

course in which some educational psychologists were going to try to be relevant. Upon finishing this paper, the reviewer wanted to tug Belanger's sleeve and ask, Well, what happened? The reply, thankfully, is given in the subsequent paper. This latter paper also gives the most reasonable alternative for concerned educational psychologists: "Leap into the thick of the battle constructing conceptual modes of learning on the one hand and work directly with beginning teachers on the other" (p. 115).

The conference, and possibly the monograph, might have one salutary effect. If more educational psychologists start asking themselves what they are doing, and what may be its relevance to teaching, it is extremely likely that we might aid in developing better teacher-preparation programs. Hopefully, we might even provide some answers for frustrated teachers. In any case, it's a good place to start.

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Harold J. Noah and Max A. Eckstein. *Toward a Science of Comparative Education*. Collier Macmillan Canada, Ltd.: 1969. Pp. 222.

Toward a Science of Comparative Education illustrates the increasing concern of many comparative educationists with the use of empirical research and quantitative data to test hypotheses regarding the relationships between education and society. This book, in particular, advocates a marked departure from the more usual approaches to comparative education as found in the work of Nicholas Hans, George Z. F. Bereday and Brian Holmes.¹

Explaining the evolution of their book the authors chronicle previous work in comparative education as a point from which to analyze the use of scientific method. Unfortunately, this, together with later sections on scientific method, does not adequately prepare the average student for the leap into the world of theory and hypotheses.

The book is divided into four parts. These are "The Development of Comparative Education," "The Method of Science," "The Method of Science in Comparative Education," and "Conclusion." Part one offers the student historical background and reviews in a systematic way some of the more distinguished contributors to comparative studies in education, as well as discussing their value as a phase of development in the field. Particular attention is given to methodological considerations and the way they reflect aims as well as the technological limitations of the age. The authors show the gradual but certain evolution of systematiza-

¹Nicholas Hans, *Comparative Education: A Study of Educational Factors and Traditions* (London: Routledge and Kegan Paul, 1958); George Z. F. Bereday, *Comparative Method in Education* (New York: Holt, Rinehart and Winston, 1964); Brian Holmes, *Problems in Education: A Comparative Approach* (London: Routledge and Kegan Paul, 1965).

tion in comparative methodology and the increasingly rigorous data collection it demands, including the need to avoid indiscriminate gathering of data. Immediately relevant to the new comparative method is a discussion of social science explanation. The most important point made is that the rigors of hypothesis formation and testing, controlled investigation and operationalizing indicators to allow for quantification are all directed toward increasing "the explanatory power of comparative research." In effect the task of comparative education is theory building.

Part two begins with a brief but useful discussion of Charles Peirce's epistemology, linking his four ways of knowing with the range of method in comparative education. This provides an important focus for beginning students since the language and method of science imply a way of knowing which is obviously different from ways of knowing about God, personal values or questions of morality.

A discussion of epistemology is important because comparative education has had, and perhaps still has, more than its quota of self-evident truths and of intuitive evaluations of the worth of foreign educational systems, and it is necessary that students know the relative explanatory power of each kind of approach. As the authors put it, and this reviewer agrees, what is most needed in comparative education "is a method of inquiry that is self-correcting, that minimizes the possibility of observer bias and maximizes the validity of data."

With this end in mind the authors discuss the application of scientific method to the study of society and conclude with only slight hesitation that "the functional approach is the only way to extend knowledge of relationships among phenomena." This does not mean disregarding previous attempts in comparative education which, it is pointed out, have often provided important definitions, evidence and conclusions from which general theory and hypotheses for further testing have been developed.

In the chapter on "Scientific Method and Comparative Education" the authors unfortunately get involved with the problem of comparative education as a field of inquiry. One cannot wholly agree with them that "there is no consensus about the area of discourse over which comparative educators properly may range." Surely the area of discourse appropriate to comparative education is that area of education studies which may be usefully investigated comparatively, using comparative method, drawing upon whatever seem appropriate for solving problems. In this respect comparative studies in education are essentially no different from comparative studies in political science, economics, anthropology, or any other social science. Also, approaching comparative education as an area within the field of education might help to eliminate some of the problems the authors seem to encounter in defining this "area of discourse."

Part Three takes a practical look at the scientific method applied to testing two hypotheses, including the choice of appropriate indicators for

concepts, data collection, and country selection. These hypotheses illustrate two extremes of difficulty in testing, when quantified data are required for indicators.

Overall, this section is excellent in its step by step approach to the problems faced in testing each hypothesis, although one sometimes finds the authors being glib rather than helpful in accounting for certain procedures with the data. The authors also assume more sophistication with techniques of data manipulation than most undergraduates in an introductory course in comparative education are likely to have at present.

The concluding section summarizes the argument of the book by asking that comparative studies in education be evaluated by the criteria of "systematic, controlled, empirical, and (wherever possible) quantitative investigation of explicitly stated hypotheses . . ." It is argued that compendiums of descriptive data in education are only raw materials and stop at the very point at which comparative education begins. If one accepts this, then one must also agree with the authors that the essence of comparative education is the formulation and testing of hypotheses. It is the explanatory power, or the explanatory potential, of this empirical method which is its main justification. And, like theory, if it does not fulfil its role of explanation, the method must be modified or even discarded.

Finally two relatively minor problems of this book are its title, which might have more appropriately been *Social Science Method in Comparative Education*, and the audience for whom the book was written. It seems to be aimed at students in introductory courses in comparative education, while at the same time offering scholars in the field an argument for using social science methods in comparative studies in education. It seems to this reviewer that both aims must suffer from being in the same small volume and it might be hoped that further scholarly discourse on methods will not take place in students' textbooks where necessary depth of argument cannot be reached.

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