

necessary to show that the group of nonsingular matrices will do it. This is not exactly trivial and requires some such device as Weyl's principle of irrelevance of algebraic inequalities. A rather unusual and commendable feature of the book is the treatment of the rotation group by the method of Stiefel. The spin representations are obtained in several ways, including the method of Brauer and Weyl. The author's handling of the topological matters relevant to the rotation group is perforce rather sketchy, as he readily admits. However it could be made somewhat less so with very little extra effort. For instance, it would be no trouble to give at least a precise analytic definition of homotopy before constructing covering groups. The final chapter is devoted to the finite-dimensional representations of the Lorentz group.

The subject of which this book treats is a difficult one and it is far from easy to achieve clarity of exposition in dealing with it. In the reviewer's opinion, Professor Boerner has succeeded in this respect better than anybody so far. Not the least of the consequences is that it renders more accessible the rest of the literature on the subject, especially Weyl's book which even after all the years since its publication still contains such a wealth of stimulating ideas. There is only one major regret, namely that the symplectic group has been ignored, presumably because of the absence of applications to physics. It is sincerely to be hoped that it will come in for its proper share of attention in a future edition.

W. E. JENNER

The convolution transform by I. I. Hirschman and D. V. Widder. Princeton, Princeton University Press, 1955. 10+268 pp. \$5.50.

At a time when so much mathematics writing has had a tendency to become ponderous and unreadable it is a pleasure to have this excellent book appear. The style of the authors has become well known through their extensive papers and the precision and care that has marked their writing in the past is scrupulously maintained throughout the book. Furthermore the subject is itself of considerable interest being classical in every sense of the word, and appearing again and again in the most varied contemporary contexts. The problems treated are solved on their own ground and the theorems are not based on changing the problem. The ratio of theorems to definitions in this book is high.

The main part of the book is devoted to a study of the convolution equation whose kernel has the property that the reciprocal of its La-