

Book Reviews

Culture in Crisis: A Study of the Hopi Indians.

Laura Thompson. New York: Harper, 1950. 221 pp. \$4.00.

This is a study of an American Indian tribe living under socially critical conditions. Many scientists participated in making the original observations and in analyzing them, but Dr. Thompson is wholly responsible for the analysis presented in this fascinating volume. The Hopi Indians of the Southwest and their communities are her subjects, but the principal subject of the book is the dynamics and effects of the white man's impact upon Hopi personality and Hopi social structure. Dr. Thompson gives a very clear account of what is known of the history of Hopi society and then describes Hopi society as it is today. The analysis of Hopi personality structure suggests that to the Hopi the world appears as a complex, balanced power system regulated by an inherent rhythmic principle. Everything that exists holds together in an interdependent relationship. Man, animals, plants, the elements, the supernatural powers, interact in an orderly rhythmic fashion, for the good of all. Man, however, has a certain measure of control over the world.

Introduce into a society living by such beliefs Menonite and Baptist missionaries with their doctrines of sin, together with the whole apparatus for producing a sense of guilt, and the disintegrating effects upon personality and ways of life become tragically inevitable. Add to this the hypocritical behavior of the U. S. government toward its Indian wards—of which Dr. Thompson writes objectively—and the picture becomes a sad one indeed. Someone once remarked that the trouble with the Red Indian is that he has been too much tied up in red tape. The truth is, unfortunately, much worse than that, and Dr. Thompson tells it clearly and frankly. The new Indian Service policy instituted in 1934 commits the government to a wiser and more humane policy, and Dr. Thompson gives a valuable account of the positive effects of this policy on Indian welfare.

Her analysis leads her to conclude that the core of the Hopi crisis is ideological. The acculturation process has thrown the basic ideological dynamic of the Hopi out of order. In her final chapter the author offers recommendations which, put into practice, would almost certainly help solve the Hopi problem. The analysis and the approach to the solution of the problems of culture in crisis made in this book present a scientific methodology by which similar problems may be approached wherever they may occur.

The late Benjamin Lee Whorf's brilliant analysis of the Hopi language forms a valuable addition to the volume.

M. F. ASHLEY MONTAGU

Department of Anthropology, Rutgers University

Dirichlet's Principle, Conformal Mapping, and Minimal Surfaces. R. Courant. New York: Interscience, 1950. 330 pp. \$4.50.

This is a brilliant exposition of the sphere of mathematics centered around Dirichlet's principle for surfaces, and it brings together many of the important developments in the theory since H. Weyl's classical work *Die Idee der Riemannschen Fläche*. Weyl's book marked the end of the period, beginning with Lord Kelvin in 1847, during which Dirichlet's principle was vigorously established for Riemann surfaces. Subsequent developments, strongly influenced by Weyl's treatment, have been in two directions: (a) generalization of the theory to higher manifolds by E. Cartan, Hodge, De Rham, Bochner, Weyl, and others; (b) generalization of Dirichlet's principle to the theory of minimal surfaces by Douglas, Rado, Courant, Morse, Shiffman, and others and its application to problems in the general theory of conformal mapping of surfaces.

The book, although concerned with developments of type (b), provides an excellent perspective for the understanding of other developments of a more abstract nature. As the author states in the preface, "It is written in a style which . . . expresses adequately the balance and tension between the individuality of mathematical objects and the generality of mathematical methods."

An appendix by M. Schiffer summarizes some recent developments in the theory of conformal mapping, with emphasis on the kernel function and variational methods.

The rich content of the book cannot be indicated by listing the various topics discussed.

D. C. SPENCER

*Department of Mathematics
Princeton University*

Scientific Russian: A Textbook for Classes and Self-Study. James W. Perry. New York: Interscience, 1950. 846 pp. \$7.50.

Modern languages contain within themselves subdivisions of the forms of expression generally used by scientific workers in their publications. Whether one agrees to the need for such subdivision, on the grounds of linguistic practices, the fact itself exists, and its existence is being continually perpetuated by the rather formalized mode of scientific writing. In most cases one is on fairly easy ground in comprehending a foreign language publication dealing with a scientific subject; relatively easy ground, that is, in comparison with the truly literary expression of the general literature, prose or fiction. The relative ease of the technical literature shows up exceptionally well in the Russian language, as Dr. Perry points out. Several years of close study would be needed by a

moderately serious student who tries to tackle the general Russian literature, with its many varied forms of expression, shaded meanings, idioms, and plain "slang." On the other hand, a period of a year should suffice for a fairly sound adaptation to scientific Russian.

Here is a welcome and sound addition to the available textbooks dealing with the Russian language. Points of grammar are well illustrated with numerous examples, and a liberal sprinkling of tables of the usual word forms is provided, along with a vocabulary of nominal size. The author points out that the truly phonetic nature of the language is frequently modified in actual speech and that the student cannot expect to "sound" like a Russian, unless a Russian-speaking colleague aids him in the process. However, the reviewer feels that Dr. Perry has done an excellent job of providing numerous pronunciation aids, of which the indication of accent placing is probably the most important.

The logical order of presentation used in the book must be commended, particularly the early stress on reading aloud; the usefulness of this device cannot be overemphasized in studying the Russian language.

In physical appearance the book is attractive, and the "open" appearance of the pages, with room for marginal notes, is welcome to many "scribblers" among us. The price is rather high, although not out of line with the current trend—particularly when the thoroughness of treatment is considered.

It is a minor fault of the book that the "dropped" letters of the prerevolutionary Russian are mentioned only briefly in the beginning. Many of the classical scientific works in Russian belong to the early days, and a student might encounter a bit of trouble in reading such material, after seeing only the examples of modern Russian in the book provided by Dr. Perry.

G. M. KOSLOPOFF

Department of Chemistry
Alabama Polytechnic Institute

Scientific Book Register

The Principles of Cloud-Chamber Technique. J. G. Wilson. New York: Cambridge Univ. Press, 1951. 131 pp. \$2.75.

Photometric Atlas of the Near Infra-Red Solar Spectrum, $\lambda 8465$ to $\lambda 25,242$. Orren C. Mohler *et al.* Ann Arbor, Mich.: Univ. Michigan Press, 1950. 124 pp. \$4.00.

Races & Cultures of India. Rev. ed. D. N. Majumdar. Lucknow, India: Universal Publishers, 1950. 215 pp. Rs. 8/8.

Quantum Mechanics. Alfred Landé. New York: Pitman, 1951. 307 pp. \$5.50.

The Practice of Sanitation. Edward S. Hopkins and Francis B. Elder. Baltimore, Md.: Williams & Wilkins, 1951. 423 pp. \$7.50.

Geography in the Twentieth Century. Griffith Taylor, Ed. New York: Philosophical Library; London: Methuen. 630 pp. \$8.75.

Natural and Synthetic High Polymers. 2nd ed. Kurt H. Meyer. New York-London: Interscience, 1950. 891 pp. \$15.00.

Experimental Physiology. With anatomical and mechanical illustrations and an appendix of technical data. Rev. ed. Maurice B. Visscher, Ernest B. Brown, and Nathan Lifson. Minneapolis, Minn.: Burgess, 1950. 126 pp. \$2.75.

The Nomogram: Theory and Practical Construction of Computation Charts. 4th ed. H. J. Allecock and J. Reginald Jones; revised by J. G. L. Michel. New York-London: Pitman, 1950. 238 pp. \$3.75.

TV and Other Receiving Antennas. Arnold B. Bailey. New York: Rider, 1950. 595 pp. \$6.00.

L'Ozone Atmosphérique. Charles Fabry. Paris, France: Centre National de la Recherche Scientifique, 1950. 278 pp.

Radiation Monitoring in Atomic Defense. Dwight E. Gray and John H. Martens. New York: Van Nostrand, 1951. 122 pp. \$2.00.

Big Hugh: The Father of Soil Conservation. Wellington Brink. New York: Macmillan, 1951. 167 pp. \$2.75.

Metabolic Interrelations. Transactions of the Second Conference, January 9–10, 1950. Edward C. Reifenshtein, Jr., Ed. New York: Josiah Macy, Jr. Foundation, 1950. 279 pp. \$3.95.

Applied Nuclear Physics. 2nd ed. Ernest C. Pollard and William L. Davidson. New York: Wiley; London: Chapman & Hall, 1951. 352 pp. \$5.00.

James Lind: Founder of Nautical Medicine. Louis H. Roddis. New York: Schuman, 1950. 177 pp. \$3.00.

Advances in Carbohydrate Chemistry, Vol. 5. Claude S. Hudson and Sidney M. Cantor, Eds. New York: Academic Press, 1950. 322 pp. \$6.80.

Biological Antioxidants. Transactions of the Fourth Conference, December 8–9, 1949. Cosmo G. Mackenzie, Ed. New York: Josiah Macy, Jr. Foundation, 1950. 181 pp. \$3.25.

The World of Science. 2nd ed. F. Sherwood Taylor. New York: Norton, 1950. 1,064 pp. \$7.50.

Vitamins and Hormones: Advances in Research and Applications, Vol. VIII. Robert S. Harris and Kenneth V. Thimann, Eds. New York: Academic Press, 1950. 342 pp. \$6.80.

A Laboratory Guide to the Anatomy of the Rabbit. E. Horne Craigie. Toronto, Canada: Univ. Toronto Press, 1951. 113 pp. \$2.75.

Proceedings of the International Statistical Conferences, Econometric Society, Vol. V. September 6–18, 1947, Washington, D. C. Dickson H. Leavens, Ed. Baltimore, Md.: International Statistical Conferences, care Monumental Printing Co., 1950. 340 pp.

The Smut Fungi. A Guide to the Literature, with Bibliography. George William Fischer. New York: Ronald Press, 1951. 387 pp. \$6.00.

Les Propriétés Optiques des Lames Minces Solides, XXIII. Colloque Internationaux du C.N.R.S., Marseille, 19–23 Avril 1949. Paris, France: Centre National de la Recherche Scientifique, 1950. 176 pp. 2,200 fr.

The Science of Health. 2nd ed. Florence L. Meredith. Philadelphia: Blakiston, 1951. 452 pp. \$3.75.