

When speaking of the problems of estimation by intervals the author indicates the distinction between the theory of confidence intervals and that of fiducial argument as developed by R. A. Fisher. However, while giving an outline of the former the author does not present any information about the latter, except for references to several papers by Fisher.

Another gap is the omission of at least a few details concerning tests of composite hypotheses and problems of estimation of some but not all the parameters that may be involved in the probability law of observable random variables. As these statistical problems have created problems of pure analysis, those of the so-called "similar regions," not previously considered, their description in a book like that under review might have contributed to its value and increased the chances of the problems getting a speedy and more satisfactory solution than the one that is available now.

However, to say that a book meant to be short is actually short, should not be considered as a criticism.

JERZY NEYMAN

Les Fonctions Multivalentes. By M. Biernacki. (Actualités Scientifiques et Industrielles, no. 657.) Paris, Hermann, 1938. Fr. 66.

The notion of multivalent functions was first introduced and developed by Paul Montel in his book, *Leçons sur les Fonctions Univalentes ou Multivalentes*. An analytic function of a complex variable in a region is said to be multivalent of order p (or p -valent) in that region if it assumes no value more than p times and at least one value exactly p times. The case $p = 1$, that of univalent functions, has been studied extensively and has yielded a unified and rather complete theory. The extension of this theory to any positive integral p is considerably more difficult and the resulting theory is far less complete.

The author collects these results with the intention of aiding future research in the field. Most of the results are stated without proof, whenever the known proofs are at all complicated. The first chapter deals for the most part with extensions of the theory of univalent analytic functions to the general multivalent case and to other related classes of functions. The second chapter deals with meromorphic multivalent functions. The last chapter takes up a few results connected with systems of functions.

It is unfortunate that the book was written before the appearance in 1940 of important papers of D. C. Spencer on the subject of finitely mean valent functions which have greatly clarified the whole notion of p -valence.