

## BOOK REVIEW

J. S. Wentzel: "Elemente der dynamischen Programmierung", german translation from the russian by R. Herschel, published by R. Oldenbourg Verlag, München, Wien, 1966, price DM 28, -

This compact booklet (131 pages) is intended to give a first idea of dynamic programming. The main principle is adequately illustrated by means of some introductory examples; then, a general statement of the problem is given.

To demonstrate the development of the solution procedure, the idea of a phase space is introduced; this serves as a basis for all further explanations, and accounts for many of the 69 illustrations, which are neatly done.

The presentation of applications, forming the larger part of the book, is exclusively concerned with the general investment problem in various forms. The discussion is limited to problems with additive object functions; as a special example, a simple multiplicative function is reduced to an additive one. Finally, some problems of a stochastic nature are mentioned only too briefly.

The general treatment of the subject is at the pre-graduate level, but rather formal in the literal sense. Thus, it may be doubted whether the readers for which the book is said to be intended (engineers, economists) may easily distinguish the various indices, asterisks etc., which characterize the many formulas.

On the other hand, several examples are presented, fully elaborated and illustrated in accordance with the general phase space concept. It is stated in the preface, that these examples are taken from the most varying principal applications; the military ones are rather dominant, however. This leads to the assumption that the book was meant originally for use at military academies, which might be confirmed by its general mathematical level.

Thus, on finishing, the civilian reader is tempted to quote the author from one of her examples, in literal translation, but not in the original sense:

'the only possible (and at the same time optimal) directive reads: don't shoot!'

J. S. Folkers.

NOTE: This book is published simultaneously in the D. D. R. by B. G. Teubner Verlag, Leipzig under the title:

J. S. Wentzel: "Elemente der dynamischen Optimierung". It contains 159 pages and 69 figures. Price 7, -MDN.