done for other topics favored in the book. It would seem that some of the minor problems and methods included might gracefully make room for this. Even the utilitarian reader would have profited by some contact with these modern notions and been spared the labor of tackling the larger works to which the author deferred.

The reviewer takes exception to the remark on p. 98 that the strong law of large numbers "scarcely plays a role in mathematical statistics." This is like saying e.g. that Dedekind cut scarcely plays a role in numerical analysis (or dynamics). The point is, even if the strong law is meaningless in a final statistical statement it may well enter into an argument or proof which is essential to the statistical conclusion, just as the real number system is surely at the back of many calculations although the IBM machines yield nothing but terminating decimals. To cite one concrete example, the asymptotic normality result mentioned on p. 220 has been recently extended (albeit slightly) by using convergence with probability one.

Finally, irrelevantly but inevitably, a reader of Professor van der Waerden's new book cannot help recalling his well-known volumes on *Moderne Algebra*. The format is there complete with the graphic guide; the masterful exposition is there; and the various pedagogic devices mentioned above are there. If the total impression is different this is due more to the subject matter than to the treatment. Mathematical Statistics, being a branch of fiercely applied mathematics with a relatively short history, does not have nor perhaps even care for the idealism and formalism of Algebra. Indeed, the criteria of excellence are somewhat different in these two fields. Statistics is primarily concerned with utility, not beauty; nevertheless there is no lack of neat things in this volume, and a good deal more in the field, as there always will be when competent hands work with Mathematics.

K. L. CHUNG

Convexity. By H. G. Eggleston. Cambridge Tracts in Mathematics and Mathematical Physics, no. 47, Cambridge University Press, 1958. 8+136 pp. $4.00.

This tract provides a brief and clear introduction to the theory of convex sets in E^n on an elementary level. It is not intended for the specialist, because it covers in the main only topics found in Bonnesen and Fenchel's *Theorie der konvexen Körper*. There are, of course, innovations in methods and proofs. As examples we mention the greater use of duality in E^n and the proof that the mixed volumes are non-negative.

The scope of the book will become apparent from a brief survey of its contents. After treating the basic notions like convex cover, supporting and separating planes, convex polyhedra (called polytopes), the tract turns in Chapter 2 to Helly's and Carathéodory's theorems, their interrelation and some generalizations. Convex functions, in particular distance and supporting functions follow (Chapter 3). Then distance for convex sets, Blaschke's Selection Theorem and the approximation of a convex set by polyhedra and regular convex sets are discussed. Chapter 5 deals with linear and concave families of convex sets, mixed volumes, Steiner's symmetrization, the Brunn-Minkowski theorem (Brunn is spelled as Brünn throughout), and Minkowski's inequalities. The more general inequalities of Alexandrov-Fenchel are stated without proof.

In Chapter 6 we find some extremal problems like the isoperimetric problem, and the relations between the inradius, circumradius and the diameter, also Besicovitch's result on the asymmetry of plane convex sets. Sets of constant width are the topic of the concluding chapter.

The book will well serve its purpose of providing an introduction to the field for "those starting research and for those working on other topics who feel the need to use and understand convexity."

HERBERT BUSEMANN

The numerical solution of two-point boundary problems in ordinary differential equations. By L. Fox. New York, Oxford University Press, 1957. 11+371 pp. $9.60.

If insistence on deductive reasoning is one of the characteristics of mathematics, the numerical solution of mathematical problems is not a branch of pure mathematics. In its methods and spirit it is more closely related to the applied sciences, in that incomplete induction based on experimental evidence is the ultimate criterion, even though a good measure of theoretical analysis is indispensable for guidance and interpretation. It is true that there are numerical procedures whose theory is so well understood that a result can be obtained which is safely embedded between double numerical inequalities. However, at this time, and for the forseeable future, the number of practically important problems in this comfortable class is, and will remain, depressingly small. A good specialist in the art of computation should therefore be able to resist the mathematician in him, who might lure him into the ideal realm of pure analysis, away from his concrete problems, without, on the other hand, losing the incentive of availing himself of all the mathematics, highbrow or lowbrow,