

AN EMPIRICAL DETERMINATION OF THE DISTRIBUTION OF MEANS, STANDARD DEVIATIONS AND CORRELATION COEFFIC- IENTS DRAWN FROM RECTANGULAR POPULATIONS*

By

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Formulae for the standard errors of means, standard deviations and correlation coefficients have been derived on the assumption of a normal distribution in the sampled population. They are said to serve approximately even when the population varies considerably from the normal. This paper presents empirical evidence of their applicability in the case of means and standard deviations of samples of ten from a rectangular discontinuous population, and of correlation coefficients of samples of fifty-two from a rank distribution.

The data for the study of the distribution of means and standard deviations were secured by throwing ten dice 1600 times.

The dice were cubes four-tenths of an inch along an edge and numbered on opposite faces 1-6, 2-5, 3-4. They were constructed of bone and formed a matched set.

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