amusing, therefore, to view Appendix I as a scale against which Kac's achievements can be measured. When Uhlenbeck mentions the problem of finding "appropriate laws for the approach to equilibrium" or of relating the classical Liouville approach for the description of a gas to the master equation, the reader will find comfort in a more thorough discussion of these points in the "ring" model and the Kac monatomic gas model of Chapter III. On the other hand, when Uhlenbeck mentions the Bogoliubov approach to the description of a gas, the corresponding feeling of comfort is not to be found. Uhlenbeck's discussion is good, but quite intuitive (rather than rigorous) and a bit brief at times. To the reviewer, the real issue is to define the problems in a more reasonable form. Because of this problem of definition, Appendix I may well give the reader a much deeper appreciation for the accomplishments of Kac in Chapter III. At the same time the reader will discover that Kac and Uhlenbeck talk a somewhat different language. In spite of their many years of association, a large gap still exists between their viewpoints.

An excellent set of notes and bibliography has been included at the end of the book. Readers interested in the history of the problems discussed will find these notes add a certain glamor to the various sections.

There are several groups to whom this book is highly recommended. All persons interested in probability theory will find the models and examples presented well worth their attention. The physicist with prior knowledge of probability theory, who is interested in applications, will find this an excellent exposition of the methods and techniques involved. In summary, for all those interested in probability and related topics in physical science, the book, will serve as a concise and elegant summary of the author's own investigations into this important borderline area.

<div style="text-align: right">GLEN BAXTER</div>

Homotopy theory. By Sze-Tsen Hu. New York and London, Academic Press, 1959. xiii+347 pp. $11.00.

Although homotopy theory has been rather intensively studied for 25 years and is today one of the principal branches of algebraic topology, this is the first textbook on the subject. (A possible exception to this statement is the Cambridge Tract by P. J. Hilton entitled *An introduction to homotopy theory*; however, this booklet is only about 140 pages long and is principally concerned with certain special topics.) Since this book by Hu is the only text in this large field, its acquisition is a "must" for any mathematical library having any