

the theory much simpler in case  $n=2$ . A countability result, false for  $n>2$ , delayed the development of the general theory for many years. The authors go on to consider the concepts of bounded variation and absolute continuity introduced by Tonelli (the first attempt to generalize the classical notions of real variables) and investigate the interconnections with their own ideas. For the benefit of those interested in the field, an unproved conjecture is stated on page 433. From the point of view of applications, it is interesting to note that any Dirichlet transformation is  $eAC$ .

So much for a part by part summary. In general the book leaves something to be desired in a nonmathematical way.

The index is inadequate, and it is difficult to follow up the cross references, which are given in the form III.3.3 while the clues at the top of the page cut matters short with III.3. The printing does not live up to the high standards one has been led to expect of Springer-Verlag, and there are numerous broken characters and smudges (see, for example p. 212). The theorems are often easy to miss because their statements are not italicized. Finally the cohomological diagrams should have been left to the mercy of a printer (even a careless printer). Though they were apparently drafted with care, the results are sometimes shocking. All in all, though, these are probably petty grievances—the mathematical content certainly stands on its own feet, and is an outstanding source of information on an important and very difficult portion of modern mathematics.

J. W. T. YOUNGS

*Leçons d'algèbre moderne.* By P. Dubreil and M. L. Dubreil-Jacotin. Dunod, Paris, 1961. 11+393 pp. 35 NF.

The authors present a course in abstract algebra (the term "modern" is open to question, since almost all the material was already in the first edition of van der Waerden) designed for a program roughly at the level of the master's degree in this country. Their treatment is straightforward, usually aiming for proofs which involve the least complicated apparatus. This approach makes it possible to include a large number of results on assorted topics in fewer than four hundred pages.

Several notions which play an important part in modern mathematics, among them those of module and tensor product, are either given only passing notice or left out completely. These omissions may not be of great importance in the case of students completing their training with this course, but they are serious deficiencies for students