Status Attainment Processes*

Archibald O. Haller
University of Wisconsin (Madison)

Alejandro Portes
University of Texas at Austin

Recent research on stratification has moved away from traditional concerns with description of mobility rates and toward explanation of the processes by which educational and occupational positions are attained. This paper presents and compares the two main theoretical models emerging from this line of research. The Blau-Duncan and Wisconsin models of status attainment are similar in the causal ordering of positional variables and yield similar empirical estimates of paths of influence, despite being based on different samples. The main focus of the Blau-Duncan model is on the structure of status transmission while the Wisconsin model focuses on social psychological dynamics mediating interpersonal influences on individual attainment. Different aspects of this mediation are discussed on the basis of completed Wisconsin research. Practical implications of the two attainment models are examined. A paradigm for future research in this area is presented.

Introduction

STATUSES ARE INEQUALITIES among social units, such as persons or families, which are more or less institutionalized within the larger social system. These inequalities occur in most societies along a plurality of basic dimensions. Three such dimensions come closest to being regarded universally as bases for status systems: wealth, power, and prestige (Runciman, 1968; Haller, 1970). Abstract hierarchies represented by these dimensions are operationalized

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in social life by a broader set of specific status variables. They include, among others, income and property, political influence, prestige in the occupational domain, and generalized esteem in the community. Of these, for reasons explained below, the variable most commonly focused upon is occupation and, more specifically, occupational prestige (Duncan, Featherman, and Duncan, 1972; Hodge, Siegel, and Rossi, 1966). Also employed as status indicators, though less frequently than occupation, are income (Miller, 1966), general wealth (Lampman, 1962), and reputational prestige and influence in the community (Warner and Lunt, 1941; Lehman, 1969; Walton, 1971). Education has been proposed as a fourth basic status dimension (Svalastoga, 1965). Education, however, seems to lack the abstractness and universality of the first three hierarchies, its formal importance being limited to relatively modern societies (Haller, 1970). Concern for education in the study of stratification systems seems better justified by its increasingly important role as determinant of positions in subsequent variables directly representing differences in wealth, power, and prestige (Rosen, Crockett, and Nunn, 1969).

Among many study areas to which the permanent fact of social inequality has given rise, the problem of "movement" along status dimensions has few rivals in the amount of interest it has elicited. Two focal points of concern have been the extent to which ascriptive factors at birth determine subsequent levels of achievement and the extent to which initial positions of individuals in the stratification system influence their positions at later points in time. The initial impetus provided by Sorokin's (1927) plea for empirical research instead of speculation in this area was followed by nearly three decades in which the above issues were approached under the labels inter- and intra-generational mobility, respectively.

Research on mobility has been useful in providing descriptions of the extent and direction of population movements along different status dimensions in particular societies. Comparing rates of upward and downward mobility between different societies has given rise in turn to insightful theorizing about societal causes of static versus changing inequalities and the social and political consequences of these alternative situations (Lipset and Bendix, 1959).

However, for the most part there is a paucity of causal explanations of mobility at the individual level. The magnetism exercised on researchers by the mobility problem has meant almost exclusive concentration on description—analysis of conventional mobility matrices *per se*—to the neglect of explanation—study of the possible determinants of observed status movements. Analysis of the causes and consequences of mobility within a society has been

handicapped, in addition, by use of a "difference score" between parental or individual initial positions and present ones to represent direction and distance of status movement. Because such a score is not a simple measure but a composite of initial and terminal positions, its statistical manipulation is fraught with difficulties. As noted by Blau and Duncan (1967), causal influences on parental or early individual positions (and their impact on mobility scores) may not be identical with those on terminal ones. Identical mobility scores may be the result of quite different causal configurations making simple, homogenous explanations inappropriate. Moreover, initial parental or individual status is not causally indifferent to final outcomes. Their impact on later attainment—reflected in consistently sizable correlations—means that mobility in either direction varies in degree of difficulty with its starting point: there are few chances of downward mobility for children of those at the bottom of the stratification ladder and equally restricted opportunities for upward movement among offsprings of those at the top. Interpretation of statistical results based on mobility as a difference score runs into the constant risk of confusing substantive findings with those due to an inevitable regression toward the mean (Blau and Duncan, 1967).

Difficulties associated with mobility scores have led investigators interested in causal explanations to drop the initial status baseline, regarding it as part of the sequence leading to final attainment. This development has been accompanied by terminological changes. Study of "mobility" thus has become the study of "achievement" or of "the process of stratification."

While labels are of no crucial importance it may be well to point out that no term coined up to the present seems entirely satisfactory for designating this new turn of empirical research. "Achievement" as employed by those in the psychological tradition of McClelland (1961) does not seem entirely proper since it implies a substantial influence of inner drives (Rosen, 1959; Rosen and D'Andrade, 1959). This can be regarded as a too hasty anticipation of results which should come from empirical research. Blau and Duncan (1967) employed "process of stratification" to avoid premature closure on the question of ascription versus achievement. While their points against usage of "mobility" or "achievement" certainly are well taken, their own term is not without shortcomings. Processes by which persons come to occupy their status positions are certainly stratification processes but the latter are not exhausted by the former. To be precise, they are concerned with a particular process among all those relevant to stratification—the degree to which fathers' occupational status levels are transmitted to their sons and the processes by which this occurs. Other stratification processes include, for example, changes in entire

status systems rather than in positions of individuals within them.

Given the present ambiguities in nomenclature, a new term is in order. "Status attainment" seems to us to avoid the pitfalls of difference scores and premature conclusions concerning the role of motivation. It is specific enough to draw attention only to changes in the status of persons, yet is general enough to cover all such processes, including intergenerational status transmission. Throughout the remainder of this paper, we will employ "status attainment processes" to refer to those sets of events by which individuals come to occupy their positions in the social hierarchies of wealth, power, and prestige. The plural "processes" calls attention to two aspects. First, different societies may have quite different sets of events leading to status attainment. The well-known comparison between the American system of "contest" attainment and the British system of "sponsored" attainment furnishes a good example of these differences (Turner, 1960). Second, status attainment within specific societies tends to occur as a net result of several quite different sets of events. This applies to both the particular status which is attained and the causal processes leading to it. This paper attempts to summarize what is now known about status attainment processes in the United States today. It may be convenient to state here reasons for employing occupational status as the main attainment variable to be explained.

Usage of occupation in status attainment research is inextricably linked to the prevalence of this research in the United States (and other western societies) in which individual levels of wealth, prestige, and power are not attained primarily as a function of ascriptive criteria present at birth. In systems using ascriptive criteria—partially exemplified by the remnants of the European nobility and, at the other extreme, by some discriminated racial minorities—status attainment takes the form of mere age-graded socialization into predetermined positions. In contrast, modern societies seem increasingly to allocate varying levels of wealth, prestige, and power primarily on the basis of what a person does rather than on who he is. This is not to say that such allocation necessarily follows some equity principle, as suggested by the functional theory of stratification (Davis and Moore, 1945), but merely to point out the strategic place of occupational roles vis-à-vis the basic status dimensions. When the status systems of modern societies are somewhat crystallized (see below), a person's occupation is intimately connected with his position in other hierarchies. While occupational status certainly does not exhaust the range of status variations, it appears as the most representative summary measure of a person's general social standing within the context of modern societies. This is certainly so if we restrict the field to status dimensions for which simple and reliable

measures are available. The relationship of occupational status to these specific dimensions, for the most part, is straightforward—educational attainment being regarded as primarily a determinant, and income level as primarily a consequence, of occupation.

While study of status attainment focuses on individual change sequences, it should not be forgotten that these processes occur within status systems which are themselves subject to change. Though the evidence at present points to a marked stability of occupational prestige rankings in the U.S. over a period of several decades (cf. Hodge, Siegel and Rossi, 1966), this fact is by no means a necessity.

A theory of status attainment, therefore, must draw from other areas of stratification research to take into account possible changes occurring in the structure of status systems. Elsewhere the distinction has been drawn between the Weberian (Weber, 1946; Runciman, 1968) *content* dimensions of status (wealth, power, and prestige) and *structural* dimensions (Haller, 1970) which describe states of the content dimensions. Two structural dimensions seem especially relevant to the problem of status attainment: dispersion, or the degree to which social units are differentiated along each of the three basic content dimensions, and crystallization (Landecker, 1970), or the degree to which content dimensions themselves are inter-correlated. Dispersion is important because when the variance in status is large, status attainment processes are likely to be delineated sharply. Crystallization is important because of the inter-dimensional predictability in status which it implies. Different models of status attainment would be required were each status dimension to have low correlations with the others. This is why the degree to which occupational status safely can be assumed to be representative of other status dimensions is contingent upon the level of crystallization.

Dispersion and crystallization of status systems—for which empirical measures might be developed without great difficulty—may prove worthwhile as integral parts of future status attainment research since they delineate the general framework within which individual processes take place: dispersion indicating the quantity of status variation to be explained, crystallization the qualitative nature of this variation. Yet to date, neither variable has been taken into account as a parameter affecting status attainment.

In sum, the place of status attainment research in the study of social stratification lies in the effort to specify the causal sequence through which individuals reach their positions in status hierarchies. Status attainment research seeks to identify those basic factors describing the persons and their situations which account for whatever status locations they come to occupy. Knowledge of these causal inputs may allow prediction of eventual status out-

comes for different categories of individuals. While a plurality of social hierarchies offers alternative foci for the study of attainment, it is occupation, among readily measured status variables, which is most strategic and which is best known. Finally, study of individual attainment must take into account the changing structure of status systems within which these processes take place.

The sections below present, in summary fashion, what is known on the basis of empirical research of causal sequences through which status attainment takes place. Discussion is limited to American society because it is here that the main research has been conducted. Two such models exist today. We shall call one the "Wisconsin model" and the other the "Blau-Duncan model." One, the Blau-Duncan model, is most precisely concerned with status transmission. Both are grounded solidly in careful research using extensive samples. The following discussion will aim at clarifying:

(1) The dissimilar theoretical orientations but eventual complementarity of the two basic models presented;
(2) The relative usefulness of each as analysis is focused on general objective determinants or on more specific psychological factors;
(3) The limitations of both approaches and, by extension, lines of viable research for the future.

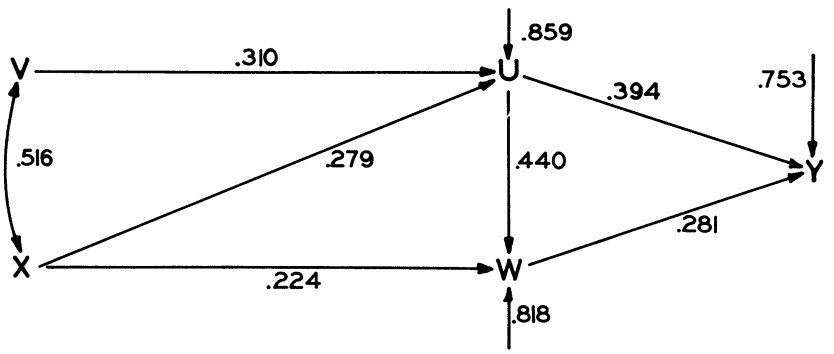
Models of Status Attainment

Research on status attainment processes in the U.S. has been conducted along different theoretical paths. The two models outlined in this section are not the only ones developed, but they are representative of the two main orientations which sociological thought has followed. Both are based on large data sets and both have employed path analysis as a form of presentation.

Best known among causal theories of status attainment is Blau and Duncan's (1967) model. It is based on data collected from a single cross-sectional sample of the American adult male population as part of the Bureau of Census' "Current Population Survey" of March, 1962. Strictly speaking, the concern of the model is status transmission, or the extent to which ascribed positions relate to subsequent attainment. As such, Blau and Duncan's model essentially is an attempt to reconceptualize classic questions of mobility research within a more useful analytic framework. That is, they focus upon:

(1) The extent to which inherited status determines the social fate of individuals.
(2) The extent to which earlier positions in status hierarchies affect later levels of attainment.

DIAGRAM 1: BLAU–DUNCAN'S MODEL OF STATUS ATTAINMENT



V=FATHER'S EDUCATION
X=FATHER'S OCCUPATION
U=RESPONDENT'S EDUCATION
W=RESPONDENT'S FIRST JOB
Y=RESPONDENT'S PRESENT OCCUPATION (IN 1962)

Their answers are portrayed graphically in a path model reproduced in Diagram 1.

Basically, the model says that while parental positions exercise some significant direct effects, their primary influence on occupational attainment is indirect via educational level. Education affects both early and late occupational attainment while the former also has a sizable effect on the latter. The greater importance of education-mediated influence vis-à-vis direct parental effects is illustrated further by partitioning gross effects of parental status variables into their direct and indirect components. As presented in Table 1, only the effect of father's occupation on initial occupation shows roughly equal direct and indirect components. In all other cases, direct effects on occupational attainment are much smaller than those mediated first by education and then by initial occupation.

TABLE 1

Indirect and Direct Effects of Parental Status Variables on Occupational Attainment [a]

Variables	Effects		
	Gross	Direct	Indirect
Father's Occupation on Early Occupation	.417	.224	.193
Father's Education on Early Occupation	.332	.017	.315
Father's Occupation on 1962 Occupation	.405	.115	.290
Father's Education on 1962 Occupation	.322 [b]	0	.327 [b]

[a] Adapted from Blau and Duncan (1967).
N = 20,700 (approx.)
[b] Differences are due to the effects of rounding.

Variables included in this model are of an "objective" positional nature for which reliable measures are available. All were already present in conventional mobility research. The major contribution of the model thus consists of systematizing causal relationships obscured by usage of mobility "difference scores." Restriction of the theory to these variables means, however, that further questions concerning the finer mechanisms through which status attainment takes place are not answered. Crucial among them:

(1) What are the mediating processes by which parental status affects educational and, to a lesser extent, occupational attainment?
(2) In what specific ways are mental ability and academic performance related to status attainment?

Answers to these questions require examination of causal processes at a more specific social psychological level. It is obvious, for example, that father's occupation does not affect educational and occupational attainments directly. What father's occupation "means" in terms of the set of influences it can bring to bear on offspring's attitudes and cognitions and how these in turn affect attainment-oriented behavior comprise crucial aspects for study if adequate understanding of the dynamics of status attainment is to be reached.

To explore these questions is to enter the less "safe" realm of social psychological variables. It is also, however, to face a challenging scientific endeavor since specification of mediating mechanisms can enrich a causal model based on objective variables.

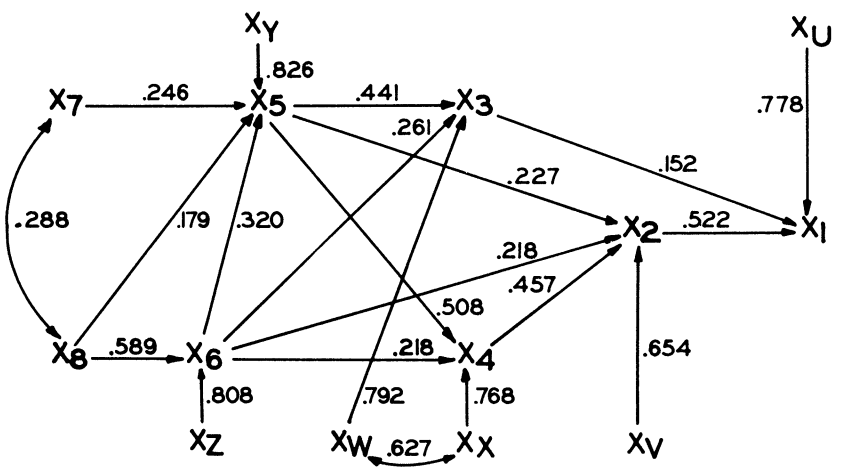
The second model of status attainment, presented below, departs from a social psychological orientation. Its basic features were developed by a group of researchers originally affiliated with the University of Wisconsin (Sewell, Haller, and Portes, 1969; Sewell, Haller, and Ohlendorf, 1970; Woelfel and Haller, 1971). The data set was collected by Little (1958) and Sewell (1971) from a one-third random sample of Wisconsin's male high school seniors in 1957. Information was obtained at that time on parental status, area of residence, and other objective variables as well as on more subjective factors such as significant others' influence and respondent's educational and occupational aspirations. Eighty-nine per cent of the sample was reinterviewed in 1964–65 to ascertain educational and early occupational attainments.

The Wisconsin model was first used to describe data on the subsample of farm residents (Sewell, Haller, and Portes, 1969). Subsequently it was applied to respondents in five different residential areas—farm, village, small city, medium city, and large city—as well as to the total sample—in order to ascertain whether

original results were specific to the farm population (Sewell, Haller, and Ohlendorf, 1970). This test supported the initial model with slight modifications. The final model is presented in Diagram 2. Path coefficients (beta weights) for each residential area are presented in Table 2. As these results show, the causal model applies in similar fashion across different residential categories. The model is parsimonious, involving thirteen of the possible twenty-six paths among variables arranged in this causal order. Evidence in support of this restriction is provided by comparing variation in dependent variables accounted for by the model (R^2s) versus that explained when all possible paths are included. The two sets of figures—for each residential area and the total sample—are presented in Table 2. As can be seen, increases in explained variation due to these additional paths are, in almost all cases, of little consequence.

Total explained variation in early occupational attainment (X_1) is forty per cent and in educational attainment (X_2) fifty-seven per cent. These figures compare with thirty-three per cent of

DIAGRAM 2: THE WISCONSIN MODEL OF EDUCATIONAL AND EARLY OCCUPATIONAL ATTAINMENT



X_1 - OCCUPATIONAL ATTAINMENT
X_2 - EDUCATIONAL ATTAINMENT
X_3 - LEVEL OF OCCUPATIONAL ASPIRATION
X_4 - LEVEL OF EDUCATIONAL ASPIRATION
X_5 - SIGNIFICANT OTHERS' INFLUENCE
X_6 - ACADEMIC PERFORMANCE
X_7 - SOCIOECONOMIC STATUS
X_8 - MENTAL ABILITY

TABLE 2

Path Coefficients and Coefficients of Determination for Final Wisconsin Model and for That Including All Possible Paths. Five Residence Categories and Total Sample

Residence Category and Dependent Variable	Independent Variables							Coefficient of Determination (Final Model)	Coefficient of Determination (All Paths)
	X_2 EdAtt	X_3 LOA	X_4 LEA	X_5 SOI	X_6 AP	X_7 SES	X_8 MA		
								R^2	R^2
Farm N = 857									
X_1—OccAtt	.553	.139						.415	.433
X_2—EdAtt			.434	.202	.240			.519	.539
X_3—LOA				.376	.275			.315	.333
X_4—LEA				.432	.234			.338	.352
X_5—SOI					.388	.174	.106	.263	.263
X_6—AP							.630	.397	.397
Village N = 816									
X_1—OccAtt	.565	.105						.404	.410
X_2—EdAtt			.458	.193	.237			.563	.569
X_3—LOA				.414	.314			.394	.403
X_4—LEA				.497	.253			.432	.445
X_5—SOI					.367	.247	.070	.292	.292
X_6—AP							.673	.453	.458
Small City N = 1094									
X_1—OccAtt	.508	.096						.328	.340
X_2—EdAtt			.476	.204	.232			.602	.628
X_3—LOA				.394	.304			.365	.388
X_4—LEA				.497	.260			.441	.463
X_5—SOI					.300	.236	.217	.341	.341
X_6—AP							.602	.363	.366

TABLE 2 *(Continued)*

Residence Category and Dependent Variable	Independent Variables							Coefficient of Determination (Final Model)	Coefficient of Determination (All Paths)
	X_2 EdAtt	X_3 LOA	X_4 LEA	X_5 SOI	X_6 AP	X_7 SES	X_8 MA	R^2	R^2
Medium City N = 935									
X_1—OccAtt	.475	.168						.354	.371
X_2—EdAtt			.413	.260	.234			.577	.595
X_3—LOA				.476	.232			.392	.430
X_4—LEA				.549	.164			.419	.452
X_5—SOI					.346	.232	.219	.355	.355
X_6—AP							.534	.286	.290
Large City N = 686									
X_1—OccAtt	.495	.158						.361	.367
X_2—EdAtt			.440	.218	.212			.510	.556
X_3—LOA				.386	.292			.331	.370
X_4—LEA				.456	.226			.346	.387
X_5—SOI					.291	.145	.219	.251	.251
X_6—AP							.501	.251	.252
Total N = 4, 388									
X_1—OccAtt	.522	.152						.395	.405
X_2—EdAtt			.457	.227	.218			.572	.598
X_3—LOA				.441	.261			.372	.410
X_4—LEA				.508	.218			.410	.442
X_5—SOI					.320	.246	.179	.318	.318
X_6—AP							.589	.347	.347

variation accounted for in early occupational attainment (W) and twenty-six per cent in educational attainment (U) by the Blau-Duncan model.

Both models came to identical conclusions regarding the causal order of comparable status variables. Early occupational attainment is defined, in both cases, as primarily a function of prior education. Educational and, to a lesser extent, occupational attainments, in turn, are viewed as causally dependent on parental status. The Wisconsin model attempts, however, to complement this general model by a series of hypotheses specifying mediating variables and paths through which initial status variables influence later ones. Direct effects of parental status on educational and occupational attainments are found to disappear when intervening factors are considered. Indirect parental status effects occur primarily through significant others' influences (X_5) as the latter affects the formation of status aspirations (X_3, X_4) and acts directly on educational attainment.

The model in fact says that practically all the effect that family's socioeconomic status has on a person's educational and occupational attainment is due to its impact on the types of attainment-related personal influences that the person receives in his adolescence. The measure of significant others' influence employed on the Wisconsin sample [1] suggests that this impact includes, but is not exhausted by, direct parental influence on the formation of status aspirations. The family's socioeconomic position also sets limits on the pool of potential significant others confronted by the individual and the nature of their orientations. It affects, for example, the class and general background of possible friends and hence the likelihood of their having and conveying college plans.

Leaving for the next section analysis of other features of this model, we may proceed with comparison between the two models by examining their empirical results along conceptually similar variables. Respondent's first job (*W* in Diagram 1) in the Blau-Duncan model is roughly equivalent to occupational attainment in the Wisconsin research: The latter (X_1 in Diagram 2) was measured only a few years after high school enrollment and, hence, can be assumed to reflect early stages in respondents' occupational careers. Both variables are operationally identical, being given in

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[1] Significant others' influence was measured by a summated index of three variables: parental encouragement toward college, teachers' encouragement toward college, and best friend's college plans. These variables are moderately inter-correlated. Family socioeconomic status (X_7) correlates significantly with all three. Further details on measurement are found in the original sources: Sewell, Haller, Portes, 1969 and Sewell, Haller, Ohlendorf, 1970. (Sewell, Hauser, and Shah, unpublished, are currently disaggregating the multi-item indexes and are assessing their effects on subsequent variables.)

scores of Duncan's (1961) socioeconomic index for all occupations (SEI). Education variables (U and X_2) are conceptually the same—years of formal schooling completed—though Blau and Duncan utilized the continuous distribution of the variable while in the Wisconsin data it is coded into four broad educational attainment categories (Sewell, Haller, and Ohlendorf, 1970) and refers only to college attainment.

Concern of Blau and Duncan with status transmission led them to employ only father's occupation and education as exogenous variables and examine their effects separately. Concern of Wisconsin researchers with the dynamics of status attainment led them to posit parental socioeconomic status as a single exogenous variable formed by father's occupation and education, mother's education, and family's income level. This operational difference may be overcome partially by combining father's occupation and education in Blau-Duncan's research as an approximation to the Wisconsin socioeconomic status index (X_7). The question then is: how do relationships between these three status variables compare across the two studies?

Correlations of socioeconomic status with educational and early occupational attainment in Blau-Duncan's data are estimated by taking simple averages of the correlations of father's education (V) and father's occupation (X) with the other status variables. Intercorrelations between parental status, educational and early occupational attainment in the two studies are presented in Table 3.

As can be seen, despite differences in variable measurement, sample selection, and time and place of data collection, the two sets of coefficients are quite similar. In no case do correlations between the same two variables differ by more than eight points. Differences between the same coefficients across the two studies are consistently smaller than differences between coefficients within each set. Both studies rank the correlations in the same order, parental status and early occupation displaying the weakest rela-

TABLE 3

Correlations between Status Variables: Blau-Duncan and Wisconsin Models

Correlation	Blau-Duncan	Wisconsin
r_{12}	.538	.618
r_{13}	.374	.331
r_{23}	.445	.417
$R_{1.23}$	.560	.623

X_1: Early Occupational Attainment.
X_2: Education.
X_3: Parental Socioeconomic Status.

tionship and educational and occupational attainment the strongest.

As seen above, if both models were restricted to these three variables, they would hypothesize the same causal order, with early occupation defined as a function of educational attainment and parental status. Thus, it is also possible to compare multiple correlations, with early occupation as the dependent variable. Not surprisingly, coefficients are quite similar. As shown in Table 3, multiple correlation in Blau-Duncan is .56, in the Wisconsin study, .62. Squaring available coefficients makes possible a final comparison in terms of relative contribution to explained variation in early occupational attainment. More than specific coefficients, this exercise illustrates how both studies would yield identical conclusions if restricted to objective status variables. We may start by considering the total effect (r^2) of the earlier causal variable —parental status—on occupational attainment and then the additional contribution made by education. This yields the following figures:

	Blau-Duncan	Wisconsin
Gross Parental Status Effect (I)	.14	.11
Additional Education Effect (II)	.17	.28
Total Variation Explained ($R^2 = I + II$)	.31	.39

In both cases, even when total parental status effects—direct effect plus that due to its inter-correlation with education—are considered, education exercises a stronger additional effect on occupational attainment. This trend is especially marked in Wisconsin results where the additional impact of education is more than twice that due to gross parental effects. Nevertheless, both sets of results yield identical conclusion: There is a significant gross effect of parental status on early occupational attainment but a still larger additional effect of education.

Next, we may consider results from the opposite perspective: first, total effect of the more immediate determinant of occupational attainment—education; second, additional effect of the more remote variable—parental status. For each model:

	Blau-Duncan	Wisconsin
Gross Education Effect (I)	.29	.38
Additional Parental Status Effect (II)	.02	.01
Total Variation Explained ($R^2 = I + II$)	.31	.39

The conclusion is the same in both cases: Once educational attainment has been taken into account, additional effects of parental status on occupational attainment are entirely insignificant.

This similarity of empirical results despite very different research designs suggests two important points: First, relationships between status variables are seemingly "robust" since they yield similar levels of association across different times, locations, and forms of data collection. Second, and more important for a theory of status attainment, differences between the two models presented above are not due to contradictory empirical results but rather to alternative conceptualizations of the problem.

In sum, two theoretical models emerging from the main currents of empirical research on status attainment have been presented. The first, employing objective status variables, is concerned primarily with status transmission. The second, employing objective and social psychological variables, is concerned primarily with the dynamics of status attainment. Variables shared by the two models—parental status, educational and early occupational attainment—are arranged in the same causal order and yield similar empirical results. Thus, the main contribution of the second model is not in challenging conclusions reached by the first, but rather in clarifying the processes through which causal influence of earlier status variables on later ones occurs. Direct effects of parental status variables on educational and occupational attainment in the first causal model are shown by the second to be entirely mediated by formation of educational and occupational aspirations and the impact of significant others' influences on this process.

In other words, when we look at both systems as status transmission models we find that they yield similar results, except that the Wisconsin model includes a set of social psychological mediating variables while the Blau-Duncan model does not.

The complementarity between the two lines of research is not limited to theoretical questions but shows promise of extending itself to practical problems as well. Broad models of the type developed by Blau and Duncan may be employed in the future to depict main trends in the process of occupational attainment and diagnose significant deviations—defined as social problems—of specific subgroups. Models following the Wisconsin orientation will be alternatively useful for identifying steps in the status attainment sequence where these deviations occur and hence isolating the junctures at which planned social intervention may prove more effective. If taken at face value, the latter model in its present form suggests, for example, that the negative impact of low parental status on children's educational and occupational attainment could well be altered if a set of counterbalancing in-

fluences—at school and within the peer group—were brought to bear at the time status aspirations were formed and at the point they were enacted into relevant behavior.

The Wisconsin Model

To enter the field of social psychological processes in status attainment is to invite many more challenges to hypothesized relationships and increasing doubts that a causal model is isomorphic with reality.

Four main types of challenges may be leveled:

(1) The variables included in the model are not exhaustive of all important influences at different stages of the process.
(2) The indexes of the variables are of questionable reliability and validity.
(3) The causal order in which variables are arranged is not the proper one.
(4) Assumptions of linearity and additivity of relationships, implicit in path analysis, are not justified.

Without question, the Wisconsin model constitutes a heuristic approximation in need of further development. Its defense is justified only in the absence of the more sophisticated, better research-supported theories which eventually will supersede it. Four points, however, deserve mention:

(1) Though certainly not all possible variables were considered, several alternative factors were tested during construction of the model. These included a series of background and contextual factors (Sewell and Armer, 1966; Sewell, Haller, and Portes, 1967; Haller and Sewell, 1967). None of these, other than those included herein, proved to have significant influences on occupational and educational attainments or their antecedents. This, of course, does not detract from the possibility that other variables may prove causally important. However, with the exception of motivational and personality factors, for which no measures were available, none appears at present as a likely candidate for use among young men. The possible use of other variables for women and for younger people are another matter entirely.

(2) Mental Ability (X_8) was measured by an instrument of known reliability and validity, the Henmon-Nelson scale (Henmon and Nelson, 1942) applied yearly to all Wisconsin high school juniors. Socioeconomic status is a weighted index of items such as father's and mother's education, father's occupation and family's income level, conventionally employed as status indicators. Reliability of this variable seems at least not inferior to that of other status measures employed in current sociological research.

Academic performance (X_6) came, as mental ability, from school records in the form of student's rank in his high school class. Assessment of current occupation and educational level in 1964–65 seems straightforward. The former was coded from Duncan's Socio-economic Index, employed by a number of other studies as the most valid available measure of occupational prestige. Intercorrelation between attainment variables as well as its similarity with correlations reported by other studies suggest reliability levels not inferior to those reached by the best currently available research. This leaves measurement of aspirations and significant others' influence as problematic. It will suffice to note at present that hypothesized relationships between these variables derive strong support from an independent research program designed precisely to examine these aspects of the status attainment process (Woelfel and Haller, 1971). Results from this study are summarized in the next section.

(3) The longitudinal design of data collection insures a temporal sequence among crucial variables similar to the causal order portrayed by the model. Aspirations and their antecedents were measured in 1957 or earlier; attainments in 1964–65. Among the latter, education preceded occupational attainment. Among 1957 variables, mental ability is not only logically prior to academic performance but was measured when the student was a junior in high school, while academic performance is his relative standing in the senior class. The durability of status positions over time means that parental status naturally should precede other variables. Relationships between academic performance, significant others' influence, and aspirations however, are, problematic. While, for example, academic performance is hypothesized to influence college educational aspirations, the opposite also may be true. Similarly, academic performance should affect significant others' assessment of the child's college potential and hence the nature of their influence, but the opposite also could occur. Such "circles of causality" are particularly difficult to portray on the basis of survey data. In the present case, nonrecursive path models comprising these reciprocal influences can be solved only by imposing implausible assumptions on the data (Woelfel and Haller, 1971b). It is here then that the model seems farthest removed from empirical reality. It remains for future research, based on different data collection designs, to clarify these relationships. Limiting ourselves, for the time being, to recursive paths, those hypothesized by the model seem clearly the most reasonable ones among existing options. As seen above, they yield a close fit to observed correlations.

(4) Tabular analyses of bivariate associations indicate that all relevant relationships are linear (Sewell, Haller, and Portes, 1967).

This, of course, does not rule out the possibility of multivariate nonlinearity or interactive effects. A separate study was undertaken to test these alternative hypotheses in regard to causal effects on educational and occupational attainments (Gasson, Haller, and Sewell, 1972). As results presented below indicate, this research provided no empirical justification for abandoning the assumptions of linearity and additivity underlying the model.

As in the case of Blau and Duncan's theory, the Wisconsin model does not contain any radically new conceptions but rather summarizes in a systematic fashion well-established notions in social psychology and stratification research as they impinge on the process of status attainment. Most important among them: (1) The forceful impact of interpersonal influence on the formation of attitudes and their behavioral enactment. This is portrayed by the strong direct effects of significant others' influence on educational and occupational aspirations and its smaller direct effect on educational attainment. (2) The role of self-reflexive action in the adjustment of status aspirations to more or less conform to perceived ability (Woelfel and Haller, 1971a). (3) The basic role of status aspirations, as antecedents of educational and occupational attainment. These observations are in agreement with results of most past research in the area (Kahl, 1953; Herriott, 1963; Alexander and Campbell, 1964; Duncan, Haller, and Portes, 1968).

It is the last set of variables which constitutes the strategic center of the model. Aspirations mediate most of the influence of antecedent factors on status attainment. Even when educational attainment is taken into account, occupational asiprations still exercise a significant direct effect on occupational attainment.

The execution of occupational and educational aspirations appears to be a central process in early adult status attainment, not only because it represents a clear expressive orientation toward desirable goals but also because it is likely to involve a realistic appraisal of possibilities conveyed to ego by significant others and his own self-evaluations. The hypothesized impact of aspirations on status attainment does not mean that all or most specific goals must be fulfilled but, more generally, that initial plans set limits to the range where eventual attainment levels are likely to be found.

The Wisconsin model thus can be defined as an attempt to clarify the process by which status aspirations are formed and the manner in which they influence subsequent attainment-oriented behavior. Related to each of these aspects, two general hypotheses are advanced:

A. Status aspirations are complex forms of attitudes whose

translation into attainment levels is affected by the context in which individuals attempt to enact them.

Individuals in society set personal goals with respect to socially structured behavior alternatives. Status hierarchies, such as the occupational or educational systems, are instances of such structured alternatives. Educational and occupational aspirations are essentially attitudinal variables describing differences in personal goal levels. Aspirations are complex forms of attitudes because they are orientations to objects treated as having finely structured alternatives for behavior. Nonetheless, like all attitudes, translation of aspirations into behavior is problematic. If an aspiration level is carried out at all, it is enacted in a context which itself affects attainment.

Status attainment thus is hypothesized to be a function of two main causal components: a cognitive-motivational component, formed by aspirations, and a contextual component formed by the set of social and organismic factors affecting their enactment. As a class, we have termed the contextual variables "facilitators" (Sewell, Haller, and Portes, 1969). The status expectation levels that the others hold for the youth and the status attainment levels they exemplify are crucial variables describing the contextual component. The mean expectation levels of such people are what we mean by "Significant Others' Influence" (though our operational definitions of the variable are at times less than ideal). In the Wisconsin model, significant others' influence acts as a facilitator of educational attainment; the latter, in turn, serves as a crucial facilitator of early occupational attainment. Further research on relationships between facilitators, aspirations, and attainment is reported below.

B. Attitudes—including levels of aspiration—are formed and altered through two basic mechanisms: interpersonal influence, including reflexive adjustment of others' expectations, and including self-reflexion.

Interpersonal influence occurs through information on relationships between self and the attitudinal object—status hierarchies in this case—conveyed to the individual directly, via others' personal communication of the expectation levels they hold for him, or indirectly through others' example. As noted above, well-established theories of interpersonal influence in social psychology are supported empirically by the strong direct paths from significant others' influence to status aspirations. But significant others' expectations are not completely independent of evidence of the individual's capabilities. Significant others may take some of their cues as to what is appropriate for the youth by assessing his academic performance. This is what we mean by a "reflexive adjustment of significant others' expectations."

Self-reflexion affects formation of aspirations through feedback on the individual from his past performance as it indicates possibilities and limitations for fulfillment of future goals. The impact of self-reflexion on development of status aspirations is represented in the model by the strong direct paths from academic performance to educational and occupational aspirations, which are not eliminated by controlling for significant others' influence. This indicates that the youth is not merely responsive to expectations of his significant others, but also capable of assessing his own potentials. School grades reflect on the individual's self by providing direct feedback on his intellectual ability and, thus, his chances for high educational and subsequent occupational attainment.

In this regard, it is worthwhile to note that practically all effects of mental ability (X_8) are exerted upon academic performance (X_6), with some left to affect significant others' influence (X_5), the above-mentioned reflexive adjustment of significant others' expectations. There are no noteworthy direct effects of mental ability on subsequent variables. In turn, academic performance (X_6) exerts strong effects on significant others' influence (X_5), as well as educational and occupational aspirations (X_3 and X_4), and educational attainments (X_2). In short, the theory hypothesizes that intellectual ability *per se* is less a direct determinant of status aspirations than the individual's and others' assessments of that ability through such realistic, tangible results as academic grades. This provides an initial answer to the question advanced above of the roles of mental ability and academic performance in status attainment.

Further Wisconsin research on attainment processes has aimed at closer examination of the two basic hypotheses presented above. As a synthetic paradigm for investigation, its main concerns have been:

(1) The processes by which aspirations are enacted.

(2) The processes by which aspirations are formed, which breaks down into:

(a) Processes by which others affect development of status aspirations.

(b) Processes by which self-assessment affects these outcomes.

Results from this research program as they further contribute to a theory of status attainment are summarized in the section below.

Further Research

(A) Formation of Status Aspirations

The Wisconsin model posits interpersonal influences as a crucial determinant of educational and occupational aspirations.

However, in the aforementioned state-wide data measurement of the relevant variable—significant others' influence—may be less than ideal. This measure has two main shortcomings:

(1) Parents, teachers, and best friends are assumed *a priori* (since no other indicators were available) as the only significant others affecting status aspirations.

(2) Information on their orientations toward ego is obtained from the latter rather than from original sources. Hence, correlations between significant others' influence and status aspirations could be spuriously high due to respondents' selective recall or to perception of influences biased toward harmony with existing aspirations.

To assess these and other possibilities an independent research program was undertaken. Procedures of data collection and results have been discussed in detail elsewhere (Haller, Woelfel, and Fink, 1969; Haller and Woelfel, 1972; Woelfel and Haller, 1971a). It will suffice here to note their bearing on the original theory. A theoretical model was developed on the basis of Kelly's (1952) distinction between significant others who hold expectations for ego and convey them directly to him—"definers"—and those who influence ego indirectly through their own aspirations or their level of attainment—"models." The main task of the study was to develop a reliable instrument for identifying models and definers influencing ego's perception of his relationship to status goals. The Wisconsin Significant Other Battery was developed for this purpose (Haller and Woelfel, with Fink, 1969). As reported in the original study, initial indicators of its internal consistency and reliability over time are quite satisfactory.

On the basis of this instrument, it was possible to locate significant others both in the occupational and educational realms. This was done by interviews with 100 high school students—the entire senior class in a small Wisconsin city. As it turned out, there was considerable overlap between significant others affecting educational and occupational aspirations, the conditional probability of a person named in one area being identified in the other reaching .70. As it also turned out, most significant others were "definers," some were definers and models, but very few were models alone. Mean number of significant others per respondent was 13.5.

Having located individuals holding influential expectations for the respondent, it was possible to interview them directly concerning these expectations. This was done via mailed questionnaires which yielded a 68 per cent rate of return. A crude summary measure of interpersonal influence on status aspirations was obtained by taking the mean level of education or occupation that significant others expected ego to attain. It was then possible

to correlate significant others' influence with ego's own educational and occupational aspirations without:

(a) Making *a priori* assumptions about number or identity of significant others.
(b) Depending on ego for report on the nature of these influences.

For the purpose of comparison these correlations are presented in Matrix 1 together with those from the original data on which the model is based. As expected, refined measurement of significant others' influence yields somewhat higher correlations with aspiration variables. That this increase results from more precise measurement of the independent variable is substantiated by the fact that correlation between educational and occupational aspirations (r_{34}) is about the same in both studies and that those between significant others' expectations in one area and ego's aspirations in the other (r_{35b}, r_{45a}) are smaller, being roughly of the same magnitude as those obtained in the original study. Only when relevant expectations are paired with aspirations in each status area do we obtain significant improvement in the strength of associations.

Correlation does not imply causality. Hence, it is possible to argue that while an empirical relationship exists, its causal nature is not portrayed adequately by the model. Congealed status aspirations, if communicated, could have a feedback effect on expectations of significant others. While, as noted above, this seems a likely possibility, it is implausible to assume that the *primary* causal relationship between the variables goes in this direction. In the Haller-Woelfel research (1971a) most significant others

MATRIX 1

Zero Order Correlations between Significant Others' Influence and Educational and Occupational Aspirations in Two Wisconsin Studies [a]

Variables	X_3	X_4	X_5	X_{5_a}	X_{5_b}
X_3	...	.77	.57	...	...
X_4	.70	...	.61	...	...
X_5	...	...	...	...	...
X_{5_a}	.64	.59	...	...	...
X_{5_b}	.55	.66	...	.76	...

X_3 = Level of Occupational Aspiration.
X_4 = Level of Educational Aspiration.
X_5 = Significant Others' Influence (Sewell, Haller, and Ohlendorf, 1970).
X_{5_a} = Significant Others' Influence—Occupational Expectations.
X_{5_b} = Significant Others' Influence—Educational Expectations.

[a] The original study (1957–1965) correlations are above diagonal. The Haller-Woelfel study (1969) correlations are below diagonal. Variable labels follow original model, Diagram 2.

detected were adults—teachers, parents, other relatives, or siblings and friends older than the respondent. It does not seem reasonable to assume that sizable empirical correlations are due to the fact that these, presumably more mature individuals, shifted attitudes very much in order to agree with the youth. Nor does it seem likely that correlations reflect selective identification of only those who support crystallized aspirations. The largest proportion of significant others come from roles in the family circle—parents, siblings, and close relatives—precisely where well-established notions in the study of early socialization would lead us to expect (Woelfel, 1972).

While further study of reciprocal causal effects is important, it seems safe to conclude that present evidence lends support to the hypothesized role of interpersonal influence as a major determinant of status aspirations.

(B) Enactment of Status Aspirations

Theoretically it is possible that multivariate relationships are neither linear nor additive. This is of special importance in the passage from status aspirations to attainments. In agreement with the position of field theory (Yinger, 1965), we have assumed that behavioral enactment of aspirations is not a simple process, since the context in which action takes place itself affects the outcome. It is not just the context of the person, but rather the context of the attitude—here, an aspiraion—when it is being enacted, including aspects of the person as well as the person's situation, which facilitates expression of an attitude into behavior. Naturally, the person may adjust his aspirations to conform more or less well to his facilitational level and his available alternatives.

The question, however, is: What is the exact form in which contextual facilitation affects the relationship of status attainment to previous goals? The dictum "behavior is a function of the person and his situation" can be interpreted in different ways. As presented in 1969 (Sewell, Haller, and Portes) and 1970 (Sewell, Haller, and Ohlendorf), the Wisconsin model in fact hypothesizes that "behavior" (attainment) is a function of the person (aspirations) *plus* each variable describing his situation (facilitators). This additive hypothesis implies that aspiratons have equal effects on status attainment regardless of the level of available facilitation and vice versa.

In contrast, a long tradition of sociological and psychological theorizing, prominently represented by Lewin (1951) and Parsons and Shils (1951), has argued that behavior is a function of the person *in* his situation. This interactive hypothesis implies that contextual facilitation exercises not only a direct effect on behavior but also affects the relationship of the latter with initial attitudes.

Impact of aspirations on status attainment thus varies depending on the available level of facilitation and vice versa.

A study conducted by Gasson, Haller, and Sewell (1972), attempted to test these alternative hypotheses on the basis of the original 1957–1964 data. Details of variable measurement and specific statistical procedures are presented in the original source. Linearity was tested by breaking *n*-categories of each aspiration and facilitation variables into corresponding *n-1* dummy variables and entering the latter into a multiple regression with each indicator of status attainment.

Nonlinearity would mean different regression slopes of the dependent variable on each dummy. Were this the case, explained variation in the former would be significantly higher since the procedure does not assume a specific shape of relationships. Hence, it is possible to test the linearity assumption by comparing resulting coefficients of determination with the original squared correlations. Variables included in this analysis are educational and occupational aspirations, significant others' influence—as facilitator of educational attainment—and the latter as both dependent variable and facilitator of subsequent occupational attainment.

As results in Table 4 show, removing the constraint of linearity does not increase explained variation in educational attainment by significant others' influence or in occupational attainment by occupational aspirations. In the cases where it does —educational aspirations on attainment and the latter on occupational attainment—it is only by a minimal amount. Graphic

TABLE 4

Linear and Curvilinear (Dummy Variable) Coefficients of Determination of Independent Variables on Status Attainment [a]

Independent Variables	Status Attainment Variables	r^2 (Linear)	R^2 (Curvilinear)
Level of Educational Aspiration	Educational Attainment	.471	.487
Significant others' Influence	Educational Attainment	.284	.279 [b]
Level of Occupational Aspiration	Occupational Attainment	.232	.228 [b]
Educational Attainment	Occupational Attainment	.385	.395

[a] Adapted from Gasson, Haller, and Sewell (1972).

[b] In theory, $R^2 \geqq r^2$. In actual analyses, dummy variables sometimes yield R^2 values slightly lower than r^2 because of the attenuation introduced by rough categories.

representation of the latter two relationships shows a weak tendency toward sigmoid curves within predominant linear patterns (Diagrams 3 and 4; adapted from Gasson, Haller, and Sewell, 1972).

Results, therefore, do not support the hypothesis of nonlinearity. Minimal increases of explained variation in status attainment do not justify abandoning the linearity assumption for more operationally cumbersome procedures. Identical results were obtained by Gasson, Haller, and Sewell when other potential facilitators, such as mental ability and parental status, were considered.

Two tests for interaction were performed. The final and most comprehensive one tested interaction without reinstating the assumption of linearity. This was done by identical dummy-variable regressions of status attainments on aspirations within categories of relevant facilitators and vice versa. Interaction would mean that slopes would not be parallel across facilitation categories but would rather accelerate in one direction (monotonic interaction) or run in opposite directions (nonmonotonic interaction).

None of the results presented by Gasson, Haller, and Sewell departs markedly from the pattern of parallel slopes representing additivity. This is certainly the case for relationships between attitudes and facilitators, explicitly posited by the model as determinants of status attainment. As shown in Diagram 3, the

DIAGRAM 3: EDUCATIONAL ATTAINMENT BY EDUCATIONAL ASPIRATION, SIGNIFICANT OTHERS' INFLUENCE (SOI) CONTROLLED

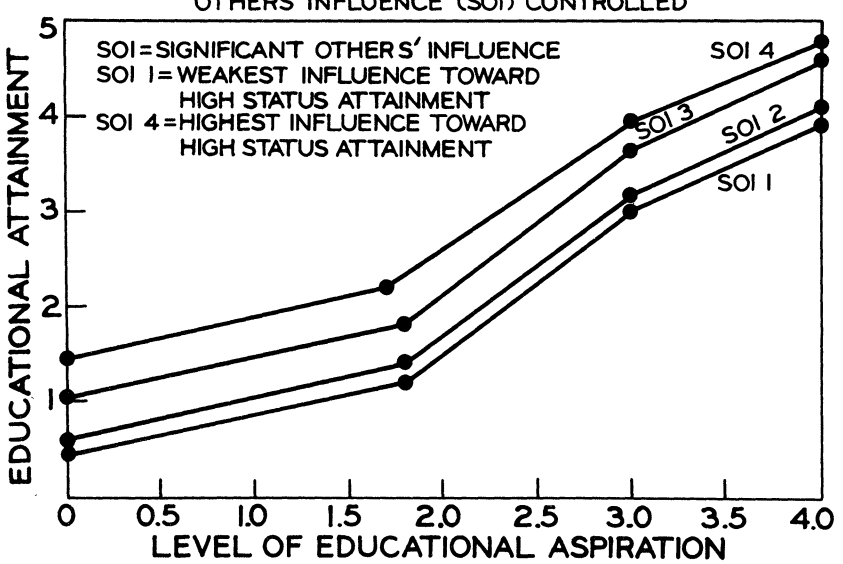
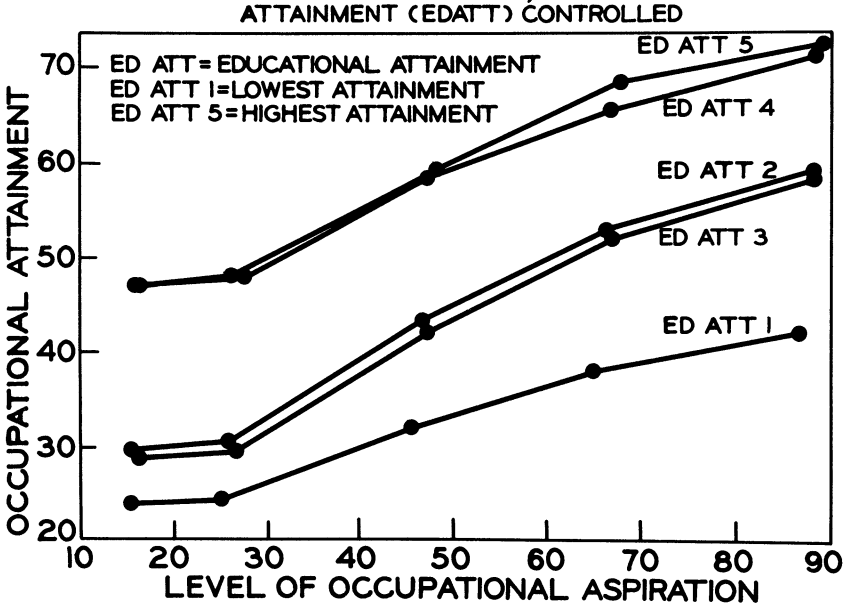


DIAGRAM 4: OCCUPATIONAL ATTAINMENT BY OCCUPATIONAL ASPIRATION, EDUCATIONAL ATTAINMENT (EDATT) CONTROLLED



quasi-linear relationship of educational aspirations and attainment follows almost perfectly parallel slopes across four levels of significant others' influence. In Diagram 4, the same is only slightly less true for regressions of occupational attainment on aspirations across five levels of educational attainment.

The strong rhetoric with which many writers have argued for a theory of behavior as an interaction effect of the person and his environment is not supported by these results. Plausible theoretical accounts of why the causal relationship between attitudes and behavior ought to be influenced by its context are not reflected on this research. Instead, the latter emerges as primarily a function of initial aspirations plus direct effects of a few strategic contextual factors.

Support provided by these results to the Wisconsin model is, however, qualified by serious limitations in the data. The data set on which these findings are based is identical to that from which the original model was derived. Thus, both studies are subject to the same error sources. Nor do these data contain measures of all possible facilitators or completely adequate measures of those included.

Rejecting the well-established theory of behavior as a person-context interaction requires more convincing empirical proof than that provided here. Nevertheless, we may conclude that initial

findings furnish no reason for rejecting the assumptions of linearity and additivity in processes by which status aspirations are enacted. In this limited sense, the model presented above is supported.

Needed Research

There is a host of research questions remaining to be answered before a completely satisfactory theory of status attainment can be specified. Are there identifiable states of stratification systems which affect the applicability of present or future status attainment paradigms? And what is the effect of changes in these parameters on status attainment behavior? Experimental evidence regarding key status attainment processes is needed. How can it be obtained? Are there discernible points in the life cycle at which persons normally experience substantial changes in the effects of key status attainment variables? Which are the variables and what are their changes? Can present status attainment models be extended to cover processes unique to women? Are levels of status transmission changing? What are the processes in the early stages of socialization which influence later status attainment? What status attainment or status maintenance processes operate in middle and late stages of adulthood? How does retirement or physical breakdown alter the status stratification of persons and what are the status allocation processes of old age? Is it possible to formulate valid models which will simplify the theory of status attainment transmission without losing explanatory precision?

Given space limitations, we cannot provide much detail regarding each of these. But at the least, sketches sufficient to enable the reader to develop hypotheses may be presented. Some of these questions may be disposed of quickly, either because it is easy to see how to try to resolve them or because they are too complex to resolve at this time. Solutions to those of moderate difficulty may be sought by means of explications which are feasible at this point in time.

We shall start with the "easy" ones. First is the question of status system parameters. Haller (1970) has noted six "structural dimensions" of status which appear in the literature. Two of these are appropriate here: crystallization and dispersion. Crystallization (Landecker, 1970; Treiman, 1970) refers to the degree of intercorrelation among status content dimensions (wealth, power, prestige, and perhaps education) and their indicators. The degree of status crystallization of a social system will determine whether and to what extent single or multiple models will have to be formulated in order to summarize status attainment behavior of persons. In a weakly crystallized system, the correlations among content dimension indicators (say, education, income, and occupa-

tional prestige) will be low and a different attainment model will have to be formulated for each such content indicator. If the crystallization is quite high, it will not be necessary to have special sets of antecedents for attainment with respect to each status content dimension; highly crystallized systems will require much simpler models than less crystallized systems. Status attainment models for moderately crystallized status systems will be the most complex of all; they will require special antecedents for attainment with respect to each content dimension as well as complex interrelations among dependent attainment variables and among their antecedents. (See Diagram 2.) (Some of this will become clearer when we present the theory summarized in Diagrams 5, 6, 7, and 8.) In any case, rapid changes in dispersion or in status crystallization will change effects of the attainment variables by changing the values of the parameters under which the internal causal network operates. We do not know enough as yet about the latter processes to deduce the effects of parametric changes in crystallization.

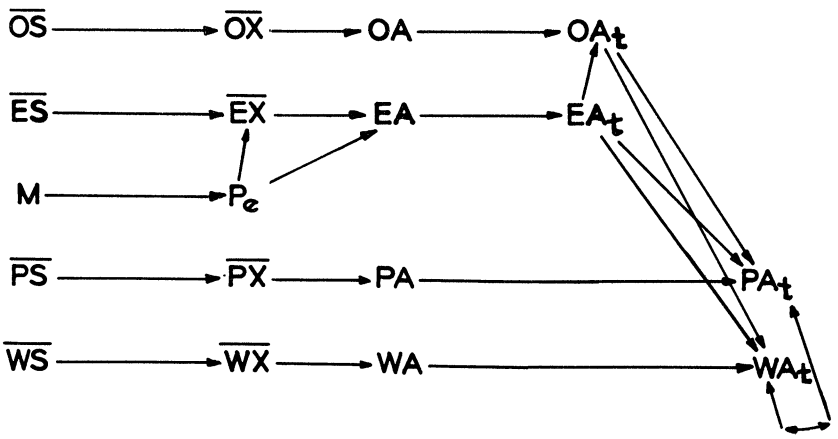
The effects of status dispersion are easier to describe. Status dispersion refers to the degree of variability of any status variable in a status stratification system. It is measured by the variance (σ^2). A high degree of dispersion of wealth would mean that an enormous distance separates the rich from the poor; a low dispersion would mean that the distance is small and people are more or less equal in wealth. Similarly for the other status varia-

DIAGRAM 5: NOMENCLATURE AND SYMBOLS FOR A STATUS ATTAINMENT MODEL FOR FOUR STATUS VARIABLES *

	STATUS MANIFESTATIONS			
	EGO'S SIGNIFICANT OTHERS'		EGO'S:	
STATUS CONTENT VARIABLES	MEAN STATUS LEVELS $\overline{S}$	MEAN STATUS EXPECTATION LEVELS FOR EGO $\overline{X}$	STATUS ASPIRATION LEVEL A	STATUS ATTAINMENT LEVEL A_t
OCCUPATIONAL PRESTIGE LEVEL O	$\overline{OS}$	$\overline{OX}$	OA	OA_t
EDUCATIONAL LEVEL E	$\overline{ES}$	$\overline{EX}$	EA	EA_t
POWER LEVEL P	$\overline{PS}$	$\overline{PX}$	PA	PA_t
WEALTH LEVEL W	$\overline{WS}$	$\overline{WX}$	WA	WA_t

* NON-STATUS VARIABLES IN THE MODEL INCLUDE MENTAL ABILITY (M) AND ACADEMIC PERFORMANCE (P_2)

DIAGRAM 6: A STATUS ATTAINMENT MODEL FOR FOUR STATUS VARIABLES IN A MODERATELY CRYSTALLIZED STATUS SYSTEM



bles, if the dispersion of a status variable is low, differences in it will be harder to measure reliably and validly and the participants themselves will have more difficulty in making the fine discriminations required in order to have definite status orientations for themselves and others. The greater the dispersion of status variables the easier it will be both for the participants to act

DIAGRAM 7: STATUS ATTAINMENT MODELS FOR FOUR STATUS VARIABLES IN A HYPOTHETICALLY UNCRYSTALLIZED STATUS SYSTEM

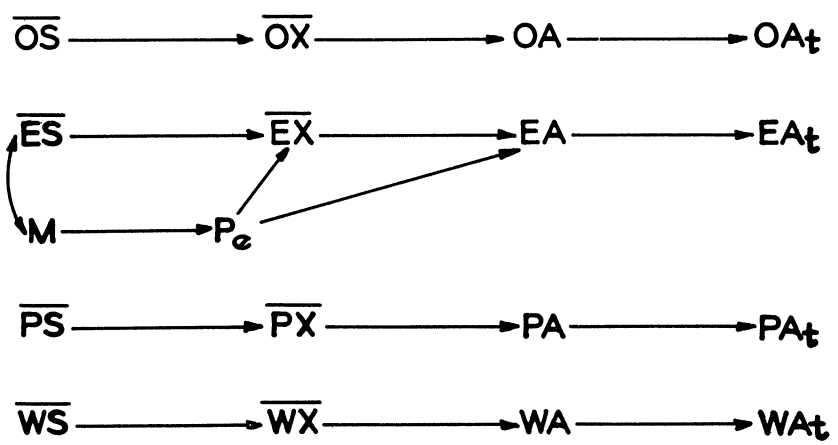
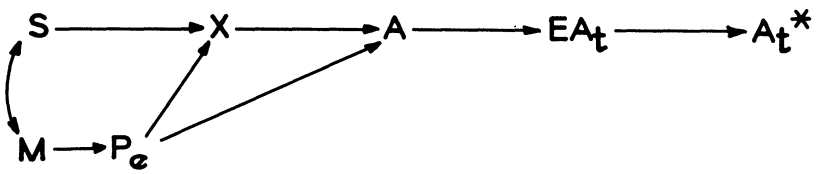


DIAGRAM 8: A STATUS ATTAINMENT MODEL FOR FOUR STATUS VARIABLES IN A HIGHLY CRYSTALLIZED STATUS SYSTEM



* HERE, A_t REFERS ONLY TO PRESTIGE, POWER, AND WEALTH

upon them and for the researchers to measure them. Hence it is more likely that clear status attainment models can be applied successfully to status system with large dispersions than to those with small dispersions.

Second is the question of experimental evidence. Actually, most of the process is probably experimentally intractable. The part that most requires it and may be most amenable to it is that of significant others' (SO) influence on aspirations and attainments. We imply the existence of networks of significant others' influence. These consist of a variable number of SOs each of whom may have different expectation levels for the focal person. For status stratification systems which are crystallized imperfectly we also assume (Woelfel and Haller, 1971a) that a person's SOs for attainment with respect to one social hierarchy (e.g., education) may not be identical to his SOs for attainment with respect to another (e.g., occupational prestige). It may be both scientifically and ethically feasible to design field research in which SO composition and SO expectation levels with respect to a social hierarchy are varied experimentally and observations of the subsequent changes, if any, in the corresponding aspirations of focal persons are recorded. Careful experiments on the effect of intellectual ability or performance in school on SO expectations or on the aspirations of focal persons are less tractable, although Rosenthal and Jacobson (1968) have made efforts in this direction.

Third is the question of critical stages in the status attainment process. We surmise that one such point exists when a person reaches the age at which regular remunerative work is possible. Some people will leave school and take a job, others will continue their education, usually moving to a different physical location to do so. Either way, some SOs will lose their salience for the person, and he will take on new SOs. Those who leave school

earliest will doubtless take blue-collar or lower white-collar occupations. They will tend to draw their new SOs from that level; their expectations for the focal person will tend to be correspondingly low. Those continuing on for further education will tend to gain SOs with higher expectations for them and lose SOs with lower expectations. If this occurs, and we suspect it does, we believe that the changes in SO expectation levels will not have important lagged effects on attainment levels but rather will tend to reinforce commitments the person already has made. These hypotheses easily could be tested with longitudinal data. Clearly we suspect that the key process variables to concentrate on are the expectations of significant others and the aspirations and attainments of the focal person. Such a project is beginning at Wisconsin.

Fourth is the question of extending status attainment models so that they are applicable to women. There is no doubt that the status levels of women are lower than those of men (Knudsen, 1969; Sewell, 1971). But in itself this fact might not even affect the size of path coefficients among status variables in status attainment. In any case, the values of the coefficients may change without affecting the overall model. The problem is that many fewer women are gainfully employed and women tend to be intermittently employed. This means that many have no values at all for two key status variables: income and occupational prestige; and many others have such values more or less sporadically. For women who are gainfully employed, there may be no problem at all. Present models may, with minor changes in path coefficients, be quite appropriate for them. Within a year or so we hope to try out the Wisconsin model on women. The problem of the unemployed or intermittently employed women is much more complex and we do not have any suggestions as to how to handle it.

Fifth is the question of changes in the levels of status transmission. Blau and Duncan (1967) have shown how to measure the level of status transmission in a society and how to compare these levels among different age groups. In new research Featherman and Hauser (unpublished, 1971) plan to replicate and extend the Blau-Duncan analysis using data to be collected in 1973. This will provide hard evidence of any such change in the United States since 1962.

At this time it seems premature to indicate exactly how to proceed with research either with early status attainment processes, or with status maintenance or status shifting in maturity, or with status allocation in old age. We have nothing to say about old age. Regarding maturity Featherman (1971), following leads provided by Blau and Duncan (1967), has assessed the effects of father's occupational level and also the respondent's education on occupa-

tion and income at later periods. He has shown both lagged effects and the effects of earlier job levels on subsequent job levels and on subsequent income. For our purposes, his main finding is that in adulthood, one's status at an earlier period is not a very reliable indicator of his status at a later period. We take this to mean that there is considerable status shifting going on in early to middle adulthood. The factors producing the various status levels of people at this stage—apart from education and father's occupation—are almost completely unknown.

A few remarks also may be made and a few questions may be raised about the early period. Obviously, whatever it is that intelligence tests measure, it has substantial effects on academic performance, on significant others' influence, and on aspirations (see Diagram 2). Clearly, too, it is not influenced much by socioeconomic status. An enormous amount of work has been done on this variable. Can this literature be synthesized from a sociological or social psychological point of view and thus help us understand the earlier stages of the status attainment process? A related problem is that of the emergence of ego's levels of status aspirations and his SOs' levels of status expectation for him. We know that parents' expectation levels are correlated with various measures of student ability as early as the fourth grade (Boerger, 1970). Also, Sewell et al. (unpublished) report that they have found that a person's report of his teacher's expectation levels for him is affected by his performance in school but not by the status of his family, although parents' expectations are affected by the latter. How early do SOs' expectation levels become stabilized? What are the various bases upon which these emergent expectations rest? To what extent do expectation levels affect performance in school and to what extent are they affected by that factor? What are the processes by which the various status hierarchies and the fine gradations along them become clear to the young person? When and how in the chain of events are SOs' expectations and ego's own self-evaluations transformed into stable levels of aspiration?

Lastly we turn to the question of new models, leaving aside the important detail of the earlier and later periods. In Diagrams 5, 6, 7, and 8, we sketch a model which is conceptually simple, but comprehensive, readily adapted to variations in either the degree of status crystallization of the system or to the degree of dispersion. As proposed it is comprehensive because it covers each of the main status dimensions of wealth, power, and prestige, as well as education, and because it also suggests that status transmission may be much more important in status attainment than previous models indicate.

Diagram 5 presents the nomenclature. We assume that there

are four key status content variables: prestige (occupational prestige in the United States), wealth (for which income is a good proxy in the United States), power (which has not yet been measured well anywhere), and education (which can be measured almost anywhere by assessing the highest year in school successfully completed). In the Diagram, O stands for occupation, E for education, P for power, and W for wealth. (We are aware that power may be less constant over time for any given person than are the other variables. We include it because no status attainment model could be complete without it.) We further assume that there are four "manifestations" of any status variable: the status levels a person's significant others occupy in the system, the expectation levels his significant others hold for him, the aspiration levels he holds for himself, and the level he ultimately attains. The first is the main set of independent variables and the last the main set of dependent variables—although some of the last are prior to others. The other two are intervening variables. In the Diagram S stands for the mean *status* of the person's significant others, X for their mean *expectation* levels for him, A for his aspiration level for himself, and A_t for his attainment level. The reader will note that each of these four "manifestations" is possible for each of the four status variables. We also include two other variables which are nonstatus: mental ability (M) and academic performance (P_e) as measured by grades in school. In the subsequent diagrams, a bar over the letters standing for a manifestation of a status variable indicates a mean average for his several significant others. Thus $\overline{OS}$ means the average occupational prestige status levels of all of ego's significant others; or again, $\overline{EX}$ means the average educational levels ego's several significant others hold for him. Each focal person will have a mean value of his significant others' expectations or their statuses for each status dimension. Also, we remind the reader that by "expectations" we mean that which another demands of, desires for, wishes for, hopes for, a focal person or "ego," and that by "aspirations" we mean that which a focal person demands of, wishes for, hopes for, himself. Both concepts have "realistic" and "idealistic" levels and both have long and short future time spans (Haller and Miller, 1971:7–11, 60–61).

In Diagrams 5–8 we assume that the parents are not the only people whose statuses are transmitted to the person. A large body of literature calls attention to the fact that people are responsive to some but not all with whom they interact and that they are responsive to some groups with whom they do not interact. This is what the whole question of "reference groups" (Hyman and Singer, 1968) is all about. In this context the concept "significant

others" may be substituted for "reference groups." This model hypothesizes that average statuses of a person's significant others are transmitted to his attainment. Furthermore, this transmission occurs first through the impact of average status of significant others on their average expectations for ego, and these averages affect ego's aspiration levels. The shift from the status of parents (one important set of significant others) to the average status of significant others whoever they are is one of the two unique aspects of this model. (The other is its inclusion of each of the Weberian status dimensions.)

The last three diagrams (6, 7, and 8) use the above nomenclature to present a model of the status attainment process. The model's applicability to any given social system is a function of the degree of dispersion around the mean of each status indicator; assuming its general validity for the moment, the greater the variance the more appropriate the model. It also assumes that the degree of crystallization of the status system affects the complexity and exact form of the model.

Diagram 6 is the most complex. It sketches a four-dimensional model for a moderately crystallized status system. For simplicity we have left out arrows describing the correlations among the exogenous variables and those describing the residuals, whether correlated or uncorrelated, except for the presumably correlated residuals of the ultimate dependent variables, power and wealth attainments. It should be understood, however, that these residuals belong in the model. If the model is identifiable, it might be described by presenting the partial correlations among the residuals. Alternatively, extending a suggestion in Model 4 of Duncan, Haller, and Portes (1968) it might be useful to fit a principal component or factor to the common correlation among the set of status content variables for each of the set of antecedent variables. Presumably there exist: (1) a status aspiration factor commonly accounting for the correlation among all four aspiration variables, as well as a component specific to each; (2) a significant others' mean status expectation factor common to all expectation variables, as well as a component specific to each; and (3) a significant others' mean status factor common to each significant other insert variable, as well as a component specific to each. Still a third alternative would be to infer reciprocal paths among all content variables at a given point in the causal experience (see Duncan, Haller, and Portes, 1969, esp. Model 2). (We are a bit skeptical of this last because we do not see any social psychological justification for inferring them.)

In brief the model contains several hypotheses not already advanced. (1) The main effects of any given significant others'

status content variable are transmitted through the corresponding expectation and aspiration variables to the corresponding attainment variables; radiation of effects to non-corresponding variables should be minimal. (2) Educational status attainment (EA_t) is particularly strategic because it influences all other status attainment variables. (3) Occupational status attainment (OA_t) is of importance especially because it influences both wealth (WA_t) and power (PA_t). (4) Status transmission conceived of in terms of significant others constitutes a more powerful causal system than status transmission of parents alone. (5) Mental ability (M) as measured by standard intelligence tests constitutes the only important causal input to status attainment beyond the inputs due to status transmission. We hypothesize that it works through its effects on academic performance (P_e), and this on significant others' educational expectations $\overline{EX}$ which is transmitted to ego's educational aspirations (EA), and on ego's own self-reflexive adjustment of his educational aspirations (EA). Naturally, this last causal chain is not new (Sewell, Haller, and Portes, 1969; Sewell, Haller and Ohlendorf, 1970; Woelfel and Haller, 1971); but the hypothesis that mental ability and education provide the only component not wholly transmitted from statuses is novel.

The next versions of the model are included for illustrative purposes. In Diagram 7 we consider the hypothetical case of a completely uncrystallized status system. Except as indicated, the exogenous variables would be uncorrelated and so would the residuals. In such a system, the four status variables of significant others would by definition be uncorrelated, as would the status attainment variables of the focal persons. Here, too, there are several hypotheses. (1) The status expectation variables also would be uncorrelated, as would the status aspiration variables. (2) Occupational attainment (OA_t), power attainment (PA_t), and wealth attainment (WA_t) would be wholly due to transmission of the respective statuses of significant others ($\overline{OS}$, $\overline{PS}$, and $\overline{WS}$). (3) For each status variable the main line of transmission is from significant others' status (S), to significant others' exepectations for ego (X), to ego's aspiration level (A), to ego's attainment (A_t). (4) Educational attainment (EA_t) would be a function of transmission of significant others' mean educational statuses (ES) and of mental ability (M) as transmitted through academic performance (P_e). The latter affects mean educational expectations of significant others ($\overline{EX}$) and educational aspirations of ego (EA), and the latter, in time, the educational attainment levels (EA_t) of ego.

Diagram 8 may not be quite so hypothetical. There may well be societies in which the main Weberian status dimensions of wealth, power, and prestige (Runciman, 1968) are highly inter-

correlated. This greatly simplifies the model. By definition, the statuses of significant others would be so highly correlated as to be summarized by a single principal component, status (S). So also would status attainment regarding occupational prestige, wealth, and power (A_t). The following hypotheses would be advanced. (1) The four mean status expectation variables of significant others would be summarized by one principal component, status expectations (X). (2) The four status aspiration variables of ego would be summarized by a single component, level of status aspiration (A). (3) Educational attainment (EA_t), being prior in time, would mediate the effects of other antecedents on the attainment component. (4) The significant other mean status component would affect the significant other mean expectation component, which would affect the aspiration component, etc. (5) Mental ability (M) would have its usual effects on academic performance (P_e), and the latter would affect both status expectations (X) and status aspirations (A).

We hope that these sketches of models point the direction to simple but more complete ways to conceptualize status attainment. We hope too that they are more realistic than those presented in past research in that they allow for a wider variety of significant others to transmit their statuses to people and in that they explicitly take into account the degree of crystallization of the status system with respect to which attainments occur. We believe that these models provide theoretically adequate social psychological mechanisms for explaining why status attainments occur. They are in this regard merely simple extensions of the Wisconsin models presented earlier. We also think it possible that the basic model might yield a higher degree of "explained" attainment variance than has been possible heretofore. We hope that research explicitly built upon it may be undertaken soon.

Summary and Conclusions

This paper has attempted to summarize recent trends in stratification research which have deviated from the structure of classic mobility studies for stochastic models of status transmission and attainment. The use of "difference scores" to represent status mobility within and between generations has been dropped in favor of final status attainment as the main dependent variable and initial status as part of the causal sequence leading to it. The models presented above synthetize the current state of sociological knowledge of processes leading to status attainment.

At the level of "objective" variables, Blau and Duncan have presented and empirically supported a model defining the main step of status transmission as the effect of father's education and

occupation on individual educational attainment. The latter, in turn, has a strong influence on initial occupation; this variable plus education is the main determinant of final occupational attainment. Direct effects of father's occupation on initial and final occupational attainment are, after education has been taken into account, minor.

At the level of social psychological variables, a research program initiated at the University of Wisconsin by William H. Sewell and pursued by several other researchers has envisioned educational and occupational attainment as the outcome of two related processes: those by which status aspirations are formed and those by which they are enacted. Aspirations are formed as the consequence of two related sets of influences: those brought to bear on the individual by his significant others and those brought to bear by the person himself as he assesses his potentialities on the basis of past performance. While crystallized aspirations exercise primary influence on status attainment, other contextual variables act as significant facilitators of the process. Encouragement by others and previous educational attainment are such variables.

Further Wisconsin research has supported initial tenets of the model concerning the decisive impact of interpersonal influence on development of status aspirations and the additivity and linearity of aspirational and contextual effects on status attainment.

No finality is attached to either model. Both can in fact be viewed as pioneering efforts in a research field bound to yield more refined and accurate theories. It seems unlikely, however, that future studies will prove either model "wrong" in the sense of containing spurious relationships or of having overlooked crucial variables. At its own level of abstraction, each theory seems fairly exhaustive of causally relevant variables in status attainment, having examined and discarded other likely factors. Further refinement, we believe, will tend to occur along lines of greater accuracy in hypothesized causal relationships, specification of still finer mediating mechanisms, and more compelling empirical support. The models in Diagrams 5, 6, 7, and 8 may help to achieve this goal.

Research advances are generally coupled with increasing practical implications. Above, we have noted possibilities of the Blau-Duncan and Wisconsin models on this count. Causal models departing from the former's orientation may prove useful in diagnosing the general occupational state of society while those ensuing from the latter's may serve to isolate particular variables responsible for different attainment levels among specific subgroups.

Perhaps the most important, and at the same time controversial, feature of this last attainment theory is the causal role assigned to family's socioeconomic position in the process. As seen above, Wisconsin results indicate that practically all the effect of family's position on educational and occupational attainments is due to its impact on the formation of status aspirations and significant others' encouragement of their enactment. Once these variables are controlled, family's position has no direct effect as a facilitator of status attainment.

This runs contrary to a widespread imagery of ambitions, especially among lower-class groups, frustrated by lack of means. Inheritance of poverty has often been blamed less on psychological than on economic limitations. In contrast, findings presented above seem to emphasize the importance of psychological formations and their consistent support from those the youth considers important.

It is here that the usual request for more research in this area acquires a particularly urgent connotation. Reported results are based on a sample of Wisconsin students. Even in the larger urban areas of Wisconsin, field research may not have located the abysmal poverty levels necessary to render economic, as well as psychological conditions, crucial direct determinants of status attainment. Alternatively, such levels may not have been located in sufficient numbers to alter overall correlations. Studies specifically designed to examine this causal sequence among sharply contrasting socioeconomic groups may uncover direct paths of influence from parental status to attainment even after aspirations are controlled.

It is not implausible, however, that the opposite may prove true. In a society with a relatively broad range of opportunity, the parental role in the status fate of youth may well hinge more on the psychological than on the economic support they are able to provide. Yet to ideologues of the opposite conviction who may find comfort translating these findings into "will is might," we say that neither "will" emerges at random nor are individuals to be blamed for its absence, an outcome profoundly dependent—as results also show—on the social context to which birth has destined them.

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