

rather higher than A-level mathematics, the principal aim to derive the standard distributions which arise in sampling from a Normal distribution. The approach is unusual and intriguing, giving emphasis to the family of Pearson curves (categorised in a new way) and the identification of members of this family by their moment generating functions. The author's claim that this "helps to give a unified setting to all the common distributions" is largely true, especially in respect of limit theorems, although the reader may feel disappointed by the change of approach which the non-existence of certain M.G.F.s entails.

The author uses the phrase, obviously with dislike — "those dreadful overhangs from the days of Victorian statistics": I am unconvinced that he is not following the same path, being fascinated by the discovery and description of relationships between distributions, albeit in mathematical rather than numerical terms. The independent learner, whose modern educational needs are to be met by this series, will find a well-written book full of interesting mathematical manipulations. In itself, however, it is not a book about statistics.

R. M. CORMACK

SINCLAIR, ALLAN M., *Automatic Continuity of Linear Operators* (Cambridge University Press, 1976), 92 pp., £2.90.

Theorems on the automatic continuity of functions preserving certain algebraic structures have a natural appeal to mathematicians. Allan Sinclair, who has made notable contributions to this field, is to be commended for putting in permanent form his postgraduate lecture course on automatic continuity given at the University of Edinburgh. Most of the results involve Lebesgue rolling hump arguments; a preliminary chapter attempts to provide some universal technical lemmas and this streamlines the subsequent proofs of a rich variety of theorems, even though the synthesis is not as complete as the author would wish. A brief second chapter treats the problem of intertwining linear operators, i.e. operators S such that $ST = RS$ for some continuous linear operators T, R on Banach spaces, including complete answers when T, R are normal operators on Hilbert spaces. The main chapter deals with homomorphisms of Banach algebras and begins with Johnson's theorem on the uniqueness of complete algebra-norm topology on semi-simple Banach algebras. It also includes two methods of constructing discontinuous derivations, with an example for the disc algebra. The Bade-Curtis results are developed for homomorphisms of $C(\Omega)$ and the chapter culminates in homomorphisms and derivations of C^* -algebras. The final result reduces the existence of a discontinuous homomorphism of a C^* -algebra to a Banach algebra to the case when the C^* -algebra is $C[0, 1]$. Just after publication of these notes Dales and Esterle independently have shown that the continuum hypothesis implies the existence of a discontinuous homomorphism of $C[0, 1]$. The final chapter expounds the delightful results on the automatic continuity of positive linear functionals on Banach star algebras. There are full references to the literature and research problems are scattered through the notes. Functional analysts will find a lot of good reading in this slim volume, postgraduates will find it a boon.

J. DUNCAN

THOM, RENÉ, *Structural Stability and Morphogenesis: An Outline of a General Theory of Models* (Addison-Wesley, 1975), xxv+348 pp., \$22.50 (cloth), \$13.50 (paper).

Catastrophe theory lends itself to applications of a novel type, and a keen interest in these is spread far beyond the circle of experts in this field. Thus the appearance of a book such as the one under review, by so eminent an author, is an event of considerable