cycles. It also gives a new "economic" interpretation of history and presents some interesting analogies between mathematics and economics.

This book should prove very useful to the statistician as a handbook. He will find a great deal of stimulation and valuable material and procedures even if he is not professionally concerned with economic problems. The pure mathematician can gain a survey of the field. He may be interested especially in some of the unsolved problems of serial correlation and periodogram analysis which evidently require very powerful tools of analysis. One has to be extremely grateful to the author for having accumulated so much material and presented it in such a readable and interesting form.

GERHARD TINTNER

A Survey of Modern Algebra. By Garrett Birkhoff and Saunders Mac-Lane. New York, Macmillan 1941. 11+450 pp. $3.75.

In this book Professors Birkhoff and MacLane have made an important contribution to the pedagogy of algebra. Their emphasis is on the methods and spirit of modern algebra rather than on the subject matter for itself. The word "survey" in the title is quite accurate; for, although many topics are treated, none of them is really completely developed. The most important parts of each theory are included and that is all that can be asked of an introductory textbook.

Because of the authors' emphasis on "method" rather than "fact" the book will not be of much use as a reference work. But there is no dearth of good reference works in algebra, and in the reviewer's opinion the present textbook will prove more useful than another encyclopedic treatise would have been.

A discussion of the topics included will help to indicate the authors' purposes.

The first three chapters of the book are ostensibly devoted to the development of number systems: starting with postulates for the integers, then defining rational numbers in terms of the integers, and next giving an outline of the Dedekind construction of real numbers. Actually much more is happening. Such fundamental concepts as congruence, residue class, isomorphism, and ordered and well ordered sets are introduced and applied in a natural manner to the theory. Also the generalizations from integers to integral domain, and from rational number to field are made at suitable stages of the development. This procedure of starting with properties of a familiar mathematical system and generalizing to an abstract system is typical of