Book Reviews

The Difference-Deficit Issue

Language and Poverty. Perspectives on a Theme. FREDERICK WILLIAMS, Ed. Markham, Chicago, 1971. xii, 460 pp., illus. $10.50. Institute for Research on Poverty Monograph Series.

The efforts of recent years to break through the poverty cycle by giving special attention to the education of the children of the disadvantaged have brought to the fore a basic question about the nature of "nonstandard" language. Is the nonstandard English that the poverty child brings to school a deficient language, which must be corrected or supplanted for intellectual development to proceed, or is it rather a different language, equally capable of conveying complex semantic messages and equally useful for logical thought, reasoning, and any other intellectual purpose?

The question is obviously a practical as well as theoretical one, for educational procedures in the early years of schooling hinge upon the answer. This volume is an attempt to reach across the gap between research and theory on the one hand and practical problems on the other. It contains 20 chapters written by educators, linguists, psychologists, sociologists, and speech scientists. For the most part, attention is focused upon the language of poor Blacks, but the poor White, the American Indian, and the Spanish-speaking groups of the Southwest and Puerto Rico are also considered. The book is presented as an overview of the issue and the chapters are therefore not particularly technical; it is of interest because of the variety of points of view represented on the difference-deficit issue and on the solution of the obvious problems associated with the poverty cycle.

The difference-deficit issue seems to divide the authors roughly into those with some close association with linguistics (on the difference side) and the other authors (on the deficit side). Basil Bernstein, a sociologist, and Siegfried Engelmann, an educator, for example, take the deficit position. According to Bernstein's sociological analysis of language codes, some children—mostly in families from the lower end of the socioeconomic continuum—as a result of their socialization are oriented toward receiving and offering particularistic meanings, whereas other children—mostly at the other end of the socioeconomic scale—are oriented toward universalistic meanings in most contexts. In each case, the children develop codes—"restricted" in the one case, "elaborated" in the other—as a result of the characteristic social structures in which they are reared, the communication systems used in those structures, and the linguistic demands of those communication systems. Although Bernstein tries hard to extricate himself from the deficit camp, he clearly states that the reason children reared primarily within the framework of restricted codes do not succeed in school is that education *is* elaborated codes, and unless the child learns to use such codes he will not profit from education. Obviously, some children come to school deficient in this respect, and the educator must do something to help them.

Engelmann describes just what needs to be done to establish a good educational program for children with language deficits. There is no question in his mind that the child of poverty has language deficiencies because he cannot repeat or comprehend the same words and sentences as a middle-class child of the same age. Since the teacher instructs in middle-class language, the Bereiter-Engelmann program is designed to teach the disadvantaged child the meaning of the basic language which is assumed to be used in instruction. No broad language program, this is a pragmatic approach to a specific problem. Thus, Engelmann describes how one establishes specific behavioral objectives, analyzes the elements of the objectives, programs the teaching of those objectives, and evaluates the results. Disadvantaged children can be taught and their deficiencies remedied, but only with good programmed learning procedures. Engelmann is sharply critical of programs advanced by educators, linguists, psycholinguists, developmentalists, and others who, in his view, have fallen far short of the mark largely because they have not made their objectives behaviorally specific and programmed their teaching to achieve those specific objectives.

Taking the difference side on the question, William Labov is equally critical of Engelmann and others who advance "the myth of verbal deprivation." Labov argues that the evidence supporting the verbal deprivation hypothesis has been collected by inept interviewers in situations which are hostile and threatening particularly for the Negro child. The interviewer in studies of language and tests of intelligence is a power figure who tends to have a condescending attitude toward the child, demands that the child talk, and asks questions which the child recognizes as artificial conversation. If the power relationship is reduced to a minimum, if the child is allowed to discuss matters of relevance to him and there is a shared knowledge among the participants in the exchange, then language pours forth in a manner which clearly reveals fully developed linguistic capabilities. In fact, highly complex linguistic skills are required of the child to maintain his social status in the peer group. Not only are the child's linguistic skills in such situations revealed to be well developed but the content of the language demonstrates a rich cognitive structure with precise logical arguments unencumbered by the verbal filler characteristic of elaborated middle-class language. In brief, not only is language fully available to the lower-class Negro child but it is a language at least as capable as that of the middle-class child of dealing with abstract, logically complex, and hypothetical questions. The arguments of Deutsch, Bereiter and Engelmann, Bernstein, and Jensen seem to disintegrate in the hands of Labov, who presents a variety of data to support his contentions.

There are, however, differences between the language of lower-class Negroes and Whites of both middle and lower class. William Stewart attempts to account for some of those differences within the framework of historical linguistics, tracing some of them to Creole English sources. While the reasoning requires some assumptions and is based on minimal data at times, Stewart does make a substantial case for his hypothesis. He begins by noting that the slave trade brought to this country a linguistically heterogeneous group whose only common tongue may have been pidgin English, which was the lingua franca at the time. Subsequently, that pidgin was taught in the home and evolved into Creole English for the Ne-

gro population. Most of the Creole form has been lost, but Stewart is able to present evidence that some of the grammatical variants of Negro dialect derive from Creole roots. He suggests that additional research may provide further evidence of the influences of pidgin English, Creole English, and also African language sources.

Other authors in this volume take less extreme positions or at least argue less forcefully on the two sides of these issues. In many cases the obvious implications for education are discussed. If the child is deficient then we must change the child but if the child is different then we must change our educational procedures. It is perhaps easier to attempt the former, as in the case of programs such as Head Start, but we may be more likely to achieve success if the latter approach is tried. In any case, this volume presents the issues in a form which is easy to read and enables nonspecialists to become acquainted with the questions and some answers. The final chapter provides an annotated bibliography of about 200 references for those who wish to dig deeper.

DAVID S. PALERMO
Department of Psychology,
Pennsylvania State University,
University Park

A Recognition

Of Microbes and Life. Les Microbes et la Vie. JACQUES MONOD and ERNEST BOREK, Eds. Columbia University Press, New York, 1971. xx, 312 pp., illus. $12.50.

The practice of recognizing the merit, the contributions, and the place of eminent individuals in the development of our scientific culture has obvious importance. Volumes intended to provide such recognition have taken many forms. In the volume under review, a festschrift for André Lwoff, an extraordinary opportunity was available not only to honor a scientist of exceptional breadth and vision but to collect the thoughts and the perspectives of many who have themselves done much to lead and to fashion the development of some of the most important fields of science during the last 50 years. For the career of André Lwoff has spanned this exciting half-century. During this time he has managed to achieve world eminence in at least four separate fields, and to rub shoulders with many in other, related fields. Because of this, and because of the notable students and colleagues he has been able to attract around him, Paris, the Pasteur Institute, and André Lwoff have for many years been a mecca for foreigners from all over the world eager to partake of the ambience and to learn from the founts of knowledge and wisdom.

The list of contributors and contributions to this volume commemorating Lwoff's 50 years in science reads like a who's who and what's what. It is indeed rare to find a book that includes articles written by scientists of eminence in such a wide spectrum of fields and covering such a range of subjects. Such a book might have provided a chronicle, an overview, a philosophical perspective of some of the most important advances in microbiology that have occurred in the last 50 years. This is certainly what the editors had in mind when the book was conceived, but unfortunately, for reasons unknown, this goal is not achieved.

The editors have been very successful in collecting essays, articles, or reviews from a majority of those who have known André Lwoff well and who have worked with him. But they have not succeeded in developing a theme for the book, let alone the theme originally envisaged. The articles are extremely heterogeneous in content and in tone, and, as far as can be seen, little attempt has been made to relate them to each other. Some, such as those of François Jacob, Pierre Schaeffer, Niels Kjeldgaard, and Georges Cohen, are personal in nature and manage to reflect the respect and the devotion of the authors for "the patron." They also serve to provide a personal historical perspective of the ambience around Lwoff's laboratory and examples of the catalytic effect Lwoff has had on the development of others' careers. Other articles, such as those of Max Delbrück and Salvador Luria, are more philosophical, reflecting some of Lwoff's "outside" interests.

Some contributors have indeed attempted a general speculative and historical view of an area of biology of particular interest to themselves and to Lwoff. In this vein Seymour Cohen presents some interesting thoughts on the autonomy of mitochondria and chloroplasts, E. F. Hartree discusses the relationships of lysosomes and fertilization, Fazekas de St. Groth speculates on the place of antigenic variation of influenza viruses in disease, and Roger Stanier and Martin Pollock deal with particular aspects of evolution.

The volume includes papers more closely allied with the present scientific interests of the authors. Bernard Roizman's review on herpesviruses, man and cancer is both comprehensive and thoughtful, and L. Barksdale and A. Pappenheimer present an excellent perspective on the present situation in the field of diphtheria toxin.

Perhaps the article that comes closest to what I would consider should have constituted the theme of a commemorative volume for Lwoff is that by Jacques Millot, who was associated with Lwoff during his earlier years in science. Millot manages to evoke the spirit of the times, the atmosphere that prevailed around Lwoff and his colleagues at Roscoff and Banyuls, and the personality of Lwoff, while at the same time providing a view of developments in protozoology that were occurring at that time. Would that the other papers in the book had continued in this vein, so as to encompass Lwoff's associations, his leadership, his visions, and his contributions to the development of understanding of "facteurs de croissance," lysogeny, and temperature regulation of animal virus growth.

As it stands, the book will certainly be of interest to those who know Lwoff and who have known Roscoff, Banyuls, or "the Pasteur," for the personal touch is always there, the respect and love for André. For the general reader, it will be necessary to pick and choose from what seems at first glance a myriad of subjects and approaches. He will find it difficult to place all of this in proper historical perspective. All the more regrettable because of the grandeur of the man being honored and because he himself certainly could give us the overview we would like to have.

LOUIS SIMINOVITCH
Department of Medical Cell Biology,
University of Toronto,
Toronto, Ontario

Physics: Historico-criticism

Mach's Philosophy of Science. J. BRADLEY. Athlone, London, 1971 (U.S. distributor, Oxford University Press, New York). xii, 226 pp., illus. $13.

Ernst Mach (1838–1916), physicist, mathematician, philosopher, and historian (to list only the subjects he professed ex cathedra), is perhaps best known for his insistence that physics should aim solely at an economical description of the facts, avoiding quan-