

## BOOK REVIEW

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J. ARTHUR GREENWOOD AND H. O. HARTLEY, *Guide to Tables in Mathematical Statistics*, Princeton University Press, Princeton, New Jersey, 1962. \$8.50  
lxii + 1014 pp.

Review by H. A. DAVID

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This massive but manageable volume has been long in preparation and represents a staggering amount of work by the authors, with some help from graduate students and other statisticians. Throughout more than twenty years it has been sponsored by the National Academy of Sciences—National Research Council.

Descriptions of tables begin with those very broadly based on the standard distributions: Normal,  $\chi^2$ , Poisson, incomplete  $\Gamma$  and  $B$  functions, binomial,  $t$ ,  $F$ , and various discrete distributions. There follow sections on likelihood and other statistics; on correlation, order statistics, non-parametric tests; on frequency curves, moments, fitting of curves, variate transformations, and control charts. Special features include a list of tables of random samples and a long index of tables for the design of experiments. A section referring to selected mathematical tables likely to be of value to statisticians completes the main body of the book. Appendix I is a supplement covering recent publications and some earlier omissions. Appendix II gives the contents of 16 books of tables, mainly statistical, including the sizeable collection of Vianelli (1959). Finally, there are extensive author and subject indexes. The only wholesale exclusions are tables relating to queueing theory and tables of the *results* of random sampling experiments.

The authors were to some extent influenced by the first edition of "An Index of Mathematical Tables" by Fletcher, Miller, and Rosenhead (FMR). In the section on mathematical tables the numbering allows easy reference to FMR for further details. When one-line descriptions are possible, Greenwood and Hartley, like FMR, give information about number of decimals or figures; the function tabled, if the article is slightly heterogeneous; interval and range of argument; facilities for interpolation, if any; author, date, etc. Of course, FMR even in its second much enlarged edition (1962, with Comrie as fourth co-author) deals only with the more basic statistical tables, and then very concisely. More important, FMR is an index, whereas the book under review is rightly called a guide. For easy use statistical tables often require much explanatory material, and this is provided in an unhurried style by abstracts of a large number of papers or by introductory matter at the beginning of each chapter. The abstracts are in the manner of *Mathematical Tables and Other Aids to Computation*