

Occupational Prestige Hierarchies: Theory and Evidence*

Occupational Prestige in Comparative Perspective, by DONALD J. TREIMAN. New York: Academic Press, 1977. 514 pp. \$19.50 cloth.

ARCHIBALD O. HALLER AND DAVID B. BILLS
University of Wisconsin, Madison

Professor Treiman's book presents an ideal occupational prestige hierarchy which

is purported to be almost, if not wholly, universal. Built on this, it presents a scale of occupational prestige which is intended to be used to measure the status position of any given worker or household or to describe the actual stratification system of any society. The present paper attempts to locate this work historically and theoretically, and to show, by means of an empiri-

*The analysis reported here was supported by the University of Wisconsin College of Agricultural Sciences and by the National Science Foundation (Grant No. SOC 78-07414). Thanks are due to Jonathan Kelley for advice and to Rochelle Reimer, Daramea Godfrey, Lynne Lohfeld, Chaiwat Roongruangsee, and Sharon Maestas for technical and/or clerical assistance.

cal analysis of the data Treiman presents, at least some of the circumstances under which the universality hypothesis and the scale based on it may be questionable and, by implication, the conditions under which both may be tentatively applicable.

Impressionistic and sanctioned prescriptions of occupational hierarchies go back to remotest antiquity. Serious research on them goes back at least to the early 1920s. In his *Social Mobility*, P. A. Sorokin (1927) distinguished three kinds of stratification: political, economic, and social. He made a serious, though unsuccessful, attempt to measure the latter by means of data on occupational hierarchies, drawn from prior publications on mean IQ scores for occupations. Even before Sorokin's book appeared, George S. Counts (1925) published what appears to be the first set of empirical data on occupational prestige ratings. Many such studies of the American occupational prestige hierarchy were published during the next two decades. Apparently, the first representative national study of occupational prestige, conducted in the United States and employing 90 occupational titles, was executed in 1945 by C. C. North and P. K. Hatt (North and Hatt, 1947). In the voluminous literature appearing since then, the Counts (1925) and North-Hatt (1947) reports have been used as benchmarks (e.g., Hodge, Siegel, and Rossi [1966]; Hodge, Treiman, and Rossi [1966]), while the intervening publications have been largely ignored, at least in the sociological literature. Indeed, the North-Hatt project has been singularly influential. Not only has it been the main marker by which to assess changes in the American occupational prestige structure (Hodge, Siegel, and Rossi, 1966; Siegel, 1971); in addition, it has served as a model to be copied or surpassed in rigor and comprehensiveness and it serves as perhaps the prime example of the occupational prestige hierarchy of advanced urban-industrial societies against which to compare that of all other societies (Inkeles and Rossi, 1957).

Lately, it has become fashionable (e.g., Horan, 1978) to attribute the theoretical origins of occupational prestige research to the so-called "functionalist theory" (e.g., Davis and Moore [1945]; Parsons [1947, 1953, 1966]). This reasoning may well be specious. The research tradition was well established before the theory appeared, but the data do parallel the theory to some

extent. The theory assumes a degree of value consensus within any given society, even going so far as to suggest that the same value consensus exists everywhere because of the need to fulfill "functional requirements" shared by all societies; the research on occupational prestige shows a rather impressive degree of consensus within and among many countries.

Occupational prestige research did not grow out of functionalism, but initially at least, was part of a wider search for indicators of positions in social hierarchies. Indeed, Sorokin—who, in a few lines on page 100 of his book, *Social Mobility* (1927), sketches the heart of what in the 1940s came to be called the functionalist theory of stratification—drew on a set of prior studies of occupational intelligence (Fryer, 1922; National Academy of Science, 1921). American research sociologists have never been especially constrained by any particular theoretical position. For years they had been searching for a good single index of position in the stratification system. As Sewell (1940) clearly shows, behind his work and that of Chapin (1933), there lay a long history of quantitative research in stratification, much on dimensions not directly involving occupational variables.

The main reason occupational hierarchies in general and occupational prestige hierarchies in particular have interested sociologists has nothing to do with the functionalist explanation of stratification. It is rather the possibility that they would yield a simple, easy-to-use, index of one's position in a stratification system. To the extent that they remain constant over time they offer a basis for studying variations in the status of persons across generations, across age-cohorts, and throughout individual careers. To the extent that they measure or index all those variations in resources and rewards that are summed up by words such as "power," "privilege," "wealth," "prestige," "class," "status," etc., they promise to provide a single variable by which to locate each person at his proper level in the stratification system. Among countries, to the extent that occupational prestige hierarchies everywhere are similar to each other, they offer a comparable measure of stratification position which would be valid regardless of the different cultures, economies, technologies, and political structures which distinguish one country from another. It is their promise for research purposes, not

their theoretical affinities to functionalism, which lies behind their attractiveness.

This promise has not gone unexamined. In the mid-60s, the NORC group, Hodge, Siegel, and Rossi (1966), showed that the United States' occupational prestige hierarchy had remained quite stable since Counts first marked it in the mid-20s. Some years before, Duncan (in Reiss, 1961) published his Socioeconomic Index for All Occupations (SEI), which seems to have been first conceived as an expansion of the ninety 1947 North-Hatt prestige rankings, rigorously interpolated so as to be applicable to all occupations. Certain more recent writers (Featherman and Hauser, 1978) now view the SEI of occupations as the basic stratification variable, a summary of resources (education) and rewards (income). They see prestige as no more than an imperfect index of SEI. On a different tack, Goldthorpe and Hope (1974) tried to show that a hierarchy of deference entitlements is the fundamental stratification variable. They seem to have found, however, that prestige rankings index it so well that deference ratings and prestige ratings appear to measure just about the same thing.

The question of which is the best single stratification index is not the only point that needs to be examined. Many writers including Weber (1946) and Sorokin (1927) during the first quarter or so of this century, not to mention several from the third quarter (Svalastoga, 1964; Lenski, 1966; Duncan, 1968; Haller, 1970) have argued that status is multidimensional and probably cannot always, if ever, be reduced to a single dimension. With the possible exception of Weber and Lenski, these writers, and the many others whose work they have tried to synthesize, believe that stratification systems will differ according to the statistical distribution of each of several status variables and according to the degree of correlation among the latter. In this view, occupational prestige (or SEI) would be only one of several variables essential to a complete description of any particular stratification system.

Notwithstanding, the search for a single status indicator which would be applicable everywhere is a serious pursuit of some of today's stratification researchers. Treiman's book is in the forefront of this endeavor. It, and the occupational prestige studies from many parts of the world on which it is built and which it fulfills, constitute the most

thorough attempt yet seen to identify a single world-wide status hierarchy.

Inkeles and Rossi (1956) first presented the hypothesis that occupational prestige hierarchies were similar the world over. Their data consisted of correlations among sets of average evaluations of small numbers of occupational titles taken from several different countries. Hodge, Treiman, and Rossi (1966) later collated a large number of such studies. These showed an impressive degree of positive correlation among the occupational prestige hierarchies of different countries. Nonetheless, many have wondered whether the apparent discovery of an approximately invariant world-wide occupational prestige hierarchy might have been exaggerated due to a combination of three artifacts of inappropriate methods: biased sampling of countries (usually Western), biased selection of regions within countries (almost always urban, outside of the West), and biased sampling of occupational titles (almost always taken from those in Western industrial nations, especially the United States; and often under-representing the middle of the prestige range).

Treiman's book has two emphases. First, it contains a carefully compiled new summary of the evidence regarding the hypothesis that all societies have the same basic occupational prestige hierarchy. Second, it presents a new measure of occupational prestige, the Standard Index of Occupational Prestige, which Treiman recommends for use in all societies.

From this and his previous work, Treiman seems firmly convinced that the occupational prestige hierarchy constitutes—or at minimum, provides a valid index of—an underlying stratification hierarchy which is everywhere the same. He takes off from a comment of Lenski (1966), who had argued that prestige was a somewhat secondary phenomenon under the control of power and privilege. He then reasons that if occupational prestige is a consequence of the other two variables, it should index them very well. So if one's position is measured by means of valid occupational prestige, his positions on the others have been measured, too. Obviously, he assumes that power, privilege, and prestige are very nearly perfectly correlated. He also believes that the same variable measures deference, as Shiels (1968) sees the concept. In short, Treiman believes that occupational prestige either is, or at least measures very well, the

only basic hierarchy that exists. But actually this hypothesis is merely asserted, not tested. At present, it probably cannot be fully tested: first, because we do not yet know how to measure power variables on a mass basis; and second, because prestige may not turn out to be the best way to array occupations.

Nonetheless, the analysis is impressive for its comprehensiveness, the painstaking care which went into each item compiled and each calculation executed, and for the clear, open way each crucial bit of data is presented. In these respects, the work is exemplary.

The logic of the argument is straightforward and simple, despite the great effort which went into fulfilling it. Treiman assembled nearly all the (mostly English-language) publications available through 1971, providing data on occupational prestige hierarchies. He recalculated the scores to each occupational title, conducting a long series of careful checks to assess the quality of data. He then calculated the correlation between each pair of sets of occupational prestige ratings. To learn whether the same occupational prestige hierarchy existed before the industrial revolution, he assembled data from prior periods: on official caste rankings in Nepal for the year 1395; on occupational ranks, taken from a cadastral survey in Florence, Italy in the year 1427; and on occupational ranks taken from income and wealth data from several English-speaking locations during the late seventeenth, the eighteenth, and nineteenth centuries. It would be tedious to review the detail here. It is enough to say that it would be difficult to imagine a more thorough compilation of the data. From this first set of analyses, he concludes that indeed there exists a single world-wide occupational prestige hierarchy. Then he presents the Standard International Occupational Prestige Scale (SIOPS). Effectively, he argues for the need for such a scale and—since he has concluded that occupational prestige hierarchies everywhere are essentially the same—that the information from the empirical occupational prestige hierarchies which to various degrees approximate this general hierarchy can be put to good use in constructing a scale to measure it. The SIOPS is constructed as carefully and as rigorously as were the correlations among sets of evaluations of occupational titles. That he believes that the SIOPS can be

validly and reliably applied in just about any country is apparent from the following quotation:

The obvious question regarding any such scale is the simple one of its validity. If, indeed, occupational status hierarchies differed substantially from country to country, any attempt to score occupations according to a status scale not specific to the society being studied would distort the realities of the local situation and thereby invalidate any attempted comparisons. However, we know from the analysis reported in Chapter 4 that occupational prestige hierarchies are essentially similar throughout the world—recall that the average inter-country occupational prestige correlation (computed over 55 countries) is .81. Thus the question reduces to whether the distortion of the "true" situation for any given country that would result from use of a standard international scale is likely to be less than would result from use of alternative scaling procedures, such as those traditionally employed; the answer is affirmative. [Treiman, 1977:165-166]

Though he is at times cautious about it, Treiman, as we understand him, would have us believe that there really is only one occupational prestige hierarchy and that it shows itself especially clearly in the industrialized countries, particularly the United States and Australia where the respective correlations with the SIOPS are .93. He does examine some cases which might tend to disconfirm the conclusion. Socialist countries downgrade clerical occupations and upgrade manual labor. Data from Congo, Nigeria, Village India, and New Britain deviate rather sharply, and he warns the researcher to be cautious when using the scale in "such places." The French data simply do not conform to the pattern. This he dismisses as error. It may be. In other words, he seems to think that the negative cases are few and that they constitute nothing more than minor aberrations.

How well do the data really support the basic contention that at bottom there is really one occupational prestige hierarchy—possibly with a slight variant for socialist nations, possibly misunderstood in a few primitive places? This is a question which is not easy to answer. One can list the caveats, most of which have been stated before. (1) The sample of countries is a bit overloaded with the Euro-American

Industrial countries and their offshoots in Oceania and South America. (2) It is also overbalanced with urban samples and samples of relatively well-educated (i.e., urbanized, westernized) students in the less developed countries (LDCs) where rural-urban differences might be expected. By our rough count, in his set of sixty (Table 2.1:31-41), forty-three samples were taken from countries where rural-urban differences in outlook, if they exist, might influence the outcome. Only seven of these, however, were rural samples. Thirty-four were urban and/or student samples. Of the nineteen student samples, eighteen were of university or high school students. In the LDCs, such people are usually highly urbanized. (3) Probably more important, while the number of occupations evaluated by the raters in the hundreds of pairs of country samples Treiman compared varied enormously, many were rather small. Only seven pairs included over 100 shared occupational titles (the United States with Australia, United States with Canada, United States with the Netherlands, Australia with New Zealand, and the three Thai samples with each other). Unfortunately, for years it has been surmised that small samples of titles might tend to be overweighted with those of higher and lower prestige to the neglect of the middle. This may well be the case in these data. There were even 387 (22%) which shared fewer than ten occupational titles (Table 4.1:81-92). These he wisely dropped from the analysis. (4) Almost all the samples of occupational titles were taken from those current in the industrialized West. It is no surprise, therefore, that those with the largest numbers of missing correlation coefficients (due to small numbers of shared occupational titles) all involved non-Western and non-industrialized people: Ceylon, Nigeria, West Irian, and South African indigenous people. (5) In our opinion the examination of negative cases could have been more thorough. If the shared variance of a pair of estimates of the similarity of occupational prestige hierarchies is not even equal to $r^2 = .500$ ($r = .707$), then the two would seem not to be very much alike. To find out how many are dissimilar by this criterion, the number of pairs of samples whose $r^2 < .500$ was counted, again drawing upon the data Treiman presents in his Table 4.1:81-92. There are 267 such coefficients, or 15% of the total 1,770 cross-sample comparisons. To us, this seems like a rather high per-

centage of negative cases, especially in view of the fact, noted above, that an *additional* 22% of the correlations were not even run because of low numbers of comparable occupational titles. These low correlations were not distributed randomly. Eight samples each yielded twenty or more correlations of $r^2 < .500$ (again by our rough count). These were the USSR, Poland, Czechoslovakia, Peasant India, New Britain, Congo, Grenada, and France (whose data Treiman suspects). Thus, except for France, the negative cases are concentrated among new societies and socialist countries. As a matter of fact, the one other socialist nation in the sample, Yugoslavia, also shows a rather high number of low correlations: sixteen. It seems to us that the large percentage of negative cases and the apparent tendency for them to be concentrated outside the industrial West and its offshoots would alert one to the possibility that the variations among countries may be behaving lawfully. If so, this would mean that we are observing, not one, but several—perhaps many—occupational prestige hierarchies.

All in all, one would infer that the biases in the data unfairly tip the scales in favor of the hypothesis of world-wide identity. The oversampling of Western countries, of urban and thus possibly Westernized raters, and possibly of occupational titles of Western industrial origin each might yield pro-Western biases. The sizeable undersampling of inter-country correlations involving non-industrial countries and peoples, and the large proportion of low correlations suggest that Treiman's conclusion may be premature.

There is little new about these concerns. The only truly new information is the wealth of detail that Treiman has presented. In the best scientific tradition, all the necessary data are there so that the careful reader may inspect them for himself. The most serious challenge to Treiman's main conclusion and thus to the SIOPS could come from vastly improved original data, collected so as to satisfy the criticisms implied above. But a bit more may be done even with Treiman's data.

Even though Treiman's evidence is biased (unintentionally, of course), so as to yield an illusion of greater occupational prestige similarity than probably really exists, it may still be analyzed so as to determine the extent to which the correlations among the occupational prestige hierar-

chies vary lawfully. If, in spite of these biases, sociologically meaningful independent variables turn out to control a substantial proportion of the variation among occupational prestige hierarchies, it may be necessary to abandon or modify the hypothesis, and to use with special caution the SIOPS instrument based on it. We have performed such a test on Treiman's data. Two substantive sociological variables and four technical variables are used as regressors. The latter are employed to reduce the likelihood that correlations between the quality of the evidence on the one hand and sociologically meaningful variables on the other might either obscure or spuriously indicate effects of the latter on the correlations among occupational prestige hierarchies. Each of Treiman's correlation coefficients is taken to be an estimate of the degree of similarity between a pair of occupational prestige hierarchies (OPH). We have then regressed the degree of OPH similarity on a series of pairwise variables which we have constructed from the data Treiman provides. The objective of this exercise is to estimate the zero-order, partial, and total effects of each of a set of available technical and substantive pairwise variables (see the next paragraph) on the apparent degree of similarity of occupational prestige hierarchies. The *substantive variables* are: Variable (1) the types of societies from which the samples contributing to a correlation were drawn; and Variable (2) the rural or urban populations from which the pairs of samples were drawn. For reasons that become clearer as we go on, both of these are dummy variables. The *technical variables* are: Variable (3) the number of shared occupational titles (this may in fact be a subtle reflection of serious substantive differences among occupational structures); Variable (4) a dummy variable describing the sizes of the two samples of occupational titles; Variable (5) a dummy variable describing the sizes of the two samples of raters; and Variable (6) a dummy variable describing the quality of the data of each pair (Treiman's estimate, Table 2.1:31-41).

Pairwise variables may be new to the literature. In any case, they are essential to this type of analysis. The phenomena which gave rise to the correlation coefficients obviously come in pairs. Our dependent variable, OPH correlations, is thus pairwise. So are all the independent variables. The occupations actually correlated come from

two samples of occupational titles—one rated by members of one sample of persons, the other by those of the other sample. Each of the two samples of raters is a participant in a society of one type or another. Both sets might be rural people or both might be urban, or one might be urban while the other is rural. Not only are all the variables pairwise; all but one of the regressors (the number of shared occupational titles) are treated as dummy variables. So most are pairwise dummy variables. Each of these is made up of $\frac{C(C+1)}{2}$

possibilities (C is the number of categories). For example, given that each sample of raters may be rural (R) or urban (U), then $C=2$ —one for R, another for U.

Thus, in this case, $\frac{C(C+1)}{2} = \frac{2(3)}{2} = 3$.

These three pairwise classes are RR, RU (which is the same as UR), and UU. Now let us take the case of the type of society from which each sample of raters was drawn. As will be seen in more detail in a moment, we have broken the samples into four categories of societies: Western Industrialized and Their Offshoots (W), Socialist Industrialized (S), Old Non-Industrialized (O), and New Societies (N). In this case $\frac{C(C+1)}{2} = \frac{4(5)}{2} = 10$ pairwise classes.

Categorical pairwise variables such as these may be used as regressors simply by dropping one of the pairwise classes, that is, by making dummy variables out of them. For the rural-urban pairwise variable, UU was taken as the dummy; for the type of society WW was the dummy. These dummy variables (Suits, 1957) require that the regression coefficient for a category be read as its deviation from the omitted category.

The most complicated pairwise variable is type of society. Contemporary civilizations, whether industrial or not, have enormous durability and influence. Europe during and after the Age of Conquest was and is such a society. So are the Hindu society, Southwestern Asian, and North African Islamic society, as well as China, Japan, and Java. The industrial system is also influential. European civilization is now more influential than the others precisely because it has the socioeconomic organization and trained personnel to operate the industrial system. The others, except Japan, are just learning how to do it. Capitalism and socialism, where they are more than rhetoric, also stand for basic

pervasive and durable differences among societies. Clearly, the Eastern European nations, four of which appear in Treiman's data, are socialist in name and fact. So too are Cuba and several Asian nations—China, Vietnam, North Korea—none of which are in these data. The bases of this classification are civilization, industrialization, and capitalism-socialism. Thus Western Europe and the nations it spawned (W) should exhibit an occupational prestige hierarchy reflecting its industrial structure and capitalist economic organization. That is, Western European nations and their urbanized offshoots in the Americas and Oceania (the once sparsely populated regions they peopled with emigrants from Western Europe) should be relatively near to each other regarding their basic culture, their understanding of the industrial system, and their involvement in the capitalist system. Correspondingly, the socialist nations (S) included in Treiman's data are all European and industrial. But their mode of economic organization is different from that of the West and their evaluation of occupations should differ accordingly. The occupational structure of contemporary pre-industrial urban-agrarian societies (O)—India, the Islamic countries, Java, China, Japan (though the latter is not easy to classify)—we would surmise would be rather like each other because of their deep experience with labor intensive agriculture and urban commerce. Their populations, especially rural people, would be relatively unfamiliar with the industrial system in general (thereby differing from the people of the West and of the Industrial Socialist nations) and be untouched by socialist evaluations of industrial occupations, thereby differing from people of Eastern Europe. The people of many newly emerging states may have not yet been steeped in any of the above three kinds of systems. These New Societies (N) have been formed by colonial powers within the last 300 years, by mixture of once-separate non-urbanized ethnic or tribal groups. They are certainly not European capitalist industrial societies, neither are they European socialist industrial societies (although some of them claim to be socialist), nor old urban-agrarian societies. Raters from such societies would be expected either to respect the evaluations transmitted to them by their former colonial "mother countries" or simply not to have very clear evaluations of the occupations of modern industrial societies.

The resulting basic classification of the societies in Treiman's samples has few ambiguous cases. Western Europe's offshoots are clear enough. They include all of North America, urban South America, Australia, and New Zealand. Also unambiguous are the Socialist Industrial nations: Java, India, and the Islamic countries are clearly old agrarian and commercial civilizations. Japan poses a bit of a problem because it is an old urban-agrarian civilization that has industrialized. To be consistent, we classed it along with India, etc., rather than with the West. Those from the New Societies, the ex-colonial tribal regions, are equally unambiguous. The basic four-fold classification (W, S, O, N) generates a pairwise variable of ten classes: WW, WS, WO, WN, SS, SO, SN, OO, ON, NN. WW was used as the dummy. This pairwise variable is labeled SOCIETY.

The rural-urban pairwise variable was already sketched above. It was included because of earlier evidence (Haller, Holsinger, and Saraiva, 1972; Haller and Lewis, 1966; Lewis and Haller, 1964), some of which data, together with others presented by Treiman (peasant India, rural Thailand, and rural Brazil), suggest the possibility that rural people are likely to have variant evaluations of occupations. This is for two reasons: (1) rural divisions of labor are characteristically different from urban, and (2) in non-industrial countries, rural people are less likely to have been exposed to European industrial occupational hierarchies. Students, of course, were treated as urban. So were all nation-wide samples (which, incidentally, only were drawn from industrialized countries). There are three possible cases—RR, RU, AND UU. UU was used as the dummy. This pairwise variable is labeled as RURAL.

The third variable is the number of similar occupational titles rated by members of both the samples involved in a given OPH correlation. Its main function, like that of all the subsequent variables, is to control the effects of technical matters whose possible correlation with both the inter-societal OPH correlation coefficients and the variables of clear substantive importance might spuriously influence the estimate of the effects of the latter. But there is also a substantive purpose in including it. The degree to which the occupational environment of any two samples of raters is similar enough to permit them to evaluate the same occupations, and thus to permit the assessment of

the degree of correlation of their hierarchies, is one of the questions posed in this literature. If two occupational systems are so different that it is difficult to obtain enough mutually translatable and mutually recognizable occupational titles on which to calculate a correlation coefficient, this in itself would constitute evidence of dissimilarity. This is the substantive reason for including the number of titles actually used in each OPH correlation. Yet the latter is so confounded with the technical reason—the tendency to over-represent the top and the bottom will probably be greater when small numbers of occupations are available—that the two kinds of effects cannot be separated. We treat it primarily as a technical variable. It is called **COMMON TITLES**. It was not dummied, of course.

The fourth variable is the number of occupational titles rated by each of the two samples. It is entered as a proxy for quality of the research operations going into each data set which are directly pertinent to the measurement of occupational prestige hierarchies. The lower the quality, if anything, the less dependable the estimates of the degree of inter-hierarchy similarity. Other things being equal, one would suppose that less sophisticated research teams would be content with smaller and probably poorer samples of occupational titles. Teams with greater experience with research regarding occupational prestige hierarchies would normally draw larger and more representative samples of occupational titles. This variable is controlled because of the strong possibility that it is correlated with the substantive variables. The sizes of the occupational title samples were broken into three groups: L (100 or more titles), M (30–99 titles), S (29 or fewer titles). This yields a pairwise variable with six classes: LL, LM, LS, MM, MS, SS. LL was used as the dummy. This variable is called **ALL TITLES**.

The fifth variable is the number of raters. Small numbers of raters would provide unstable rankings, thus lowering the correlations between OPHs. The depressing effect that small sizes would have on the value of the correlation coefficients would be greatest when both samples of raters were small. Each sample was classed as Large (200 or more raters), Medium (51–199 raters), or Small (50 or fewer raters). This yields a pairwise variable with six classes LL, LM, LS, MM, MS, and SS. LL was used as the dummy. This pairwise variable is

called **RATERS**. It, too, might well be correlated with the substantive variables.

The sixth and last variable is the quality of each data set, as rated by Treiman. It was used as a control variable. As a rule, poor data leads to low correlations. This variable is included because of the likelihood that lower correlations would be observed in non-Western and rural societies—because of the relative paucity of capable survey research agencies and personnel, and because of the rarity of respondents accustomed to such research. Treiman classed the quality of each data set into one of four categories: 1 (worst) to 4 (best). His criteria are not clear, but we infer that 4 was reserved for research in which national samples of raters were designed and conducted by professional survey research agencies. We cannot determine how he distinguished between categories 3, 2, and 1. (By coincidence, we are intimately familiar with three of the data sets which he has classified and would disagree with his scoring of at least one of them, if not all.) We surmise that those to which he assigned a scoring 4 are indeed quite dependable, but that he may have misestimated the quality of some of the others. At any rate, the better the quality of each of two samples, the more valid and reliable the data from them, and the more dependable the estimate of the correlation between them. As with the other technical variables, this is included to control the effects of quality variations on the estimates of the effects of substantive variables on the intercountry correlations. This leads to another pairwise variable. Its categories are: 44, 43, 42, 41, 33, 32, 31, 22, 21 and 11—ten in all. Category 44 serves as the dummy. The variable is called **QUALITY**.

The following brief discussion of the results of this exercise is taken from a multiple regression of all six independent variables on the correlation between pairs of occupational prestige hierarchies.

Given the large number of regression coefficients and F tests (generated by the five pairwise dummied variables), it seemed prudent to check the results of the full-scale analysis against three lower-order regression analyses: (a) each regressor (dummied, of course) alone against the dependent variable; (b) the multiple regression of the two substantive pairwise regressors—rural-urban sampling and type of society (**RURAL** and **SOCIETY**, in the Tables)—on the dependent variable; and (c) the multiple regression of each of the tech-

nical regressors—number of occupational titles rated by both samples involved in the estimate of correlation between occupational prestige hierarchies (COMMON TITLES), the pairwise size classification of the number of titles rated by each such sample (ALL TITLES), the pairwise classification of the number of raters in each such sample (RATERS), and the pairwise classification of Treiman's estimate of the quality of data in each such sample (QUALITY)—against the dependent variable. In reading these data, it should be recalled that the F test for a category indicates whether its value differs significantly from that of the omitted category, and that each of the omitted categories was chosen because it provides a reasonable basis for comparison with each other category in its set.

The overall results of these checks are presented in Table 1. The coefficients of determination (R^2) show a consistent pattern despite the fact, to be expected, that they shift around a bit depending on which specific regressors are included in the equations. The main conclusions to be drawn from the table are: (1) The substantive variables (S), RURAL and SOCIETY, do indeed seem to have noteworthy impacts on the estimates of the correlations among pairs of occupational prestige hierarchies. Their estimated effects are just a bit larger than those of the technical variables (T). (Uncorrected, $R_s^2 = .175$, $R_T^2 = .125$, Total $R^2 = .277$.) (2) One of the technical regressors

appears to have noteworthy effects. It is the number of occupational titles correlated (COMMON TITLES): $r^2 = .060$. (3) The effect of the number of occupational titles (ALL TITLES) in the original samples appears in this table to be inconsequential ($R^2 = .004$), but Table 2 will show that this is misleading. We believe that a suppressor effect is operating here in conjunction with COMMON TITLES. (4) The estimated effects of the other two variables are small ($R^2 = .023$, $R^2 = .039$, respectively). Still, their sizes are large enough so that researchers would be imprudent to ignore them in the future.

The main results are summarized in Table 2. They may be stated quickly. (1) People from rural and urban samples do disagree significantly regarding the evaluation of occupational titles. The b values would seem to indicate that Rural-Rural pairs of rater samples disagree sharply with Urban-Urban pairs ($b = -.328$)—quite a bit more so than rural-urban pairs do ($b = -.117$). We believe this finding warrants future work in identifying characteristically rural occupations with the same sort of care that has been given to urban and industrial occupations and incorporating them into studies of occupational prestige. In this we should be prepared to cope with the possibility that the occupational roles of specific rural workers may be more varied according to region and season, among other things, and possibly more complex, than seems to have been assumed. Surely their work is less standardized than that of many types of machine operators in factories. Similarly, the number of rural samples of raters is so small (7) that it is surprising that the b and F values are as large as they are: $-.328$ and 39.299 , respectively. (2) The type of societies compared (SOCIETY) clearly affects the correlation among occupational prestige hierarchies. Western-industrial pairs were used as the contrast samples. The greatest similarities to Western pairs are found among those pairs that include at least one Western sample. Pairs involving one Socialist and one other type of society show the greatest dissimilarity, while those exclusively involving New Societies and Old Non-industrial civilizations are in between. It seems a bit anomalous that Socialist-Socialist pairs do not differ much from Western-Western pairs. (3) Data from Table 1 (especially the last column) appear to show that the number of shared occupational titles

Table 1. Summary of Estimates of Explained Variance of Sets of Regressors on Treiman's Estimates of the Correlation Between Occupational Prestige Hierarchies*

| Regressors (Pairwise variables) | R^2 |
|---|-------|
| RURAL | .027 |
| SOCIETY | .131 |
| COMMON TITLES | .060 |
| ALL TITLES | .004 |
| RATERS | .023 |
| QUALITY | .039 |
| SUBSTANTIVE REGRESSORS (Rural, Society) | .175 |
| TECHNICAL REGRESSORS (Common Titles, All Titles, Raters, Quality) | .125 |
| ALL REGRESSORS | .277 |

Source: Original calculations based on data in Treiman (1977), Tables 2.1 (31-41) and 4.1 (81-92).

* R^2 s are uncorrected.

Table 2. Summary of Estimates of Simultaneous Effects of Six Regressors on Treiman's Estimates of the Correlation Between Pairs of Occupational Prestige Hierarchies

| Variable | Comparison Dichotomy | N ⁺ | \bar{X} | σ | Constant | b | β | R ²⁺⁺ | F |
|---------------------|-------------------------|----------------|-----------|----------|----------|-------|---------|------------------|---------|
| 1. RURAL | Urban-Urban | 939 | .829 | .377 | .6510 | | | .257 | 13.630* |
| Rural-Rural | | 7 | .006 | .078 | | -.328 | -.173 | | 39.299* |
| Rural-Urban | | 185 | .163 | .370 | | -.117 | -.291 | | 76.135* |
| 2. SOCIETY | West-West | 113 | .100 | .300 | | | | | |
| West-Socialist | | 59 | .052 | .222 | | -.158 | -.237 | | 54.720* |
| West-Old | | 249 | .220 | .414 | | .000 | -.001 | | 0.000 |
| West-New | | 205 | .181 | .385 | | -.047 | -.121 | | 8.392* |
| Socialist-Socialist | | 9 | .008 | .089 | | -.031 | -.019 | | 0.488 |
| Socialist-Old | | 65 | .057 | .233 | | -.098 | -.153 | | 19.802* |
| Socialist-New | | 38 | .034 | .180 | | -.190 | -.231 | | 54.615* |
| Old-Old | | 146 | .129 | .335 | | .032 | .072 | | 2.833 |
| Old-New | | 195 | .172 | .378 | | -.028 | -.072 | | 2.544 |
| New-New | | 53 | .047 | .211 | | -.023 | -.033 | | 0.996 |
| 3. COMMON TITLES | | | 22.506 | 14.574 | | .003 | .267 | | 46.031* |
| 4. ALL TITLES | Large-Large | 45 | .040 | .195 | | | | | |
| Large-Medium | | 368 | .325 | .469 | | .084 | .266 | | 11.842* |
| Large-Small | | 67 | .059 | .236 | | .113 | .180 | | 13.664* |
| Medium-Medium | | 541 | .478 | .500 | | .090 | .302 | | 10.642* |
| Medium-Small | | 110 | .097 | .296 | | .149 | .298 | | 23.046* |
| Small-Small | | 1 | .001 | .030 | | .242 | .048 | | 3.333 |

Table 2. (Continued)

| Variable | Comparison Dichotomy | N ⁺ | \bar{X} | σ | Constant | b | β | R ²⁺⁺ | F |
|---|-------------------------|----------------|-----------|----------|----------|-------|---------|------------------|---------|
| 5. RATERS | Large-Large | 461 | .407 | .492 | | | | | |
| Large-Medium | | 475 | .419 | .494 | | .018 | .062 | | 3.443 |
| Large-Small | | 51 | .045 | .207 | | -.035 | -.049 | | 3.079 |
| Medium-Medium | | 116 | .102 | .303 | | .053 | .109 | | 10.118* |
| Medium-Small | | 27 | .024 | .153 | | -.044 | -.045 | | 2.539 |
| Small-Small | | 1 | .001 | .030 | | -.143 | -.029 | | 1.223 |
| 6. QUALITY | 11 (Worst-Worst) | 298 | .263 | .441 | | | | | |
| 1 2 | | 160 | .141 | .348 | | .059 | .139 | | 19.647* |
| 1 3 | | 314 | .277 | .448 | | .032 | .098 | | 8.265* |
| 1 4 | | 115 | .102 | .302 | | .030 | .060 | | 3.338 |
| 2 2 | | 16 | .014 | .118 | | .119 | .095 | | 12.178* |
| 2 3 | | 77 | .068 | .252 | | .093 | .158 | | 25.681* |
| 2 4 | | 31 | .027 | .163 | | .093 | .103 | | 12.451* |
| 3 3 | | 64 | .057 | .231 | | .046 | .071 | | 5.359* |
| 3 4 | | 51 | .045 | .207 | | .030 | .041 | | 1.674 |
| 4 4 (Best-Best) | | 6 | .005 | .073 | | .021 | .010 | | 0.134 |
| Dependent Variable: Correlation of Occupational Prestige Hierarchies | | 1133 | .797 | .148 | | | | | |

Source: Original calculations based on data in Treiman (1977), Tables 2 (31-41) and 4.1.

* Cases with complete data.

++ After correction. Uncorrected, R² = .277.

* P < .05.

(COMMON TITLES) entering into an estimate of the degree of similarity of occupational prestige hierarchies is the strongest regressor among the technical group. Net of all else, the larger the number of comparable occupational titles entering the comparison, the higher the correlation. This was included mainly as a control variable, but there was a substantive reason involved too, it will be recalled. Comparable occupational structures are those containing the same occupational roles and thus the same occupational titles. The smaller the overlap of the occupational structures of two societies, the smaller will be the list of comparable occupational titles. Thus the lower correlations which are observed between pairs of samples whose correlations are based on smaller numbers of occupational titles may be partly due to the degree of incomparability between the two occupational structures. Of course, it might also be due to the possibility that the more sophisticated research teams include large numbers of occupational titles in their studies of prestige hierarchies, though the fact that the pairwise sizes of the whole lists of occupations entering such correlations (ALL TITLES) are included in the equation (see Table 2) argues against this purely technical interpretation. In short, it is plausible that this variable's effect on the correlations is partly due to variations in the basic comparability of occupational prestige hierarchies. If so, it would be a third substantive societal difference affecting the similarity of occupational prestige hierarchies. This would be quite important. It would bring the total amount of variance of the correlations among prestige hierarchies due to the combination of substantive factors (combinations of cultural and structural differences among societies [SOCIETY], and among sector-specific samples of raters [RURAL], and non-comparable aspects of occupational structures not captured by these) up to about $R^2 = .200$. (4) The apparent effects of the other technical variables (ALL TITLES, RATERS, and QUALITY) are not strong, and their only function in the analysis is to guard against attributing effects to the substantive variables which might have been (though we now know they were not) attributable to technical flaws. A few comments might be in order. (a) As conjectured many years ago (Haller and Lewis, 1966), net of the number of occupational titles actually compared, small samples of them (ALL TITLES) raise

the estimated correlations among occupational prestige hierarchies (large-large vs. all others: $b \geq .084$). We presume that this is due to a tendency to overrepresent the high and low prestige extremes in small samples of occupational titles. (b) On the other hand, at these levels, the number of raters has no consistent effect. (c) Finally, Treiman's measure of the quality of the data set makes very little difference, although there is a slight tendency for pairs he labels as the better to yield higher correlations.

So what do these results imply regarding the two main offerings of Treiman's book? The main questions are simple. Is there really but one prestige hierarchy in the world? Can Treiman's SIOPS be used with confidence to conduct comparative research on occupational prestige?

Regarding the first, regression analysis data do not permit us to conclude that there is but one pervasive occupational prestige hierarchy in the world. Too many comparisons could not even be made. Too many OPH correlations are too low. And the correlations among prestige hierarchies behave lawfully. But the observed correlations among quite a few specific occupational prestige hierarchies are indeed quite high. A less sweeping hypothesis may well be tenable. It holds that the whole urban West—including all of the non-socialist industrial nations of Europe, North America, and Oceania, as well as all of urban Latin America—apparently has one single occupational prestige hierarchy. Treiman's data certainly suggest the possibility. It also appears that the urban areas of non-industrial countries share the Western hierarchy, but until data from more of these areas are in, it is probably too early to be sure. The European industrialized socialist countries and to some extent the new societies, however, are not in complete agreement with it. Moreover, the rural sectors of non-industrial societies also appear to have rather sharply different occupational prestige hierarchies.

Regarding the second, 21% of Treiman's pairs of societies could not even be correlated because their OPHs had fewer than ten comparable occupational titles. Perhaps more important, many of Treiman's OPHs are clearly different from that of the West. These facts make it almost certain that when serious attention is given to occupational prestige hierarchies of isolated rural peoples and other peoples out-

side the industrialized West, they will turn out to be different enough to warrant considerably more attention than they have received to date. It seems unlikely that the SIOPS would ordinarily work well in such societies.

To answer Treiman's first question, we apparently do not live in a world that has but one occupational prestige hierarchy. To answer the second, we cannot depend exclusively on the SIOPS in our efforts to measure occupational prestige. Occupational prestige hierarchies are human constructions; some are very similar to each other, some quite different. Both the differences and the similarities are too great to be ignored. Some prestige hierarchies are quite different from that of the West. But the impact of Europe and its industrialized offshoots on the occupational prestige hierarchies of the urbanized, literate populations of the world seems truly remarkable.

If a single occupational prestige hierarchy does not yet span the world, is a process of convergence going on? Here the evidence is circumstantial. It would appear that as the peoples of more and more countries are incorporated into a world system, convergence may be occurring. If today's illiterate and rural peoples continue to be brought into deepening contact with the industrial system and with the educational system linked to it, both diffusion and the requirements of the industrial system should induce considerable convergence (Meyer, Boli-Bennett, and Chase-Dunn, 1975). The question of possible socialist divergence remains, however. Treiman seems to think that their somewhat variant hierarchies are temporary. He may be right, but the more prudent stance may be that it is too early to say.

Then what about the SIOPS? It seems to us that, used with care, it will probably turn out to be an important research tool. There is no present reason to doubt that it is a good instrument for use in the West, and that it would be quite effective in many other urban and industrial areas of the world. Even so, cautious researchers will develop scales for specific countries and use them, perhaps in conjunction with the SIOPS, especially outside the West. Of course, there is always the risk that the SIOPS might be superseded by something else, such as a world-wide socioeconomic status scale.

Until and unless this happens, the

stratification researcher interested in the possibility of drawing generalizations about stratification systems and their correlates would be well advised to include the SIOPS as at least one of his scoring systems for occupational prestige. For some purposes, it might be useful to employ other SEI-type occupational scoring systems along with it, as Featherman and Hauser (1978) have done. Furthermore, the occupational prestige hierarchy of a country is not the only variable essential for describing a stratification system. The data are not yet in regarding the relationship between the prestige, wealth, and power of the small units—families, households, workers—which participate in larger stratification systems. For many purposes, the careful stratification researcher will want to use other, non-occupational variables, together with the SIOPS or an SEI instrument.

This book is a landmark in stratification research. It is a model of thorough attention to detail. In the openness with which the basic data are revealed to the reader, it may be unmatched in its field. It will be of practical value to other researchers who have been seeking just such an instrument as the SIOPS. Many will use it. Others will be stimulated by Treiman's analysis to determine just what are the factors that generate similarities and differences in occupational prestige hierarchies.

Other Literature Cited

- Chapin, F. Stuart. 1933. *The Measurement of Social Status*. Minneapolis: University of Minnesota Press.
- Davis, Kingsley, and Wilbert E. Moore. 1945. "Some principles of stratification." *American Sociological Review* 10 (April):242-49.
- Duncan, Otis Dudley. 1968. "Social stratification and mobility: Problems in the measurement of trend." Pp. 675-719 in Eleanor B. Sheldon and Wilbert E. Moore (eds.), *Indicators of Social Change*. New York: Russell Sage Foundation.
- Featherman, David L., and Robert M. Hauser. 1978. *Opportunity and Change*. New York: Academic Press.
- Fryer, Daniel. 1922. "Occupational-intelligence standards." *School and Society* 16 (September):273-77.
- Goldthorpe, John H., and Keith Hope. 1974. *The Social Grading of Occupations: A New Approach and Scale*. Oxford: Clarendon Press.
- Haller, Archibald O. 1970. "Changes in the structural dimensions of status systems." *Rural Sociology* 35 (Winter):469-87.

- Haller, Archibald O., Donald B. Holsinger, and Helcio U. Saraiva. 1972. "Variations in occupational prestige hierarchies: Brazilian data." *American Journal of Sociology* 77 (March):941-56.
- Haller, Archibald O., and David M. Lewis. 1966. "The hypothesis of intersocietal similarity in occupational prestige hierarchies." *American Journal of Sociology* 72 (September):210-16.
- Hodge, Robert W., Donald J. Treiman, and Peter H. Rossi. 1966. "A comparative study of occupational prestige." Pp. 309-29 in Reinhard Bendix and Seymour Martin Lipset (eds.), *Class, Status, and Power: Social Stratification in Comparative Perspective*. New York: Free Press.
- Hodge, Robert W., Paul M. Siegel, and Peter H. Rossi. 1964. "Occupational prestige in the United States: 1925-1963." *American Journal of Sociology* 70 (November):286-302.
- Horan, Patrick M. 1978. "Is status attainment research atheoretical?" *American Sociological Review* 43 (August): 534-41.
- Inkeles, Alex, and Peter H. Rossi. 1956. "National comparisons of occupational prestige hierarchies." *American Journal of Sociology* 59 (January):329-39.
- Lenski, Gerhard. 1966. *Power and Privilege: A Theory of Social Stratification*. New York: McGraw-Hill.
- Lewis, David M., and Archibald O. Haller. 1964. "Rural-urban differences in pre-industrial and industrial evaluations of occupations by Japanese adolescent boys." *Rural Sociology* 29 (September):324-29.
- Meyer, John W., John Boli-Bennett, and Christopher Chase-Dunn. 1975. "Convergence and divergence in development." *Annual Review of Sociology* 1:223-46.
- National Academy of Sciences. 1921. "Intelligence ratings of occupations." *Memoirs* 15:819-37.
- North, Cecil C., and Paul K. Hatt. 1947. "Jobs and occupations: A popular evaluation." *Opinion News* 9 (September): 3-13.
- Parsons, Talcott. 1954. "A revised analytical theory of social stratification." Pp. 386-439 in *Essays in Sociological Theory*, revised edition. Glencoe, Ill.: Free Press.
- Reiss, Albert J., Jr. 1961. *Occupations and Social Status*. New York: Free Press of Glencoe.
- Sewell, William H. 1940. *The Construction and Standardization of a Scale to Measure the Socioeconomic Status of Oklahoma Farm Families*. Stillwater: Oklahoma State University, Agricultural Experiment Station Bulletin No. 9.
- Shils, Edward. 1968. "Deference." Pp. 104-32 in J.A. Jackson (ed.), *Social Stratification*. Cambridge: Cambridge University Press.
- Siegel, Paul M. 1971. *Prestige in the American Occupational Structure*. Unpublished Ph.D. Dissertation. University of Chicago.
- Sorokin, Pitirim A. 1927. *Social Mobility*. New York: Harper & Row.
- Suits, Daniel B. 1957. "The use of dummy variables in regression equations." *Journal of the American Statistical Association* 25 (December):585-95.
- Svalastoga, Kaare. 1965. *Social Differentiation*. New York: David McKay.
- Weber, Max. 1946. "Class, status, and party." Pp. 180-95 in Hans Gerth and C. Wright Mills (eds. and trans.), *From Max Weber*. New York: Oxford University Press.