

I. Grattan-Guinness

From the Calculus to Set Theory 1630-1910.

An Introductory History

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REVIEW

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The book under review was published for the first time in 1980 by Gerald Duckworth & Co. Ltd. in London. The present edition is the first paperback printing. The book consists of a collection of essays that recount the development of the differential and integral calculus from the early 17th to the late 18th centuries and their subsumption under the broader subject of mathematical analysis in the 19th century. It describes the progress of this discipline up to the early 20th century. It records also the introduction and development of set theory and mathematical logic in the period 1870-1910. Their close relationships and the unfolding of one into the other are stressed.

These topics have been, of course, treated by historians of mathematics before. The novelty of the approach of the authors is that they not only discuss the mathematics involved in some detail but they first introduce the reader to the historical development of their subjects. In this way they avoid the traditional limitations of mathematical education (which can be traced back to the late 18th century and the standards established at the École Polytechnique and École Normale in Paris) in which the emphasis was usually put on the accumulation of mathematical knowledge without considering the growth of mathematical understanding, and the appreciation of why a mathematical theory developed and took its form. Because work in history and the connections between history and education have increased greatly in the last 20 years, the book can be of use not only to mathematicians and historians but also to teachers of courses in the histories of the topics covered. Undergraduates, especially in the later years of their