

energy appears in a chapter concerned with statics, as do the concepts of work and potential energy. The discussion of the motion of a particle in a central field occurs very late (Chap. 10 of a 15-chapter book), so that the intimate relationship of the concepts of torque and angular momentum to this material is somewhat hidden.

A few minor points might be mentioned, such as the labeling of the first chapter as "Fundamental principles." In the discussion of the motion of a rigid body in a plane, it is gratifying to find the proper warning concerning the indiscriminate application of the torque-angular momentum relationship about an instantaneous axis, a point unfortunately omitted in most elementary and intermediate treatments of the subject. However, at this point it is curious to read about "accelerations acting on P ," where P refers to a point through which the instantaneous axis passes. An amplification of this particular section would be welcome, as would a similar amplification of the very brief treatment of motions involving variable mass and of nonlinear oscillations.

On the whole, this book appears, to a physicist, to be a mixture of theoretical applied mechanics and theoretical physics. Perhaps this is necessary for the proper education of a major in engineering physics, but it limits the value of the book as a textbook for students majoring in pure physics.

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The Application of Results of Research. Vera Connell, Ed. In collaboration with the British Commonwealth Scientific Offices. Academic Press, New York; Butterworths, London, 1954. vii + 212 pp. \$5.

This book is the result of a report presented to the British Commonwealth Scientific Conference that was held in Australia in 1952. It deals with the basic problem of how to translate the results of scientific research into practice.

For most readers, the meat of the work is probably in the five short chapters, which occupy only one-fifth of the book. These chapters give brief evaluations of the various methods that are used to obtain the rapid dissemination and application of research findings, and some attention is given to the obstacles to the use of scientific information. Unfortunately, some topics are treated in such a sketchy fashion that no new ideas are communicated.

For other readers, however, the real meat may well be the nine appendixes that make up the balance of the book. Eight of these are reports on research activities and practical applications in the various Commonwealth areas. There are, for example, brief summaries of the activities of the Rubber Research Institute and the Tea Research Institute in Ceylon, of the Fisheries Research Board in Canada, and of the Council for Scientific and Industrial Research in South Africa. The final appendix, incidentally, is en-

titled "Some novel methods employed in the U.S.A." Here the methods of research organization and implementation that are used by three of our agencies are summarized, with the Tennessee Valley Authority in the stellar role.

Although this book is somewhat brief and its scope is limited—in that it concentrates on government-sponsored research and its application in a few fields, namely, industry, agriculture, and health—it is a welcome addition to the literature that concerns itself with the uses of scientific knowledge.

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Psychological Testing. Anne Anastasi. Macmillan, New York, 1954. xiii + 682 pp. Illus. \$6.75.

In the 50 years since Binet and Simon produced the first practical psychological test, the development and use of new tests has increased at a phenomenal pace. Theory and practice have proceeded, occasionally apace, more often alternatively, but both have made great strides. In such a rapidly developing field, it is difficult for the practitioner to retain his perspective and for the student to acquire understanding and skill in the use of tests. Anastasi has contributed a well-written work intended to meet the needs of the beginning student and the practicing psychologist, the business executive, the psychiatrist, and the educator. It will be particularly welcomed by those already familiar with testing and a stimulating and challenging, but rather difficult, introduction for students.

The material is presented in four major sections: "Principles of psychological testing," "General classification tests," "The differential testing of abilities," and "The measurement of personality characteristics." Especially welcome is the treatment of materials so far omitted from most introductory textbooks, materials such as Cronbach's formulation of the reliability problem and the materials on factor analysis. Anastasi's well-deserved reputation for sound scholarship should be enhanced, an especially noteworthy achievement in the light of the book's introductory nature.

In the preface, Anastasi sets her task as follows:

The primary objectives . . . are to provide an introduction to the principles of psychological testing and to acquaint the reader with the major types of tests in current use.

In general, she has succeeded quite well. The first section on principles will serve as a vantage point from which the student can survey and evaluate the later descriptions of the many kinds of tests available.

There are two major difficulties that may make the book rather difficult as a text. In the first place, Anastasi has tried to write a book that assumes no previous training in statistics. She attempts throughout to weave in discussions of statistical concepts as

they occur in connection with tests or theoretical points. On the basis of my experience, I seriously doubt the feasibility or even the desirability of such an attempt.

Second, there are some organizational difficulties. As is indicated previously, the discussion of factor analysis is welcome, but it is introduced in such fashion that its principal treatment *follows* the sections that it could best illuminate and organize. Except for the first section, there is a somewhat regrettable lack of development around available theories in favor of a more encyclopedic approach.

These are things, however, that a skillful teacher can take into account, and they should not seriously reduce the book's potential usefulness. They should not be problems at all for the practicing psychologist who wants a sound, critical evaluation of recent developments. The field of tests and measurements seems about to embark on a new era in response to many recent and important developments. In some ways, Anastasi's book represents an excellent summary of progress. In other ways, it heralds the new directions of attack on critical problems of this field.

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Renal Function. Trans. of the Fifth Conference 14-16 October 1953, Princeton, N.J. Stanley E. Bradley, Ed. Josiah Macy, Jr., Foundation, New York, 1954. 218 pp. Illus. \$3.75.

Since 1942 Frank Fremont-Smith has organized and directed, under the aegis of the Macy Foundation, a series of interdisciplinary conferences on medical and allied topics in which integration of the activities and accomplishments of workers in different fields seems especially called for. Not only has the interchange around the conference table proved of great value to the participants, but the published transactions have been notable evaluations of the status of the topics discussed, in a fashion that could be achieved only when the presentation of the investigator is subjected to questioning by *cognoscenti* in the field.

This volume records the fifth and last conference on renal function. The subjects included are "The nephrotic syndrome," by John A. Luetscher, Jr.; "The problem of kidney transplantation," by Benjamin F. Miller; and "Acute renal failure," by Graham McGregor Bull. Each essayist presents original and important work, and the uninhibited give-and-take of the discussion brings out the shadows as well as the highlights.

Luetscher details the most recent results of his important studies on sodium-retaining substances in the urine of patients with the nephrotic syndrome as well as the role of these substances in the pathogenesis of the edema. He finds that the sodium-retaining activity of nephrotic urine resides in a single chromatographic fraction with the reactions of an adrenocortical steroid.

Miller presents remarkable results with homotransplantation of the kidney in man. In one patient the transplanted kidney functioned for more than 5 mo. In an individual with polycystic disease, the transplanted kidney formed 2850 ml of urine on the 18th day, and on the 21st day there was an inulin clearance of 14.4 ml/min as contrasted with 2.1 ml by the polycystic kidneys.

Bull's work concerns renal function and treatment in acute tubular necrosis. Contrary to much (not all) opinion in this country, Bull prefers conservative management to dialysis.

The content of this volume is more clinical than that of the four preceding ones. It can be heartily recommended to clinicians interested in kidney disease, and it will prove of value to workers in renal physiology.

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Diagnostic Cytologique du Cancer Génital chez la Femme. Raymond Bourg, Claude Gompel, and Jean-Paul Pundel. Masson, Paris, 1954. xiv + 176 pp. + atlas. Illus. + 84 plates. F. 4800.

For the English-speaking reader, the main interest of this book lies in the fact that, according to the authors, this is the first book in French that deals with the cytological diagnosis of genital cancer of the woman. Written for the use of practicing physicians, the book gives a comprehensive and vivid description of the usefulness, limitations, methods, and techniques of exfoliative cytology in investigation of female genital pathology. The illustrations and microphotographs, which comprise the larger part of the book, are clear and instructive and should prove very helpful to anyone starting to investigate exfoliated cells. A short description of the cyclic changes that occur in the vaginal epithelium and of their importance in the study of normal hormonal functions might have made the treatment of the subject more complete. The book may be of great value in disseminating the knowledge of a method, the importance of which has been proved and is now routinely used throughout America.

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Isotopic Gas Analysis for Biochemists. R. F. Glascock. Academic Press, New York, 1954. viii + 247 pp. Illus. \$5.80.

Methods for the radioactive analysis of carbon-14 and tritium as gaseous compounds are generally more sensitive and more precise than solid-sample radioactive assay procedures. Although gas-phase procedures have been used for many years, such methods are not as widely used as they could be. Part of this lack of use stems from the expense for complex gas-handling and electronic equipment, but part of the trouble comes from lack of usable information for