

In addition to the lapses in accuracy mentioned, it seems proper to call attention to the fact that this book shares with other introductory works on analysis the fault of creating an illusion of simplicity, facility, and even completeness. The addition of a thoroughgoing treatment of some fundamental topic as an example of the nature of a rigorous discussion would improve the work.

It is usual for authors of works of this sort to introduce the elementary transcendental functions for purposes of illustration in advance of their theoretical treatment. While this method undoubtedly adds to the interest of the discussion it seems likely that the student will eventually fail to distinguish clearly between the material which is logically presented and that which is illustrative. This can be avoided by an obvious rearrangement of subject-matter. This rearrangement is much to be preferred if the reader's interest can be sustained.

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*Wahrscheinlichkeitsrechnung und ihre Anwendung in der Statistik und Theoretischen Physik.* By Richard von Mises. Leipzig and Wien, Franz Deuticke, 1931. 574 pp.

Aside from its usefulness in technical applications, the theory of probability has recently taken on a significance secondary to that of very few mathematical issues. Philosophers have come to study it with a view to investigate its logical implications, and physicists have recently been accustomed to regarding it as the foundation of their science. Their acceptance of probability doctrines has frequently been uncritical, and it is safe to say that many difficulties in connection with the present status of quantum dynamics are consequences of an incomplete understanding of the basic probability postulates. In the midst of this situation the appearance of a book like that of von Mises is indeed a fortunate event.

It is well known that the author's views concerning the axioms of the probability theory are specific and exclusive, that they are disputed in several quarters. Nevertheless, in the opinion of the reviewer their value in applications, such as those made in the exact sciences, is unique, and it is gratifying to observe that, in this book, von Mises' frequency theory has been carried through consistently in a manner that is detailed and complete.

The book is the first volume of a series of treatises on applied mathematics. Continuations, dealing with hydromechanics, practical analysis, and applied geometry, are announced in the author's preface. The present volume contains four principal sections; the first two are concerned with the theoretical elements of the theory, the third is an application of probability to statistics and the theory of errors, the last discusses in a lucid fashion the foundation of physical statistics. Numerous problems of historical and practical interest are treated in the text, and to each section is appended a set of problems to be solved by the reader. The book is intended as a textbook. In conformity with this aim, the author has succeeded in making his exposition clear and concise. The treatment is more extended than is customary in American texts, but the greater length makes for easy reading. Indeed its reading is distinctly less difficult than that of most similar treatises, in spite of the complete logical rigor of the