

only the level of living of the affected households but also the whole rhythm of the community. Family menus and school lunchboxes were more plentiful and nutritious immediately after payday. Consumption patterns shifted significantly as more and more belt tightening became mandatory. The result was what the authors term a "weary" community. Weeds took over the public park. The nursery school organized by the workers closed down. Library usage and newspaper reading declined, as did membership in political party activities and other associations not offering direct financial advantages. Family morale deteriorated, running the gamut of despair to moderate optimism. Time lost its value, especially for the men now forced to lead unaccustomed lives of idleness. A "fading resilience" is the phrase used by the authors to convey the mood of the community.

The book concludes with an afterword on the history of sociography. The authors saw it as "an effort to trace the spiritual and methodological ancestors of Marienthal, so that our study could be seen in historical context" (p. 99). It was the first attempt to survey the developments of the last three centuries. Like the main text the authors have left it unchanged except for footnotes on developments not recognized 40 years earlier. In itself this appendix should prove useful to sociologists interested in the history of empirical research.

Assessing the 1971 edition of *Marienthal* poses a problem. Should one evaluate it in the context of the 1930s? In retrospect, the book was clearly an important contribution to research methodology and the then scarce literature on community poverty. Or should one see Marienthal primarily in the setting of the 70s, ranged alongside similar empirical studies? If so, it would have to admit to being overshadowed by other reports derived from far more sophisticated techniques and theoretical frameworks — many of them developed by Jahoda, Lazarsfeld and Zeisel themselves in the interim period!

A third alternative for assessing the 1971 *Marienthal* stems from Lazarsfeld's own account as to why he finally authorized a translation after years of resistance:

The combination of quantification and interpretative

analysis of qualitative material is today in the forefront of the research fraternity's interest. It is therefore worthwhile to trace the origin of our position in more detail. The history of our research procedure will help to explicate the characteristics of our specific position . . . it is no coincidence that the original book had a historical appendix. In a way the following remarks can be considered as extending it by treating our own work as an episode in the history of empirical social research (p. xii).

This perspective asks that the book be taken for what it is — a monograph originally written in 1931–32 but republished for the non-German-speaking sociological world in 1971, mainly for its historical interest with respect to research methodology. The authors acknowledge its methodological naivete and the neglect of standards which they later insisted upon in their teaching. Honoring the authors' explanation, one would judge the book's current value not so much in terms of its substantive information on poverty, but as an early model of the desirability of combining the quantitative and qualitative interpretation of data. Their leaving the original text unchanged despite its occasional weaknesses gives further evidence of their sincerity. Clearly their aim is to trace the development of empirical research using *Marienthal* as a case in point. Rewriting the report might update its substance; but it would also defeat the main reason for republication. Without invoking a false modesty, Jahoda, Lazarsfeld, and Zeisel imply, quite correctly, that to understand their early efforts at forging new approaches is equivalently to understand in general the progress of sociological research.

Causal Models in the Social Sciences, edited by Hubert M. Blalock, Jr. (Chicago, Aldine-Atherton, 1971), xi, 515 pages, US\$15.00 cloth, US\$9.75 paperback.

SUSAN M. BENNETT

November 24, 1972

This volume was designed as a sourcebook on the main developments in the use of causal

models in data analysis and theory construction. It brings together a selection of 19 articles which have appeared in journals of sociology, economics, political science, biometrics, and statistics and eight previously unpublished articles. The collection was intended for use as a supplement to more integrated textual materials such as have appeared in the econometrics literature. It will be of interest to professionals and to advanced graduate students in sociology, political science, economics, and psychology, especially to those with a substantial background in research methodology and statistical analysis.

Unfortunately, many potential utilizors of causal methodology are likely to be put off by the considerable effort required to master the basic concepts and mathematical techniques involved. Blalock has suggested that before attempting *Causal models* a rudimentary familiarity with the use of causal methodology should be obtained by reading a nontechnical discussion of the topic such as that found in his earlier book: *Causal inferences in nonexperimental research* (Chapel Hill: University of North Carolina Press, 1964). This assignment, in itself, will present quite a challenge to the uninitiated. For those students with a serious interest in the subject, additional background information will be needed on the basic elements of matrix algebra and on simultaneous-equation approaches.

Hopefully, these requirements will not completely discourage the reader. As Blalock has stressed in his Preface to *Causal models*, "many of the most important methodological problems we face in the social sciences involve highly technical issues. . . . [moreover] . . . there are ways of handling the kinds of complexities that have been loosely discussed in the verbal literature, but . . . we cannot expect to obtain definitive answers without first mastering some of this rapidly accumulating technical literature" (p. vii).

The causal-modeling approach is presented as a systematic means of bridging the gap between verbal theories involving causal inferences and research, "which can only establish covariations and temporal sequences" (Blalock, 1964). Causal models of reality are essentially formal theories

which state the relationships between precisely specified variables. Such models are not subject to empirical verification; however, the researcher can proceed by modifying or eliminating those models which are shown to be inadequate by inconsistencies between the data and the predictions they yield.

Causal models consists of five parts. Each of these parts is preceded by an introductory statement which summarizes the basic issues raised in the papers which follow, and relates the causal models utilized to those presented in other sections of the book. In order to facilitate the translations from technical discussions of methodology to theoretical issues in the individual social sciences, one or two substantive papers have been included in each section. The beginning student of causal modeling is likely to profit from reading these illustrations of applications before the more abstract papers on methodology. For the serious student, bibliographical references to the technical literature follow most of the selections.

Part I of *Causal models* focuses on relatively simple models involving one-way causation. These models are handled by what are called "recursive" systems of equations. The coefficients for each equation in such a system are estimated by ordinary least-squares regression procedures. The fundamental idea behind recursive models is that "variables can be hierarchically arranged in terms of their causal priorities in such a way that it becomes possible to neglect variables that are clearly dependent upon a given subset of variables" (pp. 1-2). In Part I, selections by Simon and Blalock deal with problems involving the assumptions which must be made regarding relevant variables which have been omitted from three- and four-variable models. A third substantive paper by Goldberg illustrates the application of recursive models to causality in voting behavior, and should be particularly helpful in orienting the beginning student of causal modeling. Finally, a theoretical paper by Costner and Leik discusses the translation of "axiomatic theories" implied by measures of relationship such as r and gamma into causal models.

Part II concerns the "path analysis" approach

to causal modeling first introduced by Sewall Wright. This approach has often been contrasted with the "Simon-Blalock" approach. The path analysis models presented in Part II are recursive, and involve essentially the same assumptions as those in Part I, but the analyses focus more on the estimation of coefficients in a selected model than on the testing of alternative models. Other differences between the two perspectives involve the kinds of measures utilized (standardized versus unstandardized coefficients), and the way in which the equations are written down and solved. Blalock suggests that valuable insights may be gained by the use of both approaches. The selections in Part II include an introductory explanation of the analysis of causal paths using unstandardized regression coefficients; two papers discussing the relative advantages and disadvantages of using standardized path coefficients and unstandardized coefficients; and a paper illustrating several applications of path analysis to sociological data.

Part III presents papers involving nonrecursive, two-way causal models and systems of equations which are solved by various procedures for simultaneous-equation estimation. The reader who is unfamiliar with nonrecursive models will be well advised to follow Blalock's suggestion and turn first to two papers which explain the essentials of two-stage least squares as applied to substantive data on innovation-diffusion and to the influences of peers upon aspirations. A third paper which should not prove too difficult for the reader who is untrained in the technical aspects of estimating equations concerns the application of two-stage least squares to experimental and nonexperimental designs. The four additional selections in Part III are recommended as supplementary readings for use in conjunction with a textbook presentation on the estimation of simultaneous equations. They deal with such issues as problems of identification (estimation of coefficients), the seriousness of errors introduced when assumptions are invalid, constructing adequate models to capture time lags in stimulus-response situations, and choosing among variables in macrolevel models involving large numbers of variables.

In Part IV, eight papers (including five which were previously unpublished) deal with the application of causal models to measurement error. Most of the papers derive from the work of psychologists and are exploratory in nature. They are concerned with such problems as the use of multiple indicators to test the assumptions of randomness of error, to estimate degree of true relationship, and to estimate degree of random error; the use of multiple-partial correlation coefficients to test complex causal models; the explicit introduction of unmeasured "intervening" variables in stimulus-response models; the estimation of measurement error from test-retest data; and the assessment of validity utilizing a modification of the multitrait-multimethod matrix. The papers in this section are generally abstract, because of the lack of "realistic applications of this relatively new approach" (p. 297).

Part V, the final section of the book, includes four papers concerning several frequently-occurring complications in social-science research. Two of the papers are concerned with the possibility of utilizing ordinal variables in causal analysis. The author of the first paper argues that this will be difficult, if not impossible, because of the incompatibility of the rationale involved in ordinal measurement and that of causal modeling. The author of the second paper illustrates that path analysis can be done utilizing dummy variables in such a way as to preserve the ordering of categories. The final two papers deal with causal modeling problems related to multicollinearity (a statistical problem arising when independent variables are highly intercorrelated), and to aggregation (changes in units or levels of analysis).

The content of this volume presents a challenge both to the social scientist who has not yet learned to translate his causal thinking into testable models, and to the practitioner of causal modeling who is unaware of methodological advances made in other disciplines. The quality of the format and printing are also high. However, considering the expense of volume, the fact that few potential users will be interested in all of the papers, and the fact that 70 percent of the papers are available in journals, this re-

viewer recommends the purchase of *Causal models* to university libraries rather than to individual users.

Patterns of Discovery in the Social Sciences, by Paul Diesing (Chicago, Aldine-Atherton, 1971), x, 350 pages, US\$11.75 cloth.

FRANK LYNCH

November 1, 1972

Author Diesing believes there are two basic methods currently employed by social scientists, the clinical and the experimental. On further analysis he ups the number to four – experimental, survey, participant-observer, and formal – but insists his intention is not to catalog methods but to characterize tendencies (p. 10). Explicitly, he wants to shake up those social scientists (especially the statistical-survey and experimental types) who tend to overlook or deny the existence of other valid approaches to understanding. As he says, "I wish to argue that social science is not at present, and ought not to be concerned solely with the experimental-statistical verification of hypotheses and the discovery of general laws" (p. 13).

Since the experimental and survey methods receive so much attention in other studies of method, Diesing designedly devotes most of his book to formal methods and theories (pp. 29–133) and participant-observer and clinical methods (pp. 137–288). The introduction serves its function well, while the final section, on methods in the philosophy of science, shows where Diesing's work belongs among studies of its genre. References are abundant (pp. 325–42), followed by name and subject indexes (pp. 343–50). Interestingly, the word "phenomenology" does not occur.

The author (Ph.D. philosophy, Chicago 1952) is professor of philosophy and political science, State University of New York at Buffalo. His book belongs in any Philippine library that is servicing graduate social-science students or is, for that matter, interested in educating those faculty members who think the root and source of all knowledge is the pretest-posttest sequence, a random sample, or analysis of variance.

Spain in the Philippines: From Conquest to Revolution (IPC Monographs, No. 1), by Nicholas P. Cushner, S.J. (Quezon City, Institute of Philippine Culture, Ateneo de Manila, 1971), 272 pages, plates, ₱30.75/US\$8.20 cloth, ₱20.65/US\$5.50 paperback.

JOHN N. SCHUMACHER

September 15, 1972

As the title indicates, this book is not meant to be a history of the Philippines during the Spanish regime, but of Spanish society in the Philippines. Hence, relatively little is said about Filipino society except as it was acted upon or reacted to that of the Spaniards, and it is these sections which are the weakest in the book. This is prefaced, not as a criticism of the book, which breaks important new ground in several areas, but to make clear its scope. For certainly Filipino society of the colonial period and its subsequent development must be studied in relation to that Spanish society introduced into most of the country in the sixteenth century.

The first three chapters give a fairly detailed and highly competent treatment of the early Spanish expeditions to the Philippines up to the permanent settlement under Legazpi. They are basically a somewhat revised form of the author's earlier book, *Isles of the West*, and show his broad acquaintance with the larger story of Spanish overseas expansion, of which the expeditions to the Philippines were a part. One less familiar with sixteenth-century navigation could wish for more guidance to technical terms, and a map for the other voyages similar to the helpful ones provided for Villalobos and Legazpi.

The fourth chapter on the missionaries and their work, though largely dependent on the work of Phelan and De la Costa, provides much interesting data on the relationships between the government in Spain and Manila on the one side and the missionaries on the other, based on documentation from the Archivo de Indias. However, in the opinion of this reviewer, its analysis of the impact of Spanish evangelization is rather less successful. Such a statement as the one that "for many it was simply a matter of