

61[K].—B. SHERMAN, "Percentiles of the ω_n statistic," *Ann. Math. Stat.*, v. 28, 1957, p. 259–261.

The statistic

$$\omega_n = \frac{1}{2} \sum_{k=1}^{n+1} \left| L_k - \frac{1}{n+1} \right|, \quad 0 \leq w_n \leq \frac{n}{n+1},$$

is one of several which have been suggested in connection with the null hypothesis that x_i , ($i = 1, \dots, n$) is a random sample from the uniform distribution and the L_k are the lengths of the $n + 1$ subintervals of the unit interval defined by the ordered sample. In most cases of interest, the x_i are the probability transforms of observations on a random variable with a continuous distribution function. Based on the distribution function derived by the author [1], the 99th, 95th, and 90th percentiles of ω_n to 5D for $n = 1(1)20$ have been computed, and are given in Table I. Values of two standardized forms of this statistic (based on the exact and asymptotic mean and variance, respectively) which are asymptotically normal are given in Table II to 5S for the same percentiles as in Table I and for $n = 5(5)15(1)20$. The author points out that the rate of convergence to the limiting values is slow.

C. A. BENNETT

Hanford Laboratories Operation
General Electric Company
Richland, Washington

1. B. SHERMAN, "A random variable related to the spacing of sample values," *Ann. Math. Stat.*, v. 21, 1950 p. 339–361.

62[K, X, Z].—E. D. CASHWELL & C. J. EVERETT, *A Practical Manual on the Monte Carlo Method for Random Walk Problems*, Pergamon, 1959, 152 p., 23 cm. Price \$6.00.

This is volume I of the publisher's series "International Tracts in Computer Science and Technology and Their Application". It is devoted to a direct and elementary attack on the Monte Carlo principle (that is, the principle of using simulation for calculation and recording the sample statistics obtained from the simulation) in random walk problems, such as mean free path and scatter problems. Many examples are given in the text, and an appendix is added listing twenty more or less typical problems in which the Monte Carlo method was used at the Los Alamos Scientific Laboratory.

Computational details are given and in many cases flow charts are included. No full machine codes are given, but most of the calculations were done on the MANIAC I computer at Los Alamos, and coding from the descriptions given and the flow charts is probably easier than any attempt to translate a MANIAC I code to a code suitable for another machine. A disappointingly short chapter on statistical considerations is included; the reader should be warned that this is not a suitable exposition of the theory or even the practice of the statistical handling of the statistics gathered in his simulation. However, it also is treated from a definitely computational point of view, including flow charts, and is interesting from this point of view.

An interesting small chapter titled "Remarks on Computation" is also included.