WHO GETS PRESTIGE, POWER, PROPERTY, AND PRIVILEGED INDUSTRY LOCATION?
Allocation to a Multidimensional Structure of Inequality

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ABSTRACT

This paper supplements the traditional interest in occupational attainment with a parallel inquiry into the antecedents of class and industry positions. The male attainment process is found to differ across these three stratification dimensions, implying that rules of allocation cannot be adequately inferred from the study of occupational status alone. Each dimension has a relatively independent attainment process, with a given outcome depending on the corresponding parental origin rather than the full set of ascriptive variables. Furthermore, returns to education and ability are far stronger for occupational attainment than for class or industry allocation. These results suggest a "pluralist" pattern of attainment in which the legitimation of inequality derives from the dispersion of ascriptive advantages across stratification dimensions rather than meritocratic processes within each dimension. This paper also addresses the sexual process of stratification. The main effects of sex are considerably stronger for nonoccupational outcomes, indicating that inequality is most pervasive along dimensions other than socioeconomic status. In addition, there is a consistent pattern of restricted social background effects, suggesting a "perverse" meritocracy in which females net smaller returns to social origins than their male counterparts. These sex differences in multidimensional attainment contrast with the surprising similarity commonly found when occupational attainment is considered alone.

1.0 INTRODUCTION

This paper explores the process of allocation to a multidimensional structure of inequality. Previous research focusing exclusively on educational and occupational attainment is supplemented by examining determinants of property ownership, workplace authority, and industry location. The multidimensionality of the stratification system has been a central insight of mainstream theory, evident in the tripartite distinction between class, status, and party (Weber, 1946), in the elaboration of four bases of inequality within the AGIL paradigm (Parsons, 1970), and in pluralist perspectives where cross-cutting cleavages inhibit class polarization (Coser, 1956; Lipset, 1960). More recently, neo-Marxist analyses have also developed a multidimensional character by incorporating workplace authority as a further criterion for class location (Wright, 1978; Carchedi, 1975), and by recognizing industry position as an independent dimension which divides the working class (Reich et al., 1973). Despite these multidimensional concepts, it is only lately that empirical research has considered the determinants of nonoccupational positions.

One of the central issues to be addressed by this analysis concerns the relationship between class and status allocation. It has been argued that Great Britain has two distinct stratification systems, a status system involving education and occupation, and a class system comprising authority and ownership (Robinson and Kelley, 1979). This dual system is characterized by (a) moderate levels of intergenerational inheritance within each system (class outcomes depend on class origins and status outcomes depend on status origins), (b) limited cross-cutting effects between the two systems (background origins in the class system have little consequence for outcomes in the status system, and vice versa), and (c) negligible

educational effects on class positions. Surveys from Great Britain have provided most of the evidence to date regarding the dual system thesis (Robinson and Kelley, 1979; Kerckhoff et al., 1982).[1] The contribution of this paper is to examine the evidence for the thesis within the United States, to explore multidimensional allocation for both males and females, and to elaborate the dual system thesis into a triadic model by considering attainment to industry as well as class and occupational positions. Moreover, we develop a series of models more general than the dual system thesis which explore the degree of similarity in allocation across stratification systems.

If a dual or triadic system is confirmed for the United States, the implications are twofold. First, a pattern of weak educational effects on nonoccupational outcomes disputes conclusions of meritocratic allocation derived from traditional attainment research (e.g., Blau and Duncan, 1967:401-31). Such results not only question the legitimation of inequality through a meritocratic ideology, but also suggest inefficiencies in the allocation of human resources. Second, the dual or triadic thesis implies a "pluralist" pattern of attainment in which most individuals have advantaged access to at least one system of social rewards. Since there are a multiplicity of systems each with ascriptive processes, the dispersion of ascriptive advantages is far greater than suggested by the conception of a unidimensional status system. Although contrary to a meritocratic legitimation of inequality, this broad distribution of ascriptive processes may constitute a stabilizing force since it sustains aspirations for success among those from a variety of backgrounds. Whereas the pluralists argue that stability derives from the multiplicity of cross-cutting positions (Lipset, 1960), we have elaborated this argument to suggest that stability

further derives from a specific pattern of intergenerational movement between these positions.

Aside from issues of pluralist allocation, this paper also explores the process of industry attainment. While ownership, authority, and status are typically conceived as social rewards, location within the industrial structure entails a considerably less salient vertical or evaluative hierarchy. Indeed, industry is often equated with a horizontal situs dimension which lacks strong status connotations (Hauser and Featherman, 1977; Reiss, 1961). However, much of the recent dual economy literature attributes a vertical dimension to what was formerly conceived as purely horizontal. Scales of industry desirability have been developed (e.g., Tolbert et al., 1980), and the effects of industry position on income, job satisfaction, and employment tenure have been amply demonstrated (Beck et al., 1978; Hodson, 1980; Schervish, 1981). Given this evidence for a vertical hierarchy, it becomes important to consider the determinants of industry position. The subsequent analysis on this issue considers if conclusions of meritocratic allocation advanced within occupational research can be sustained equally with regard to industry outcomes. As noted earlier, we shall also explore an elaborated version of the dual system thesis which includes industry as the third dimension of a triadic model.

The final issue addressed by this analysis concerns the process of sexual stratification. One of the more surprising findings from attainment research is the relatively modest sex differences in occupational allocation (Treiman and Terrell, 1975; McClendon, 1976; Featherman and Hauser, 1976a). Although recent research has revealed some important sex interactions in an expanded social psychological model (Sewell et al., 1980), there is merit in the argument that socioeconomic status metrics do

not adequately capture sexual inequality in labor market outcomes (Wolf and Fligstein, 1979a, 1979b; Acker, 1980). We pursue the latter insight by examining sex differences in the process of authority, ownership and industry attainment. To anticipate some of the findings, we uncover a "perverse" form of meritocracy where females net smaller returns to social origins than their male counterparts.

2.0 THE SAMPLE AND VARIABLES

This analysis is based on the Wisconsin Study of Social and Psychological Factors in Socioeconomic Achievements, a longitudinal sample of Wisconsin high school seniors in 1957. The results reported below pertain to the 2976 males and 2430 females who were employed in civilian jobs in 1975 or the five preceding years, and who provided nonmissing responses on all twenty of the indicators. Figure 1 lists the sources and descriptions of the twenty indicators used in the analysis. As the figure shows, many variables are represented by multiple indicators. The more important operationalizations are discussed below; details for other variables are provided in the figure.

Workplace authority is measured by two dichotomous indicators, the authority to hire or fire and the authority to set or influence the rate of pay.[2] Although these indicators tap one salient dimension of power in the work setting, they fail to measure limited supervisory authority or identify those responsible for decisions on issues more important than recruitment or pay. In this sense the two measures are imperfect indicators of an unobserved, continuous variable which includes these finer discriminations. It might be supposed that this unobserved variable generates a response of '1' on the observed binary variable if the level of authority is above a given threshold, and a response of '0' otherwise. The models estimated

below explicitly incorporate this assumption of a continuous authority dimension by employing tetrachoric and biserial correlations. The latter are estimates of the product moment correlations for variables which follow an underlying normal distribution, but are imperfectly measured as a simple dichotomy.[3]

Ownership of the means of production is measured by dichotomous responses to the question, "Were you self-employed in own business, professional practice, or farm?"[4] Again, we could advance a threshold interpretation of this measure, conceptualizing it as the binary outcome of a continuous variable indexing the utility of becoming an owner (Amemiya, 1981). In this case, however, it seems more plausible to conceive of ownership as inherently discrete. Because a linear model for a dichotomous outcome is rarely defensible, we specify instead a model of linear effects on the transformed probability of becoming an owner (Mare and Winship, 1983). The latter variable is continuous, so the estimates presented below again apply tetrachoric and biserial correlations with the current ownership measure. In this sense the ownership measure represents an imperfect indicator of the probability of becoming an owner, rather than an indicator of ownership conceived as continuous itself.[5]

Industry position is coded by the Continuous Segmentation Index (Tolbert, et al., 1980), which was derived from a factor analysis of indicators measuring economic concentration, economic scale and oligopolistic behavior in product and labor markets. Since the index was constructed from data on labor market outcomes, there is an element of circularity in subsequent attempts to predict these outcomes (Hodson and Kaufman, 1981). However, the circularity is not of consequence for this analysis, as the intent is to examine industry attainment rather than

industry effects. Indeed, an index that resolves to industry desirability for market outcomes is quite adequate for research on who gets the most privileged industry positions.

3.0 STRUCTURAL AND MEASUREMENT MODELS

Baseline models are estimated for the full sample, and for males and females separately. These three models are identical, except that the model for the full sample includes sex as an additional exogenous variable. The baseline structural model for the full sample is represented by the following system of equations:[6]

$$(1)\quad \eta_9 = \underline{\beta}_1'\underline{\eta}^* + \beta_2\eta_8 + \zeta_1$$

$$(2)\quad \eta_{10} = \beta_3\eta_8 + \beta_4\eta_9$$

$$(3)\quad \eta_{11} = \underline{\beta}_5'\underline{\eta}^* + \beta_6\eta_{10} + \zeta_2$$

$$(4)\quad \eta_{12} = \underline{\beta}_7'\underline{\eta}^* + \beta_8\eta_{10} + \beta_9\eta_{11} + \zeta_3$$

$$(5)\quad \eta_{13} = \underline{\beta}_{10}'\underline{\eta}^* + \beta_{11}\eta_{10} + \beta_{12}\eta_{11} + \zeta_4$$

$$(6)\quad \eta_{14} = \underline{\beta}_{13}'\underline{\eta}^* + \beta_{14}\eta_{10} + \beta_{15}\eta_{11} + \zeta_5$$

$$(7)\quad \eta_{15} = \underline{\beta}_{16}'\underline{\eta}^* + \beta_{17}\eta_{10} + \beta_{18}\eta_{11} + \zeta_6$$

$$\textit{where}\quad \underline{\eta}^* = \begin{pmatrix} \eta_1 \\ \vdots \\ \eta_7 \end{pmatrix}$$

The first equation specifies that high school rank (η_9) is a function of mental ability (η_8) and a vector of ascriptive variables ($\underline{\eta}^*$) including father's education (η_1), mother's education (η_2), father's occupational status (η_3), parent's income (η_4), father's ownership (η_5), father's industry (η_6), and sex (η_7). These determinants of high school rank are exogenous variables with freely correlated disturbances. The second equation forms academic performance (η_{10}) as a linear composite of high school rank and mental ability. Since there is no residual in this

equation, the claim is that rank and mental ability exhaust the concept of academic performance. A stochastic component could be introduced only with the assumption that academic performance completely accounts for the covariance between two subsequent variables (Hauser and Goldberger, 1971). In this case, such an assumption is less tenable than that of perfect determination. It should be noted that the normalizing restriction of $\beta_4 = 1$ is imposed to identify the variance of the composite.

Equation 3 specifies educational attainment (η_{11}) as a function of academic performance and a vector of ascriptive variables. Mental ability and high school rank are not entered in this equation; these variables are constrained to exert their effects through the academic performance composite. The restriction implies that the relative influence of ability and rank on educational attainment and subsequent variables is in the same proportion, namely β_3/β_4. This formulation was first introduced by Hauser, et al. (1983), partially to compensate for the single indicator representation of ability and rank. The next four equations of the model pertain to the central concerns of this paper. They say that allocation to occupational status (η_{12}), workplace authority (η_{13}), ownership (η_{14}), and industry (η_{15}) depends upon the same set of determinants: a vector of ascriptive variables, academic performance, and educational attainment. The disturbances for equations 4 through 7 are freely correlated since no causal order is defined between the four stratification dimensions.

Six of the variables included in this model have multiple indicators: father's education, mother's education, father's occupational status, parental income, educational attainment, and workplace authority. In each case, a measurement structure of the following form is specified:

$$Y_1 = \lambda_1 \eta_1 + \varepsilon_1$$

$$Y_2 = \lambda_2 \eta_1 + \varepsilon_2$$

Y_1 and Y_2 are indicators of the unobservable η_1, and the residuals ε_1 and ε_2 are errors in measurement. To identify the variance of the unobservable, the normalizing restriction $\lambda_1 = 1$ is imposed. The fourteen remaining variables with single indicators are assumed to be measured without error.

The baseline model incorporates correlated measurement error in addition to the random error described above. Two types of error correlation are plausible. First, an individual may respond with consistent errors across variables when measured on a single occasion with a single instrument. This between-variable, within-occasion correlated error is identified with two indicators per unmeasured variable; seventeen of these correlated errors are identified and entered in the baseline model. The second type of error correlation occurs between indicators measuring the same variable but ascertained on different occasions. This within-variable, between-occasion correlated error is under-identified with only two indicators per unobservable. However, we were able to fix the error covariance for both maternal and paternal education with an estimate of the correlated error for father's education obtained in the 1977 Wisconsin Sibling Survey (Hauser et al., 1983).

4.0 RESULTS

A series of models were estimated by maximum likelihood with the assumption of multivariate normality; their descriptions and goodness of fit statistics are provided in Tables 1 thru 4. As is common for samples of this size, none of the three baseline models fit by conventional significance levels.[7] Consequently, we focus our discussion on the ratio of

chi-square statistics to their degrees of freedom. Another criterion for model evaluation in large samples is provided by a null model estimated by constraining all covariances to be zero, except those between exogenous variables (Bentler and Bonett, 1980). The ratio of chi-square statistics between the baseline and null models reveals that at least 97 percent of the "association" in the data is explained by each of the three baseline models. It is also instructive to compare these baseline models to a random error model which restricts all measurement error covariances to zero. For all three samples, the L^2/df ratios for the contrasts are considerably larger than the ratios for the baseline models. This marked deterioration in fit indicates the strength of correlated response error; such error will be freely allowed in all subsequent models.

4.1 The Dual System Thesis

Tables 5 thru 7 present the structural coefficients for the baseline models in the three samples.[8] Inspection of Table 6 reveals substantial support for the dual system thesis within the male sample. The three background variables of the status system (father's education, mother's education, and father's occupation) have no significant effects on the two class outcomes (authority and ownership), while the effects of class background (father's ownership) on the two status outcomes (education and occupation) are either insignificant or negative.[9] In contrast to these negligible cross-system effects, there is evidence of moderate ascriptive processes within each system. The coefficient for inheritance of ownership is particularly large, while ascriptive processes for authority are also significant but less prominent; this difference may derive partially from the omitted measure of paternal authority. The dual system thesis receives further support on the issue of meritocratic processes in the class system.

Whereas occupational allocation depends strongly upon educational attainment, returns to schooling for class outcomes are insignificant or negative. The effect of academic performance on ownership is also insignificant, but the corresponding effect on authority is quite strong. The latter finding indicates that meritocratic effects are not entirely absent from the class system, although it is equally evident they are not of overriding importance. It should also be noted that parental income, which cannot be clearly placed in either the class or status system, has significant effects on outcomes in both systems. Despite these caveats, there is striking evidence that the dual system thesis advanced by Robinson and Kelley (1979) for Great Britain applies equally to the United States. Ascriptive resources facilitate attainment within the system of origin, but cannot be converted for cross-system achievement. Moreover, educational credentials and academic performance are the principal basis of selection within the status system, but are of little consequence for outcomes within the class system.

However, the female pattern of class and status allocation suggests a considerably different story. Although meritocratic effects on class outcomes are equally weak, there are moderately strong cross-system effects between educational and ownership variables. In addition, ascriptive processes within the class and status systems are significantly weaker for female attainment. We shall discuss this restriction of social background effects in more detail later; at this point, suffice it to say the dual system model lends little insight into female stratification.

4.2 Industry Attainment and the Triadic System

As yet, we have not considered the process of industry attainment or its relation to class and status allocation. Table 6 suggests that males

experience a pattern of allocation to industry positions quite different from that characteristic of occupations. While meritocratic effects are the most prominent aspect of occupational recruitment, industry returns to schooling and academic performance are negative and insignificant, respectively. This provides little support for those who interpret industry effects on income as returns to human capital mediated by industry position (Kalachek and Raines, 1976). In fact, our results suggest that such mediated returns to education are actually negative, contrary to human capital suppositions. Although meritocratic effects are quite weak, it is unwarranted to conclude that purely ascriptive processes govern the allocation to industry positions. Indeed, the standardized coefficient for industry inheritance is somewhat smaller than the corresponding coefficient for occupation. This combination of weak ascriptive and meritocratic processes renders industry allocation largely undetermined, suggesting that Jencks' theory of luck may pertain more to the attainment of industry than occupation (Jencks et al., 1972).

The results of Table 6 also suggest substantial support for a triadic system thesis. First, the cross-system effects of class and status origins on current industry are either insignificant or negative. Second, a privileged industry background confers no advantage for attainment in other systems; in fact, an individual from a privileged industry suffers a net loss in both educational and class outcomes. Third, we have noted already that industry attainment is distinguished by moderate inheritance and weak meritocratic effects. These findings imply a triadic thesis where an individual from any of the three systems enjoys ascriptive advantages for attainment in his system of origin, but is unable to convert these ascriptive resources for cross-system achievement. Moreover, the possession

of educational credentials or academic skills are of major consequence only within the status system.

Turning to Table 7, we consider the female process of industry allocation. We note that the effects of academic performance and education are both positive and significant, implying somewhat stronger meritocratic processes for females. In addition, intergenerational inheritance within the industry system is significantly weaker for females; this parallels previous findings of restricted ascriptive effects in the class and status systems. Thus a triadic thesis is inappropriate for the female process of allocation, since within-system inheritance is hardly stronger than cross-system ascription. It should also be noted that the strength of meritocratic effects renders female industry allocation substantially similar to their occupational attainment. Indeed, in the following section we will be unable to reject a model of homogeneous allocation.

4.3 Models of Proportional Allocation

This section considers a series of models which formally test the hypothesis of heterogeneous allocation. The degree of similarity in attainment processes cannot be assessed by imposing equality constraints across equations on the effects of the regressors, since this would confound the strength of effects with differences in the metrics of the stratification outcomes.[10] Rather, we conceptualize allocative similarity to imply that the relative size of the parameters is the same for each outcome. In this sense, the process of allocation is perfectly homogeneous when the ratio of effects for any two regressors is the same constant for each of the four outcomes. This set of proportionality restrictions is imposed by constraining the effects of the regressors to be entirely mediated by an unobservable with the four outcomes as its indicators. We

retain all possible correlations between the disturbances of the four outcomes; these are identified because the unobservable is completely determined by the regressors (Hauser and Goldberger, 1971).[11] In short, proportionality constraints are imposed by embedding MIMIC restrictions within the baseline model (Joreskog and Goldberger, 1975).

Table 2 reveals that this model of proportional allocation (Model D) is patently inconsistent with the male data, as the L^2/df ratio is nearly eight times larger for the contrast than the baseline. Model E relaxes the restrictions of Model D by allowing occupational status to be determined directly by the regressors. This is a dual system model positing two processes of attainment: one for occupation, and another which subjects the nonoccupational outcomes to proportionality constraints. The considerable improvement in the test statistic suggests that much of the heterogeneity in attainment is located along an occupational-nonoccupational dimension, but the contrast with the baseline also suggests strong differences within the nonoccupational system. We attempt to account for the latter with a triadic model which frees both occupational and industry allocation from proportionality constraints; such constraints are now imposed upon the authority and ownership outcomes alone. However, this model is also rejected, indicating that the assumption of a unitary class system disguises different processes of allocation to the authority and ownership components.

We conclude from these series of models that attainment processes are quite heterogeneous. Only the baseline model which allows distinct processes across the four outcomes is acceptable. Although a triadic model was supported earlier by a criterion of cross-cutting effects, this model is overly restrictive if also interpreted to imply that allocation to ownership and authority are proportional. The remainder of the models in Table 2

further illustrate the differences between occupational and nonoccupational allocation. We successively impose proportionality constraints between the attainment of occupation and each of the other three outcomes; in all cases the L^2/df ratio for the contrast is larger than the baseline ratio.[12] These findings emphasize that the process of attainment cannot be simply inferred from the study of occupational outcomes alone. To do so seriously misrepresents the complex nature of the stratification process.

The same set of models was estimated for the full sample and for females alone. Although the results for the full sample demonstrate strong differences in attainment processes, the female sample suggests a considerably different story. In Table 3, the model of proportional allocation to all four outcomes has an L^2/df ratio for the contrast which is smaller than that of the baseline. Indeed, none of the proportional allocation models for the female sample generates an increase in the L^2/df ratio. These results contrast sharply with those presented for men; we explore the precise nature of this difference in the following section.

4.4 The Process of Sexual Stratification

One of the arguments addressed by this analysis suggests that the structure of sexual inequality is best explored within a multidimensional framework. The evidence presented thus far supports this contention, as a number of important sex differences in multidimensional attainment have already been reported. This section pursues the issue of sex interactions in greater detail.

Research to date has uncovered surprisingly little evidence for sexual inequality in occupational status. This finding is replicated in Table 5, which indicates only a moderate sex effect on current occupation. The net effects of sex are considerably larger for the other stratification

outcomes, indicating that labor market inequality is most pervasive along dimensions other than socioeconomic status. Controlling for their origins and qualifications, women experience substantial deficits in workplace authority, industry rewards, and the probability of ownership. These findings support the results of Wolf and Fligstein (1979a) for authority allocation, and extend their analysis to the added dimensions of ownership and industry.

In addition to main effects, it is also of interest to explore interactions in the returns to social origins and qualifications. Model J in Table 4 allows all possible sex interactions in the measurement and structural parameters by estimating the baseline models for the two sexes separately. The following model imposes equality constraints across sexes on the latent variable loadings; sex differences in the structural coefficients are interpretable only when the measurement model is restricted in this manner. The relevant contrast indicates that the loadings are indeed comparable, so all subsequent models retain these restrictions. The hypothesis of sexual equality in attainment is implied by Model L, which constrains both the measurement and structural models to be the same for males and females. This hypothesis cannot be sustained, since the L^2/df ratio for the contrast is nearly twice as large as the ratio for the baseline Model K. In the following paragraph we discuss the pattern of sex interactions revealed in the baseline estimates. In the final four models, equality constraints are successively imposed on the attainment process for each single outcome, while the processes for the remaining three outcomes are allowed to vary between sexes. We note considerable differences between outcomes in the degree of sexual similarity in allocation, with the strongest dissimilarity evident in the process of ownership attainment. The

latter result again suggests that sexual inequality is most pervasive along nonoccupational dimensions.

Of the forty-seven possible interactions between male and female structural coefficients in Model K, thirteen are significant at the .05 level. We discuss those pertaining to the attainment of the four stratification dimensions; sex differences in other parts of an elaborated model are considered in Sewell et al. (1980). The majority of the interactions suggest a perverse form of meritocracy where females enjoy significantly less ascriptive benefits than their male counterparts.[13] This pattern is evident for all four stratification outcomes: females show significantly smaller direct effects of background occupation on current occupation, background ownership on current authority, background income and ownership on current ownership, and background industry on current industry. There is a striking parallel between this form of sexual discrimination and the process of racial stratification reported by Featherman and Hauser (1976b). Although differentials have diminished over time, blacks are also unable to convert social origin advantages into labor market achievements. In the struggle between conflicting ascriptive effects, the negative consequences of black skin and female gender apparently overcome any advantages that might accrue from social origins.[14]

5.0 CONCLUSIONS

Recent stratification research has explored positional sources of inequality outside the technical division of labor. Contrary to the assumption that occupational roles form the structural basis of advanced capitalism, it has been established that class and industry positions have important effects on economic and noneconomic rewards (Wright, 1979; Kalleberg and Griffin, 1980; Kalleberg et al., 1981). This research has

typically eschewed consideration of allocative processes into class and industry positions, on the grounds that a specification of their consequences is logically prior. However, the cumulation of results on positional consequences suggests a return to the traditional concerns of attainment research, yet within the context of a multidimensional structure of inequality.

We have found considerable heterogeneity in the male process of attainment. A formal model of proportional allocation to all four outcomes was strongly rejected, as were successive models positing proportional allocation between occupational positions and each of the class and industry outcomes. Not only are educational effects on nonoccupational outcomes weak or insignificant, but ascriptive processes for these outcomes rest on a set of background variables quite different from those relevant for occupational attainment. In this sense, heterogeneity is located in both the ascribed and achieved components of the attainment process, although previous research has emphasized differences in achieved effects alone (Griffin and Kalleberg, 1981). This heterogeneity implies that processes of allocation cannot be simply inferred from studies of occupational positions. Moreover, the pattern of weak educational effects on nonoccupational outcomes suggests that a meritocratic legitimation of inequality may not be tenable. Rather, the stability of the stratification system may derive from the dispersion of ascriptive processes; this is discussed in some detail later in the conclusion.

Informed by a paradigm of economic segmentation, this paper has also explored the process of industry attainment. Our interest in this issue was twofold. First, it becomes increasingly important to determine who gets the privileged industry positions given the emerging consensus on the salience

of industry location for economic rewards. Second, we sought to elaborate the dual system thesis into a triadic model by including industry outcomes as a third dimension. With regard to the first issue, we note that both ascribed and achieved variables exert rather weak effects on industry outcomes.[15] The implication is that individual positions within the industry hierarchy remain largely unexplained. This may imply that the process of allocation is so complex that the relevant determinants are quite different from those typically employed in attainment research. Alternatively, industry allocation might entail a strong random component which rewards the worker lucky enough to probe the labor market when a desirable industry is hiring. In this regard, we have suggested that Jencks' theory of luck may pertain more to the attainment of industry than occupation (Jencks et al., 1972).[16]

Although some might be more impressed by the residuals, a consistent pattern of allocation nonetheless characterizes the multidimensional structure of attainment. We have interpreted the results as evidence for a triadic system with three independent attainment processes. There is moderate intergenerational ascription within each system, coupled with negative or insignificant cross-system effects. It should be emphasized that no single system monopolizes ascriptive resources, and that no single system possesses ascriptive resources powerful enough that they can be converted for achievement in another system. It is a pluralist pattern of attainment in the sense that ascriptive advantages are shared by a multiplicity of social groups -- a full 83 percent of the sample has a father who is an owner, or who is in the top third of the occupational or industry hierarchies.[17] This distribution of advantages may be a stabilizing force since individuals from a variety of backgrounds can aspire

to success in at least one system. Indeed, this pluralist pattern of attainment suggests that the legitimation of inequality may proceed on a basis quite different from that commonly supposed. Rather than a meritocratic legitimation, the stability of the stratification system may arise from a wide dispersion of ascriptive resources across social groups. The son of the shopkeeper or union worker participates within the system because he can aspire to a position similar to his father's, not because he believes that such outcomes accrue to those who are best qualified or most educated.[18]

However, this pattern of dispersed ascription does not apply to the female process of allocation. Rather, we have found a consistent restriction of social background effects for all four outcomes. Ascriptive processes operate primarily in regard to the main effects of sex, and we note that the latter are considerably stronger for nonoccupational outcomes. These main effects provide an objective basis to the current "crisis" of legitimation over female allocation, contrary to prior research which has found little evidence of sex differences in attainment processes.

We conclude with the suggestion that new insights into related issues might be gained from a multidimensional perspective. The current results on stratification trends, racial differentials in attainment, and social psychological models may need revision if nonoccupational measures are considered.

FOOTNOTES

1. Robinson and Kelley (1979) analyze NORC data from the United States, but their conclusions are limited since measures of class background are not available. Griffin and Kalleberg (1981) also consider data from the United States, but they focus on the specific question of meritocratic allocation to class positions, rather than the dual system thesis.

2. Unfortunately, these measures are not available for the parents of the respondents.

3. This normality assumption seems an adequate approximation, although a truncated normal might better reflect the prevalence of respondents with no authority at all.

4. Since it might be supposed that farm ownership entails a distinct process of allocation, the baseline models were estimated for the nonfarm population as well as the total sample. However, parameter estimates for nonfarmers were quite similar to those reported below for the full sample.

5. The rationale presented here for tetrachoric and biserial correlations is identical to the motivation for probit or logit analysis. We have estimated probit models for the authority and ownership outcomes, with results similar to those presented below. We have also estimated models with product moment correlations, and again the substantive conclusions remain unchanged.

6. Refer to Figure 1 for the names and descriptions of variables. Since the variances of the transformed ownership and authority variables are not identified, they are arbitrarily fixed at unity in this model and all succeeding ones.

7. Since the models are estimated with biserial and tetrachoric moments for the authority and ownership outcomes, standard errors and

chi-square statistics should be regarded as only approximate (Joreskog and Sorbom, 1981).

8. The models presented in Tables 6 and 7 were estimated with equality constraints across sexes on the measurement model; this allows meaningful comparisons between the male and female structural coefficients. Differences between the models presented here and the unconstrained versions are entirely trivial, as evidenced by the chi-square contrast between Models J and K in Table 4.

9. References to significance in the text are based on an .05 level, two-tailed.

10. The regressors include father's education, mother's education, father's occupational status, parents' income, father's ownership, father's industry, academic performance, and educational attainment. For models estimated in the full sample, sex is also included.

11. In this sense, the unobservable is a simple linear composite of the regressors.

12. The contrast with Model I suggests a considerable degree of homogeneity between occupational and industry allocation. However, the loading of the industry variable on the unobservable is negative, implying that regressors with positive consequences for occupational achievement have negative effects for industry attainment. This supports the triadic model of allocation, since advantages for within-system attainment are simultaneously disadvantages for cross-system mobility.

13. Of course, the main effects of sex imply strongly nonmeritocratic processes. The label of perverse meritocracy applies only in regard to attainment processes within the female subsample.

14. These findings of restricted background effects should be interpreted with caution, since it is possible that female ascriptive processes operate through the mother's characteristics. However, the available evidence suggests that such effects are limited. In the subsample of Wisconsin women with working mothers (N=911), we included mother's occupation, ownership, and industry in the set of regressors for the stratification outcomes. Only three of the fifteen least squares coefficients were significant: the effect of mother's industry on the power to set pay (beta = -.080), the effect of mother's industry on current industry (beta = .099), and the effect of mother's ownership on current ownership (beta = .073).

15. It should be noted, however, that sex effects on industry location were quite strong, and the role of racial ascription was not examined.

16. Similar conclusions might equally be applied to the attainment of authority and ownership. However, inferences regarding comparative levels of determination should be avoided, as there is no legitimate contrast of R^2s between dependent variables.

17. At the same time, the triadic system is contrary to the pluralist image of cross-cutting cleavages, since intergenerational movement tends to be restricted to a single system of stratification.

18. However, it is unclear if ascriptive processes are strong enough to sustain this form of legitimation. An alternative explanation suggests that stability may derive from a subjective belief in purely random allocation, so that failure is neither a sign of overt discrimination nor a reflection on individual ability. The negligible size of the R^2 statistic for nonoccupational outcomes might suggest this alternative.

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Figure 1

Sources and Descriptions of Variables

Variable	Indicator	Source	Description
Father's Education (η_1)	EDFA57	1957 survey	Completed years of schooling, truncated at 17
	EDFA75	1975 survey	Completed years of schooling, truncated at 17
Mother's Education (η_2)	EDMO57	1957 survey	Completed years of schooling, truncated at 17
	EDMO75	1975 survey	Completed years of schooling, truncated at 17
Father's Occupational Status (η_3)	OCFATA	Wisconsin tax records	Duncan SEI for detailed census occupation in 1957 or closest year available
	OCFA75	1975 survey	Duncan SEI for detailed occupation in 1957
Parent's Income (η_4)	INPA1	Wisconsin tax records	Parent's income in 1957 or first year available, truncated at $1,000 and $30,000 and transformed by logarithmic function
	INPA2	Wisconsin tax records	Parent's income in years following the first available (1957-1960), truncated at $1,000 and $30,000 and transformed by logarithmic function
Father's Ownership (η_5)	OWNFA	1975 survey	Dichotomous response (Owner = 1, Nonowner = 0)
Father's Industry (η_6)	INDFA	1975 survey	Continuous Industry Segmentation Index (Tolbert, Horan, and Beck 1980)
Sex (η_7)	SEX	Wisconsin school records	Dichotomous response (Male = 1, Female = 0)
Mental Ability (η_8)	IQ	Wisconsin Testing Service	IQ based on Henmon-Nelson test given in grade 11

Figure 1
(continued)

Variable	Indicator	Source	Description
High School Rank (η_9)	RANK	Wisconsin school records	Average grades in high school, ranked and normalized
Educational Attainment (η_{11})	ED64	1964 survey	Completed years of schooling, truncated at 17
	ED75	1975 survey	Completed years of schooling, truncated at 17
Occupational Status (η_{12})	OCC	1975 survey	Duncan SEI for detailed census occupation held at survey date or of last occupation held within the preceding five years
Workplace Authority (η_{13})	AUTHPAY	1975 survey	Dichotomous response (Power to set pay = 1, No Power to set pay = 0)
	AUTHHIRE	1975 survey	Dichotomous response (Power to hire = 1, No Power to hire = 0)
Ownership (η_{14})	OWN	1975 survey	Dichotomous response (Owner = 1, Nonowner = 0)
Industry (η_{15})	IND	1975 survey	Continuous Industry Segmentation Index (Tolbert, Horan, and Beck 1980)

Table 1

Models of the Stratification Process, Wisconsin Males and Females

	Models or Contrast	L^2	df	L^2 / df
A.	Baseline	551.4	74	7.45
B.	Null Model	33491.3	124	270.09
C.	Random Error	975.5	91	10.72
D.	Proportional Allocation, Single System	2606.4	98	26.60
E.	Proportional Allocation, Dual System	1335.7	90	14.84
F.	Proportional Allocation, Triadic System	979.6	82	11.95
G.	Proportional Allocation to Occupation and Authority	1418.0	82	17.29
H.	Proportional Allocation to Occupation and Ownership	1002.1	82	12.22
I.	Proportional Allocation to Occupation and Industry	1126.3	82	13.74
	C vs. A	424.1	17	24.95
	D vs. A	2055.0	24	85.63
	E vs. A	784.3	16	49.02
	F vs. A	428.2	8	53.53
	G vs. A	866.6	8	108.33
	H vs. A	450.7	8	56.34
	I vs. A	574.9	8	71.86

Table 2

Models of the Stratification Process, Wisconsin Males

	Models or Contrast	L^2	df	L^2 / df
A.	Baseline	424.2	68	6.24
B.	Null Model	20889.0	116	180.08
C.	Random Error	755.4	85	8.89
D.	Proportional Allocation, Single System	1402.4	89	15.76
E.	Proportional Allocation, Dual System	682.3	82	8.32
F.	Proportional Allocation, Triadic System	654.4	75	8.73
G.	Proportional Allocation to Occupation and Authority	574.3	75	7.66
H.	Proportional Allocation to Occupation and Ownership	781.8	75	10.42
I.	Proportional Allocation to Occupation and Industry	484.0	75	6.45
	C vs. A	331.2	17	19.48
	D vs. A	978.2	21	46.58
	E vs. A	258.1	14	18.44
	F vs. A	230.2	7	32.89
	G vs. A	150.1	7	21.44
	H vs. A	357.6	7	51.09
	I vs. A	59.8	7	8.54

Table 3

Models of the Stratification Process, Wisconsin Females

	Models or Contrast	L^2	df	L^2 / df
A.	Baseline	307.4	68	4.52
B.	Null Model	11425.1	116	98.49
C.	Random Error	494.9	85	5.82
D.	Proportional Allocation, Single System	369.6	89	4.15
E.	Proportional Allocation, Dual System	354.1	82	4.32
F.	Proportional Allocation, Triadic System	334.0	75	4.45
G.	Proportional Allocation to Occupation and Authority	325.7	75	4.34
H.	Proportional Allocation to Occupation and Ownership	337.3	75	4.50
I.	Proportional Allocation to Occupation and Industry	310.8	75	4.14
	C vs. A	187.5	17	11.03
	D vs. A	62.2	21	2.96
	E vs. A	46.7	14	3.34
	F vs. A	26.6	7	3.80
	G vs. A	18.3	7	2.61
	H vs. A	29.9	7	4.27
	I vs. A	3.4	7	0.49

Table 4

Models of Sex Differences in the Stratification Process

	Models or Contrast	L^2	df	L^2 / df
J.	No Constraints Between Sexes	731.6	136	5.38
K.	Equal Measurement Models	750.2	142	5.28
L.	Global Equality of Structural Models	1212.3	189	6.41
M.	Equal Occupational Allocation	806.9	150	5.38
N.	Equal Authority Allocation	776.8	150	5.18
O.	Equal Ownership Allocation	869.5	150	5.80
P.	Equal Industry Allocation	820.9	150	5.47
	K vs. J	18.6	6	3.10
	L vs. K	462.1	47	9.83
	M vs. K	56.7	8	7.09
	N vs. K	26.6	8	3.33
	O vs. K	119.3	8	14.91
	P vs. K	70.7	8	8.84

Table 5

Structural Coefficients of Baseline Model, Wisconsin Males and Females*

Predetermined Variable	Dependent Variable: High School Rank	Academic Performance	Educational Attainment	Occupational Status	Workplace Authority	Ownership	Industry
Father's Education	.0169 (.0105) [.0319]		.0785 (.0145) [.1167]	-.0254 (.0181) [-.0300]	-.0022 (.0089) [-.0061]	.0032 (.0092) [.0087]	-.0115 (.0166) [-.0169]
Mother's Education	.0215 (.0092) [.0352]		.0647 (.0127) [.0832]	.0002 (.0158) [.0002]	.0156 (.0077) [.0371]	.0230 (.0081) [.0535]	.0041 (.0145) [.0053]
Father's Occupational Status	-.0257 (.0135) [-.0369]		.1306 (.0188) [.1473]	.1037 (.0233) [.0927]	.0202 (.0118) [.0420]	-.0190 (.0119) [-.0388]	-.0139 (.0212) [-.0156]
Parent's Income	-.0228 (.0333) [-.0093]		.2774 (.0452) [.0894]	.0798 (.0570) [.0204]	.1036 (.0272) [.0616]	.1102 (.0293) [.0644]	-.0006 (.0524) [-.0002]
Father's Ownership	.1362 (.0370) [.0460]		.0578 (.0500) [.0154]	-.2835 (.0630) [-.0598]	.1986 (.0299) [.0975]	.4748 (.0323) [.2290]	-.1627 (.0579) [-.0431]
Father's Industry	.0026 (.0096) [.0034]		-.0330 (.0130) [-.0337]	.0025 (.0164) [.0020]	-.0234 (.0078) [-.0441]	-.0141 (.0084) [-.0261]	.0504 (.0151) [.0511]
Sex	-.7096 (.0301) [-.2475]		.8451 (.0428) [.2319]	.3965 (.0552) [.0863]	.8168 (.0262) [.4137]	.3097 (.0283) [.1541]	1.1954 (.0506) [.3264]
Mental Ability	.5731 (.0110) [.5799]	.5320 (.0552) [.3884]					
High School Rank		1.0000 -- [.7215]					
Academic Performance			.4211 (.0176) [.4592]	.1565 (.0169) [.1354]	.0574 (.0079) [.1155]	.0047 (.0082) [.0093]	.0339 (.0148) [.0368]
Educational Attainment				.5749 (.0206) [.4558]	.0307 (.0098) [.0566]	-.0378 (.0104) [-.0685]	.0133 (.0186) [.0132]
Coefficient of Determination	.4083	1.0	.4314	.3516	.2186	.0812	.1104

* Entries are structural coefficient, (standard error), [standardized coefficient]. The sample size is 5406, listwise present. The scales of the occupational status, mental ability, high school rank, academic performance, and industry variables have been divided by ten for convenience in presentation.

Table 6

Structural Coefficients of Baseline Model, Wisconsin Males*

Predetermined Variable	Dependent Variable: High School Rank	Academic Performance	Educational Attainment	Occupational Status	Workplace Authority	Ownership	Industry
Father's Education	.0054 (.0143) [.0107]		.0704 (.0195) [.1021]	-.0366 (.0248) [-.0414]	-.0059 (.0124) [-.0167]	-.0099 (.0119) [-.0276]	.0037 (.0219) [.0059]
Mother's Education	.0065 (.0133) [.0108]		.0585 (.0181) [.0704]	-.0033 (.0231) [-.0031]	.0207 (.0114) [.0488]	.0138 (.0111) [.0317]	-.0079 (.0204) [-.0104]
Father's Occupational Status	-.0149 (.0181) [-.0225]		.1370 (.0251) [.1497]	.1707 (.0319) [.1457]	.0285 (.0160) [.0607]	-.0155 (.0152) [-.0324]	-.0325 (.0280) [-.0389]
Parent's Income	-.0019 (.0454) [-.0008]		.2702 (.0611) [.0835]	.0675 (.0787) [.0163]	.1379 (.0387) [.0833]	.1848 (.0379) [.1095]	-.0130 (.0698) [-.0044]
Father's Ownership	.1221 (.0510) [.0424]		-.0523 (.0685) [-.0132]	-.4436 (.0879) [-.0872]	.2619 (.0433) [.1288]	.6619 (.0423) [.3190]	-.2546 (.0781) [-.0701]
Father's Industry	-.0002 (.0134) [-.0002]		-.0394 (.0179) [-.0379]	-.0111 (.0231) [-.0084]	-.0394 (.0114) [-.0740]	-.0320 (.0111) [-.0589]	.0821 (.0205) [.0863]
Mental Ability	.5492 (.0150) [.5820]	.5523 (.0628) [.4118]					
High School Rank		1.0000 -- [.7036]					
Academic Performance			.5082 (.0239) [.5233]	.1288 (.0240) [.1036]	.0708 (.0119) [.1424]	.0134 (.0113) [.0264]	.0291 (.0209) [.0328]
Educational Attainment				.6213 (.0283) [.4856]	.0252 (.0139) [.0493]	-.0369 (.0134) [-.0707]	-.0561 (.0247) [-.0614]
Coefficient of Determination	.3373	1.0	.4687	.3911	.0838	.1204	.0217

* Entries are structural coefficient, (standard error), [standardized coefficient]. The sample size is 2976, listwise present. The scales of the occupational status, mental ability, high school rank, academic performance, and industry variables have been divided by ten for convenience in presentation.

Table 7

Structural Coefficients of Baseline Model, Wisconsin Females*

Predetermined Variable	Dependent Variable: High School Rank	Academic Performance	Educational Attainment	Occupational Status	Workplace Authority	Ownership	Industry
Father's Education	.0332 (.0155) [.0630]		.0914 (.0210) [.1483]	-.0064 (.0260) [-.0083]	-.0009 (.0158) [-.0024]	.0216 (.0148) [.0563]	-.0282 (.0249) [-.0434]
Mother's Education	.0371 (.0125) [.0641]		.0786 (.0169) [.1162]	.0074 (.0210) [.0087]	.0118 (.0123) [.0286]	.0375 (.0120) [.0890]	.0073 (.0202) [.0103]
Father's Occupational Status	-.0359 (.0200) [-.0521]		.1146 (.0275) [.1423]	.0139 (.0335) [.0137]	.0146 (.0213) [.0296]	-.0202 (.0190) [-.0403]	.0027 (.0320) [.0032]
Parent's Income	-.0495 (.0490) [-.0208]		.2636 (.0654) [.0949]	.1082 (.0815) [.0311]	.0551 (.0466) [.0323]	-.0445 (.0465) [-.0257]	.0329 (.0784) [.0112]
Father's Ownership	.1540 (.0533) [.0541]		.2094 (.0709) [.0629]	-.0771 (.0886) [-.0185]	.1101 (.0501) [.0540]	.1571 (.0505) [.0759]	-.0775 (.0852) [-.0221]
Father's Industry	.0059 [.0139] [.0080]		-.0273 (.0184) [-.0316]	.0165 (.0229) [.0152]	.0023 (.0130) [.0044]	.0147 (.0131) [.0274]	.0134 (.0221) [.0146]
Mental Ability	.6033 (.0160) [.6188]	.5819 (.1127) [.4103]					
High School Rank		1.0000 -- [.6875]					
Academic Performance			.2901 (.0244) [.3608]	.1763 (.0236) [.1750]	.0583 (.0123) [.1184]	-.0068 (.0117) [-.0136]	.0416 (.0200) [.0490]
Educational Attainment				.4948 (.0303) [.3948]	.0165 (.0177) [.0269]	-.0322 (.0171) [-.0518]	.1384 (.0289) [.1312]
Coefficient of Determination	.4152	1.0	.3616	.2666	.0293	.0148	.0242

* Entries are structural coefficient, (standard error), [standardized coefficient]. The sample size is 2430, listwise present. The scales of the occupational status, mental ability, high school rank, academic performance, and industry variables have been divided by ten for convenience in presentation.