

formative. The contributions of this study to methodology are also limited, inasmuch as it was not designed to reveal how the nonmunicipal hospitals can be integrated into a community-wide reporting system and, most of all, because it was not designed to compare the several procedures that could be used for the several possible objectives of a community-wide hospital reporting system. Apparently the main contribution of this study is directed at the administrative problems of New York. In their foreword, the Commissioner of Health and the Commissioner of Hospitals write, "the study findings have been of great value to the operations of both departments."

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**Introduction to Psychiatry.** O. Spurgeon English and Stuart M. Finch. Norton, New York, 1954. viii + 621 pp. \$7.

This is the first textbook of psychiatry to be completely oriented along psychoanalytic lines. The subject matter is covered in 592 pages with appended bibliography and index in 9 sections: "Concepts of dynamic psychiatry," "Child psychiatry," "Psychoneurotic disorders," "Personality disorders," "Psychophysiological disorders," "Functional psychotic disorders," "Organic brain disorders," "Mental deficiency," and "Therapy." The text is largely a compilation of lectures given to medical students, and each section is illustrated with well-chosen case material. The authors have attempted to follow the new revision of nomenclature of the American Psychiatric Association. This should be of help to board candidates in preparing for their examination. Psychoanalytic terms are briefly defined and easily memorized.

The theoretical approach is strictly Freudian, in that the authors adhere to the traditional description of libidinal stages of personality development from infancy to maturity. Neglect, however, to define specifically, to enumerate the variety of instincts, and to describe their state of fusion makes for a vague introductory orientation. In this connection, there is a tendency to neglect the importance of hereditary factors and to overemphasize environmental influence, which leads to a psychiatry without biological foundation and may result in a separation from the other branches of medicine. There is a lack of clarity, if not contradiction, in the discussion of the mechanisms of ego defense; for ex-

ample, sublimation is said to be the only defense mechanism that can be considered well within the limits of normality, yet, of rationalization it is stated, "this mechanism of defense is one of the most common of all and is utilized to a certain degree by almost everyone."

Although the chapter on history taking and examination is extremely detailed, it is written so as to stimulate the medical student to develop and to use his intuitive endowment. The section devoted to child psychiatry neglects the importance today of juvenile crimes. However, it is clear, concise, well illustrated with case material, and devoid of repetition. Handling of the formal psychiatric disorders leaves little to be desired, and the therapeutic approach is eclectic. The manuscript was probably out of the authors' hands before the therapeutic value of the two new drugs chlorpromazine and reserpine was reported. The chapter on mental deficiency, although telescoped, is adequate as an introduction. The final section on therapy is constructively repetitious and includes an informative chapter on mental hygiene.

Despite my critical remarks, the book is a valuable textbook, not only to psychiatrists, but to physicians in other branches of medicine, to medical students, and to persons in related fields such as nursing, social work, psychology, and anthropology.

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#### **Bibliography on Physical Electronics.**

Prepared by Wayne B. Nottingham and staff. Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, 1954 (distr. by Addison-Wesley, Cambridge Mass.). iv + 428 pp. \$8.50.

This publication is literally what the title suggests, a bibliography and no more. Completeness is a necessary attribute of such an offering, and I tested this by using spot checks. References on thermionic and photoelectric emission in the second edition of Dow's *Fundamentals of Engineering Electronics* were used, together with the references on semiconductor literature included in "The new electronics" by K. Lark-Horovitz, a chapter in the book, *The Present State of Physics*, and the *Abstracts of the Literature on Semiconducting and Luminescent Materials and Their Applications* (1953 issue) compiled by Battelle Memorial Institute.

The conclusion is that, while the bibliography is almost but not entirely com-

plete, its 428 pages contain a large share of the references in the field and comprise a worth-while contribution. Many headings and subheadings are listed in the table of contents to assist in searching references. I prefer the format of the Battelle compilation for the brief abstracts that accompany each reference and for the paper-backed ring binding, which seems more appropriate for a book that is destined to become out of date so soon, but this is just a matter of taste.

The Nottingham bibliography and Battelle abstracts both eloquently demonstrate the magnitude of recent activity in the field of electronics.

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**Atomic and Nuclear Physics.** Robert S. Shankland. Macmillan, New York, 1955. xv + 529 pp. Illus. \$7.75.

This book has been prepared from material used in a course for undergraduate physics majors and first-year graduate students. About half of the book is concerned with the topics usually described as "atomic physics"; there is a chapter on the solid state, and the remainder is on nuclear physics. A very wide range of topics is covered, including some rather up-to-date material—for example, on Lamb shift, antiferromagnetism, the transistor, nuclear magnetic resonance, production of elements up to  $Z = 100$ , nuclear chain reactors, and production and properties of mesons. Numerous subjects are described in historical development, and some of these stories are of the kind that will catch up the student in the excitement that is physics.

On the debit side, there are several features of the book that might leave one unhappy. For one, the treatments of certain basic concepts are wanting in carefulness and thoroughness. The Heisenberg uncertainty principle is discussed only briefly, although Brownian motion receives five pages. The terms  $\psi$  and *wave-function* are introduced without discussion, and without any mention of the Schrodinger equation; the term *parity* is used but not defined. Several topics suffer from the book's omission of any discussion of matrix elements or overlap integrals.

A second item concerns the referencing. A very large number of references is given to the original literature, but only in a few instances is the student referred to sources that might help him obtain the background necessary to understand the many sophisticated papers referred to.

A third shortcoming is the appreciable number of erroneous statements contained in the book. It is a difficult job to cover as wide a selection of topics as this book does and yet to avoid having some misstatements appear. Those noted in the material of a basic nature are the statements that Born's statistical interpretation is applicable to a system of many electrons only if their mutual interaction may be neglected, and that in the scattering of a pair of electrons, or protons, the interaction is purely the coulomb force for the case of antiparallel spins but greater for parallel spins.

On the whole, the book gives a survey of a broad range of phenomena that can be explained by the principles of quantum theory and a good discussion of many topics, including both basic ones and those of a more applied nature, but a student is not likely to be able to get from it by himself a thorough and solid understanding of the fundamental principles.

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**Supplement No. 2, 1955, of Cancer Research.** *Negative Data from Experimental Cancer Chemotherapy Studies*, II. Various contributors. Univ. of Chicago Press, Chicago, 1955. 397 pp.

This supplement was published as a continuation of data presented in Supplement No. 1, 1953. Various contributors have supplied essentially experimental protocols in tabular form, with the briefest of textual explanatory notes, dealing with the failings of an imposing array of chemical compounds to affect experimental mouse and rat tumors. The editors state that the publication facilitates "earlier circulation of data, whether positive or negative, in order to prevent useless reduplication and to acquaint investigators of areas being explored by their confreres elsewhere." Unfortunately, some of the advantages of this type of publication have been overlooked by those contributors who refer to several previous publications of their negative findings.

Although the concept of printing a journal devoted to negative results may appear somewhat less than profound, the publication of such compilations in many fields might be appropriate and effective. This procedure would tend to relieve the already overburdened technical journals from publishing lengthy and formal articles reporting essentially negative findings, which are nonetheless of interest to workers in the specific field, and would present these results in brief but adequate, accessible form.—E. M. L.

**Scientific and Technical Societies of the United States and Canada.** National Academy of Sciences—National Research Council, Washington, ed. 6, 1955. 441 pp. \$7.50.

Here is information on 1506 membership societies of a scientific or technical character in the United States, ranging from the Abilene Geological Society to the Zoological Society of San Diego, Inc. Similar information on 206 Canadian societies is also included. Information about each includes name and address, principal officers, history, purpose, membership qualifications and dues, size, time of meetings, research funds and medals if any, and publications.

The first such directory was published in 1908 by the Carnegie Institution of Washington. In 1927, by agreement, the National Academy of Sciences—National Research Council took over responsibility. This is the sixth directory under the NAS-NRC auspices. It differs from earlier ones in omitting institutions that do not have members. Information on the Canadian societies was compiled by the National Research Council of Canada; that on the United States by Callie Hull, librarian of the NAS-NRC, and her staff.

Directories of this sort are always useful. This one is particularly to be commended because of the up-to-dateness of the information (all obtained directly from officers of the listed societies in the latter half of 1954) and the detailed index of societies, publications, prizes and research funds, activities, purposes, and fields of science. There is a similar index for Canada.—D. W.

## New Books

*Electro-Magnetic Machines.* R. Langlois-Berthelot. Trans. and rev. in collaboration with H. M. Clarke. Philosophical Library, New York, 1955. 535 pp. \$15.

*Introduction to Demography.* Society of Actuaries' textbook. Mortimer Spiegelman. The Society, Chicago, 1955. 309 pp. \$6.

*Anti-Composition Tables for Carbon Compounds (CH, CHO, CHS, and CHOS).* H. H. Hatt, T. Pearcey, A. Z. Szümer, compilers. Cambridge Univ. Press, London, 1955. 191 pp. \$4.

*Counseling in Medical Genetics.* Sheldon C. Reed. Saunders, Philadelphia, 1955. 268 pp. \$4.

*Advances in Genetics.* vol. VII. M. Demerec, Ed. Academic Press, New York, 1955. 309 pp. \$8.

*A Classification for Medical and Veterinary Libraries.* Cyril C. Barnard. Lewis, London, ed. 2, 1955. 278 pp. £4, 4s.

*A Handbook of Hospital Psychiatry.* A practical guide to therapy. Louis Linn. International Universities Press, New York, 1955. 560 pp. \$10.

## Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, but to the publisher or sponsoring agency.)

*Autohydrogenation of Oil Gases.* Research Bull. 25, Inst. of Gas Technology. H. A. Dirksen, H. R. Linden, E. S. Pettyjohn. Illinois Inst. of Technology, Chicago, 1955. 75 pp. \$5.

*Memórias do Instituto Butantan, 1954.* vol. XXVI. Instituto Butantan, São Paulo, Brasil. 318 pp.

*Retailing and Wholesaling Cotton Planting Seed in Arkansas.* Bull. 554. C. Curtis Cable, Jr. Agricultural Experiment Sta., Univ. of Arkansas, Fayetteville, 1955. 32 pp.

*Notes on Shrimps from the Marshall Islands.* Proceedings of the U.S. National Museum. vol. 105, No. 3349. Fenner A. Chace, Jr. Smithsonian Institution, Washington, 1955. 22 pp.

*Thirty-Eighth Annual Report of the National Research Council of Canada, 1954-55* (in English and French). NRC No. 3607. The Council, Ottawa, 1955. 44 pp.

*Observations sur la Genèse des Nappes de Gravats dans les Sols Tropicaux.* Série Scientifique No. 64. J. de Heinzelin. L'Institut National pour l'Étude Agronomique du Congo Belge, Bruxelles, 1955. 37 pp. F. 30.

*Facilities for Care of Experimental Dairy Animals.* Special Rpt. 10. George G. Bateman. 12 pp. *Growing Alfalfa for Seed.* Circular 135. M. W. Pedersen et al. 60 pp. *Performance Testing Studies with Beef Cattle.* Bull. 337. James A. Bennett and Doyle J. Matthews. 15 pp. *Biennial Report of the Utah Agricultural Experiment Station 1952-1954.* Bull. 373. 62 pp. *Fertilizer Requirements of Alfalfa Hay in Utah.* Bull. 374. R. F. Nielson, J. P. Thorne, G. T. Baird. 15 pp. *Eradication of Mule Ear with Herbicides and Its Relation to Production of Forage on Range Lands.* Bull. 375. D. C. Tingey and C. Wayne Cook. 15 pp. *Potato Production, Utah 1953.* An economic analysis. Bull. 376. E. M. Morrison and W. G. Kearl. 26 pp. Agricultural Experiment Sta., Utah State Agricultural College, Logan, 1955.

*Resultados Generales Referentes a la Descripción de un Foton en un Medio Material.* A. Battig. vol. 10, No. 1-2, Ser. A, Revista. Matemática y Física Teórica. Universidad Nacional de Tucumán, Tucumán, República Argentina, 1954.

*Tests for Type of Action of Hydrocarbon Insecticides Applied Jointly.* Bull. 594. Neely Turner. Connecticut Agricultural Expt. Sta., New Haven, 1955. 23 pp.

*Joint ILO/WHO Committee on the Hygiene of Seafarers.* Second Rept. World Health Organization Technical Rept. Ser. No. 92. The Organization, Geneva, 1955. 20 pp. \$0.30.

*Eighteenth Semiannual Report of the Atomic Energy Commission.* July 1955. GPO, Washington, D.C., 1955. 160 pp.

*Second International Congress of the International Diabetes Federation.* Cambridge, England, 4-8 July 1955. The Federation, The Hague, 1955.