into three parts. In the first part, the idea of continuity of a function is studied extensively. The second part develops Lebesgue's integration, together with a detailed treatment of abstract measure theory and the Stieltjes integral. It contains also a treatment of the more important properties of differentiability of functions. Chapter V gives an account of theory of Baire functions, and Chapter X presents the theory of distributions of Schwartz. Chapter XII contains an introduction to the theory of function spaces and functional analysis. The third part of the book deals with applications of the theory of Lebesgue integration to orthogonal series, and to Fourier series and the Fourier integral.

The treatment of all this material is outstanding by its great clarity and in showing how the deeper results of set theory and the abstract theory of measure find applications in functional analysis in general, and the theory of orthogonal series. The theorems are presented in as general a form as possible without destroying the simplicity of their formulation.

S. ULAM

Algebraic varieties. By M. Baldassarri. (Ergebnisse der Mathematik und Ihrer Grenzgebiete, vol. 12, new series). Berlin, Springer, 1956. 195 pp. DM 36.

The author asserts that it is his purpose to present the most important aspects of modern algebraic geometry as completely as space allows. Naturally, such a task involves the rejection of much material that could claim the right to be included and perhaps the inclusion of some that could with reason be rejected, so that any particular selection of topics is necessarily open to question. The author's selection for this monograph seems to have been guided by the desire not only to present a survey of results obtained by algebraic, analytic and topological methods, but also to show how these methods complement each other in dealing with some of the central problems in the theory of algebraic varieties defined over the complex field. In the opinion of the reviewer, he has achieved a high degree of success. The monograph presents a comprehensive though not exhaustive account of several of the major developments of the past two decades that conforms in every respect to the exacting standards of the Ergebnisse series.

An introductory chapter on algebraic foundations modelled on Samuel's Ergebnisse tract is followed by six chapters devoted largely to results achieved by purely algebraic methods. The first of these (Chapter II) contains an account of Zariski's work on the problem of