

8[G, Z].—FRANZ E. HOHN, *Applied Boolean Algebra, An Elementary Introduction*, The Macmillan Company, New York, 1960, xx + 139 p. \$2.50 (paperback, offset print).

The author gives as much information as it seems possible to include conveniently in a text of this length starting with the veriest elements concerning the use of Boolean algebra in the design of switching circuits—especially for digital computers.

Examples of engineering applications are given, but no complete design of a very extensive arithmetic unit is undertaken. Hence, the ultimate dependence of the designers of computers on Boolean algebra is not completely illustrated, although it is strongly and correctly implied.

The crux of any applications of Boolean algebra to the design of switching circuits lies in computational schemes for writing fairly efficient statements of Boolean propositions. This problem is faced by the author, but only to an extent which permits the reader (and problem worker) to understand the nature of the difficulties which are encountered and some of the procedures which promise to be helpful. In this regard the pamphlet is no less informative than most of the other textbook material available, but additional reference to computational efforts would have been welcome.

The electrical elements to be used are described abstractly in a reasonable way, and altogether the presentation is self-contained, lucid, and reasonably illustrated by problems. No sophistication is required in the reader except for motivation.

Attention is not restricted to circuit design, and the standard applications of Boolean algebra are treated to an extent which is indicated in the chapter headings listed below:

Introduction

Boolean Algebra as a Model of Combinational Relay Circuitry

Boolean Algebra as a Model of Propositional Logic

The Boolean Algebra of the Subsets of a Set

The Minimization Problem

The Binary System of Numeration (Appendix I)

Semiconductor Logic Elements (Appendix II)

It would have been helpful if the author had included various alternate notations. He uses Λ for "or" and no symbol for "and." A short table of notations would be helpful to the neophyte, for not all authors have the thoughtfulness to describe their notation. The bibliography is not extensive.

The printing is by photographic offset process from typed copy, and there was a considerable amount of smearing and a number of ghost images in the review copy. However, these defects did not make reading seriously difficult.

This pamphlet should be a handy introduction to Boolean algebra for many users and a useful adjunct to the texts for several courses which might be offered in colleges.

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9 [K].—B. M. BENNETT & P. HSU, *Significance Tests in a 2×2 Contingency Table: Extension of Finney-Latscha Tables*, July 1960. Deposited in UMT File.

In testing the significance of deviations from proportionality in a 2×2 con-

tingency table

	With Attribute	Without Attribute	Total
Series I	a	$A - a$	A
Series II	b	$B - b$	B
Total	r	$N - r$	N

with fixed marginal totals $A \geq B$, and $a/A \geq b/B$, Finney (1948, *Biometrika* 35, 145) supplied the exact probabilities and the significant values of b at levels .05, .025, .01, .005, respectively for $A = 3(1) 15$. An extension of the same table for $A = 16(1) 20$ was prepared by Latscha (1953, *Biometrika*, 40, 74). The present tables further extend the exact probabilities (4 decimal places) to the case: $A = 21(1) 25$ and the significant b values at the four levels of the Finney-Latscha tables.

AUTHORS' SUMMARY

10[K].—MORDECAI EZEKIEL & KARL A. FOX, *Methods of Correlation and Regression Analysis*, 3rd edition, John Wiley & Sons, Inc., New York, 1959, xv + 548 p., 24 cm. Price \$10.95.

It is very pleasing to see that Dr. Ezekiel's well-known text, *Methods of Correlation Analysis*, has been modernized. The older excellent book, which for many years stood alone in the desert of statistical literature, has now been joined by a growing array of fine statistical text material. Professor Fox was clearly a wise choice for Dr. Ezekiel to make for the co-author of the present edition.

This book is aimed mainly at the non-mathematical reader, in that algebraic and computational methods are stressed. There is also a wealth of practical material drawn from applied research. However, the mathematical statistician will also find much of great value; for example, the use of digital computers for data analysis is something which not all statisticians are yet well aware of.

In general, the treatment of regression and correlation is quite comprehensive, and results from the recent theoretical literature have been utilized throughout the book. As an example of this point, mention may be made of the inclusion of material dealing with regression and the analysis of variance, time series and errors, and the fitting of simultaneous relations.

The book is divided into seven main sections, with twenty-six chapters in all. The main sections are:

1. Introductory Concepts
2. Simple Regression, Linear and Curvilinear
3. Multiple Linear Regressions
4. Multiple Curvilinear Regressions
5. Significance of Correlation and Regression Results
6. Miscellaneous Special Regression Methods
7. Uses and Philosophy of Correlation and Regression Analysis

There are also three appendices, providing a glossary and important equations, methods of computation, and some technical notes. The inclusion of an author index is also a commendable feature.

Those working in the field of economics, agriculture, and business statistics will find this text of much value, since a good deal of the material is slanted toward