Buck then treat Sister Celine's polynomials including Bateman's Z_n and others as special cases. The authors also treat what they term Bessel polynomials, which are generalizations of one of Rainville's generalizations of what Krall and Frink called generalized Bessel polynomials. A few other polynomial sets are also considered in this chapter.

Chapter III (about 19 pages) is a study of the representation of functions regular at the origin. Again the Boas and Buck generalized Appell polynomials play a major role. Applications are made to Jacobi, Gegenbauer, Humbert, Lerch, Faber, and Sheffer polynomials among others.

Chapter IV (about 5 pages) gives applications to uniqueness theorems and certain functional equations. The book closes with an extensive bibliography and an index.

This book should be of interest to students of function theory. It certainly belongs in the library of everyone working with special functions.

EARL D. RAINVILLE

Eigenfunction expansions associated with second order differential equations, Part 2. E. C. Titchmarsh. Oxford University Press, 1958. 11+404 pp. \$11.20.

One of the major difficulties facing an author of a book on eigenfunction expansions associated with partial differential equations is the decision as to which topics to discuss and at what level of generality to place the discussion. How general are the differential equations and domains to be considered? Should "expansion" mean "expansion in L^2" or something less or more general? Are the methods employed to be those of strictly classical analysis or those of abstract operator theory or a mixture of the two?

Professor Titchmarsh had faced similar, but perhaps simpler, versions of these questions when in 1946 he wrote Part 1 dealing with the ordinary differential equation $\{d^2/dx^2+\lambda-q(x)\}\psi(x)=0$. In the present volume, he stands by the decisions he made then and his object here is to treat the partial differential equation $\{\Delta+\lambda-q(x)\}\psi(x)=0$ on the entire x-space in a similar fashion, that is, by methods of classical analysis. The decision to deal only with the fundamental case of constant coefficients is probably a wise one. The complete avoidance of standard results and even the language of operator theory in Hilbert space leads a reader (particularly, an inexperienced reader, who may know the elements of operator theory) to lose a great deal of perspective.