

D. R. COX AND P. A. W. LEWIS, *The Statistical Analysis of Series of Events*. Methuen's Monographs on Applied Probability and Statistics (John Wiley), London, 1966. viii + 285 pp. \$7.75.

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The title of this book describes its contents well. It is concerned with the statistical analysis of single realizations of point processes, though spatial as well as temporal processes are discussed. The book does not always give detailed and precise derivations (or even statements) of the results on which the analysis is to be founded. This is partly because such treatments are not always (at present) available and partly because the length and scope of the book would not permit their inclusion. As a result there is a good deal of purely mathematical imprecision of the kind commonly met in works which are truly concerned with the applications of mathematically derived results to "real life" situations. This kind of imprecision (for example the undiscussed assumption of the pointwise convergence of a Fourier series) seems acceptable in such a work. The alternative might be a mere pedantic adjunction of footnotes or paranthetic statements whose only real purpose might be to protect the writers against reviewers. (There is, of course, no excuse for a complicated statement when a simple one can be given or an ineffective proof when a short effective one is available.) The difficulty facing the writer who does not adopt one of the alternatives, of giving more or less complete proofs or no proofs at all, is that of deciding how much proof to give. Probably the only guide is to keep in mind a reasonable audience and to write to that audience. In the case of this book the audience seems to be both "the applied statistician with little inclination for theory", mentioned by the writers, and the theorist who wants a ready reference to help him when he is consulted with data as well as a stimulus in the way of a list of unsolved problems. For this audience an approach intermediate between "all proof" and "no proof" is probably acceptable, particularly if the account is well supported by references. In this work in cases where an incomplete discussion is given references to sources of a more complete account are generally supplied. There are 150 references given in the fourth appendix. (Only two of these are to Russian literature.) A student may find the book unsatisfactory for it is, in general, true that a proof which is incomplete or which relies heavily on heuristic arguments is more difficult, for one not familiar with a subject, than even quite a difficult complete proof. However if the intended audience is in fact that one described above then the authors seem to have written well to it.

One might have hoped, perhaps, for a general definition of the class of "point" processes to be studied and perhaps some initial systematic classification of these. The approach used is, instead, rather *ad hoc*. However again this is not unreasonable having in mind the purposes of the book.

The subject of the book has been well chosen for the statistical analysis of