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ON LIN AND YAUGER'S CROSS-NATIONAL COMPARISON OF THE PROCESS OF OCCUPATIONAL STATUS ACHIEVEMENT

As Lin and Yauger (1975) note, comparative studies of status-attainment processes involving data from less developed countries (LDCs) are badly needed. While we think that they were correct in attempting to fill this void, we take serious objection to some of the data they present, and we question the tenability of their conclusions.

Briefly, what they tried to do was to estimate national status-attainment parameters for two LDCs (Costa Rica and Haiti) and two more highly developed countries (MDCs: the United States and Great Britain). So far as we can tell, the data for the MDCs (Treiman and Terrell 1975) are appropriate. It is the adequacy of the LDC data which we doubt. Our misgivings pertain to three general problems: (1) rural sampling bias, (2) high nonresponse rates, and (3) occupational status scoring of low validity.

1. Rural sampling bias. Both of the LDC samples were drawn from rural areas of the respective countries. Surely a disproportionate number of the better educated, more prestigious, and more influential people in Costa Rica and Haiti live in the cities. So the higher reaches of the status system were almost certainly undersampled. Clearly, the only appropriate way to obtain national level status-attainment parameters is to base them upon representative national samples. There seems to be no way by which the parameters estimated from these two samples can legitimately be considered valid estimates of their respective national parameters. It follows that the comparisons drawn with the MDCs are untrustworthy.

2. High nonresponse rates. Compounding the first problem, in both LDC samples many cases were dropped from the analysis because of missing data. The intergenerational mobility analysis for Haiti was based upon only 37% of the original sample (199/544). For Costa Rica the corresponding figure is 59% (337/570). In Lin and Yauger's regression analysis the percentages are 86% (455/544) for Haiti and 59% (336/570) for Costa Rica. It is difficult if not impossible to assess the error in the estimates of the parameters which is due to such underrepresentation. But surely, even if they had used adequate national sampling frames, non-response rates as high as some of the above would make their estimates dubious.

3. Validity of occupational status scores. Both the nominal occupational codings and the numerical scores assigned to them by the SIOP (Standard Index of Occupational Prestige; Treiman, forthcoming) are probably inaccurate, for two reasons. First, from our rural Brazilian work (e.g., Haller,

Holsinger, and Saraiva 1972) we have come to believe that agricultural occupational titles are not part of the urban vocabulary in Latin America. Urban interviewers and coders, consequently, are often unable to interpret accurately the meanings of the words agricultural respondents use to describe their job titles. Unable to distinguish among farm occupations, they label most farm workers with some blanket term like "day laborer" or "skilled worker," thus losing important nominal distinctions. It is hard to imagine that the proper prestige scores could be assigned to improperly classified occupational titles. We suspect that this makes the occupational prestige scores less valid than is required for careful comparative research. Second, we would suppose that some of the farmers, especially those in the smaller farm areas near San Jose, Costa Rica, might have had other jobs. How are prestige scores assigned to such people? Were their other jobs more or less important to them than farming? Were they more or less prestigious than farming? There is no way one can tell from the article. Surely, an unknown amount of invalidity must have been introduced in the scoring of occupational prestige as a consequence of multiple job holdings among farmers. Both of these factors thus should reduce the validity of the occupational prestige scores.

The principal adverse consequence of these three fundamental shortcomings (biased samples, missing data, and low validity of the prestige scores) is an almost certain deflation of the values of the status parameters estimated for the LDCs. Obviously, this would tend to exaggerate the differences between them and the MDCs.

Our reasons for being skeptical of the data from the LDCs and the authors' interpretation of them are not wholly speculative. In our own Costa Rica study (here called the Turrialba Longitudinal Study, or TLS) of men first interviewed as high school students (all first- to fourth-year students in school on the day of the testing) in 1959 and later reinterviewed in 1968, we obtained quite different findings (Hansen and Haller 1973). Most important, we found the path from education to occupational prestige to be $\beta = .56$, which is very close to that found in similar research in Wisconsin ($\beta = .52$) and in the United States as a whole, in the data set used by Treiman and Terrell and by Lin and Yaeger ($\beta = .53$). Of course, ours is no better a sample by which to estimate the corresponding Costa Rican parameter value than that employed by Lin and Yaeger. But that is not the point. This datum illustrates forcefully the well-known fact that non-representative samples such as theirs and ours provide poor statistics by which to estimate population parameters.

Turning to their criticism of our study, Lin and Yaeger, we fear, have glossed over the TLS data. (a) They fail to point out that the TLS was a long-term project, not merely a study of "enrollees in a high school in a county in Costa Rica in 1959." The sample members were reinterviewed

nearly a decade later (1968). (b) They overemphasize the smallness of our TLS sample size (103), which in fact is quite close to two of their own three Costa Rica subsamples ($N = 103, 104, 221$) whose statistical differences they take quite seriously. (c) Although they are correct in saying that the TLS men were "privileged," the privilege consisted mostly in living near a high school. It certainly does not mean that they were from high-status families, as Lin and Yaeger imply. In fact, the appendix to our article shows quite clearly that their fathers and mothers were rather poorly educated (averaging about two years each) and that most of their fathers were blue-collar and lower-white-collar workers. (d) Lin and Yaeger's point about the homogeneity of our sample is true but misleading. Certainly the sample was not homogeneous with regard to the sons' status variables. The means and standard deviations for our respondents' education and socioeconomic index (SEI) were 11.46 ± 2.20 years of schooling completed and 55.42 ± 19.44 SEI points, which is about as heterogeneous as we find in American cohorts. Regarding age, the sample was obviously quite homogeneous inasmuch as it was a high school student cohort. In 1959 their mean age was 16.28 ± 1.50 years. In 1968 they were, of course, nine years older. If our sample had been homogeneous with respect to the educational and occupational statuses of these men, it would have been impossible to obtain such a high β as we did. (e) Finally, their criticism of our use of Duncan's (1961) SEI is erroneous. The SEI is a well-known expansion upon the NORC prestige scores available during the 1950s and 1960s. It appears to provide an almost identical ranking of the same occupations and provides a rational assignment of scores to many others for a number of populations. As has been demonstrated (Haller 1972), there are rural people for whom urban occupational prestige scores such as the NORC scores, the SEI, and possibly the SIOP might not be fully appropriate. But the men in our Costa Rican sample are not among them. In fact, for this particular sample, the correlation between the NORC ratings of 80 occupations and those provided by our respondents while they were still in school in 1959 is $r = .87$ (Haller and Lewis 1966). So it turns out that SEI scores are satisfactory for the TLS sample. The criticism of the SEI leveled by Lin and Yaeger does not merit extended consideration. Their argument seems to be that because the SEI is partly based on aggregate education data there will be a high autocorrelation between SEI scores and education at the individual level. This is untrue, as has been known for many years (Robinson 1950).

Highlighting the already glaring faults in their analysis, our findings question the credibility of their conclusions about status attainment in Costa Rica. If their Costa Rican analysis—to which they devote a disproportionate amount of attention—is spurious, what about Haiti? There is no reason to believe that the sampling and scoring problems in their Hai-

than data are less severe than those in their Costa Rican data. Finally, if their analysis of status attainment in the LDCs is unsound, the conclusions they draw from their comparisons of parameters estimated from these samples with those of Britain and the United States are also unsound.

In sum, there is no doubt about the need for comparative status-attainment research. However, in such studies extreme caution should be taken in assessing sampling imperfections and data reliability and validity. Lin and Yaeger appear to have used grossly unrepresentative LDC samples and somewhat questionable measures to estimate and compare national parameters. This is not the way to advance comparative knowledge of status-attainment processes.

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REFERENCES

- Haller, Archibald, Donald Holsinger, and Helcio Saraiva. 1972. "Variations in Occupational Prestige Hierarchies: Brazilian Data." *American Journal of Sociology* 77 (March): 941-56.
- Haller, Archibald, and David Lewis. 1966. "The Hypothesis of Intersocietal Similarity in Occupational Prestige Hierarchies." *American Journal of Sociology* 72 (September): 210-16.
- Hansen, David O., and Archibald O. Haller. 1973. "Status Attainment of Costa Rican Males: A Cross-cultural Test of a Model." *Rural Sociology* 38 (Fall): 269-82.
- Lin, Nan, and Daniel Yaeger. 1975. "The Process of Occupational Status Achievement: A Preliminary Cross-national Comparison." *American Journal of Sociology* 81 (November): 543-62.
- Robinson, W. S. 1950. "Ecological Correlations and the Behavior of Individuals." *American Sociological Review* 15 (June): 351-57.
- Treiman, Donald J. Forthcoming. *Occupational Prestige in Comparative Perspective*. New York: Seminar.
- Treiman, Donald J., and Kermit Terrell. 1975. "The Process of Status Attainment in the United States and Great Britain." *American Journal of Sociology* 81 (November): 563-83.