NOTES ON FOREIGN ACTUARIAL JOURNALS

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AMERICA

Transactions of the Society of Actuaries, Vol. 1, No. 1, Nov. 1949

WE welcome the first number of the new *Transactions*. The discussions are printed after each paper which is more convenient to the reader than to find them in a subsequent number. The pages quoted include the discussion.

- E. M. MCCONNEY. Presidential address on the responsibilities of 'Scientific Financiers', pp. 1-9. It provides an excellent send-off to the new Transactions.
- R. A. HOHAUS. The origin of the Society of Actuaries, pp. 10-41. An account of the merger which will be useful to future actuaries as a historical reference.
- C. A. SPOERL. *The actuarial examinations*, pp. 42-105. The paper, its appendix of statistical information and the discussion will be interesting to all actuaries.
- L. H. McVITY. Some reflections on Fund Accounts, pp. 106-130. A fund account of a line of business represents an approximation to the amount of assets that would have existed if the line had been maintained as a separate entity.
- C. F. B. RICHARDSON. Some actuarial observations on agency management problems, pp. 131-176. Figures are given showing rates of survival of new agents, etc.
- E. G. FASSEL. *Term Conversion Option*, pp. 176-218. The paper is largely on classical lines. Statistical experiences mentioned in the discussion are of much interest.
- D. C. BRONSON. *Pensions* 1949, pp. 219–294. The paper and the discussion give a full account of the present practice, problems and conditions in America.
- J. F. RVAN. An 80-column punched card for mortality statistical purposes and the procedure followed in its preparation, pp. 295-342. The card includes the information required for studying impairments, blood pressure, weight, aviation, etc.
- T. N. E. GREVILLE. On the derivation of discrete interpolation formulas, pp. 343-368. In many cases the derivation can be simplified by employing an analogy between interpolation and graduation. This idea is largely due to Vaughan, who contributes to the discussion (cf. J.I.A. Vol. LXXII, p. 482).
- W. A. JENKINS and E. A. LEW. *A new mortality basis for annuities*, pp. 369-498. The paper not only gives tables for use but a considerable discussion on the past mortality and on projected mortality. It should be studied by every actuary.

- Z. I. MOSESSON. *Prudential* 1946–1948 *Disability Experience*, pp. 499–524. This experience and those mentioned in the discussion give statistical information about disability according to the type of benefit—I, Waiver of premium and disability income; II, Waiver but as from date of disablement; III, Waiver and payment of sum assured by instalments, etc.
- C. N. WALKER and W. E. LEWIS. A valuation method for retirement income endowment policies after life contingencies have ceased, pp. 525-538.

Digests of Informal Discussions

Mortality (pp. 539-547) (i) under term insurance plans before and after conversion, (ii) under level term insurances compared with decreasing term insurances, (iii) on large risks.

Dividends (pp. 548-552). Social Insurance (pp. 553-562). Group Insurance (pp. 563-567). Employee Welfare plans (pp. 568-574). Actuarial Profession (pp. 575-576).

Reports of the Committee on Mortality under ordinary insurances and annuities, pp. 584-621, includes (i) insurance mortality for years 1947 and 1948 and ratios for seven years, (ii) mortality on policies for large amounts, (iii) individual immediate annuities 1947 and 1948, (iv) aviation statistics 1946-48.

BELGIUM

Bulletin de l'Association royale des Actuaires Belges, No. 55, 1949

- R. CONSAEL. Sur le schéma de Pólya-Eggenberger à deux variables aléatoires, pp. 11-23.
- R. RISSER. Note relative aux tirages contagieux, pp. 25-51. The Pólya-Eggenberger scheme of urn-drawings consists of successive extractions of individual balls from an urn containing, at the commencement, R red and S white balls; after each drawing $1 + \Delta$ balls of the colour just drawn are placed in the urn. The resulting probability distribution of the number of red balls drawn in *n* extractions is typical of a certain kind of 'contagion' and has found numerous applications in accident and sickness statistics. The two authors reviewed provide a simultaneous and independent consideration of the generalization of the Pólya-Eggenberger scheme which replaces the initial set-up by a tri-colour combination of balls, R red, S white and T blue.
- G. M. M. ALTING VON GEUSAU. L'enseignement actuariel aux Pays-Bas, pp. 53-62. A brief review of the history and recommendations of the committee formed in 1939 by the Dutch Actuarial Society to investigate the training of actuaries (see J.I.A. Vol. LXXIII, p. 147). The resulting creation of two kinds of actuaries, one trained at Amsterdam University and the other by the Society itself, promises interesting developments.

FRANCE

Bulletin Trimestrial de l'Institut des Actuaires Français, No. 189, December 1949

P. RICHARD. Sur un nouveau mode de reassurance, pp. 344-367. The suggestion (hardly new) is to reassure an excess of loss for fire or accident business and the author discusses with numerical examples how this could be arranged.

GERMANY

It is with pleasure that we draw attention to the *Querschnitt durch die Ver*sicherungsforschung, Nos. 1 and 2, 1949, which is published by Duncker and Humbolton behalf of Köln University and is edited by Prof. Dr WALTER ROHRBECK. The articles are in general of more interest to the insurance community than to actuaries, but include three papers on the mathematical side—one by H. MÜNZNER draws attention to the use of confidence intervals and maximum likelihood, another by K. FISCHER is concerned with questions connected with currency changes and the third by A. BERTSCHE analyses premiums in private sickness insurance.

SCANDINAVIA

Skandinavisk Aktuarietidskrift, 1949, Parts 3-4

- A. HALD. Maximum Likelihood Estimation of the Parameters of a Normal Distribution which is Truncated at a Known Point, pp. 119–134. The estimation of the mean and s.D. of a truncated normal distribution has hitherto differed according as the observations in the truncated tail are missing or are merely counted instead of measured. Both problems are now treated by essentially the same method and valuable tables are provided.
- N. F. GJEDDEBÆK. Contribution to the Study of Grouped Observations. Application of the Method of Maximum Likelihood in Case of Normally Distributed Observations, pp. 135-159. The Sheppard corrections for the mean and variance of grouped observations are 'inconsistent', i.e. as the sample size tends to infinity they do not tend to the universal values. The maximum likelihood corrections are here derived in an implicit form for the special case of a normal sample, and tables useful in their application are supplied.
- J. F. STEFFENSEN. On the Technical Functions of Invalidity Insurance, pp. 160-175. A further contribution (cp. J.I.A. Vol. LXXV, p. 111) to the problem of ensuring consistency of various combinations of forces of invalidity, mortality of actives, etc. After a more general discussion the author puts the force of mortality for 'actives' = $k\mu_x$ (0 < k < 1) and, retaining μ_x and the force of invalidity from the Danish Pensioners Male Table, considers the possibility of obtaining values of μ_x^i (i.e. force of mortality for invalids) fit for practical use and gives an interesting arithmetical example.
- S. J. BJORAA. Approximate Values of Premium Return Assurances, pp. 176–179. Satisfactory results are obtained with Norwegian Annuity Tables R 1935, 4% by $(\bar{a}_{\vec{r}|} - \bar{a}_{x\vec{r}|})$ (1 + 0.3i) for single life and $(\bar{a}_{\vec{r}|} - \bar{a}_{x\vec{y}\cdot\vec{r}})$ (1 + 0.2i) for last survivor.

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- H. HYRENIUS. Sampling Distribution from a Compound Normal Parent Population, pp. 180-187. The compound normal universe intended is a linear compound of normal probability laws and most of the sampling results $(\chi^2, s, t, z, \text{ etc.})$ are based on a compound of two laws with the same variances but different means.
- H. L. SEAL. Mortality Data and the Binomial Probability Law, pp. 188-216. The author maintains that not all mortality data can be indiscriminately tested for adherence to the binomial law. He gives, however, numerous examples showing that the binomial is widely applicable.

Nordisk Försäkringstidskrift, Jan. 1950

This number includes the following:

- H. PALMSTRÖM. The Schemes of Social Insurance in Norway and Life Insurance. An interesting lecture with criticism of certain new proposals made for social insurance.
- G. BRUNDIN. Introduction of the principle of Equity in Swedish non-life insurance. Discusses the suggestion that non-life business should be mutualized in effect and explains the difficulties that must arise.
- N. VON VEH. Statistics of Accidents in Finland during the Years of War. Although direct war accidents are excluded the casualty rates are high and the causes suggested are less skilled labour, forced working pace, machines not kept in perfect working order and neglect of safety measures.
- H. BERNHARD. The Loan Business of the Swedish Housing Board. Interesting because it shows how Sweden is financing the problem of re-housing.
- G. TRIER. Mortality of Sub-standard Lives in Norway in the period 1917–1948. The experience is that of the Norske Folk which was formed to reinsure under-average risks. The mortality of persons who had had pleurisy or who had had tuberculosis was lower than had been expected. Some groups (e.g. abnormal blood pressure) were too small to permit of definite conclusions.