

Statistical Analysis. By Edmund E. Day. New York, Macmillan, 1925. xxvii+459 pp.

Statistical Analysis is one of a number of recent excellent treatises on statistical methods written by professors of economics or statistics. These books, which include Mill's *Statistical Methods*, Jerome's *Statistical Method*, and Chaddock's *Principle and Methods of Statistics* and perhaps others that have not come to my notice, mark an advance over the older books. The new books are in general larger and great pains have been taken to make the pages pleasing to the eye, as well as to present simply and clearly the fundamentals of the subject. While not professing to enter into mathematical intricacies, they nevertheless increase somewhat the mathematical content offered in a first course in statistics to students of economics. And they give in extremely attractive form that groundwork of statistics which is above all essential. They do not contain as much mathematics as Gavett's *First Course in Statistical Method*, Kelley's *Statistical Method*, or Forsyth's *Mathematical Analysis of Statistics*.

Professor Day is Professor of Economics and Dean of the School of Business Administration at the University of Michigan. In *Statistical Analysis* his chief interest lies in the analysis and interpretation of statistical data. The collection and tabulation of data is treated in appendices. In an appendix, also, is the report of the Joint Committee on Standards for Graphic Presentation. Graphical representation is, indeed, regarded as a useful adjunct, and is used freely throughout the text; but it is not treated as an end in itself. The technique and manipulation of figures is also regarded as secondary. Nevertheless, complete forms are exhibited—including, for example, the calculation of the correlation coefficient, singly and jointly with the correlation ratio; marked—"Source: A. R. Crathorne, 'Calculation of the Correlation Ratio,' JOURNAL OF AMERICAN STATISTICAL ASSOCIATION, Sept., 1922, pp. 394-396." Professor Day regards statistics as primarily a form of inductive logic in which all data bearing upon a problem must be given careful consideration, and in which quantitative results furnish valuable but not infallible or conclusive evidence.

The topics include classification, frequency, spatial, and temporal distributions, averages, variability, skewness, correlation coefficient and ratio, regression lines, correlation from ranks, time series with increments and rates of change, secular trend, seasonal variation, cyclical and irregular fluctuations, lag, and index numbers. In the appendix are tables of logarithms, squares, square roots, and reciprocals, and the relationship between r and ρ , a list of general references, and an index.

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