

## BOOK REVIEWS

J. B. DOUGLAS (1980). *Analysis with Standard Contagious Distributions*. International Co-operative Publishing House, Burtonsville, Maryland 20730, xiv + 520, \$35.00

The subject of this book is the specification and estimation of discrete distributions which can be interpreted as compound distributions based on a discrete counting distribution combined with a discrete severity distribution. Such compound distributions are conveniently described by probability generating functions. Much space is devoted to the specification and interpretation of such distributions, especially the Neyman distribution. The tractability of parameter estimation by means of method of moments or maximum likelihood are demonstrated and illustrated with real data, mostly biological in nature. Some data of the insurance field are also used, however. The statistical inference is performed using the APL-language, which is the major reason for the tractability. Various APL-functions are presented for parameter estimation and goodness of fit testing.

As regards parameter estimation, my curiosity was guided to the question how a Bayesian approach, requiring numerical integration, would work out for such distributions like Neyman and Poisson-Pascal, especially for ill-conditioned samples where method of moments and maximum likelihood break down.

For actuaries, the virtue of this book will be to learn about tractable alternatives to the negative binomial distribution. For instance, the Poisson-Pascal distribution is shown to be a good description for the distribution of the number of policies with a given number of claims.

The reading of this book was a refreshing experience to me and I can recommend the book to all actuaries who study discrete frequency phenomena.

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P. ALBRECHT (1981). *Dynamische statistische Entscheidungsverfahren für Schadenzahlprozesse*. Veröffentlichungen des Institutes für Versicherungswissenschaft 17, vii + 520, Karlsruhe: Verlag Versicherungswirtschaft e.V.

This is the latest in a series of impressive monographs that have come out of the Schloss of Mannheim. The book contains the following chapters (titles translated):

1. Introduction
2. Bases of Statistical Inference
3. Models for the Claim Number Process
4. Statistical Decision Analysis for the Homogeneous Poisson Process
5. Statistical Decision Analysis for the Non-Homogeneous Poisson Process
6. Statistical Decision Analysis for the Mixed Poisson Process
7. Outlook on Further Statistical Procedures for the Claim Number Process
8. Summary