

30th August, 1935

Dear Professor Pearson,

The fullest examination I have published on the efficiency of the method of moments in fitting the Pearsonian curves is in a paper "On the mathematical foundations of theoretical statistics", Phil. Trans. A, ccxxii. 309-368. High efficiencies are only obtained in the neighbourhood of the normal curve. Efficient equations of estimation may always be obtained by the method of maximum likelihood. These equations are often transcendental, or, if algebraic, of an inconveniently high degree, and their solution, therefore, usually requires the devices ordinarily employed in solving transcendental equations.

A method very generally applicable of obtaining an efficient solution approximate to the maximum likelihood solution is given in "Theory of statistical estimation", Proc. Camb. Phil. Soc., xxii. 700-725, and an example in which even the theoretical ~~cells~~^{cell}-of frequencies are functions ^{difficult} to manipulate. a

heavily grouped Type I distribution) was worked by Koshal about two years ago in the Statistical Society's Journal, using the absolute values of the likelihood instead of its differential coefficients.

Yours sincerely,