- 41. Convergence of the Empiric Distribution Function on Half-Spaces—J. Wolfowitz
- 42. Analysis of Two-factor Classifications With Respect to Life Tests—M. Zelen.*

 The five editors are to be congratulated for assembling and presenting this volume in an excellent manner.

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45[K].—Shanti S. Gupta & Milton Sobel, "Selecting a subset containing the best of several binomial populations," p. 224-248, Contributions to Probability and Statistics, Essays in Honor of Harold Hotelling, edited by Olkin et al., Stanford University Press, 1960. [See preceding review.]

Given k binomial populations with unknown probabilities of success p_1 , p_2 , p_k , a procedure R is studied by the authors which selects a subset that guarantees with preassigned probability P^* that, regardless of the true unknown parameter values, it will include the best population; i.e., the one with the highest parameter value. Procedure R for equal sample sizes is given as follows. Retain in the selected subset only those populations for which $x_i \ge x_{\max} - d$, where $d = d(n, k, P^*)$ is a non-negative integer, and x_i denotes number of successes based on n observations from the ith population. Table 2 gives the values of d for k = 2(1)20, 20(5)50; n = 1(1)20, 20(5)50, 50(10)100, 100(25)200, 200(50)500; $P^* = .75, .90, .95, .99$ (a trial and error procedure R is given for large, unequal sample sizes).

Table 3 gives the expected proportion of populations retained in the selected subset by procedure R (for the special case $p_1 = p_2 = \cdots = p_{k-1} = p$, $p_k = p + \delta$, $0 \le \delta \le 1$, $0 \le p \le 1 - \delta$) for n = 5(5)25; $p^* = .75$, .90, .95; $\delta = .00$, .10, .25, .50; and $p + \delta = .50$, .75, .95, 1.00.

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46[K].—MAURICE HENRI QUENOUILLE, "Tables of random observations from standard distributions," *Biometrika*, v. 46, 1959, p. 178–202. Egon Sharpe Pearson, "Note on Mr. Quenouille's Edgeworth Type A transformation," *Biometrika*, v. 46, 1959, p. 203–204.

Quenouille offers a random sample of 1000 each from the normal distribution and seven specified non-normal distributions. While a sample of 1000 is too small for much serious Monte Carlo work, the method of construction of the present tables, where the normal sample uniquely and monotonely determines the 7 non-normal samples, makes it suitable for pilot studies of the sensitivity of statistical procedures to departures from normality.

Specifically, let x_1 be a unit normal deviate from the tables of Wold [1]. Define

$$y = (2\pi)^{-1/2} \int_{-\infty}^{x_1} \exp\left(-\frac{1}{2}x^2\right) dx,$$

$$x_2 = 3^{1/2} [2y - 1],$$