

and who, in the absence of an established academic niche for the subject, have been crying in the wilderness of professional indifference. By way of contrast, the history of science and the history of medicine are recognized and active fields of study.

An enormous amount of material has been crammed into this book, and the thread of narrative is sometimes difficult to keep in sight. However, the very neglect of the field, which the author has been working to set aright, is an important part of the reason for this situation. The detailed monographic studies that are essential if anyone is to write a readable, well-knit, comprehensive history of engineering simply do not exist.

It is to be hoped that many scholars will discover through Finch's writing some of the possibilities of this fertile and exciting field of study, and that a mature and respected discipline of engineering history eventually will rise as a monument to his pioneering work.

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Immediate and Low Level Effects of Ionizing Radiations. A. A. Buzzati-Traverso, Ed. Taylor and Francis, London, 1960. xii + 381 pp. Illus. \$8.

This volume, the proceedings of a symposium on the effects of low-level irradiation which was held in Venice in June 1959, is a valuable continuation of the symposium volume on low-level irradiation edited by A. M. Brues and published by the American Association for the Advancement of Science (1959). The Venice presentations give important new information in this steadily growing field; both the papers and the discussions that follow are worthwhile reading. Space does not allow a detailed evaluation of the many aspects covered in the papers, but study of the volume can be highly recommended to those who are interested in the field.

The symposium was held under the joint sponsorship of UNESCO, the Comitato Nazionale per le Ricerche Nucleari of Italy, and the International Atomic Energy Agency.

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Social Change. H. Ian Hogbin. Watts, London, 1958; Humanities Press, New York, 1960. viii + 257 pp. Illus. \$4.50.

In this expanded version of the Josiah Mason lectures delivered several years ago at the University of Birmingham, Ian Hogbin, an Australian anthropologist, examines a variety of conditions inducing social change. The emphasis is upon historically observed changes now taking place among primitive peoples, with examples drawn from the anthropological literature and from the author's own field work among Pacific Island natives. As a contribution to a general theory of social change, which it makes some claim to being, the book is handicapped by the anecdotal method that chooses random examples rather than systematic and controlled comparisons. In addition, it suffers from the drawbacks of the British functionalist theory, a theory that has been traditionally of a nonhistorical nature.

The real merit of the book lies in its perceptive analysis of many instances of acculturation, each illustrating some important aspect of change. Hogbin's discussion includes such matters as the effects of a money economy upon kinship, native resistance to latrines, the complex linkages of sorcery to social structure, and the pitfalls of administrative meddling in this sensitive area. He notes the unexpected ways in which natives interpret cherished European doctrines. As a striking instance of social chain reaction, he narrates how a single item of western culture, the steel axe, transformed the life of an Australian tribe. The examples document the basic interrelatedness of social institutions, customs, and values. The conclusion is obvious: If change in a society is to be administered with regard for consequences, the society must be understood in its entirety.

Change, the author recognizes, is inevitable and every social order must face the prospect of extinction. With knowledge, better social orders may be planned. From the native point of view, however, our best intentions may seem arbitrary. As one Melanesian told Hogbin, "In olden days we behaved as our fathers did before us. The white man has come and tells us we must behave like his father."

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Nutrition animale. vol. 2, *Données générales.* Part 1, *Métabolismes et transits.* H. Le Bars, H. Simmonet, and R. Jacquot. Baillière, Paris, 1960. ii + 490 pp. Illus. NF. 50.

Part 1 of the second volume of this encyclopedic treatise on animal nutrition covers the metabolism of water and nutrients in the animal body. The broad coverage actually constitutes a comparative presentation of our present knowledge of the nutrition of higher animals including man. Herein lies the greatest value of the work and the reward for the serious student who has the patience and persistence to penetrate, under the guidance of the eminent authors, the difficult subject matter.

FRANCIS JOSEPH WEISS

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New Books

Mathematics, Physical Sciences, and Engineering

Air Research and Development Command, Geophysics Research Directorate. *Handbook of Geophysics.* Macmillan, New York, rev. ed., 1960. 697 pp. \$15. The *Handbook* was first published in 1957 for use by prime contractors of the Air Force; data obtained from satellite and rocket explorations, arctic expeditions, solar observations, and balloon flights were used in this revision.

Boley, Bruno A. and Jerome H. Weiner. *Theory of Thermal Stresses.* Wiley, New York, 1960. 602 pp. \$15.50. Chapters 1-4 cover the fundamentals of thermoelasticity; chapters 5-7 discuss the physical basis of the subject and methods of solving heat conduction boundary-value problems; chapters 8-13 cover practical aspects, mainly from the viewpoint of strength of materials; chapters 14-16 discuss the manner in which temperature effects can be included in inelasticity theory.

Bunshah, Bointan F., Ed. *Transactions of the Vacuum Metallurgy Conference, 1959.* New York Univ. Press, New York, 1960. 222 pp. \$7.50. Contains the papers presented during the conference sponsored by the Department of Metallurgical Engineering in cooperation with the Office of Special Service to Business and Industry of New York University, 1-3 June 1959.

Coy, Paul H. *Structural Analysis of "Unistrut" Space-Frame Roofs.* Part A, *Recommended Methods for Computation of Safe Roof Loads;* Part B, *Tables of Computed Factors to be Used in Safe Load Computations.* Univ. of Michigan Press, Ann Arbor, 1960. 267 pp.; 59 pp. 2 vols., \$18.

Davids, Norman, Ed. *High Speed Testing.* vol. 1. Interscience, New York, 1960. 119 pp. \$10. This symposium (held in December 1958), was the first in a series of symposia devoted entirely to high-speed