It is hard to call this a defect since the author always gives explicit references and clearly states or describes the propositions whose proofs are omitted. Nevertheless I feel there is some danger that a student reading on his own might not appreciate what is "concealed" in the references. As a result he might come to think that once a problem is formulated in abstract terms it is as good as solved, or, if he is more sceptical, that while many problems of classical analysis can be formulated in an abstract way, the general theory is not much help in solving them. Either impression would be unfortunate.

Despite this criticism, Professor Taylor's book deserves careful consideration as a text for almost any introductory course in functional analysis. The basic theory is presented with great clarity and the numerous problems, while they should be in the grasp of a student who has mastered the text, are by no means routine exercises. Doubtless no two functional analysts have the same idea of what an introductory course should be. In any case here is a good foundation for a course, and an instructor who wishes to supplement it (by topics from Riesz and Sz.-Nagy's "Leçons d'Analyse Fonctionelle", for example) should find it easy to do so.

H. F. Trotter, Queen's University

Problems in Euclidean Space (Applications of Convexity), by H.G. Eggleston. Pergamon Press, New York, 1957. 165 pages. $6.50.

This 165 page book is a collection of problems, most of them being reprints of the author's papers.

There are four groups of problems. The first one opens with two beautiful examples: 1) when is an open set an intersection of a descending sequence of open connected sets? and 2) can a homeomorphism of E_2 onto itself be approximated by a finite succession of homeomorphisms of the form $x_1 = f(x,y)$, $y_1 = y$ or $x_1 = x$, $y_1 = g(x,y)$? Complete answers are given, but the connection with convexity is negligible.

The next group consists of a single problem which is a special case of Borsuk's conjecture on the possibility of covering a set in E_n by $n + 1$ sets of smaller diameter. The author obtains a complicated proof of this for $n = 3$. A far superior proof of B. Gruenbaum is relegated to the limbo of a footnote as being 'a lucky fluke' (sic!). Gruenbaum not only proves the same in less than a quarter of the space but he also shows that a set A in E_3 is a union of four sets of diameter less than .9886 times the diameter of A.

The other two groups deal with a variety of plane situations: measures of approximation of a convex set by another convex set of some given class (symmetric sets, sets of constant width etc.), extremal properties of triangles inscribed in and circumscribed about convex sets, properties of curves of constant width, and so on.

Although the general level and workmanship are inferior to those of the author's Cambridge Tract on convexity, the present collection contains some interesting and important things and will be of interest to the specialist.

Z. A. Melzak, McGill University

Fallacies in Mathematics, by E.A. Maxwell, Cambridge University Press, Macmillan Company of Canada Ltd. $2.75.

In this book the author, a Fellow of Queen's College, Cambridge, is acquainting his readers (College and High School teachers as well as interested pupils) in an often amusing and always interesting way with the fallacies a mathematician is apt to meet in the fields of elementary geometry, algebra and trigonometry and calculus. He distinguishes between mistakes (not discussed in the book), howlers and fallacies in the proper sense like this gem: $1 = \sqrt{1} = \sqrt{(-1)(-1)} = \sqrt{-1}\ \sqrt{-1} = i.i = -1$.

The first 10 serious chapters presenting a choice selection of fallacies in each of the fields with subsequent detailed discussion are followed by a chapter on miscellaneous howlers, e.g., the following. Solve $(x+3)(2-x) = 4$. Answer: Either $x + 3 = 4$ $\therefore$ $x = 1$ or $2 - x = 4$ $\therefore$ $x = -2$, correct. The book is most instructive for any mathematics teacher.

Hans Zassenhaus, California Institute of Technology

Some Aspects of Analysis and Probability, by Irving Kaplansky, Marshall Hall Jr., Edwin Hewitt and Robert Fortet. Surveys in Applied Mathematics IV. John Wiley and Sons, New York, 1958. 243 pages. $9.00.

This volume contains survey articles on four branches of mathematics, usually not considered as "applied"; "applicable" would be a more fitting term, although the subjects are treated not entirely from this point of view. Kaplansky's article on Functional Analysis (pp. 3-34, with a bibliography of 113 references) will be welcome as it gives an integrated account including the extensive work done in the modern Russian schools. The article on Combinatorial Analysis by M. Hall (pp. 37-104, with a bibliography of 59 references) deals with the classical