boe-Hansen, Dempsey and Lansing, and Brattgard and Hyden.

Especially useful for background information is the review on karyometric studies, since nucleocytoplasmic ratios are becoming increasingly significant to exfoliative cytologists in distinguishing among normal, suspicious, and malignant cells. The enzymes in nuclei and methods for fractionating particulates as obtained from homogenates by differential centrifugation are comprehensively covered. The probable roles of enzymes in embryonic differentiation offer newer slants on the complex problems of development and differentiation in general. The review on giant chromosomes and another on the composition of nerve cells present a valuable survey of these important topics.

Several reviews are illustrated with diagrams or photographs. There is a fairly complete review of the important literature relevant to each topic. The volume carries an author and subject index as well as a table of contents for each article.

Altogether, this and the previous two volumes in the series (1952 and 1953) are beginning to shape up so that in time the essential features of cytology in its broadest sense will be covered. These volumes should be especially helpful to teachers and research workers alike, if for no other reason than that they offer a convenient means for the highly specialized investigators of today to maintain a proper perspective of the manifold problems that are now being attacked from the cellular or subcellular points of view.

M. J. KOPAC
Department of Biology,
Graduate School of Arts and Science,
New York University

Principles of Internal Medicine. T. R. Harrison *et al.*, Eds. Blakiston, New York–Toronto, ed. 2, 1954. xxiii + 1703 pp. + index. Illus. + plates. Student 1-vol. ed., $16; professional, 2-vol. ed. boxed, $21. (Order from McGraw-Hill, New York).

This book represents a deliberate attempt to conform with the pattern of education of the modern medical student. The authors feel that the practice of internal medicine should be based on an understanding of preclinical sciences. Hence, the common features of disease, such as pain, headache, fever, shortness of breath, and many others, are adequately discussed from the standpoint of their underlying physiological and biochemical disturbances by a qualified group of contributors. This section of the book presents a challenge to the writers that they have met skillfully, leaving little to be desired.

Since a considerable fraction of the total number of patients seen by an internist have no organic disease, it is important to consider extensively those symptoms that are based on the so-called "functional" disturbances. This is done in a new section devoted to neurological signs of human suffering. Perhaps more attention could be given to discussing the mechanisms by which many and widely differing symptoms can be projected by the patient and in language that appeals more to the busy internist than to the psychiatrist.

An important feature of the book is a chapter that stresses the immediate sympathetic concern that must be shown the patient, in the form of useful measures that can bring relief, before the sometimes elaborate mechanisms of diagnosis can be started.

This book, although geared to the education of the student, will not fail to satisfy the practitioner who will find brief and adequate descriptions of the diseases that represent an assembly of the symptoms and features previously described in fundamental explanations. Treatment becomes obvious. Finally, the index is apparently accurate—a feature not always found in textbooks.

RALPH A. KINSELLA
St. Louis, Missouri

Laboratory Techniques in Rabies. Monogr. Ser. No. 23. World Health Organization, Geneva, 1954. 150 pp. Illus. + plate. Paper, $3; cloth, $4. (U.S. distrib., Columbia Univ. Press, New York.)

A project of the WHO Expert Committee on Rabies and the product of 14 distinguished contributors—including Habel, Johnson, Koprowski, and Sellers —this book is truly authoritative. However, it is intended as a manual and not as an exhaustive treatise. The contributors were asked to describe practical and dependable procedures that "could be adapted to the limited facilities and personnel of many rabies laboratories in different parts of the world." The scope embraces the important problem of diagnosis, the production and potency testing of both vaccines and hyperimmune serum, and the breeding and care of laboratory animals.

Many photographs, including an exceptional color plate illustrating the histologic diagnosis of rabies, accompany the usually very clear descriptions. Alternative methods are frequently presented to facilitate adaptation of procedures to local conditions. To this same end, considerable stress has been laid on the rationale underlying the procedures described. Elementary as much of it will seem to the sophisticated reader, this is a book of real importance to those concerned with the operation of public-health laboratories located throughout the world.

JOHN P. FOX
Department of Tropical Medicine and Public Health, School of Medicine, Tulane University

Inventories of Apparatus and Materials for Teaching Science. vol. III: **Technical Colleges.** pt. 4, **Electrical Engineering.** UNESCO, Paris, 1954. (Distrib. by Columbia Univ. Press, New York.) 147 pp. Paper, $2.75.

This book is one of a series bearing the same title. The other volumes are devoted to different types and levels of educational institutions in which science is taught. All are published as aids to educators whose task it is to rehabilitate schools in war-damaged or underdeveloped areas.

The training of electrical engineers in France, as it is done in Paris at the Ecole Supérieure d'Electricité, is discussed in the first part of the book. A complete inventory of the technical apparatus of the school is presented with the dollar value of each item. To clarify the uses of the apparatus, the curriculum is outlined in great detail. A rather complete picture of the operation of the school is thus available, although it may be somewhat misleading because the importance of, and emphasis given to, various courses is not explained.

In the second part of the book, the corresponding information is presented for the electrical engineering course at the Kungliga Tekniska Högskolan (Royal Institute of Technology), Stockholm.

The third and final part concerns the higher teaching of electricity in Great Britain. This section is extremely brief and is devoted to a general explanation of the educational practices of the country. No inventories are presented and no particular school is used to illustrate these practices.

To those readers for whom the book was intended, its contents will undoubtedly be of great value and interest. Aside from this specific purpose, educators in the electrical engineering field may find some interest in the purposes and methods of other schools. It would seem that the value of the book would have been considerably increased if a wider variety of educational institutions had been discussed.

LAWRENCE A. HARRIS
Electrical Engineering Department, University of Minnesota