

**Drugs and Behavior.** Leonard Uhr and James G. Miller, Eds. Wiley, New York, 1960. xix + 676 pp. \$10.75.

Four years ago one of America's science reporters wrote: "Nervously, the U.S. is entering a new era—the era of the chemical modification of the human personality." In fact the use of drugs to induce sleep, to deaden the perception of pain, to produce hallucinations, and to affect behavior in numerous other ways is centuries old. The resurgence of interest in the effects of drugs upon behavior is the result of new discoveries which give promise of a possible "breakthrough" in the treatment of mental illness, discoveries which have led to the development of the interdisciplinary field of psychopharmacology. Validation of this possibility "has created an entirely new problem for drug research: the objective, scientific determination of a chemical agent's effects on human behavior and experience. To delineate and explore this problem is the purpose of this book."

To achieve this purpose the editors have organized the book in two parts: "The methodological, chemical, biological, and clinical context for psychopharmacology" and "Experimental procedures and results." The 51 chapters are the contributions of 63 authors, including the editors themselves, authors whose special qualifications lie in the disciplines of biochemistry, neurology, neurophysiology, pharmacology, psychiatry, and psychology. Some of the chapters are concerned with issues of a theoretical and systematic nature; others report specific research projects conducted by the authors.

The use of drugs to alter behavior involves interactions among three general classes of variables: drugs as chemical agents, biological systems within the living organism, and behavior patterns. *Drugs and Behavior* is primarily concerned with interactions between variables in the first and third of these classes, although some attention is given to sites in the nervous system at which drugs act and to the physiological systems affected. The text discusses the wide variety of problems which arise when attempts are made to study the interactions systematically and objectively; it describes procedures which are being used to measure the effects of drugs on animal behavior and on human behavior in both normal and pathological states.

It is a major problem to integrate the

contributions of a number of different authors. In this volume the editors have done so with such success that they provide the reader with a coherent picture of an exciting area of interdisciplinary endeavor still in its preliminary stages of development. It is clear that there is much to learn about the full sensitivity of drugs used as tools for research, about their modes of action in biological systems, and about their differential effects upon behavior. Such knowledge is necessary before drugs used for the treatment of mental illness can be selected upon systematic rather than upon purely empirical grounds.

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### Miscellaneous Publications

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

**Academic Degrees.** Walter Eels and Harold A. Haswell. U.S. Office of Education, Washington 25, D.C., 1960. 324 pp. \$1. This "dictionary of degrees" reports more than 1600 different academic degrees, currently conferred by U.S. colleges and universities and 800 others recognized in past years. Chapter 6, "Spurious degrees," is a brief account of weird degrees available from the degree mills; chapter 9, "Degrees arranged alphabetically," lists more than 2400 degrees, including 155 degrees (labeled "spurious") unique to the degree mills. Examples of the spurious degrees are *Diplomat of Masso-Therapy*; *Ortho-Geneticist*; *Registered Hypnotist*.

**The Annual of Czechoslovak Medical Literature, 1957.** National Medical Library, Prague, Czechoslovakia, 1959. 593 pp.

**Asian Perspectives.** Bulletin of the Far-Eastern Prehistory Assoc., vol. 3, No. 1. Wilhelm G. Solheim, Ed. Hong Kong Univ. Press, Hong Kong, 1960. 98 pp. vol. 3 (Nos. 1 and 2), \$5.

**Australian Atomic Energy Commission.** Eighth annual report, 1959–60. Commonwealth of Australia, Canberra, 1960. 63 pp.

**Collected Papers on Planetary and Space Science.** Reprinted from *Journal of Geophysical Research*. Gordon J. F. MacDonald, Ed. American Geophysical Union, Washington, D.C., 1960. 82 pp. Twelve papers reprinted from the October 1960 issue; the papers were presented at the 41st annual meeting of the American Geophysical Union, sessions on planetary sciences, April 1960.

**The Consumer and the New Business Cycle.** 27 pp. \$2. **An Action Research Program for Organization Improvement** (in Esso Standard Oil Company). 71 pp. \$3. Foundation for Research on Human Behavior, P.O. Box 11, Ann Arbor, Mich.

**Diseases of Wheat, Oats, Barley, and Rye.** Circular 48. G. H. Boewe. Illinois Natural History Survey, Urbana, 1960. 157 pp.

**Education Directory, 1960–1961.** pt. 1, *Federal Government and States*. 83 pp. \$0.30. **Education in the United States of America.** 144 pp. \$0.50. Designed to give a broad view of education in the U.S. to persons who are not familiar with the programs and organization. **Organization and Effective Use of Advisory Committees.** Sam W. King. 85 pp. \$0.30. **Studies of Home Economics in High School and Adult Education Programs, 1955–58.** Ivor Spafford. 191 pp. \$0.70. U.S. Office of Education, Washington, D.C., 1960 (order from Supt. of Documents, GPO, Washington 25).

**Environmental Effects on Materials and Equipment.** Abstracts. vol. 1, No. 1, January 1961. Prevention of Deterioration Center. National Academy of Sciences–National Research Council, Washington 25, D.C., 1961. 40 pp. \$25 per year. A monthly journal concerned with abstracting articles from the world literature. "Each issue . . . will contain at least forty substantive abstracts plus forty or more 'extracts' of current articles. . . ."

**Epilepsia.** vol. 1, No. 4/5, pp. 327–608 of the *Journal of the International League Against Epilepsy*, "Lennox issue." Elsevier, Amsterdam, Netherlands, 1960. \$5.

**Field Museum of Natural History, Botany Series.** vol. 13, pt. 5, No. 2. pp. 537–854. "Flora of Peru." J. Francis Macbride. Chicago Natural History Museum, Chicago, Ill., 1960. \$6.

**Human Decisions in Complex Systems.** Warren S. McCulloch, Ed. New York Acad. of Sciences, New York, 1961. 180 pp. vol. 89, art. 5, of the *Annals of the New York Academy of Sciences*.

**The Museum Visitor.** No. 1, *Survey Design*. Reports from Information Services, No. 1. D. S. Abbey and Duncan F. Cameron. Royal Ontario Museum, Toronto, Canada, 1959. 12 pp.

**Nicht-Glykolytische Stoffwechselwege der Glucose.** S. Hollmann. Thieme, Stuttgart, Germany, 1961 (order from Intercontinental Medical Book Corp., New York 16). 230 pp. \$9.30.

**Nine Glacier Maps with Text.** American Geographical Soc., New York, 1960. 22 pp. + plates. 9 maps (boxed). \$3. Special Publ. No. 34. Maps of eight glaciers in Alaska and one in the Olympic Mountains, Washington. Seven of the maps resulted from participation in the IGY.

**Nuclear Engineering.** pt. 8. Chemical Engineering Progress Symposium Series, No. 28, vol. 56, 1960. American Inst. of Chemical Engineers, New York, 1960. 83 pp. Illus.

**Radiation Research in the Life Sciences.** Current projects in the United States and throughout the world. Prepared for the Committee on Government Operations, U.S. Senate, and its Subcommittee on Reorganization and International Organizations. Government Printing Office, Washington, D.C., 1960. 175 pp. This report, the tenth in the subcommittee's series, outlines 3362 projects, costing over \$101 million, conducted by nine U.S. agencies, ten foreign countries, and one intergovernmental organization.