

arrangement, clear type, sharp explanations, and freedom from extraneous material. Although an index would enhance its value as a reference, a very well organized table of contents serves almost the same purpose. Its compactness is achieved in part by relegating definitions to a glossary, with some words in the glossary referred to other definitions in the glossary. However, a great deal of the substance of the book is thus partially buried.

Although the author carefully points out that this book is intended for programmers and is not a "self-teaching device," it is not clear for whom the book is written. The omission or scanty coverage of a number of fine, technical details hardly supports the author's claim to a complete reference for programmers. For instance, in some systems, such as the Fortran II compiler for the IBM 7094 used until recently at New York University, the value of the index of a *DO* loop after a normal exit is equal to one plus the upper limit. In other systems it is equal to the upper limit. This author disposes of this point by stating that, upon a normal exit, the index of a *DO* loop is not available, which is not even correct. A number of other technical details, especially concerning formats and *DO* loops, are left unexplained. If it is indeed intended for programmers, these details are the only real essentials. One uses a reference to look up the obscure, not the elementary and obvious.

This book is probably most useful for a beginning student of Fortran, to be used with other texts and manuals, much as a student of French uses a bilingual dictionary.

THAN PORTER

Courant Institute of Mathematical Sciences
New York University
New York, New York

114[Z].—J. ARSAC, A. LENTIN, M. NIVAT & L. NOLIN, *Algol, Théorie et Pratique*, Gauthier-Villars, Paris, 1965, 204 pp., 27 cm. Price 45 francs.

The title of the book (Algol—Theory and Practice) shows clearly that it is directed both to those interested in the theoretical aspects of algorithmic languages, and to application programmers who mainly want a reference manual.

The beginning (Chapters 1 and 2) gives the basic definitions and concepts concerning the structure of programs and the "ways of thought" responsible for the formulation of the Algol language. Although the material is very abstract, the authors have made a valuable effort to make the reading attractive by giving numerous examples.

The following chapters give a thorough description of the Algol language including a special chapter for Boolean expressions.

Finally, a whole chapter is devoted to examples and at the end a summary of the Algol syntax is given. This will probably be very helpful to those who need a reference manual.

The book should appeal to many people of different interests. Those interested in mechanical languages will appreciate the systematic presentation of the material. Advanced programmers will be interested in the detailed description of the Algol system and in the examples given. However, this is not an elementary book; far from that, beginning programmers should stay away from it lest they be con-

fused by an abstract description which may at times obscure the relative simplicity of a concept. If an English version were available, this book could be an excellent textbook for an advanced programming course.

J. L. LIEUTAUD

Brooklyn Polytechnical Institute
Brooklyn, New York