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-