

generic, and that what is involved in (1) is an inductive function ζ of ξ , viz.

$$\zeta(n) = \xi(n)\xi(n-1) \cdots \xi(1)\lambda = \xi(n) \cdot \zeta(n-1);$$

hence ζ is a generic and therefore stochastic sequence. This remarkable proof sheds new light on the theorem by showing that what makes it work is the inductive character of the underlying function.

IV. CONCLUDING REMARKS

The limitations of the author's prediction theory for individual time-sequences should be evident. Finite-valued sub-Markoff sequences are of no particular interest for prediction, and so the author's final theorem (§F, above) is not very exciting. It is not yet clear if further work with the author's concept of "statistical prediction" will yield anything worthwhile in the actual analysis of the time-sequences which arise in science. As these limitations could not possibly have been foreseen, the author has of course rendered yeoman service to the subject by venturing on this new frontier.

The wider concept of prediction advocated by the author has already proved fruitful in revealing the essential core of certain deep theorems in analysis and probability. But it remains to be seen if significant tracts of mathematical territory can be illuminated by the development of his ideas and techniques. The reviewer would certainly hope that this may be possible. Recently it has become clear that many linear prediction problems are special (deficiency 1) cases of other quite important problems in functional analysis, and that linear prediction techniques extend to the latter. It would be very satisfying indeed, if the same situation were found to prevail at the non-linear level.

Reading the book is not an easy job. The subject is itself rather hard. But part of the difficulty stems from the peculiar organization of the book, which is very different from that of this review, for instance. Idiosyncrasies in its format also make for hard reading, especially the absence of an index and misuse of the decimal system of enumeration. (Theorem 10.2 occurs in §10.4!) But the work stands as a first-rate and highly original dissertation on a very difficult subject.

P. MASANI

Strukturtheorie der Wahrscheinlichkeitsfelder und -räume. By D. A. Kappos. Ergebnisse der Mathematik, und Grenzgebiete, Heft 24. Springer, Berlin, 1960. 4+136 pp. DM 21.80.

This book is the first to be devoted to a systematic account of the applications of Boolean algebras to measure theory. The direct con-