspirations; OCASP - occupational aspirations; ED - education; OCC - occupation; EARN - earnings.

² Wisconsin correlations, means and standard deviations are reported in Swell and Hauser (1975:93).

³ Equality of Educational Opportunity correlations, means and standard deviations were kindly provided by Earl Alexander.

**STATUS
ORIGINS**

FATHER'S
OCCUPATIONAL
STATUS

FATHER'S
EDUCATIONAL
STATUS

MOTHER'S
EDUCATIONAL
STATUS

[PARENTS'] *
[EARNINGS]

MENTAL
ABILITY
(IQ)

ACADEMIC
PERFORMANCE
(GPA)

**SIGNIFICANT
OTHERS'
INDICATIONS**

PARENTS'
EDUCATIONAL
EXPECTATIONS
(ENCOURAGEMENT)

FRIENDS'
EDUCATIONAL
ILLUSTRATIONS
(ASPIRATIONS)

[OCCUPATIONAL
EXPECTATIONS
OF PARENTS]

[OCCUPATIONAL
ASPIRATIONS
OF FRIENDS]

[INCOME
EXPECTATIONS
OF DEFINERS]

[INCOME
ASPIRATIONS
OF MODELS]

**STATUS
ASPIRATIONS**

EDUCATIONAL
ASPIRATIONS

OCCUPATIONAL
STATUS
ASPIRATIONS

**STATUS
ATTAINMENTS**

EDUC
OCCUP

INCOME

Employed by Sewell and Hauser

Table 1. Standardized Regression Coefficients and Coefficients of Determination for Antecedents of Socioeconomic Attainments (Decimals Omitted).

Variables ^a	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆
X ₁ -FOCC	*171	042	*135	059	*114	038
X ₂ -FED	073	-003	*129	-005	*093	*105
X ₃ -MED	*120	*176	071	*146	051	031
X ₄ -MA		*431	*107	*186	069	*144
X ₅ -AP			*167	*237	*321	*296
X ₆ -PEDE					*221	*224
X ₇ -FEDP					*178	*171
R ²	082	263	169	203	475	454

a₁ father's occupation; X₂ father's education; X₃ mother's education; X₄ mental ability; X₅ academic performance; X₆ parents' educational encouragement; X₇ friends' educational plans; X₈ educational aspirations; X₉ occupational aspirations.

*Absolute value of coefficient is at least twice as large as the standard error and the relationship is defined as statistically significant.

TABLE 2

Standardized Regression Coefficients and Multiple Correlation Coefficients for the Recursive Structural Models of Education, Occupation and Earnings (Decimals Omitted).

Variables ^a	<u>X₁₀ EDUCATION</u>					
X ₁ -FOC	*176	*120	*100	*076	030	
X ₂ -FED	*143	*120	*121	*112	062	
X ₃ -MED	*223	*184	*097	059	035	
X ₄ -MA		*325	*112	062	012	
X ₅ -AP			*495	*429	*266	
X ₆ -PEDE				*075	-041	
X ₇ -FEDP				*226	*135	
X ₈ -EDASP					*344	
X ₉ -OCASP					*178	
R ²	184	281	461	513	619	

	<u>X₁₁ OCCUPATION</u>					
X ₁ -FOC	*242	*193	*174	*151	*122	*111
X ₂ -FED	060	039	040	029	-012	-035
X ₃ -MED	*125	091	012	-022	-039	-052
X ₄ -MA		*287	*095	050	003	-002
X ₅ -AP			*448	*387	*261	*160
X ₆ -PEDP				090	-002	014
X ₇ -FEDE				190	*118	067
X ₈ -EDASP					*166	036
X ₉ -OCASP					*248	*181
X ₁₀ -ED						*378
R ²	118	194	341	383	449	503

	<u>X₁₂ EARNINGS</u>						
X ₁ -FOC	060	038	034	017	006	002	-011
X ₂ -FED	048	038	039	030	016	007	011
X ₃ -MED	*185	*170	*152	*131	*125	*120	*125
X ₄ -MA		*130	086	058	044	042	042
X ₅ -AP			102	064	022	-019	-037
X ₆ -PEDE				074	244	050	049
X ₇ -FEDP				*108	084	063	056
X ₈ -EDASP					073	020	016
X ₉ -OCASP					064	037	017
X ₁₀ -ED						*154	113
X ₁₁ -OCC							110
R ²	059	075	083	099	106	115	121

^aX₁ father's occupation; X₂ father's education; X₃ mother's education; X₄ mental ability; X₅ academic performance; X₆ parents' education encouragement; X₇ friends' educational plans; X₈ educational aspirations; X₉ occupational aspirations; X₁₀ education; X₁₁ occupation; X₁₂ earnings.

*Absolute value of coefficient is at least twice as large as the standard error and the relationship is defined as statistically significant.

TABLE 3

Proportion of Total Effects Explained (Background Socioeconomic Status Indicators on Socioeconomic Attainments) by Intervening Variables in the Wisconsin, Equality of Educational Opportunity and Lenawee County Samples* (Percentage Signs Omitted).

INDEPENDENT VARIABLES	DEPENDENT VARIABLES											
	EDUCATION				OCCUPATION				EARNINGS			
	WIS	EEO	LC	(LC)**	WIS	EEO	LC	(LC)**	WIS	EEO	LC	(LC)**
FATHER'S OCCUPATION via:												
mental ability	15	07	32	(36)	11	05	20	(20)	-	-01	-	-
academic performance	07	-01	11	(19)	05	-01	08	(11)	-	00	-	-
significant other influence	29	21	14	(04)	17	19	10	(04)	-	12	-	-
aspirations	12	12	26	(29)	07	13	12	(11)	-	02	-	-
education					16	25	05	(03)	-	15	-	-
occupation									-	11	-	-
TOTAL INDIRECT EFFECTS	62	39	83	(89)	54	61	54	(49)	-	38	-	-
FATHER'S EDUCATION via:												
mental ability	39	48	16	(16)	43	30	-	-	-	-08	-	-
academic performance	-02	20	-01	(00)	-02	15	-	-	-	03	-	-
significant other influence	18	02	06	(03)	16	02	-	-	-	01	-	-
aspirations	07	04	35	(37)	07	03	-	-	-	01	-	-
education					22	10	-	-	-	05	-	-
occupation									-	09	-	-
TOTAL INDIRECT EFFECTS	63	74	57	(56)	86	60	-	-	-	11	-	-
MOTHER'S EDUCATION via:												
mental ability	26	-	18	(17)	31	-	27	(28)	-	-	08	(08)
academic performance	06	-	39	(41)	07	-	63	(68)	-	-	10	(11)
significant other influence	25	-	17	(14)	24	-	27	(24)	-	-	11	(12)
aspirations	15	-	11	(11)	12	-	14	(14)	-	-	03	(04)
education					18	-	10	(12)	-	-	03	(03)
occupation									-	-	-03	(-03)
TOTAL INDIRECT EFFECTS	72	-	84	(83)	92	-	142	(144)	-	-	32	(34)
FAMILY INCOME via:												
mental ability	23	43	#	(17)	25	53	#	(19)	07	-06	#	(07)
academic performance	02	14	#	(-09)	02	19	#	(-11)	01	02	#	(-02)
significant other influence	36	24	#	(36)	31	42	#	(40)	02	13	#	(17)
aspirations	17	05	#	(16)	13	05	#	(16)	04	01	#	(05)
education					13	12	#	(20)	02	03	#	(07)
occupation									01	-03	#	(02)
TOTAL INDIRECT EFFECTS	78	85	#	(59)	84	132	#	(84)	17	09	#	(34)

*Estimates are made following the procedure proposed by Alwin and Hauser (1975) for interpreting causal theories in sociology. Zero-order correlations for the Wisconsin data are reported in Sewell and Hauser (1975:93). Zero-order correlations for the Quality of Educational Opportunity data were kindly provided by Karl Alexander of John Hopkins University.

**Modified Lenawee County estimates which assume the Wisconsin associations for family income and teacher education encouragement.

#Indicates that the relationships do not appear in the Lenawee County data.

-Indicates that the total effect is not statistically significant, therefore indirect effects are not calculated.

Table 4. Coefficients of Determination (R^2): LC, WIS, and EEO Samples^a

Status Variables	R^2		
	LC	WIS	EEO
Education	.62	.54	.45
Occupation	.51	.43	.42
Earnings	.12	.08	.12

^aSee Table 1 and the section on Data, Variables, and Methods for a description of the regressors. Education is included among the latter when occupation is the dependent variable; both of the former are included among the regressors for earnings.

APPENDIX

Zero-order Correlations, Means and Standard Deviations for Indicators* Used in Estimating Structural Equation Models in the Wisconsin, Equality of Educational Opportunity and Lenawee County Studies (Decimals Omitted in Correlations).

Variables [†]	WISCONSIN ¹													
	X _a	X _b	X _c	X _d	X _e	X _f	X _g	X _h	X _i	X _j	X _k	X _l	X _m	X _n
X ^a -FOCC														
X ^b -FED	439													
X ^c -MED	287	320												
X ^d -PINC	448	321	247											
X ^e -MA	181	246	205	178										
X ^f -AP	131	154	140	121	557									
X ^g -TEDE	154	150	140	173	347	415								
X ^h -PEDE	261	248	231	241	345	315	437							
X ⁱ -FEDP	219	237	210	233	288	307	339	398						
X ^j -EDASP	266	270	257	275	426	450	447	522	493					
X ^k -OCASP	242	227	227	238	428	460	399	477	455	755				
X ^l -ED	290	306	273	273	446	512	406	472	474	656	380			
X ^m -OCC	268	252	215	231	376	414	331	358	360	473	476	623		
X ⁿ -EARN	083	082	064	173	163	159	113	121	091	178	190	204	211	
$\bar{X}$	33.63	10.31	19.51	6500.00	100.67	96.01	.444	.608	.361	.387	49.38	13.30	43.30	737
S.D.	22.54	3.02	2.88	3158.50	14.54	13.64	.497	.488	.480	.487	26.51	1.72	23.41	260
EQUALITY OF EDUCATIONAL OPPORTUNITY ²														
X ^a -FOCC														
X ^b -FED	438													
X ^c -MED														
X ^d -PINC	410	466	392											
X ^e -MA	206	317	204	317										
X ^f -AP	138	229	104	228	471									
X ^g -TEDE	130	154	131	190	107	218								
X ^h -PEDE	268	263	216	354	250	354	377							
X ⁱ -FEDP	273	251	211	314	260	305	436							
X ^j -EDASP	284	307	267	343	303	391	292	488	521					
X ^k -OCASP	289	232	137	249	281	371	235	389	350	442				
X ^l -ED	324	348	260	346	480	505	221	377	418	485	393			
X ^m -OCC	294	296	172	253	351	394	219	309	366	386	364	610		
X ⁿ -EARN	212	243	180	251	071	091	075	196	122	158	117	212	228	
$\bar{X}$	43.35	10.36	10.94	.1097	7.81	2.72	1.68	2.30	5.10	2.02	59.88	14.72	53.52	11303
S.D.	20.23	3.71	2.88	.8529	3.95	.86	.60	.65	1.60	.83	24.98	2.66	23.53	4554
LENAAEE COUNTY														
X ^a -FOCC														
X ^b -FED	461													
X ^c -MED	311	547												
X ^d -PINC														
X ^e -MA	241	217	212											
X ^f -AP	199	206	279		478									
X ^g -TEDE														
X ^h -PEDE	276	288	253		263	292								
X ⁱ -FEDP	194	192	267		343	377		341						
X ^j -EDASP	349	353	345		400	542		465	452					
X ^k -OCASP	285	329	315		441	532		455	444	679				
X ^l -ED	311	346	356		419	621		361	487	700	639			
X ^m -OCC	308	240	233		362	539		325	413	554	570	658		
X ⁿ -EARN	140	177	230		183	200		191	221	255	248	291	265	
$\bar{X}$	32.64	2.27	2.56		20.68	2.03		6.37	2.50	1.15	36.19	13.48	47.05	1255
S.D.	21.78	1.35	1.25		5.14	.84		1.72	1.96	1.26	12.56	2.50	25.21	543

* We use the indicators in a generic sense and do not imply identical operationalizations.

† FOCC - father's occupation; FED - father's education; MED - mother's education; PINC - parental income; MA - mental ability; AP - academic performance; TEDE - teacher's education encouragement; PEDE - parents education encouragement; FEDE - friends' educational plans; EDASP - educational aspirations; OCASP - occupational aspirations; ED - education; OCC - occupation; EARN - earnings.

¹ Wisconsin correlations, means and standard deviations are reported in Sewell and Hauger (1975:93).

² Equality of Educational Opportunity correlations, means and standard deviations were kindly provided by Earl Alexander.

STATUS
ORIGINS

FATHER'S
OCCUPATIONAL
STATUS

FATHER'S
EDUCATIONAL
STATUS

MOTHER'S
EDUCATIONAL
STATUS

[PARENTS'] *
[EARNINGS]

SIGNIFICANT
OTHERS'
INDICATIONS

PARENTS'
EDUCATIONAL
EXPECTATIONS
(ENCOURAGEMENT)

FRIENDS'
EDUCATIONAL
ILLUSTRATIONS
(ASPIRATIONS)

[OCCUPATIONAL
EXPECTATIONS
OF PARENTS]

[OCCUPATIONAL
ASPIRATIONS
OF FRIENDS]

[INCOME
EXPECTATIONS
OF DEFINERS]

[INCOME
ASPIRATIONS
OF MODELS]

STATUS
ASPIRATIONS

EDUCATIONAL
ASPIRATIONS

OCCUPATIONAL
STATUS
ASPIRATIONS

STATUS
ATTAINMENTS

EDUC OCCUP INCOME

STATUS
ORIGINS

FATHER'S
OCCUPATIONAL
STATUS

FATHER'S
EDUCATIONAL
STATUS

MOTHER'S
EDUCATIONAL
STATUS

[PARENTS' *
EARNINGS]

SIGNIFICANT
OTHERS'
INDICATIONS

PARENTS'
EDUCATIONAL
EXPECTATIONS
(ENCOURAGEMENT)

ACADEMIC
PERFORMANCE
(GPA)

FRIENDS'
EDUCATIONAL
ILLUSTRATIONS
(ASPIRATIONS)

[OCCUPATIONAL
EXPECTATIONS
OF PARENTS]

[OCCUPATIONAL
ASPIRATIONS
OF FRIENDS]

[INCOME
EXPECTATIONS
OF DEFINERS]

[INCOME
ASPIRATIONS
OF MODELS]

STATUS
ASPIRATIONS

EDUCATIONAL
ASPIRATIONS

OCCUPATIONAL
STATUS
ASPIRATIONS

STATUS
ATTAINMENTS

EDUC OCCUP INCOME

* Employed by Sewell and Hauser

Table 1. Standardized Regression Coefficients and Coefficients of Determination for Antecedents of Socioeconomic Attainments (Decimals Omitted).

Variables ^a	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉
X ₁ -FOCC	*171	042	*135	059	*114	038
X ₂ -FED	073	-003	*129	-005	*093	*105
X ₃ -MED	*120	*176	071	*146	051	031
X ₄ -MA		*431	*107	*186	069	*144
X ₅ -AP			*167	*237	*321	*296
X ₆ - PEDE					*221	*224
X ₇ -FEDP					*178	*171
R ²	082	263	169	203	475	454

^aX₁ father's occupation; X₂ father's education; X₃ mother's education; X₄ mental ability; X₅ academic performance; X₆ parents' educational encouragement; X₇ friends' educational plans; X₈ educational aspirations; X₉ occupational aspirations.

*Absolute value of coefficient is at least twice as large as the standard error and the relationship is defined as statistically significant.

Standardized Regression Coefficients and Multiple Correlation
Coefficients for the Recursive Structural Models of Education,
Occupation and Earnings (Decimals Omitted).

Variables ^a	X_{10} EDUCATION					
X_1 -FOC	*176	*120	*100	*076	030	
X_2 -FED	*143	*120	*121	*112	062	
X_3 -MED	*223	*184	*097	059	035	
X_4 -MA		*325	*112	062	012	
X_5 -AP			*495	*429	*256	
X_6 -FEDE				*075	-041	
X_7 -FEDP				*226	*135	
X_8 -EDASP					*344	
X_9 -OCASP					*178	
R^2	184	281	461	513	619	

	X_{11} OCCUPATION					
X_1 -FOC	*242	*193	*174	*151	*122	*111
X_2 -FED	060	039	040	029	-012	-035
X_3 -MED	*125	091	012	-022	-039	-052
X_4 -MA		*287	*095	050	003	-002
X_5 -AP			*448	*387	*261	*160
X_6 -FEDE				090	-002	014
X_7 -FEDP				190	*118	067
X_8 -EDASP					*166	036
X_9 -OCASP					*248	*181
X_{10} -ED						*378
R^2	118	194	341	383	449	503

	X_{12} EARNINGS						
X_1 -FOC	060	038	034	017	006	002	-011
X_2 -FED	048	038	039	030	016	007	011
X_3 -MED	*105	*170	*152	*131	*125	*120	*125
X_4 -MA		*130	086	058	044	042	042
X_5 -AP			102	064	022	-019	-037
X_6 -FEDE				074	244	050	049
X_7 -FEDP				*108	084	063	056
X_8 -EDASP					073	020	016
X_9 -OCASP					064	037	017
X_{10} -ED						*154	113
X_{11} -OCC							110
R^2	059	075	083	099	106	115	121

^a X_1 , father's occupation; X_2 , father's education; X_3 , mother's education; X_4 , mental ability; X_5 , academic performance; X_6 , parents' education encouragement; X_7 , friends' educational plans; X_8 , educational aspirations; X_9 , occupational aspirations; X_{10} , education; X_{11} , occupation; X_{12} , earnings.

*Absolute value of coefficient is at least twice as large as the standard error and the relationship is defined as statistically significant.

TABLE 3

Proportion of Total Effects Explained (Background Socioeconomic Status Indicators on Socioeconomic Attainments) by Intervening Variables in the Wisconsin, Equality of Educational Opportunity and Lenawee County Samples* (Percentage Signs Omitted).

INDEPENDENT VARIABLES	DEPENDENT VARIABLES											
	EDUCATION				OCCUPATION				EARNINGS			
	WIS	EEO	LC	(LC)**	WIS	EEO	LC	(LC)**	WIS	EEO	LC	(LC)**
FATHER'S OCCUPATION via:												
mental ability	15	07	32	(36)	11	05	20	(20)	-	-01	-	-
academic performance	07	-01	11	(19)	05	-01	08	(11)	-	00	-	-
significant other influence	29	21	14	(04)	17	19	10	(04)	-	12	-	-
aspirations	12	12	26	(29)	07	13	12	(11)	-	02	-	-
education					16	25	05	(03)	-	15	-	-
occupation									-	11	-	-
TOTAL INDIRECT EFFECTS	62	39	83	(89)	54	61	54	(49)	-	38	-	-
FATHER'S EDUCATION via:												
mental ability	39	48	16	(16)	43	30	-	-	-	-08	-	-
academic performance	-02	20	-01	(00)	-02	15	-	-	-	03	-	-
significant other influence	18	02	06	(03)	16	02	-	-	-	01	-	-
aspirations	07	04	35	(37)	07	03	-	-	-	01	-	-
education					22	10	-	-	-	03	-	-
occupation									-	09	-	-
TOTAL INDIRECT EFFECTS	63	74	57	(56)	86	60	-	-	-	11	-	-
MOTHER'S EDUCATION via:												
mental ability	26	-	18	(17)	31	-	27	(28)	-	-	08	(08)
academic performance	06	-	39	(41)	07	-	63	(68)	-	-	10	(11)
significant other influence	23	-	17	(14)	24	-	27	(24)	-	-	11	(12)
aspirations	15	-	11	(11)	12	-	14	(14)	-	-	03	(04)
education					18	-	10	(12)	-	-	03	(03)
occupation									-	-	-03	(-03)
TOTAL INDIRECT EFFECTS	72	-	84	(83)	92	-	142	(144)	-	-	32	(34)
FAMILY INCOME via:												
mental ability	23	43	#	(17)	25	53	#	(19)	07	-06	#	(07)
academic performance	02	14	#	(-09)	02	19	#	(-11)	01	02	#	(-02)
significant other influence	36	24	#	(36)	31	42	#	(40)	02	13	#	(17)
aspirations	17	05	#	(16)	13	05	#	(16)	04	01	#	(05)
education					13	12	#	(20)	02	03	#	(07)
occupation									01	-03	#	(02)
TOTAL INDIRECT EFFECTS	78	85	#	(59)	84	132	#	(84)	17	09	#	(34)

*Estimates are made following the procedure proposed by Alvin and Hauser (1975) for interpreting causal theories in sociology. Zero-order correlations for the Wisconsin data are reported in Sewell and Hauser (1975:93). Zero-order correlations for the Quality of Educational Opportunity data were kindly provided by Karl Alexander of John Hopkins University.

**Modified Lenawee County estimates which assume the Wisconsin associations for family income and teacher education encouragement.

#Indicates that the relationships do not appear in the Lenawee County data.

-Indicates that the total effect is not statistically significant, therefore indirect effects are not calculated.

Table 4. Coefficients of Determination (R^2): LC, WIS, and EEO Samples^a

Status Variables	R^2		
	LC	WIS	EEO
Education	.62	.54	.45
Occupation	.51	.43	.42
Earnings	.12	.08	.12

^aSee Table 1 and the section on Data, Variables, and Methods for a description of the regressors. Education is included among the latter when occupation is the dependent variable; both of the former are included among the regressors for earnings.

Zero-order Correlations, Means and Standard Deviations for Indicators¹ Used in Estimating Structural
Equation Models in the Wisconsin, Equality of Educational Opportunity and Lenape County Studies
(Decimals Omitted in Correlations).

Variables ²	WISCONSIN													
	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃	X ₁₄
X ₁ -FOCC														
X ₂ -FED	429													
X ₃ -MED	287	320												
X ₄ -PINC	448	321	247											
X ₅ -MA	181	248	205	178										
X ₆ -AP	131	154	140	121	537									
X ₇ -TEDE	134	150	140	173	347	415								
X ₈ -PEDE	261	248	231	241	345	315	437							
X ₉ -FEDP	219	237	210	233	288	307	339	398						
X ₁₀ -EDASP	266	270	257	275	426	450	447	322	493					
X ₁₁ -OCASP	242	227	227	238	428	460	399	477	455	735				
X ₁₂ -ED	290	306	273	273	448	512	406	472	474	656	580			
X ₁₃ -OCC	248	232	215	231	278	434	331	358	360	473	476	623		
X ₁₄ -EARN	683	682	664	173	245	159	213	121	091	178	190	204	211	
$\bar{X}$	33.63	10.31	19.31	4500.00	100.67	96.01	.444	.408	.361	.387	49.38	13.50	43.30	757
S.D.	22.34	3.02	2.88	3158.50	14.54	13.84	.497	.488	.480	.487	26.51	1.72	23.41	260

EQUALITY OF EDUCATIONAL OPPORTUNITY ²														
Variables ²	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃	X ₁₄
X ₁ -FOCC														
X ₂ -FED	438													
X ₃ -MED														
X ₄ -PINC	410	468	392											
X ₅ -MA	206	317	204	319										
X ₆ -AP	138	229	104	228	471									
X ₇ -TEDE	130	134	131	190	107	218								
X ₈ -PEDE	268	263	216	334	250	334	377							
X ₉ -FEDP	273	251	211	314	260	303	303	436						
X ₁₀ -EDASP	284	307	267	343	303	391	292	488	521					
X ₁₁ -OCASP	289	232	137	249	281	371	235	389	350	442				
X ₁₂ -ED	324	348	260	346	480	505	221	377	418	485	393			
X ₁₃ -OCC	294	296	172	253	351	394	219	309	366	386	364	610		
X ₁₄ -EARN	212	243	180	251	071	091	075	196	122	158	117	212	228	
$\bar{X}$	43.35	10.36	10.94	.1097	7.81	2.72	1.68	2.30	3.10	2.02	59.88	14.72	53.52	11303
S.D.	20.23	3.71	2.88	.8529	3.95	.86	.60	.65	1.60	.83	24.98	2.66	23.33	4354

LENAPE COUNTY														
Variables ²	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	X ₁₃	X ₁₄
X ₁ -FOCC														
X ₂ -FED	461													
X ₃ -MED	311	347												
X ₄ -PINC														
X ₅ -MA	241	217	212											
X ₆ -AP	199	206	279		478									
X ₇ -TEDE														
X ₈ -PEDE	276	288	253		283	292								
X ₉ -FEDP	194	192	267		243	377								
X ₁₀ -EDASP	349	353	345		400	342		341	465	432				
X ₁₁ -OCASP	285	329	315		441	312		455	444	679				
X ₁₂ -ED	311	346	356		419	621		361	487	700	639			
X ₁₃ -OCC	308	240	233		362	379		325	413	554	370	638		
X ₁₄ -EARN	140	177	230		183	200		191	221	255	248	291	265	
$\bar{X}$	32.64	2.27	2.36		20.68	2.03		6.37	2.50	1.15	36.19	13.48	47.05	1255
S.D.	21.78	1.25	1.25		5.14	.84		1.72	1.98	1.26	12.56	2.50	23.21	343

¹ We use the indicators in a generic sense and do not imply identical operationalizations.

² FOCC = father's occupation; FED = father's education; MED = mother's education; PINC = parental income; MA = mental ability; AP = academic performance; TEDE = teacher's education encouragement; PEDE = parents' education encouragement; FEDE = friends' educational plans; EDASP = educational aspirations; OCASP = occupational aspirations; ED = education; OCC = occupation; EARN = earnings.

³ Wisconsin correlations, means and standard deviations are reported in Sewell and Hauser (1975:91).

⁴ For the Equality of Educational Opportunity study, means and standard deviations were kindly provided by Fred Alexander.