

Foreword to the Third Edition

The origins of this work are rooted in the great change and advance in mathematics education initiated in 1954 when the Commission on Mathematics of the College Entrance Examination Board brought together, for a sustained study of the curriculum, teachers and administrators of mathematics from several sources: secondary schools, teachers' colleges, and colleges and universities. Prior to that gathering, the several groups of teachers had seldom worked together on the curriculum. That meeting of minds has developed and continued in many directions; one of its long-run consequences was the establishment of the Joint Committee of the American Statistical Association (ASA) and the National Council of Teachers of Mathematics (NCTM) on the Curriculum in Statistics and Probability. By late 1967, such cooperation between school and college teachers was widespread, and it was easy for Donovan Johnson, then president of NCTM, and me, then president of ASA, to set up the Joint Committee to review matters in the teaching of statistics and probability.

The purpose of the Joint Committee is to encourage the teaching of statistics in schools. The sponsoring societies appropriately address such teaching because statistics is a part of the mathematical sciences that deals with many practical as well as esoteric, subjects and is especially organized to treat the uncertainties and complexities of life and society. To explain why more statistics need to be taught, the Joint Committee felt that it had to make clear to the public what sorts of contributions statisticians make to society.

When describing work in the mathematical sciences, one must make a major decision as to what level of mathematics to ask of the reader. Although the Joint Committee serves professional organizations whose subject matter is strongly mathematical, we decided to explain statistical ideas and contribution without dwelling on their mathematical aspects. This was a bold stroke, and our authors were surprised that we largely held firm.

The Joint Committee has been extremely fortunate to find so many distinguished scholars willing to participate in this educational project. The

authors' reward is almost entirely in their contribution to the appreciation of statistics. We have been fortunate, too, to have Judith Tanur as editor of the collection and hard-working committee members as her staff.

In a parallel writing effort, the Joint Committee has also produced a series of pamphlets for classroom teaching entitled *Statistics by Example*. Intended for students whose mathematical preparation is modest, these volumes teach statistics by means of real life examples. That effort differs from this one in that the student learns specific techniques, tools, and concepts by starting from concrete examples. (The publisher is Addison-Wesley, Sand Hill Road, Menlo Park, CA 94025).

The Joint Committee continues active to this day. Among its recent activities is a National Science Foundation-sponsored program entitled "Quantitative Literacy," which aims to educate teachers to train other teachers to teach statistics.

Some readers may wish to know how to become statisticians, and others may have the obligation to advise students about career opportunities. The brochure *Careers in Statistics* (obtainable from the American Statistical Association, 1429 Duke Street, Alexandria, VA 22314-3402) provides information about the nature of the work and the training required for various statistical specialties.

What made this effort possible was an initial grant from the Sloan Foundation. Over the years we have also benefited from a number of courtesies extended by the Russell Sage Foundation and by the Social Science Research Council. The national offices of the ASA and the NCTM have been helpful through three editions. The original publisher, Fred Murphy of Holden-Day, Inc., gave us attractive publications through two editions, and John Kimmel of Wadsworth and Brooks/Cole has continued this tradition. Marjorie Olson managed the manuscript for this edition, and Cleo Youtz contributed to its preparation.

Finally, we have no monopoly on the task of explaining statistics to the public. We urge others to provide their views on the purposes, the methods, and the results of statistical science. We happily note that some have done so.

Frederick Mosteller, Chairman
Editorial Committee of
Statistics: A Guide to the Unknown
Cambridge, Massachusetts
February 14, 1988