

*Statistical Method.* By Truman L. Kelley. New York, The Macmillan Company, 1923. xi + 390 pp.

There is throughout this book such a close coordination between the theoretical developments and the practical applications as to make it fairly obvious that the mathematical problems were suggested largely by the work of the author on practical problems of statistics. The method of the book is inductive, starting with quantitative data to be described, and developing the appropriate mathematical methods for the suitable description and elucidation of various kinds of data. The book seems remarkable with respect to the large number of topics treated in the given space. This seems to have been made possible in part by using in the earlier parts of the text a good many concepts whose meanings are developed later. In general, this plan involves considerable departure from logical sequence, but the method is made practicable by the use of forward references.

The first five chapters of the book together with Chapter VIII on correlation are suitable reading for the beginning student with but little knowledge of mathematics. In these chapters elementary statistical methods are explained for the benefit of biologists, economists, educators, psychologists and others who use statistical data in their work. Moreover the treatment is so well illustrated by concrete examples as to make an appeal to those who have data to analyze, and the book will tend to promote a higher standard of statistical practice in this country. While the beginner will thus find the book of interest, a large part of the book is planned for the advanced student, and he will find here a wealth of material for his purposes, whether his main interest be in the theory of statistics or in applications to fields such as economics, biology, psychology or education.

The book presents a good many new formulas and adaptations of known formulas to particular purposes. In the preface the author expresses the very commendable view that he can see "no value except at times a slightly greater ease of manipulation, in using a measure whose probable error cannot be calculated if one with a known probable error and serving the same purpose exists." In harmony with this view the book gives a large number of determinations of probable errors. The determinations of these probable errors was surely a very difficult undertaking on the part of the author and he should be complimented on his courage. The author requests the critical analysis by fellow statisticians of his determinations of probable errors, and "such charity in reporting shortcomings as may be due one who has acted upon the policy that as shrewd an estimate as possible of the probable error of a statistical constant is better than no estimate at all." While there is much to commend this attitude in discussing applied