Mathematical theory of probability and statistics, by Richard von Mises, edited and complemented by H. Geiringer. Academic Press, New York, 1964. vii + 694 pages. $22.00.

This book is based on the Harvard and Zurich lectures as well as the previously published work and notebooks of von Mises. The editor has done an excellent job of organizing the material into a unified whole, and has attempted to clarify arguments that were unclear in the earlier published work of von Mises.

The first two chapters are concerned with the von Mises frequency theory of objective probability which we now briefly describe. Consider a sequence of Bernoulli trials. Then the related "collective" of von Mises is the set of sequences which have the property that for all subsequences of a certain type the frequency ratios exist. Probabilities are then defined on the class of sets having content in the sense of Jordan assuming that probabilities are defined for finite sequences. Hence the class of sets for which probabilities are defined is smaller than in the usual Kolmogorov measure theoretic approach. According to the author the Kolmogorov class of sets contains sets with no conceivable relations to observations.

Chapters 3, 4, 5, and 6 deal with distribution theory, sums of random variables and asymptotic distributions.

Chapters 7 to 11 cover various questions in statistics; in particular the Bayesian approach to inference and an original discussion of the Neyman-Pearson theory. Finally the book ends with an introduction to the theory of statistical functions.

Although this book will be of primary interest to those concerned with the foundations and history of the subject, it is worthwhile reading for any student of probability or statistics.

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A graduate course in probability, by Howard G. Tucker. Academic Press, New York and London, 1967. xiii + 273 pages. $14.00.

As the title suggests, this book is tailored for a basic course in probability theory and as such it is one of the best presently available. The eight chapters cover probability spaces, probability distributions, stochastic independence, basic limiting operations, strong limit theorems for independent random variables, the central limit theorem, conditional expectation and martingales, and an introduction to stochastic processes and especially Brownian motion. A good basic course in real variables and measure theory is an essential prerequisite for this book. With the possible exception of the last chapter all the material is so basic that every first course should contain it. The presentation of the proofs of the main theorems is given in great detail and with effective use of preparatory lemmas. The text material is supplemented with a modest