MURRAY ROSENBLATT, *Random Processes*. Oxford University Press, New York, 1962. $6.00, x + 208 pp.

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One of the important problems in teaching probability theory is the paucity of good text-books which give an excellent, logical, and interesting, account of the subject, but do not burden the reader with bulky and cumbrous presentations and voluminous size. A lack of such good literature is keenly felt, especially in the field of random processes. In spite of the fact that there exists a series of excellent books by Bartlett, Doob, Dynkin, Takács and many others, all original expositions of the fundamentals of the Theory of Probability, we cannot admit that the situation is satisfactory. Often one experiences great difficulty in recommending a concise, yet well laid-out, book on modern lines about random processes. Therefore the book of M. Rosenblatt deserves great attention. It is a small book, well written and at the same time containing rich material and well selected problems for a fundamental text-book. The author does not feel the necessity of stating the connection between the theory laid down by him and practical problems. Only in very particular instances does he write a few words about such relations. Such a book would be of constant use to mathematicians, physicists, technicians, biologists, geophysicists, and to the representatives of other concrete sciences.

Let us say a few words about the contents of the book under review. It contains six chapters, a few appendices to the main body of the text (Chap VIII), and an introduction containing the ideas of the author (Chap I). A bibliography (77 references) and an index are at the end of the book. At the end of each chapter there are problems for solution by the reader, and a short historical note by the author. Problems are presented in an interesting manner. Undoubtedly the reader who solves all these problems not only grasps the ideas and the results of the theory of random processes, but appreciates the methods of proof.

The second chapter, "Basic Notions for Finite and Denumerable State Models," acquaints the reader with the fundamental ideas and formulas of probability theory. Previous knowledge of the subject on the part of the reader is not presumed. At the same time the reader is presented, at the end of the chapter, with the law of large numbers and, based on these ideas, the proof of S. Bernstein for the theorem of Weierstrass on the uniform approximation of continuous functions by polynomials in the interval [a, b]. Further, Central Limit Theorems are proved by the methods of differential equations, and the ideas of entropy are introduced. The only special deficiency, which we can point out to the author, is that, in the proof of the law of large numbers, he limits himself to the case of identically and equally distributed components.

In the third chapter, "Markoff Chains," are presented the elements of very important discrete schemes: definition of Markoff chains, notions of birth and