is nilpotent. The non-simplicity of groups with generalized quaternion Sylow 2-subgroup is proved (the case of a quaternion Sylow 2-subgroup still needs modular characters and so is omitted). Other topics include some technical notions such as trivial intersection sets and the construction of irreducible characters by "coherence" which are developed for the sake of applications, in the book and elsewhere.

As this mere enumeration shows, the book contains a great deal in 180 pages. This is achieved by a style which is always very much to the point, and generally terse without sacrificing clarity. In fact, the usefulness of the book lies in the fact that in relatively few pages, assuming only a little elementary group theory (as well as some Galois theory), the author is able to include so many of the vital results of current finite group theory. There is a brief index and a list of notations; the latter should really come at the beginning, since it contains conventions used in the text without further explanation. On occasion one might wish for a little more motivating discussion, or some examples (of which there are hardly any), but these are points the interested reader can often supply for himself. The reviewer noticed no significant misprints (on p. 98, line 2, a "normal" is missing and on p. 181, the sign for normal subgroup is printed back to front). Clearly this is a book that will be welcomed by all serious students of the subject.

P.M. Cohn

Elements of Nonparametric Statistics, by G.E. Noether. John Wiley and Sons, New York, 1967. ix + 104 pages. $7.95.

A glance at the Bibliography of Nonparametric Statistics by Savage or at the two volumes of Handbook of Nonparametric Statistics by Walsh shows that a vast amount of material is available on Nonparametric Statistics in scattered form in research Journals. However, surprisingly little effort has so far been made to make even a part of this material available in a coordinated and systematic manner for the use of students of Nonparametric Statistics. The book Nonparametric Methods in Statistics by Fraser seems to be the only book available that may be used for an introductory course at advanced undergraduate or beginning graduate level. There is clearly a need for more texts at this level specially since Fraser's book is now 10 years old.

Professor Noether's book, as he so clearly points out in his Preface, is intended primarily for the Statistician who is not too familiar with the literature but is interested in finding out more about the procedures he has already learned from some user's manual. It is not therefore surprising that the book lacks in mathematical rigor and detail. The author's style is very economical. In fact eleven chapters have been condensed into 104 pages.

The first three chapters are introductory. Chapter 4 treats procedures based on empirical distribution functions and Chapter 5 discusses some uses of order statistics. Rank sums and the two sample problem form the basis for Chapters 6 and 7 while Chapter 8 is devoted to confidence intervals for location parameters. Chapter 9 deals with two-sample dispersion tests, Chapter 10 with association and Chapter 11 with the efficiency of nonparametric methods.

A special feature of the book is the treatment of tied observations. It should also be mentioned that most of the chapters conclude with a section entitled "Notes and References" which contains useful, though somewhat incomplete, information on further reading and reference to tables. However, the book contains no examples or problems for solution.

Although the book is not suitable for use as a text book, it is a welcome addition to the literature in a field in which there is a dearth of books.

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Emile Borel, philosophe et homme d'action. Pages choisies présentées par Maurice Fréchet. Paris, Gauthier-Villars, 1967. 406 pages.

This volume collects Borel's popular essays on the philosophy and the teaching of mathematics, as well as on physics and on social problems. They were published between 1900 and 1937 and may be regarded as supplementing the Oeuvres d'Emile Borel, in the course of publication.

For a mathematician, the most interesting papers are probably those on set theory and functional analysis. Borel was, together with Baire, one of the rare Frenchmen who gave Cantor immediate recognition, even though he was critical of abstract set theory and, in general, mistrustful of abstraction. But the reader will probably be baffled by the claim that set theory is an integral part of the theory of functions, that algebra is the science that handles numbers in general, and that mechanics is as good a branch of mathematics as any. Age tells in all of these essays.

The foundational worker may be attracted by Borel's early defense of constructivism, and he will be surprised to find no mention of either Brouwer's intuitionism or Hilbert's finitism. Closely allied to constructivism was his empiricist conception of mathematics as "a natural science in which logic plays no greater role than in any other natural science" (p. 298). Although Borel claims that his scientific work was influenced by his philosophy, it is hard to see what relevance it may have had on his work in set theory. On the other hand it clearly