representation of a Hermitean H, locating the successive eigenvalues as maxima of (Hx,x) on sections of the unit sphere; this argument has a Hilbert space analogue only for completely continuous operators. After some study of resolvents and other functions of Hermitian operators, the chapter closes with extension of the preceding results to unitary and normal operators.

Chapter IV discusses principal manifolds, the minimal polynomial, and elementary divisors, gives the Jordan canonical form and Segre characteristic for a general linear transformation, and closes with a study of commutativity. Chapter V discusses the effect of introducing a new scalar product (Gx,y), where G is positive definite. This study is needed to make up for the original concrete choice of V_n; it is then possible to characterize the transformations with simple elementary divisors as those which are normal relative to some such scalar product.

Interesting historical notes, some referring to work of a century ago, show the authors' knowledge of the deep roots of their subject in the structure of classical mathematics. That their presentation is faithful to that same classical tradition may make the book easier for a student to begin, but it seems to this reviewer to make the secondary goal, the introduction of the reader to Hilbert space, so much the more difficult to reach in a small book.

This reviewer can (as the pre-publication reviewer for Mathematical Reviews could not), and therefore should, attempt to compare this book with *Finite dimensional vector spaces* by P. R. Halmos. The books overlap much more in subject matter than in attitude; Halmos acknowledges great indebtedness to von Neumann, whose name does not appear in bibliography or index of the book under review. A student unaccustomed, as so many of our undergraduates are, to axiomatic methods might profit more from this concrete and detailed study than from a surfeit of abstractions. On the other hand, Halmos's book, with its racy style and its steady slant toward Hilbert space, when contrasted with this formal, workmanlike, and detailed discussion, seems to offer one of the few examples of a paperbound book suited better than its slick-paper competitor to the education of any student who has been bent to the appropriate axiomatic attitude.

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BRIEF MENTION

Mecanique des milieux continus et deformables. By M. Roy. Paris, Gauthier-Villars, 1950. Vol. 1, 22+198+166 pp.; vol. 2, 212+126 +12 pp.