In order to secure a high degree of precision in the statments of the theorems and in the proofs, the author makes much use of concepts and theorems belonging to general topology. Although some brief explanations of these concepts and theorems are included in the first chapter, I believe that most readers will find this explanatory material insufficient, and will be forced to make frequent reference to other books. This task would have been lightened considerably if a greater number of precise references had been given to places where the necessary topological theory is to be found.

Aside from these matters of exposition, my chief criticism concerns the discussion of linear differential equations with periodic coefficients. The treatment, which contains no illustrative material, seems to be too brief, condensed, and general to give an adequate idea of the difficult problems which are presented by these important equations. Thus, although the entire discussion centers around the characteristic exponents, nothing whatever is said about the problem of calculating these numbers effectively. At the very least, one would have expected to see the general theory illustrated by some discussion of the familiar Mathieu equation.

Although some parts of the contents might have been dealt with advantageously in a more ample and leisurely fashion, the book remains an interesting and valuable exposition of a part of differential equation theory which has been too much neglected in American and British works. It will be exceedingly useful to people working on the theory of nonlinear dynamical systems; and it should do much toward attracting mathematicians to a fascinating field, where many further advances are urgently needed.

L. A. MacColl

Sur les bases du group symétrique et les couples de substitutions qui engendrent un groupe régulier. By Sophie Piccard. (Mémoires de l'Université de Neuchâtel, vol. 19.) Paris, Vuibert, 1946. 223 pp.

This book is divided into two main parts. The first is a collection of the author's previously published results on pairs of substitutions generating the symmetric and alternating groups. It has appeared in the Polish, French, and German journals during the years 1938–1942 (see Mathematical Reviews vol. 1 (1940) p. 161, vol. 4 (1943) p. 1, vol. 7 (1946) p. 410 and also Zentralblatt für Mathematik und ihre Grenzgebiete vols. 19, 21, 22). Besides the paper of Hoyer (Math. Ann. (1895)) referred to in her bibliography, the only other work having any close bearing on that of the author, which the reviewer was able to find, is a paper by Hadwiger (Tôhoku Math. J. vol. 49