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The Hypothesis of Intersocietal Similarity in Occupational Prestige Hierarchies¹

An influential hypothesis in stratification theory holds that industrial society produces a unique occupational prestige hierarchy. So it is thought that as the previously non-industrialized nations develop industry their occupational prestige structures become more and more like those of the industrialized nations.² Euro-American nations, especially the United States, are viewed as the most representative of this type. The data used to support this notion are the high correlations (+.90 or more, on the whole) among the average evaluations people of various societies make of certain occupational titles.³

But this evidence is weaker than it ap-

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² Alex Inkeles and Peter Rossi, "National Comparisons of Occupational Prestige," *American Journal of Sociology*, LXI (January, 1956), 329-39.

³ Most of these data are presented or cited in Inkeles and Rossi (*ibid.*); Charles E. Ramsey and Robert J. Smith, "Japanese and American Perceptions of Occupations," *American Journal of Sociology*, LXV (March, 1960), 475-82; and Edward A. Tiryakian, "The Prestige Evaluation of Occupations in an Underdeveloped Country: The Philippines," *American Journal of Sociology*, LXIII (January, 1958), 390-99. Others may be found in Kaare Svalastoga, *Prestige, Class and Mobility* (Toronto: William Heinemann, Ltd., 1959), pp. 62-67 and 79-108, esp. the tables, pp. 91 and 108. Also see Robert W. Hodge, Donald J. Treiman, and Peter H. Rossi, "A Comparative Study of Occupational Prestige," in Reinhard Bendix and Seymour Lipset, *Class, Status and Power* (2d ed.; New York: Free Press, 1966), pp.

pears to be. Correlations such as those observed could arise when in fact there is only a slight similarity in the occupational prestige structures of any pair of societies. Moreover, no one seems to have produced evidence supporting the notion that *industrialization* produces the similarities that may exist. We shall present several factors that may influence the observed correlations among occupational prestige structures. Some of the factors should lead to overestimating the correlations and some to underestimating them. In the net, these suggest that the similarities may be less than has been supposed. Following this we shall present data suggesting that the complexity of the division of labor (urbanization) in general rather than industry in particular may be responsible for the reported similarities.

PROBLEMS OF RESEARCH TECHNIQUE

Ordinarily, data for calculating the intersocietal similarity in occupational prestige structures are based on samples of persons who rank samples of occupational titles. Each member of at least two samples of respondents, one sample from each society, is asked to rate a limited number of translatable occupational titles on a simple scale of social status (such as "prestige," "general standing," etc.). The possible scores for each occupation are usually 1 to 5. The societal evaluation of each occupation is, in effect, the mean of all the individual ratings assigned to it. Similarity in occupational prestige structure is calculated by correlating the means assigned to the occupations by members of one sample with the means assigned to the same occupations by members of the other sample.

as the final unit of analysis, rather than the persons who rated them. There are at least three sources of difficulty with this procedure as it is often used.

1. *Translatability of terms.*—The above procedure cannot possibly yield similarity of occupational prestige structures except for those occupational titles which can be expressed in the language or terminology of each of the societies under comparison. An occupational title is a word standing for an occupational role, a series of activities, all or most of which are ordinarily performed by any one role incumbent. All persons having the title are expected to perform most of the activities and presumably most usually do. Now, if activities carried out by members of one society are not carried out by members of another, or if comparable activities are combined in different ways in two societies, then the occupational titles standing for these activities cannot be translated except by means of complex, sometimes unintelligible, phrases. It stands to reason, then, that the greater the difference between the occupational roles of two societies, the lower the proportion of translatable occupational titles. There can be no prestige similarity among untranslatable occupational titles because those who rate the occupational titles will not know what they are rating. Hence, the prestige correlation between translatable sets of occupational titles will indicate, at best, the degree of prestige similarity in those sectors of the occupational structures of different societies which are most alike. There are at least two logically different (but probably empirically mixed) ways this could occur. First, the occupational structures of two societies may differ only in that one has a larger number of occupations than the other, but all those of the second are possessed by the first. The correlation coefficient might be very high, yet miss the fact that their occupational prestige structures differ sharply in complexity. Second, two societies may

have some occupations in common, and have others which are relatively unique to each. Again, ignoring the unshared occupational titles and correlating the others would give the illusion of greatly similar occupational prestige hierarchies. In any case the research to date in this area almost surely tends to overestimate the degree of similarity because the most dissimilar occupations have been deliberately left out of the comparisons.

2. *Sampling persons.*—Obviously there are problems of sampling human populations that might interfere with accurate estimates of parameter values. Most of these are shared with practically all other sociological research. We shall restrict ourselves to one which is more or less characteristic of this particular issue. This is the possibility that large samples are needed in order to show accurately the degree of correlation that exists among occupational prestige hierarchies. Suppose, for example, that two samples (*A* and *B*) evaluate each of four occupational titles; and suppose, too, that the order of the means of each is identical in the universes from which the samples were drawn, namely, $\bar{X}_1 > \bar{X}_2 > \bar{X}_3 > \bar{X}_4$. This, of course, yields a rank correlation of +1.00 (although a Pearsonian correlation coefficient could be a little below +1.00). But if one sample (say, *A*) is small, the order of its means as we observe them may easily be quite different: $\bar{X}_{2A} > \bar{X}_{1A} > \bar{X}_{4A} > \bar{X}_{3A}$, for example. If the other sample (*B*) is very large, chances are the order of its observed means will be the same as the order of the true means in the universe: $\bar{X}_{1B} > \bar{X}_{2B} > \bar{X}_{3B} > \bar{X}_{4B}$. If we correlate the two sets of observed means, we will erroneously conclude that the correlation in the universe is lower than it really is. And if both samples are small, the possibilities for error are greater.

Thus, the net effect of this set of problems is probably to underestimate the true

correlation between occupational prestige structures.

3. *Sampling occupational titles.*—As if the above were not enough, there is yet a more serious statistical problem. To date, no intersocietal occupational prestige study known to the writers has used a large unbiased sample even of translatable occupational titles. This is needed because biased samples of occupations can yield overestimates of the amount of correlation, especially when the samples of occupations are small. Obviously, for example, if only two occupations at extreme ends of roughly similar occupational prestige hierarchies were being rated by persons from each of two societies, the means would doubtless turn out to have the same rank in each society and the observed rank correlation among occupations would be $+1.00$. This would occur if the true correlation among all occupations were as low as, say, $+0.20$ or less.

This is not an exaggerated example. Most of the studies on which the conclusions about intersocietal similarities in occupational prestige structures rest use twenty or fewer occupational titles in their comparisons, and none has ever used a genuinely random sample of titles, if indeed such a thing can be imagined. It is almost certain that most have oversampled the higher prestige end (as defined in the West) and to some extent the lower, and have under-sampled the middle range. Because of this problem, most of the existing research has probably overestimated the amount of correlation between the occupational prestige hierarchies of different societies.

SOCIOLOGICAL SOURCES OF SIMILARITY

Inkeles and Rossi have tended to argue that the observed intersocietal correlations in prestige ranks of occupations can be explained largely as a function of the social structure introduced into any cultural system by industrialization.⁴ This they call the "structuralist" position, viewed as a

polar opposite to a "culturalist" position, which, they say, stresses the uniqueness of the occupational prestige hierarchy of each culture. Even if we assume that the observed high correlations are not simply illusions based on inadequate research techniques, it is still by no means certain that the introduction of industrial systems accounts for them. Indeed, in their detailed analysis of discrepancies in prestige positions, Inkeles and Rossi present evidence that industry per se is, at best, one of several factors responsible for the appearance of similarity in occupational prestige hierarchies. This analysis leads them to wonder whether similarities in "needs or values" and "the nation state" may account for them. Moreover, Thomas has shown that the same correlations exist between the occupational prestige structures of a non-industrial nation (Indonesia) and various industrial nations as exist among the latter.⁵ He suspects that "common attitudes toward subdimensions of prestige," most of which are "not the exclusive property of either Western or Eastern civilization," may account for the similarities.

There are other reasons, too, for thinking that industrialization or the industrial system does not satisfactorily explain the valid portions of the correlations. Rather they are probably due to similarities in the evaluation of occupational roles which emerge in dense populations with complex divisions of labor; in short, they may be due to urbanization in general rather than industrialization in particular. The reasoning, by no means certain, is as follows.

1. Complex divisions of labor have existed in all known urban civilizations—the Nile River, Mesopotamia, China, Rome—as well as in many non-industrialized contemporary civilizations. These center on government, food distribution, personal adornment, health, building construction, the military, etc. When the lives, actions,

⁴R. Murray Thomas, "Reinspecting a Structural Position on Occupational Prestige," *American Journal of Sociology* LXVII (March 1962) 561.

health, economic well-being, etc., of the population depend largely on the actions of the incumbents of a certain occupation, that occupation is usually highly evaluated, both today and in the distant past. Industrial systems, on the other hand, began in Europe within the last few hundred years and have been adopted extensively by only a few non-Western nations. The occupational titles in the research on which the case for the "industrialization" hypothesis rests are by no means always related to industry. For each of these studies⁶ and for the 1947 NORC study,⁷ we (with the help of several colleagues who are occupational sociologists and development economists) have tried to determine the proportion of the occupational titles (and their basic functions) which existed before industrialization took place in the West. Naturally, these counts are quite imprecise, but if our collective judgment is correct, at least one-third and perhaps many more of the occupational titles in each of the intersocietal comparisons cited here, including the 1947 NORC study itself, have no necessary connection with industry. Thus it seems certain that part of the evidence for the supposed influence of the industrial system on similarity of occupational prestige hierarchies is based on data which are not clearly related to the industrial occupational order. That is, occupational titles which apparently existed before the industrial revolution began are included in and contribute to the high correlations usually observed.

2. Most, if not all, published research on intersocietal correlations in the evaluation of occupations is based on samples of people most of whom are living in intimate contact with complex divisions of labor; indeed even the "rural" Japanese sample of Ramsey and Smith was taken from a city of 20,000 people.⁸ It would be instruc-

tive to learn how people outside complex systems evaluate occupational titles. People who are not in frequent contact with many persons who occupy specialized work roles probably have little opportunity to perceive the relative deference, rewards, and punishments which are accorded persons in various specialized occupational roles, or to develop an awareness of the functional importance attributed to each by those deeply involved in such systems. Farming is one of the few sectors of the occupational structure which usually has a simple division of labor. However small, most farms are managed by means of a set of activities which are complex, varying sharply from chore to chore and season to season, yet are performed by one or a very few persons. (In complex divisions of labor these activities would be organized so that each individual concentrates on but a few things. This in fact tends to happen to farming itself when it becomes rationalized.) It is likely then that those living in closely knit farming communities would not learn to evaluate occupations as do those living in systems which have more differentiated occupational structures. Apparently, then, the variation among communities in the proportion of the population in farming would be a good index of the complexity of the division of labor visible to community members. Thus, if we assume that (a) the previously observed correlations are not purely illusory, and (b) translatable occupational titles stand for similarly evaluated sets of activities in different societies, then it stands to reason that the more complex the division of labor in which people participate, the more likely they will be to evaluate translatable occupational titles similarly. More specifically, the lower the proportion of sample members who are in farming, the higher the correlation among samples in the evaluation of translatable occupational titles.

We have tried to test the aspect of the

⁶ See sources cited in n. 3.

⁷ See Albert J. Reiss *et al.*, *Occupations and Social Status* (New York: Free Press of Glencoe, 1961), esp. pp. 54-58.

⁸ Ramsey and Smith, *op. cit.*

argument dealing with the complexity of the visible occupational structure in the following ways. First, using the general outlines of the usual procedures, we calculated prestige ranks for rough translations of eighty NORC occupational titles for five samples of Japanese school boys, one sample of Turrialba, Costa Rica, school boys, and a sample of Mason, Michigan, school boys. We then calculated the rank-order correlations of each set of evaluations with those provided by the NORC's adult United States sample of 1947. The latter is taken to be typical of occupational evaluations of people immersed in the most complex of known occupational structures. Thus the higher the rank-order correlation with U.S. adult samples, the more closely the group's evaluation of the occupations approaches that of people familiar with complex systems. Next we used the percentage of the sample who were from non-farm families as an index of the degree to which the sample members were involved in a complex division of labor. Finally we have plotted all seven samples according to their positions on these variables.⁹

Figure 1 shows this plot. The *X*-axis is the complexity of the division of labor immediately visible to the sample members, as indexed by the percentage of the sample whose families are non-farm. The *Y*-axis is the rank-order coefficient of the correlation ρ of the mean occupational prestige rankings made by each of the seven samples with the mean rankings made by the U.S. adult sample. Obviously, even when we al-

low for error due to sample variability, there are enormous differences in the average evaluations of these eighty occupations which are apparently related to complexity of the division of labor probably visible to sample members. The ρ with U.S. adult criterion group ranges from -0.04 for the sample with the simplest division of labor (Soro Aza in Japan; percentage non-farm = 25), through $+0.84$ (Sendai Shi in Japan; percentage non-farm = 79), to $+0.87$ (Turrialba, Costa Rica; percentage non-farm = 75).¹⁰

All the correlations that have been reported before are high, and they were probably all based on samples with complex divisions of labor. In the present data we see a clear and positive correlation of similarity to urban-industrial evaluations with complexity of the division of labor. These correlations range from some as large as those in previous literature down to about zero. Taken together with the reasoning presented above, this evidence suggests that something connected with the complexity of the occupational structure visible to participants in a social system, rather than industrialization as such, accounts for the valid parts of the intersocietal correlation in the prestige rankings of translatable occupational titles.

However, these data do not constitute a definitive test. Future research should

¹⁰ A check to see whether the rank-order (ρ) correlations are influenced substantially by the sample sizes shows that in the Japan samples there is little relation between the number of respondents in a sample and the ρ -values. However, the two largest ρ 's are from the two largest samples (both non-Japan) as we would expect. Moreover, pooling all Japanese respondents results in a ρ with the U.S. sample of $+0.70$, while averaging the ρ 's of the five Japan samples leaves a mean ρ of $+0.53$. This seems to show, as expected, that increasing the sample size decreases the variability of the mean scores, increasing the correlation with other large samples. We conclude that, although these samples are probably underestimating the degree of correlation in their respective universes, the differences in correlation among samples are due much more

⁹ These data are based on questionnaires filled out by junior high school and high school boys in school in 1959 and 1960. The names and sample sizes for each place are as follows: *Japan*: Sendai Shi (28), Noda Shi (28), Emi Machi (23), Futomi Mura (39), Soro Aza (24); *Costa Rica*: Turrialba (118); *Michigan*: Mason (61). Sendi Shi has a population of 250,000; Noda Shi has a population of 25,000. All other places are 6,500 or fewer. The school grade levels of the samples were slightly different: Sendai Shi, third-year high school; Noda Shi, second-year high school; all other Japanese samples, third-year middle school; Mason, Michi-

take the following into account. (1) New data should be based on much larger samples of people taken more systematically in several carefully selected societies, using better samples of occupational titles. Especially important would be samples drawn from non-Japanese communities with simple divisions of labor. This should tell us whether the inference concerning complexity is general or whether it applies only to Japan. (2) In any case, other evidence shows that there is a "Tokagawa," or pre-industrial, component in the evaluation of selected occupational titles by these same rural Japanese youth.¹¹ It is almost uncorrelated with the typical "urban-industrial" ordering. Thus it doubtless explains part of the correlation presented in the graph.

Because we doubt that more than a few of the occupational titles presented to the boys can be viewed by them as modern examples of occupations in the Tokagawa system, we believe that the Tokagawa component cannot possibly explain the entire set of findings. But we need to learn just what its relative contribution is. (3) Also, more direct measures of both objective and

¹¹ David M. Lewis and Archibald O. Haller, "Rural-Urban Differences in Pre-industrial and Industrial Evaluations of Occupations by Japanese Adolescent Boys," *Rural Sociology*, XXIX (September, 1964), 324-29. The term "Tokagawa component" refers to a traditional ordering of occupations, stemming from the Tokagawa era. The Japanese rulers of the period decreed that there were four main classes. In order of prestige, these were warriors, farmers, artisans, and merchants.

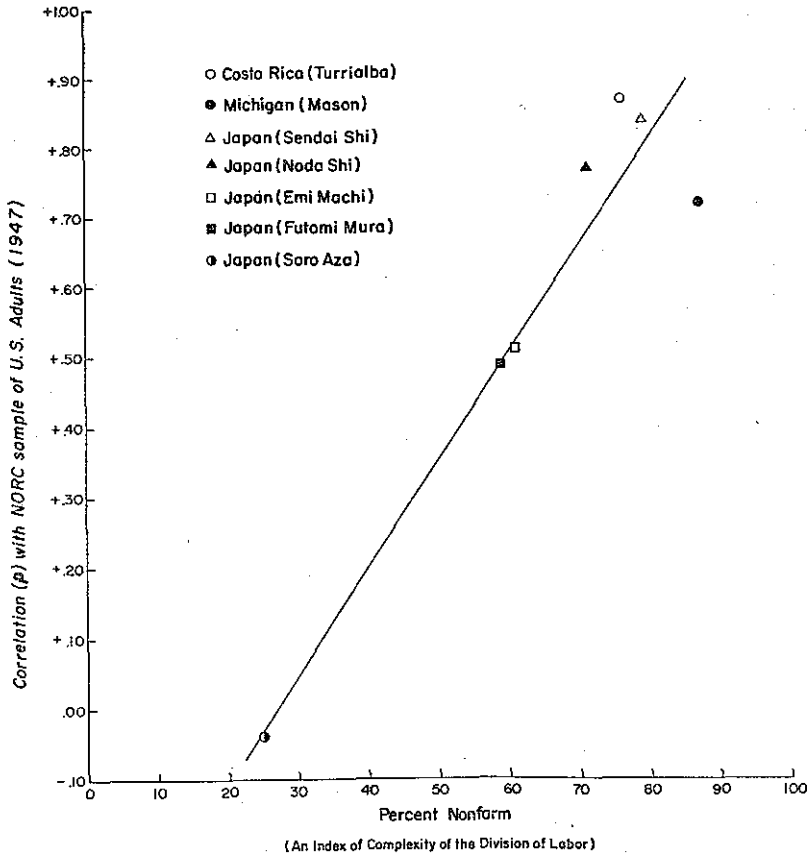


FIG. 1

perceived complexity of the immediate occupational structure should be used. It is probably reasonable to assume, as we have here, that perceived complexity of the division of labor is a function of objective complexity, but this should be shown. Also, it should be possible to construct more direct indexes of complexity, thus providing better instruments for testing hypotheses of this sort. (4) It has been suggested that basic similarities in values may account for the fact that in complex systems people evaluate translatable occupational titles similarly. We need to learn whether in fact this is the case. And it is possible that, even in widely different occupational structures, the same set of values may be present, producing under such varying social conditions a different set of evaluations of translatable occupational titles.

DISCUSSION

We have seen that there are strong reasons for maintaining a certain degree of skepticism about recent inferences to the effect that the occupational prestige structures of different societies are similar and that this similarity is due to industrialization. The evidence regarding similarities is limited to translatable occupational titles. Moreover, the correlations reported are subject to error. Small and biased samples of translatable occupational titles tend to overestimate the correlation, and small samples of people tend to underestimate it. In any case industrialization may have relatively little to do with whatever intersocietal occupational prestige similarities may really exist. Many, if not most, of the comparable occupational titles used in determining the observed similarity do not depend on modern industry; at least one ur-

ban non-industrial sample has the same correlation noted among industrial societies,¹² and the correlation of the occupational prestige evaluations of various samples with those of an urban industrial society varies greatly with an index of the complexity of their division of labor.

But these conclusions should not lead us to abandon research in the area. On the contrary, they should stimulate more careful work aimed at developing and testing more general hypotheses to account for both similarities and differences in the evaluations of work roles. Perhaps the hypotheses offered by Thomas¹³ could be a point of departure for explaining such similarities as exist among samples drawn from communities having complex divisions of labor. Among samples with simple divisions of labor it may well be that divergent occupational evaluations such as we have noted above may be due either to values not shared by those in complex systems, or to ignorance of the ways in which complex occupations tend to fulfil shared values. Finally, there are doubtless systematic similarities and differences in the evaluation of known occupations between communities with simple divisions of labor. Ultimately the sources of these differences should be traced down as well, and brought into a theory which accounts for them as well as the other sets of variations in occupational prestige hierarchies.

ARCHIBALD O. HALLER
DAVID M. LEWIS

*University of Wisconsin
and
Western Michigan University*

¹² Thomas, *op. cit.*

¹³ *Ibid.*, pp. 565-67.