

Current Trends in the Description and Analysis of Behavior. Nine lectures under the auspices of the Department of Psychology in the College of the University of Pittsburgh delivered during March 11–12, 1955, and March 8–9, 1956, in the Stephen Foster Memorial Auditorium. Robert Glaser and others. University of Pittsburgh Press, Pittsburgh, 1958. 242 pp. \$4.

This is a set of lectures by research experts in fields ranging from physiological psychology to psychoanalysis. The lecturer was asked to talk about research trends and probable future developments, particularly in methodology. The choice of subject matter was dictated by "the general problem of measurement since there is the continuous need for the development of methods to quantify the stubborn and elusive phenomena of behavior."

Glaser sees the social psychologists becoming more interested in the formal or task-oriented group. Zubin wants models rather than more facts in psychopathology. Lindsley describes the reticular activating system of the brain and his recent work on the neurophysiology of perception. Nowlis describes recent investigations on communication, persuasion, and mood. Cofer offers a theoretical discussion of processes that mediate between stimulus and response. Guetzkow describes the interaction between methods and models in social psychology. Carroll examines linguistic coding as an approach to the field of cognition. Hamlin perceives a trend in the direction of more complete observation of behavior in psychotherapy, and French analyses the reactive motives of guilt and shame.

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Spot Tests in Inorganic Analysis. Fritz Feigl. Translated by Ralph E. Oesper. Elsevier, Amsterdam, ed. 5, 1958 (order from Van Nostrand, Princeton, N.J.). 640 pp. Illus. \$13.25.

This is the fifth edition of a book which in its fourth (1954) edition had the title *Spot Tests* [vol. I]: *Inorganic Applications*; that edition, in turn, was an enlargement of the "inorganic" portion of *Qualitative Analysis by Spot Tests, Inorganic and Organic Applications* (1946, 1939, and 1937). The present edition, with its addition of numerous new tests, improvement of old ones, and inclusion of new techniques, continues to hold its place as the authoritative work by the outstanding leader in the field of spot testing. Ralph Oesper's translation is excellent.

The total number of tests and applications has grown from 451 in the fourth edition to 561 in the present one. New tests are given for aluminum, calcium, cobalt, lithium, molybdenum, palladium, potassium, tin, titanium, tungsten, and uranium as cations or metalloanions. Acids included for the first time are aminosulfonic (sulfamic), cyanic, the hypohalogenous acids, hyposulfurous (dithionous), and perchloric. Among the new techniques is the ring oven method according to Weisz. Twenty-seven of the 95 sections in chapter 7, on "Applications of spot reactions in tests of purity examination of technical materials, studies of minerals," are new.

A tabular summary of the limits of identification attained by spot tests, along with cross references to each test and an extensive subject index, add to the usefulness of the book. It is a volume that few analytical chemists can afford to be without.

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Advances in Veterinary Science. vol. 4. C. A. Brandly and E. L. Jungherr, Eds. Academic Press, New York, 1958. xi + 414 pp. \$12.

Of all the books published, those reporting on progress in any field of pure or applied sciences seem to me the most interesting and most useful ones. This is due to the disturbing fact that it has become impossible for anyone in any profession to keep up with the multitude of original and review articles and books published every month. The researcher as well as the ambitious practitioner must glance through hundreds of these publications before he finds the very few which are of real value to him.

Capable editors of reports such as those in this volume can render a tremendous service to those who do not have the time or, perhaps, the patience required to read all there is to be read in their particular field of interest. Brandly and Jungherr, in cooperation with a group of well-known authorities, have succeeded in surveying the true advances made in selected fields of veterinary medicine. These surveys should prove useful not only to veterinarians but also to physicians, pharmaceutical chemists, and public health officers, as the following brief description of the book's contents shows.

Frank A. Todd (U.S. Department of Agriculture) discusses the defense against imported animal diseases (pages 1–50), with emphasis on the necessary control measures taken at present to prevent the transmission to this country of many of the endemically and sporadically appearing diseases from various other parts of

the world. Bernard F. Trum and John H. Rust (Armed Forces Institute of Pathology) report (pages 51–95) on radiation injury, a most timely topic; they state that hematopoietic and germinal tissues are most radiosensitive; next in order are bones and glandular tissues; least sensitive are muscles and nerves. The contribution of A. Pommer (Vienna) concerns X-ray therapy in all its aspects, with indications for use in the treatment of numerous animal diseases (pages 98–136). Clyde Stormont (University of California) deals with genetics of lethal and semilethal traits and also with the possibilities of developing disease-resistant lines in animals (pages 137–162).

Of special interest to the practicing veterinarian are the three surveys (pages 164–263) concerning the current status of prevention and treatment of diseases affecting sheep (by Hadleigh Marsh) and swine (by Ronald Gwatkin, Ottawa, and A. Hjärre, Stockholm). The toxicity of insecticides and herbicides to livestock (pages 265–276) is creating many problems; these are treated concisely by R. D. Radeleff (U.S. Department of Agriculture). The discussion of the epizootiology of leptospirosis, by J. van der Hoeden (Ness-Ziona), is a most readable contribution by an Israeli researcher who specializes in the investigation of this relatively new animal disease (pages 277–339). And an English investigator, Norman H. Hole (Weybridge), has as his subject John's disease, which appears to be a problem of ever-increasing importance to the health of the ruminants throughout the world (pages 341–387).

Each chapter contains pages of literature references; in addition, there are an extensive author index (17 pages) and a subject index.

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A Course in Modern Linguistics. Charles F. Hockett. Macmillan, New York, 1958. xi + 621 pp. Illus. \$6.25.

The importance of this book can perhaps best be appreciated by the frequency with which it will be compared to what has been up till now the "bible" of American linguistics—Leonard Bloomfield's *Language*, published in 1933. Bloomfield's influence on Hockett is so apparent that there is little point in trying to distinguish any major differences in approach between the two. On the other hand, too much has happened in the last 25 years for Hockett's book to be considered merely a restatement of an earlier position, although it is clearly in the same tradition.

The book "is intended for those col-

lege students who take an introductory course in linguistics," and in keeping with this general purpose many, but not all, of the controversies in modern linguistics have been avoided. A wide range of topics is adequately covered; the only omission of any consequence is the lack of a cohesive chapter on semantics. In Hockett's view, semantics and phonetics are peripheral to the central grammatical, phonological, and morphophonemic systems. The grammatical system comprises an inventory of meaningful units (like the *boy--s walk--ed* in *boys walked*) and the arrangements in which they occur; the phonological system comprises the inventory of contrasting sounds (like the /bojz/ in *boys*) and the arrangements in which they occur; and the morphophonemic system is the code of correspondence rules between the grammatical and phonological systems (like the rules by which the plural *-s* is represented by /z/ in *boys* but by /s/ in *cats*).

In addition to discussions of these areas, with examples from a variety of languages as well as detailed analyses of English, Hockett includes presentations of language acquisition and change, the relationship of speech to writing, the esthetic use of language, and so forth. The final chapter on "Man's place in nature" is a particularly clear characterization of the differences between human language and other systems of communication, which, together with the short introductory chapter on the relationship between linguistics and other disciplines, will prove of most interest and benefit to nonlinguists.

In spite of whatever objections may be raised, this textbook will surely prove to be an excellent introduction for the next generation of students of linguistics and will probably be more widely used as such than Bloomfield's book. However, if, by virtue of this success, Hockett somehow looms larger than Bloomfield, it is only because he is able to sit on Bloomfield's shoulders.

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Farbenbestimmung in der Biologie. Parts I-VIII. Jiri Paclt. Fischer, Jena, Germany, 1958. 76 pp. Illus.

Paclt, one of the most famous biologists in Czechoslovakia, gives in this small book a general review of the technology and terminology of the colors used in the biological sciences, with the intention of forming an international basis for the terminology of colors based on a system of comparison.

The first chapter deals with the possibility of color distinction and points out that, of the effectively existing colors, only a relatively small part can be differ-

entiated. In subsequent chapters the author demonstrates that a decimal system for the determination of colors is the most useful one, and he compares this decimal system, based on the studies of Pavlovsky, with the older systems used generally today. He gives the general and theoretical background on which a colorimetric system can be built up. The conclusion is that only a comparative system seems to be useful for biological purposes.

After a discussion of the history of the terminology of colors, the author tries to provide an international system, because no one system existing today is entirely adequate. The existing systems—especially the Munsell System, the Horticultural Colour Chart (of the British Colour Council), the Répertoire de Couleur (of Oberthür and Dauthenay), and the Code Universel des Couleurs (of Séguéy)—still have to be used, preferably in combination.

The most useful part for English-speaking people is the dictionary of colors, in six languages—German, English, French, Italian, Russian, and Spanish. The nearly complete bibliography will enable the student to use the original literature.

This book develops nothing entirely new, but it is still useful because of the newly proposed terminology and the dictionary of colors, in six languages.

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Doctor Squibb. The life and times of a rugged idealist. Lawrence G. Blochman. Simon and Schuster, New York, 1958. xii + 371 pp. Illus. \$5.

The founder of the pharmaceutical house originally called "E. R. Squibb, M.D." was reared a Philadelphia Quaker. He was born in 1819 and graduated from Jefferson Medical College in 1845, during the excitement of the Mexican War. Despite the opposition of his church, which meant much to him, he acted on his grandmother Squibb's counsel—"Thee has only to decide which thee would serve—God and thy conscience or the monthly meeting"—and joined the Navy. Ten years later, after much experience at sea, followed by the almost singlehanded establishment of a drug manufacturing and control unit at the Brooklyn Navy Yard, he left to enter private business. Through the rest of his long life his all-encompassing interest was the manufacture of drugs and their honest representation. Although no longer a practicing Quaker—in fact he had been expelled for joining the Navy—he was obviously deeply concerned with commercial misrepresenta-

tation of drugs and devoted to drug reform. In professional societies, legislative committees, and particularly in the pages of the *U.S. Pharmacopeia*, he was a prickly protagonist for proper standards and regulations.

This story of Squibb is a well-written study of a strong and independent personality, staunch against compromise—a characteristic of many of his Victorian contemporaries. He was against sin but wanted his full interest; he worked long hours and then wrote a full diary and was impatient when his wife was frivolous; he organized his family efficiently and was hurt when his sons had minds of their own. There was more than a little of the singleminded executive type so well drawn in *The Man in the Gray Flannel Suit* in the make-up of E. R. Squibb.

WINDSOR CUTTING

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Introduction to Meteorology. Sverre Petterssen. McGraw-Hill, New York, ed. 2, 1958. x + 327 pp. Illus. \$6.75.

This book is enjoyable to read and review. It is an elementary text on a discipline that is gradually coming into its own. And Petterssen is a master in telling the story of weather problems. Yet there is no sacrifice of accuracy in order to make things easy for the student. After a first run of 17 successful years, this second edition is thoroughly revised and brought up to date. The growth in subject matter is well reflected in the 91 added pages.

The book starts with a conventional review of the general structure of the atmosphere and of weather observations. Then the author takes us to the front of scientific endeavor in his treatment of mechanisms of cloud and precipitation formation. This includes a conservative statement on the artificial stimulation of precipitation.

The facts about the various events composing the weather—showers, thunderstorms, hail, tornadoes, and so forth—are well told and illustrated. The atmospheric wind systems, the air masses and fronts carried by them, and the cyclonic and anticyclonic eddies are discussed from the vantage point of one who has made major contributions in these areas. Petterssen is an expressive spokesman in these chapters for the Norwegian school of weather analysis, in which he grew up and whose triumphs he shared.

In the remainder of the work there has been a fortunate shift of emphasis from the first to the second edition. There is less material on weather maps and