achievements, the concern for and understanding of mankind, and the subtle sense of humor, all of which characterized Kaj Linderstrøm-Lang, are aptly demonstrated in this collection. It is truly a fitting tribute and memorial.

JAMES F. RIORDAN
Biophysics Research Laboratory, Harvard Medical School, and Peter Bent Brigham Hospital, Boston, Massachusetts

Statistics

Elements of Mathematical Statistics. J. F. Ratcliffe. Oxford University Press, New York, 1962. x + 202 pp. Illus. $4.

If the title of a book is *Elements of Mathematical Statistics*, and if it is published by Oxford University Press in 1962, then one expects to find in it a reasonable mathematical development of a certain amount of statistical inference. However, this book does *not* contain a mathematical development of the subject. It is true that a few theorems are stated. Some of them concern notions that the author has not previously defined or discussed; this is particularly true with respect to theorems II, III, and IV on page 21; theorem I on page 22, and theorem IV on page 78. Theorem II on page 23 is true, but it says absolutely nothing. Three theorems are not quite true as stated: II on page 72, III on page 74, and the theorem on page 157. The author seems to be oblivious to the fact that one should define a symbol or a technical term before using it; yet, without giving any previous definitions, he uses the following symbols and terms: *skew*, ${}^nP_r$, ${}^nC_r$, *independence, expectation, standard deviation, best* (with respect to estimates), and $\bar{x}$. He does state some definitions, but several of them might be called incorrect. For example, on page 79, an unbiased estimate of a parameter is essentially defined as a statistic for which the parameter is a median.

In my opinion this book is not suitable for use as a textbook, either for classroom courses or for individual study. Even some of the applications are doubtful. In addition, the quality of the expository writing exhibited in this book is very poor.

HOWARD G. TUCKER
Department of Mathematics, University of California, Riverside

New Books

Mathematics, Physical Sciences, and Engineering

Adsorption and Collective Paramagnetism. Pierce W. Selwood, Academic Press, New York, 1962. 198 pp. Illus. $7.50.

Advanced Engineering Mathematics. Erwin Kreyszig. Wiley, New York, 1962. 873 pp. Illus. $10.50.

Applied Cryogenic Engineering. R. W. Vance and W. M. Duke, Eds. Wiley, New York, 1962. 528 pp. Illus. $17.50.

Astronautics in the Sixties. Kenneth W. Gatland. Wiley, New York, 1962. 388 pp. Illus. $8.25.

Basic Problems in Geotectonics. V. V. Beloussov. Translated from the Russian second edition (1954) by Paul T. Broneer. John C. Maxwell, Ed. McGraw-Hill, New York, 1962, 832 pp. Illus. $14.

Chemical Reaction Engineering. An introduction to the design of chemical reactors. Octave Levenspiel. Wiley, New York, 1962. 516 pp. Illus. $10.75.

Contributions to the Theory of Estimation from Grouped and Partially Grouped Samples. Gunnar Kulldorff. Wiley, New York, 1962. 144 pp. Illus. $5.

Eddington's Statistical Theory. C. W. Kilmister and B. O. J. Tupper. Oxford Univ. Press, New York, 1962. 125 pp. Illus. $3.40.

Eléments de Thermodynamique Statistique. A. Pacault. Masson, Paris, 1963. 373 pp. Illus. NF. 46.

Experimental Physical Chemistry. W. G. Palmer. Cambridge Univ. Press, New York, ed. 2, 1962. 333 pp. Illus. $5.50.

Ferroelectric Crystals. Franco Jona and G. Shirane. Pergamon, London; Macmillan, New York, 1962. 412 pp. Illus. $15.

Fourier Analysis on Groups. Walter Rudin. Interscience (Wiley), New York, 1962. 294 pp. Illus. $9.50.

Fundamentals of Acoustics. Lawrence E. Kinsler and Austin R. Frey. Wiley, New York, ed. 2, 1962. 531 pp. Illus. $10.75.

General Topology and Its Relations to Modern Analysis and Algebra. Proceedings of a symposium held at Prague, Czechoslovakia (1961). J. Novak, Ed. Academic Press, New York, 1962. 363 pp. Illus. $14.

Geodesy. G. Bomford. Oxford Univ. Press, New York, ed. 2, 1962. 577 pp. Illus. $14.40.

Introduction to Electron Beam Technology. Robert Bakish, Ed. Wiley, New York, 1962. 554 pp. Illus. $14.

Introduction to Mathematical Statistics. Paul G. Hoel. Wiley, New York, ed. 3, 1962. 439 pp. Illus. $6.95.

An Introduction to Phase-Integral Methods. J. Heading. Methuen, London; Wiley, New York, 1962. 168 pp. Illus. $4.50.

The Laplace Transform. An introduction. Earl D. Rainville. Macmillan, New York, 1963. 112 pp. Illus. Paper, $2.50.

L'Energie Thermonucléaire. Claude Étiévant. Presses Universitaires de France, Paris, 1962. 126 pp. Illus.

Matrix Iterative Analysis. Richard S. Varga. Prentice-Hall, Englewood Cliffs, N.J., 1962. 335 pp. Illus. Trade ed., $10; text ed., $7.50.

Matrix Methods for Engineering. Louis A. Pipes. Prentice-Hall, Englewood Cliffs, N.J., 1963. 443 pp. Illus. Trade ed., $13; text ed., $9.75.

Minerals in the Infrared. A critical bibliography. R. P. J. Lyon. Stanford Research Inst., Menlo Park, Calif., 1962. 88 pp. Illus. Paper.

Open Hearth Furnace Design. A. S. Lychagin. Translated from the Russian edition (Moscow, 1958) by L. C. Ronson. Butterworth, Washington, D.C., 1962. 256 pp. Illus. $18.50.

Optical Masers. suppl. 1, *Applied Optics.* John N. Howard, Ed. Optical Soc. of America, Washington, D.C., 1962. 168 pp. Illus. Paper, $5.

Physics. Experiments and laboratory procedures. Compiled by Richard G. Levine. Schur, New York, 1962. 246 pp. Illus. Paper, $2.50.

Plasma Hydromagnetics. Papers presented at the sixth annual Lockheed symposium, Palo Alto, Calif. (1961). Daniel Bershader. Stanford Univ. Press, Stanford, Calif., 1962. 156 pp. Illus. $4.50.

Programming and Utilization of Research Reactors. vol. 2. Proceedings of a symposium held at Vienna, Austria (1961). Published for the International Atomic Energy Agency by Academic Press, New York, 1962. 546 pp. Illus. $15.

Projective and Euclidean Geometry. W. T. Fishback. Wiley, New York, 1962. 254 pp. Illus. $7.50.

Pyridine and Its Derivatives. pt. 3. Erwin Klingsberg, Ed. Interscience (Wiley), New York, 1962. 924 pp. Illus. $65.

Qualitative Anion-Cation Analysis. An interpretative laboratory text of semimicro procedure in basic college chemistry. Emil J. Margolis. Wiley, New York, 1962. 310 pp. Illus. $5.

Quantum Mechanics. vol. 1, *Old Quantum Theory.* Sin-Itiro Tomonaga. Translated from the Japanese by Koshiba. North-Holland, Amsterdam; Interscience (Wiley), New York, 1962. 329 pp. Illus. $12.50.

Radio Wave Propagation and the Ionosphere. Ya. L. Al'pert. Translated from the Russian edition (Moscow, 1960). Consultants Bureau, New York, 1963. 404 pp. Illus. $22.50.

Reactions of Organic Compounds. A textbook for the advanced student. Reynold C. Fuson. Wiley, New York, 1962. 773 pp. Illus. $12.95.

Reactor Handbook. vol. 3, pt. A, *Physics.* H. Soodak, Ed. Interscience (Wiley), New York, ed. 2, 1962. 326 pp. Illus. $10.75.

Renewal Theory. D. R. Cox. Methuen, London; Wiley, New York, 1962. 151 pp. Illus. $4.50.

Space Logistics Engineering. Kenneth Brown and Lawrence D. Ely, Eds. Wiley, New York, 1962. 635 pp. Illus. $16.95.

Structural Geology of North America. A. J. Eardley. Harper and Row, New York, ed. 2, 1962. 761 pp. Illus. $21.50.

The System of Mineralogy of James Dwight Dana and Edward Salisbury Dana, Yale University, 1837–1892. vol. 3, *Silica Materials.* Clifford Frondel. Wiley, New York, ed. 7, 1962. 346 pp. Illus. $7.95.

X-Ray Optics. The diffraction of x-rays by finite and imperfect crystals. A. J. C. Wilson. Methuen, London; Wiley, New York, ed. 2, 1962. 154 pp. Illus. $4.50.