

in many places the usefulness and importance of this approach. In view of this it is surprising that he is reluctant to introduce and use iterated fractions (that is, sequences of general linear fractional transformations). It is true that in most cases iterated fractions can be transformed into continued fractions. However, even when this is possible, the resulting continued fraction may be considerably more involved than the iterated fraction from which it was derived. This is the case, for example, in Schur's expansion of functions bounded in the unit circle into iterated fractions. Wall uses continued fractions instead. Another instance where use of iterated fractions would have led not only to a somewhat more general result but also to a more elegant proof is in the discussion of the convergence of periodic continued fractions (§8). This could have been accomplished by the use of Schwerdtfeger's [84a] proof instead of Lane's. Finally, use of iterated fractions would have made inclusion of a discussion of the Pick-Nevanlinna interpolation problem extremely natural.

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*Substitutional analysis.* By D. E. Rutherford. (Edinburgh University Publications, Science and Mathematics, No. 1.) Edinburgh, University Press, 1948. 11+103 pp. 25 s.

The subject matter of this book, except for the last chapter, is Young's representation theory of the symmetric group. As Young developed the methods described here, he was always thinking of the elements of the symmetric group as substitutional operators applicable, in particular, to the theory of invariants. This fact explains the title.

In the introduction the author gives a brief account of Young's life as a country clergyman whose avocation remained the development of the mathematical ideas which interested him as a student at Cambridge. Those who knew him were always impressed by his sincerity and his modesty but above all by the originality and power with which he manipulated his own complicated machinery. The present book gives a connected account of Young's methods which has long been needed. The material was scattered throughout a long series of papers and, as is not surprising, the original presentation was sometimes involved. D. E. Rutherford has simplified it materially in places, and the reader can see the significance of the various steps taken.

As indicated above the theory here described was almost incidental in Young's work; it appeared as part of a larger plan, and in this light he always considered it. Young's originality was to some