"scientific" standard, and none will, seemingly, unless it is a standard rooted in an empirical analysis of actual human behavior.

The preferential choices of humans behaving under conditions of uncertainty can, if other standards of adequate measurement are met, be taken as statements of value. While this is not the only value standard which might be employed, the defensibility of the concept is substantial. Certainly, the careful scrutiny Churchman devotes to this central idea is well worth the significant fraction of the book it occupies.

Equally intricately worked out are the concluding sections of the book, in which Churchman applies the same rigorous empiricism to the value standards of groups and in which he applies value theory to industrial accounting practices and to science itself.

Churchman is explicit: the book is programmatic. This is all to the good, for we may yet hear more of certain subjects (such as his "psychologistics") which seem tantalizing. It is good, too, in that by holding open the theory of science and its values, we may also hear from the theoreticians of differing views who can give this book the serious consideration it deserves.

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Das Leben des Szelider Sees. Limnologische Studien an Einem Natriumkarbonat-Chloridhaltigen See des Ungarischen Alfold. Ernö Donászy. Akademiai Kiadó, Budapest, Hungary, 1959. 425 pp. Illus. Plates + soil map (in color).

This book is a well-organized and well-documented inventory of the limnological characteristics of a shallow Hungarian lake whose waters contain unusually large quantities of sodium carbonate and sodium chloride. Incorporated are contributions by a number of collaborators working in various Hungarian laboratories. The chemical constituents of the lake are recorded in detailed figures and tables. In addition, there are drawings of diatoms and algae and quantitative data on phytoplankton, large aquatic plants, entomostraca, and rotifers.

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New Books

Mathematics, Physical Sciences, and Engineering

Advances in Chemical Physics. vol. 3. I. Prigogine, Ed. Interscience, New York, 1961. 381 pp. Illus. $11.50.

Advances in Electronics and Electron Physics. vol. 13. L. Marton, Ed. Academic Press, New York, 1961. 464 pp. Illus. $13.50.

Algebra. An elementary text-book for the higher classes of secondary schools and for colleges. pts. 1 and 2. G. Chrystal. 595 pp; 640 pp. Chelsea, New York, ed. 6, 1959. Illus. $2.95 each.

Aristotle's Physics. Newly translated. Richard Hope. Univ. of Nebraska Press, Lincoln, 1961. 254 pp. $6.

Atomic Physics Today. Otto R. Frisch. Basic Books, New York, 1961. 562 pp. Illus. $4.50. A volume in the Science and Discovery Series, intended for high school students and general readers.

The Behavior of Plasticizers. Ibert Mellan. Pergamon, New York, 1961. 273 pp. Illus. $8.

Calculus and Analytic Geometry. Robert C. Fisher and Allen D. Ziebur. Prentice-Hall, Englewood Cliffs, N.J., 1961. 781 pp. Illus. Trade, $12.65; text, $9.50.

A Collection of Tables and Nomograms for the Processing of Observations Made on Artificial Earth Satellites. I. D. Zhongolovich and V. M. Amelin. Translated from the Russian by Prasenjit Basu. Pergamon, New York, 1961. 200 pp. $15.

College Chemistry. A systematic approach. Harry H. Sisler, Calvin A. Vander Werf, and Arthur W. Davidson. Macmillan, New York, ed. 2, 1961. 719 pp. Illus. $7.50.

Directory of Industrial Research Laboratories in New York State. New York State Department of Commerce, Albany, 1960. 302 pp. Lists 1008 laboratories, including 628 which accept work from outside organizations and 31 in educational institutions and four other agencies.

Discourses on Bodies in Water. Galileo Galilei. Translated by Thomas Salusbury. Introduction and notes by Stillman Drake. Univ. of Illinois Press, Urbana, 1960. 115 pp. Illus. $5. A facsimile, except for page numbering, of Salusbury's original translation, printed in London by William Leybourn (1663).

Elements of Nuclear Engineering. Glenn Murphy. Wiley, New York, 1961. 226 pp. Illus. $7.50.

The Fermi Surface. W. A. Harrison and M. B. Webb, Eds. Wiley, New York, 1960. 371 pp. Illus. $10. Proceedings of the international conference held at Cooperstown, N.Y., in August 1960, and attended by 90 scientists from seven countries.

Fracture Systems and Tectonic Elements of the Colorado Plateau. Publ. in Geology, No. 6. Vincent C. Kelley and N. James Clinton. Univ. of New Mexico Press, Albuquerque, 1960. 104 pp. + 3 maps. $2.75.

Gas Chromatography, 1960. R. P. W. Scott, Ed. Butterworths, Washington, D.C., 1960. 483 pp. Illus. $17.50. Proceedings of the third symposium organized by the Society of Analytical Chemistry and the Institute of Petroleum, Edinburgh, June 1960.

The International Dictionary of Physics and Electronics. Walter C. Michels, Editor-in-Chief. Van Nostrand, New York, ed. 2, 1961. 1355 pp. Illus. $27.85.

An Introduction to the Theory of Vibrating Systems. W. G. Bickley and A. Talbot. Oxford Univ. Press, New York, 1961. 252 pp. Illus. $4.80.

Magneto-Fluid Dynamics. Publ. 829. F. N. Frenkiel and W. R. Sears, Eds. Natl. Acad. of Sciences–Natl. Research Council, Washington, D.C., 1961 (reprinted from *Reviews of Modern Physics* **32**, No. 4, pp. 693–1032). $4.

Mineral Metabolism. An advanced treatise. vol. 1, pt. B, *Principles, Processes, and Systems.* C. L. Comar and Felix Bronner, Eds. Academic Press, New York, 1961. 552 pp. $14.50.

Modern Aspects of the Vitreous State. J. D. Mackenzie, Ed. Butterworths, Washington, D.C., 1960. 234 pp. Illus. $9.50.

Modern Factor Analysis. Harry H. Harman. Univ. of Chicago Press, Chicago, Ill., 1961. 485 pp. Illus. $10.

Name Index of Organic Reactions. J. E. Gowan and T. S. Wheeler. Interscience, New York, ed. 2, 1960. 301 pp. $8.50. A compilation of 739 reactions referred to by the name of chemists in the current literature and textbooks; original edition was published by the Society of Chemical Industry (1950).

Nuclear Proplusion. M. W. Thring, Ed. Butterworths, Washington, D.C., 1960. 300 pp. Illus. $9.50.

Organo-Metallic Compounds. G. E. Coates. Methuen, London; Wiley, New York, ed. 2, 1960. 379 pp. Illus. $7.50.

Planets, Stars, and Galaxies. An introduction to astronomy. Stuart J. Inglis. Wiley, New York, 1961. 484 pp. Illus. $6.75.

Power Reactor Technology. James K. Pickard *et al.*, Eds. Van Nostrand, Princeton, N.J., 1961. 426 pp. Illus. $11.25.

The Precambrian Geology and Geochronology of Minnesota. Bulletin 41. Samuel S. Goldich, Alfred O. Nier, Halfdan Baadsgaard, John H. Hoffman, and Harold W. Kruegar. Univ. of Minnesota Press, Minneapolis, 1961. 214 pp. + maps. Illus. $4.

Specifications and Criteria for Biochemical Compounds. Publ. 719. Division of Chemistry and Chemical Technology. Natl. Acad. of Sciences–Natl. Research Council, Washington, D.C., 1960. $1 (loose leaf). This publication, covering 113 biochemicals, resulted from a 5-year study of ways to improve the quality of chemicals available for biochemical research by establishing criteria, standards, or specifications which can be used for describing such chemicals, particularly with regard to purity. Supplements will be issued, probably annually.

Theories of Engineering Experimentation. Hilbert Schenck, Jr. McGraw-Hill, New York, 1961. 249 pp. Illus. $7.

Theory of Formal Systems. Raymond M. Smullyan. Princeton Univ. Press, Princeton, N.J., 1961. 154 pp. Paper, $3.

Unified Calculus and Analytic Geometry. Earl D. Rainville. Macmillan, New York, 1961. 742 pp. Illus. $8.50.