

NOTES ON OTHER ACTUARIAL JOURNALS

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HOLLAND

Het Verzeekerings-Archief (Actuarieel Bijvoegsel), 32, 1955

YNTEMA, L. *Approximate valuation for orphans' pensions*, pp. 71-86. By the use of a series of practical approximations the conclusion is reached that, if P' is the value of widows' pensions becoming due as a result of death in service, the value of orphans' supplements (payable to age 16) each equivalent to one-fifth of the widow's pension is about $2\frac{1}{2}\%$ of $R_0^*P'/\bar{m}$, where R_0^* is the gross reproduction rate and $\bar{m}$ is the proportion of women between 20 and 50 who are married.

33, 1956

BALK, W. *Contribution à la théorie de la distribution des revenus*, pp. 1-18. The solution of an integro-differential equation occurring in the mathematical theory of income distribution due to Kaiser (see *J.I.A.* 82, 147).

SCANDINAVIA

Skandinavisk Aktuarietidskrift, 37, 1954

PÖTTKER, W. *Die Lebensversicherung mit exponentiell ansteigender Prämienreserve (Sparversicherung)*, pp. 125-36. Investigates the conditions under which the policy-value of a generalized endowment assurance (with variable premiums and sums assured) can be written as $V_m = a(1+j)^m + b$ with a , b and j constants and $-1 < j < 1$.

SEAL, H. L. *The estimation of mortality and other decremental probabilities*, pp. 137-62. Reviews 'the various estimates that have been proposed for the t -year probability of death at age x ' and recommends a 'uniformly minimum-variance unbiased estimator for each of the situations that occur in practice'. When the deaths are few some of these estimates may differ substantially from those in common use.

STUART, A. *The asymptotic relative efficiencies of tests and the derivatives of their power functions*, pp. 163-9. The relative efficiency mentioned in the title is the reciprocal of the ratio of the sample sizes required to attain the same power when testing $\theta = \theta_0$ against the alternative $\theta = \theta_1$. The derivatives mentioned are evaluated at $\theta = \theta_0$. These two measures of test efficiency are shown to be essentially equivalent.

- ELFVING, G. *Geometric allocation theory*, pp. 170-90. From a set of random experiments depending on unknown parameters α_j , $j=1, 2, \dots, k$, it is desired to construct an optimal design for estimation of θ , a linear function of the α 's.
- ARFVEDSON, G. *Research in collective risk theory*, pp. 191-223. First part of a paper extending and generalizing earlier theorems in collective risk theory. [A brilliant statement of the present status of this theory is to be found in CRAMÉR, H., *Collective Risk Theory*, Nordisk Bokhandeln, Stockholm (10 kronor).] The second part of this paper appears in vol. 38.

38, 1955

- BARTON, D. E. *A form of Neyman's Ψ^2_k test of goodness of fit applicable to grouped and discrete data*, pp. 1-16. '... a modified form... of Neyman's Ψ^2_k test has been put forward which applies to grouped continuous and discrete data and which includes the chi-squared goodness of fit tests as a special case.'
- BENNETT, B. M. *On the cumulants of the logarithmic generalized variance and variance ratio*, pp. 17-21.
- SEGERDAHL, C.-O. *When does ruin occur in the collective theory of risk?* pp. 22-36. Answers three criticisms levelled against the practicality of the collective theory of risk. Provides explicit expressions for the probability of ruin within a pre-fixed period of (operational) time.
- PORTER, R. A. *Operations analysis: experience and concept*, pp. 37-52. A review of the concepts and procedures of operational research.
- ARFVEDSON, G. *Research in collective risk theory, Part II*, pp. 53-100.
- HAGSTROEM, K.-G. *Insurance on a risk premium basis*, pp. 101-21. An interesting discussion of dividend allocation in group life and pension business underwritten on a 'risk premium' basis.