

BOOK REVIEWS

Correspondence concerning reviews should be addressed to the Book Review Editor, Professor William Kruskal, Department of Statistics, University of Chicago, Chicago 37, Illinois.

E. B. DYNKIN, *Theory of Markov Processes*, (translated from the Russian by D. E. Brown). Prentice Hall, Englewood Cliffs, New Jersey and Pergamon Press, Oxford-London-Paris, 1961. \$11.95, £3.2s. ix + 210 pp. E. B. DYNKIN, *Die Grundlagen der Theorie der Markoffschen Prozesse*, (translated from the Russian by Joseph Wloka), (Die Grundlehren der Mathematischen Wissenschaften, Band 108). Springer-Verlag, Berlin-Göttingen-Heidelberg, 1961. DM.29.80. 12 + 174 pp. (Stechert-Hafner, Inc., New York, \$8.45).

Review by RONALD PYKE

University of Washington

The concept of a Markov process is a very common and important one to most readers of the *Annals of Mathematical Statistics*. Whether in the form of a discrete-parameter, countable-state Markov Chain such as the classical Random Walk, or in the form of a continuous-parameter Markov process such as a Birth and Death process or Brownian Motion, most readers will be quite familiar with this type of stochastic process. However, in view of the fact that Professor Dynkin's book deals with questions of a very general and abstract nature on the foundations of Markov processes, a good background in these more common types of Markov processes as well as in mathematics proper does not guarantee that a person will be able to understand or even appreciate the book.

Markov processes were named after the Russian Mathematician, A. A. Markov, who made his pioneering contributions to this subject during the first decade of this century. The books being reviewed are translations of a 1959 Russian treatise [1] written on Markov processes half a century after Markov's original work.¹

This review is in two parts. The first part concerns the mathematical contents and contributions of Dynkin's original manuscript, while in the second part the quality of the present books' printing and translation is discussed. In summary, this reviewer finds the mathematical quality of the book quite respectable, but finds the publication details of the English translation miserable. The German translation's typography is extremely fine. (For obvious reasons, no comments are made about the quality of the translation into German.)

¹ It has been brought to the reviewer's attention by Professor P. A. Meyer that a French translation of this book has now appeared. The exact reference to this edition, as kindly supplied to me by Professor Dynkin, is: E. B. Dynkin, *Théorie des Processus Markoviens*, Dunod, Paris, 1963, viii + 204 pp. (no. 11, Collection Universitaire de Mathématiques). Transl. by Ch. Sarthou.