by Loève "decomposable processes." This is a subject for which authors like to invent at least one new nomenclature. Loève makes a distinction between "random function" (a family of random variables) and "stochastic process" (never formally defined but, roughly, a class of random functions with common conditional distributions). This reader found the distinction, going back to ideas of Lévy, somewhat confusing, but perhaps a clearer discussion would make the distinction helpful. Dynkin has a careful definition along these lines in the Markov case. Chapter XII includes detailed discussions of the strong Markov property, sample function continuity, and semigroup analysis based on the work of Feller and Dynkin. This part of the subject is still under rapid development, and many readers will find Loève's treatment helpful as an introduction to material otherwise available only in papers scattered through the periodical literature. The relation to potential theory is not discussed.

This reader feels that Loève's attempt to be so complete in a book of normal length would have been more successful if about 100 more pages had been allotted, and devoted to discussion and examples, but the book is an excellent pioneering text which will have an enormous influence.

J. L. Doob

Vorlesungen über Orthogonalreihen. By F. G. Tricomi. Grundlehren der mathematischen Wissenschaften, Band LXXVI. Springer-Verlag, Berlin-Göttingen-Heidelberg, 1955. 8+264 pp. DM 37.60.

This book, like many of its author's other well-known books, originated in courses of lectures given at the University of Turin. It is an enlarged and considerably revised version of a preliminary (mimeographed) Italian edition (Serie Ortogonali di Funzioni, Gheroni, Torino, 1948) which is now out of print. The very competent translation is the work of Dr. F. Kasch, of Göttingen.

The author's aim is to provide a lucid, comparatively elementary, and highly readable introduction to orthogonal expansions, and in particular to trigonometric series and orthogonal polynomials. In this he succeeds admirably, demanding from the reader little more than a thorough knowledge of advanced calculus (some knowledge of the elementary theory of Lebesgue integrals, and perhaps a little more on infinite series than is contained in some advanced calculus courses). It is not part of the author's plan to replace Zygmund on trigonometrical series, or Szegö on orthogonal polynomials, to aim at encyclopedic completeness or at penetrating to the most modern parts of the theory; and he valiantly resists the temptation to enter