dex and a collection of problems, but only Alexander and Freund include answers (and then for the odd-numbered problems only). Wilks' book is the only one that does not contain some of the more common statistical tables. Alexander has an appendix on matrices, Freund has an appendix on sums and products, and Birnbaum has two appendices—one on some elementary concepts of the theory of sets and one on the inequalities of Schwarz and Cauchy. Alexander has a bibliography of 15 items, and comments thereon, and Wilks gives 19 pages of references and author index. Each of these books, commensurate with its general level of presentation, introduces probability in terms of set and measure theory. Alexander and Freund do not discuss partial or multiple correlation. I do not propose to undertake a detailed review of the contents of these books, but it is my opinion that each of the authors has reasonably well accomplished his indicated objectives and that the books may well serve as suitable texts for use at the three levels I have indicated (junior, senior, and graduate), although a prior introduction to probability and mathematical statistics would also be useful to the reader of Wilks' book. Freund is a good and experienced textbook writer.

I found misprints, errors, and questionable exposition in each of the four books, but not to such an extent as to degrade their utility and I do not propose to pick at these in detail. I do wonder why Alexander and Birnbaum omitted consideration of factorial moments and their generating function, which are especially convenient in the study of discrete distributions, and I am disappointed by the minimal treatment accorded by these authors to the analysis of categorical data in the form of three-way, or higher order, contingency tables.

Wilks' book is certainly one that will be a must for the personal library of every serious statistician. It is a thoroughly up-to-date book that can well serve as the textbook for a two-year comprehensive course in advanced mathematical statistics. Particularly good is the breakdown between parametric and nonparametric estimation and between tests of parametric and nonparametric statistical hypotheses. It is my opinion, based on classroom experience, that Wilks' exposition would have been improved had he used matrix notation more widely throughout his book, where applicable. In view of the numerous abbreviations and notational symbolism introduced in the more than 600 pages of his book, an index or summary of abbreviations and notations would be very helpful to the reader. I hope that Wilks will consider these last items for the next edition of his book.

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New Books

General

After a Hundred Years. The yearbook of agriculture, 1962. U.S. Department of Agriculture, Washington, D.C., 1962 (order from Superintendent of Documents, GPO, Washington, D.C.). 703 pp. Illus. $3.

Careers in Astronautics and Rocketry. Training and opportunities in the space and missile fields. Carsbie C. Adams and Wernher von Braun. McGraw-Hill, New York, 1962. 267 pp. Plates. $6.95.

Il Chimico Scettico. Robert Boyle. Boringhieri, Torino, Italy, 1962. 319 pp. Paper.

La Cosmologie de Giordano Bruno. Paul-Henri Michel. Hermann, Paris, 1962. 348 pp. Paper, NF. 15.

The Department of Scientific and Industrial Research. vol. 9, New Whitehall Series. Sir Harry Melville. Oxford Univ. Press, New York, 1962. 200 pp. $4.

The Joyous Cosmology. Adventures in the chemistry of consciousness. Alan W. Watts. Pantheon, New York, 1962. 116 pp. Illus. $5.

The Liberal Papers. James Roosevelt, Ed. Quadrangle Books, Chicago, 1962. 354 pp. $5.

Miracle Drugs and the New Age of Medicine. Fred Reinfeld. Sterling, New York, ed. 2, 1962. 126 pp. Illus. Plates. $3.95.

Power Relations within the Chinese Communist Movement, 1930–1934. A study of documents. Tso-Liang Hsiao. Univ. of Washington Press, Seattle, 1961. 414 pp. $7.50.

Scientific Method. Optimizing applied research decisions. Russell L. Ackoff. Wiley, New York, 1962. 476 pp. Illus. $10.25.

Socialized Medicine in England and Wales. The National Health Service, 1948–1961. Almont Lindsey. Univ. of North Carolina Press, Chapel Hill, 1962. 574 pp. $8.50.

Stars, Men, and Atoms. Heinz Haber. Golden Press, New York, 1962. 189 pp. Illus. $3.99.

A Treasury of World Science. Dagobert D. Runes, Ed. Philosophical Library, New York, 1962. 999 pp. Illus. Plates. $15.

Undergraduate Education in Foreign Affairs. Percy W. Bidwell. Columbia Univ. Press, New York, 1962. 223 pp. Paper, $5.

Mathematics, Physical Sciences, and Engineering

Advances in Astronomy and Astrophysics. vol. 1. Zdeněk Kopal, Ed. Academic Press, New York, 1962. 376 pp. Illus. $10.

Analytic Geometry. A vector approach. Charles Wexler. Addison-Wesley, Reading, Mass., 1962. 301 pp. Illus. $6.

Asphalts and Allied Substances. Their occurrence, modes of production, uses in the arts, and methods of testing. vol. 3, *Manufactured Products*. Herbert Abraham. Van Nostrand, Princeton, N.J., ed. 6, 1962. 980 pp. Illus. $25.

Catalysis by Metals. G. C. Bond. Academic Press, New York, 1962. 528 pp. Illus. $15.50.

Communications Satellites. Proceedings of a symposium held in London, May 1961, organized by the British Interplanetary Society. L. J. Carter, Ed. Academic Press, New York, 1962. 211 pp. Illus. Plates. $7.

Computer Basics. vol. 6, *Solid State Computer Circuits*. Sams, Indianapolis, Ind., 1962. 223 pp. Illus. Paper, $4.95.

Elements of Physics. D. Lee Baker, Raymond B. Brownlee, and Robert W. Fuller. Revised by Paul J. Boylan. Allyn and Bacon, Boston, 1962. 691 pp. Illus.

Fundamental Problems in Statistical Mechanics. Proceedings of the International Summer Course in Science, arranged by the Netherlands Universities Foundation for International Co-operation, August 1961. Compiled by E. G. D. Cohen. North-Holland, Amsterdam; Interscience, New York, 1962. 261 pp. Illus. $7.50.

Hydroboration. Herbert C. Brown. Benjamin, New York, 1962. 303 pp. Illus. $10.

Introduction to Molecular Spectroscopy. Gordon M. Barrow. McGraw-Hill, New York, 1962. 331 pp. Illus. $10.75.

An **Introduction to the Theory of Newtonian Attraction**. A. S. Ramsey. Cambridge Univ. Press, New York, 1940 (reprint, 1961). 193 pp. Illus. Paper, $1.95.

Lectures on Modular Forms. No. 48, *Annals of Mathematical Studies*. R. C. Gunning. Notes by Armand Brumer. Princeton Univ. Press, Princeton, N.J., 1962. 94 pp. Paper, $2.75.

The Mainstream of Physics. Arthur Beiser. Addison-Wesley, Reading, Mass., 1962. 480 pp. Illus. $9.75.

Mathematical Theory of Sedimentation Analysis. vol. 11 of Physical Chemistry, A Series of Monographs. H. Fujita. Academic Press, New York, 1962. 327 pp. Illus. $11.

Momentum, Heat, and Mass Transfer. C. O. Bennett and J. E. Myers. McGraw-Hill, New York, 1962. 709 pp. Illus. $13.50.

Physical Chemistry. Eric Hutchinson. Saunders, Philadelphia, 1962. 657 pp. Illus.

Physics of the Nucleus. M. A. Preston. Addison-Wesley, Reading, Mass., 1962. 671 pp. Illus. $15.

A Short Textbook of Colloid Chemistry. B. Jirgensons and M. E. Straumanis. Macmillan, New York, ed. 2, 1962. 516 pp. Illus. $10.75.