

1. that any individual incurring, say, six accidents was indeed liable to have six accidents in *that environment and at that time* or
2. that an individual incurring six accidents implies that he is inordinately subject to a particular degree of accident proneness

then on the evidence the correct choice is more likely to be the former”.

Attempts were made to try and find physical or psychological factors with which the accident experience of the drivers could be correlated. The results of the various experiments can be briefly described as inconclusive.

The numerical fitting of the “short model” leads to estimates of the chances of accidents arising within “spells” and of those occurring at any time. It is shown that the “spells” accidents which might be considered as “personal” showed a constancy over the different groups comprising the Northern Ireland experiments but figures derived from the Helsinki data were also of a similar magnitude. The “chance” accidents, which might be looked upon as environmental, showed variations which are reasonable compared with the known facts. Whether this interpretation is the true one or not remains to be seen, but the hypothesis is interesting and suggestive of possible lines for future studies.

The authors find that the evidence for “accident prone” drivers in their study is slight and their final words, after suggestions for further research are “Tendency to accident is a hazard of living”.

Altogether an interesting and stimulating book, with some new ideas and much material for experimental studies.

- ref. 1. Greenwood, M., and Woods, H. M. (1919). A report on the Incidence of Industrial Accidents upon Individuals with Special Reference to Multiple Accidents. Rep. Industr. Fat. Res. Bd. London, No. 4.
- ref. 2. Hakkinen, S. (1958). Traffic Accidents and Driver Characteristics. A Statistical and Psychological Study. Helsinki: Finland's Institute of Technology, Scientific Researches, No. 13.

R. E. Beard

Sul calcolo dei premi nell'assicurazione danni by BRUNO TEDESCHI, *Giornale dell'Istituto Italiano degli attuari*, Rome 1960

The author first derives the basic formula for insurance of property damage $\left(\int_0^{\infty}\right)$ and then derives the excess loss reinsurance premium by first introducing an upper limit $M \left(\int_0^M\right)$ and then choosing a net retention $\lambda \left(\int_{\lambda}^M\right)$. He then proceeds to show that the reinsurance premium $\left(\int_{\lambda}^M\right)$ depends to a large extent on the procedure followed in grouping the statistical data for a claim distribution, whereas the basic premium $\left(\int_0^{\infty}\right)$ is not so dependent.

He shows this (a) by first treating the observed claims over a period of years as a single average Poisson distribution and then (b) by subdividing the claims into three groups of equal numbers consisting of small, medium and large claims respectively.

The basic premium is the same for cases (a) and (b) but the reinsurance premium differs as the following figures show. These have been calculated on the assumption that the claim distribution is of the form e^{-x} .

	Example I		Example II		Example III	
claims	number of claims per policy and year	amount of claims	number of claims per policy and year	amount of claims	number of claims per policy and year	amount of claims
small	1	1	0,8	0,8	0,6	0,6
medium	1	1	1	1	1	1
large	1	1	1,2	1,2	1,4	1,4
premium \int_0^{10}	1,35 %		1,45 %		1,70 %	
premium \int_4^{10}	0,183 %		0,221 %		0,270 %	

The reinsurance premiums have been expressed as a percentage of the maximum upper limit ($M = 10$).

Introduction to Insurance, by ALLEN L. MAYERSON, The Mac Millan Company, New York 1962, 438 pages.

It is a rather risky attempt to write a book about the whole complex insurance business and this may be the reason why very few authors have tried to give a general survey. Clearly such an enterprise called for an expert and it needed an author of the scope of Allen L. Mayerson, Associate Professor of Actuarial Mathematics at the University of Michigan to comply with this heavy task.

The book is consumer oriented and hence concentrates on the types of insurance the individual will need for himself. It does not, of course, deal with the detailed structure of rates, or of the statistical and mathematical basis of insurance, but some guidance is given to the reader on the broad level of premiums charged for the various classes of insurance.

The book is divided into three parts: In chapters 1 to 7 the basic principles are outlined for property as well as for personal insurance. In chapters 8 to 15 the various types of property insurance are discussed, while chapters 16 to 19 deal with personal insurance. At the end of each chapter the most important features are summarized and review questions test the understanding of the students.