cases thereof, have not been included. One may also wonder if so many pages spent on the preliminaries of information theory are not a bit extravagant. The book is also expansive on the pedagogic side. There are many examples, computations, tables and interesting pictures. Some important results appear in successive stages with increasing generality and depth, and variations on a theme are often presented. All this should make the content of the book easier to digest and to appreciate. The current tendency to conciseness of exposition, even on the textbook level, is not followed here, to the benefit of the reader.

This book can well serve as a basic course in probability theory, before a serious involvement with measure theory as required in any worthwhile study of stochastic processes. It has been said that probability theory is just a chapter of measure theory. This statement is not so much false as it is fatuous, as it would be to say that number theory is just a chapter of algebra. However, for a student of mathematics who wants to learn probability, there is need for a book which is not trivial on the one hand, and does not resemble chapters on measure and integration on the other. Of course Feller's well known *Introduction to probability theory and its applications*, Volume 1, can fit the bill, except for those who are eager for a general probability space and keep wondering about his Volume 2. (It may be disclosed here that Volume 2 will be a surprise to them.) There are also some mature readers who have no use for coins and dice, or even genes and particles. This book by Rényi may be what they have been looking for.

KAI LAI CHUNG

*Introduction to differentiable manifolds.* By Serge Lang. Interscience, New York, 1962. 10+126 pp. $7.00.

From modest beginnings in the eighteenth century, differential calculus has had a continuous increase of power and scope, culminating recently with the global theory of differential manifolds and mappings. This theory, basic to modern differential topology and geometry as well as classical physics, emerges from two decades of semi-secret existence with the publication of this definitive *Introduction.*

In addition to organizing in a report to the public fragments collected since 1936 (from original articles by H. Whitney, mimeographed notes by S. S. Chern, and J. Milnor, books by C. Chevalley, and G. de Rham, and many others), this text extends the global calculus to the infinite-dimensional case, and constitutes a natural sequel to the *Foundations of modern analysis* by J. Dieudonné [Aca-