

I have two minor criticisms of the book, both due to personal prejudices of my own: I dislike "it is clear that" and I hate small suffixes. Here argument after argument are admirably presented and then, suddenly, my pleasure is destroyed by a redundant "clearly" or "it is clear that". Finally, the print; the type and lay-out of the text and examples reach a very high standard of mathematical printing, but it has one serious fault. While numerical suffixes are excellent, well set and easy to read, the literal suffixes *i* and *j* are microscopic. Whenever I came to these suffixes in a close argument I had to reach for a 'spy-glass' to see which was which.

W. L. FERRAR

Combinatory Logic

Vol. 1. By Prof. Haskell B. Curry, Prof. Robert Feys and Prof. William Craig. (Studies in Logic and the Foundations of Mathematics.) Pp. xvi+417. (Amsterdam: North-Holland Publishing Company, 1958.) 42 guilders.

SOME thirty years ago, a new root stretched out into the very foundations of mathematics, or rather, of mathematical logic. This was the combinatory logic of Schönfinkel and Curry. Its particular task is the study of combinators, which are, in fact, a species of constant operator. In formal logic, one is accustomed to the notion of a variable; what is specific to the new discipline is the recognition that this is a complex concept, amenable to analysis. There is a connexion here (perhaps through Gödel's theorems) with the pre-conditions necessary for the design of automata, and with Polanyi's heuristic field. There are chapters dealing with the several facets of the method, not excluding its bearing upon semantics and the limitations of language.

Where an essentially deductive element is invoked, especially in the use of quantifiers, the adjective 'illative' is introduced. This is a subtle derivation from the past participle of *inferre*, and is thus slightly apart from inference. The build-up of a formal system is well demonstrated for so simple a case as Euclid's "Elements".

Although the authors modestly disclaim any historical background, it is clear how far theorists have progressed beyond Aristotelian principles: they form but a trivial part of this imposing twentieth-century edifice. A great change in the structure of thought has set in, to bring about these highly specialized analytical techniques.

F. I. G. RAWLINS

Inside the Comprehensive School

A Symposium contributed by Heads of Comprehensive Schools in England and Wales. Collected and Edited by the National Union of Teachers. Pp. 235+12 plates. (London: The Schoolmaster Publishing Co., Ltd., 1958.) 12s. 6d.

SOME at least of the dust raised by the introduction of the comprehensive schools in England and Wales is beginning to settle. Controversy still continues, but this is, generally speaking, more concerned with education and less with party politics than has all too often been the case. Even so, much of the argument is still tragically uninformed. Critics of the comprehensive school still talk of 'mass production', 'submergence of the individual', 'levelling down', and 'lowering of standards'. This timely little book has little to say by way of special pleading. Instead of argument it invites the reader to 'come and see'.

The seventeen contributors to this symposium are all heads of comprehensive schools. Their immediate concern is to describe how they are dealing with the practical problems of every day, the organization of varied courses, all flexible and interlocked, so that the curriculum can be fitted to the pupil instead of fitting the pupil to the curriculum; the breaking down of large numbers into small units, in which the pupil can feel at home, and where he finds personal understanding and appreciation; the pattern of external and internal examinations, which will provide for the vast majority some opportunity for achievement; the development of the social life of the school community; the problem of staff relations and the delegation of responsibility within the hierarchy; the relation of the school to its neighbourhood.

This is an interim report. There are less than fifty comprehensive schools in the whole of Britain, and only a few of these have had time to reach their full development. It will be another ten years before a final assessment can be made. No two comprehensive schools are exactly alike, but they are one in their conscious endeavour to provide the whole range of secondary education to suit the needs of the whole range of abilities from the candidates for open scholarships to the universities down to the educationally almost subnormal.

The writers are enthusiasts with a clear sense of purpose. They know what they are after and why, and for the reader interested in the 'why?' there is a summing up in the final chapter which may well give the hostile critic second thoughts.

ROBERT W. FENN

Five Years' Work in Librarianship, 1951-1955

Edited for the Library Association by P. H. Sewell. Pp. viii+418. (London: The Library Association, 1958.) 60s.

"FIVE Years' Work in Librarianship" succeeds "The Year's Work in Librarianship" which ceased publication with the volume for 1950. Arranged in six sections covering, respectively, national and academic libraries, special libraries, public libraries, young people's libraries and library practice, with a miscellaneous section dealing with librarian co-operation, buildings, bibliography, archives, documentary reproduction, etc., it provides a competent and comprehensive survey of developments and trends in Britain and abroad. Information of special interest to the scientist or technologist is somewhat scattered through the chapters dealing with, for example, national libraries, university and college libraries, technical college libraries, medical libraries, industrial libraries, government libraries, the libraries of learned societies and professional bodies and the commercial and technical departments of public libraries. That even the chapter on library co-operation includes no reference to the lack of progress in the establishment of a national lending or reference library for science and technology is not, however, due to oversight on the part of the compilers, but to the strange lack of interest and support shown in the library world as in that of science and technology. So far as the service of science and technology is concerned, the picture is depressing, but a like survey over the two years following 1955 would provide fair evidence that the period of stagnation is past and that the needs of science and technology are now being faced with more imagination, vision and resource.

R. BRIGHTMAN