

10 March 1932.

Dr. E.S. Pearson,  
Biometric Laboratory,  
University College,  
Gower Street, W.C. 1.

Dear Pearson:

I am answering your letter, without waiting for the time needed to study the offprints.

For Type I work of the standard of accuracy set by your father, you would, I suppose, want about 7-figure  $x$  values, and for these  $n_1 = 120$  and 40, would be useful additions, though I am not sure (you may have tested this) whether they will be needed for  $n$ , not exceeding 24.

It is, of course, only in the corner,  $n_1 > 24$ ,  $n_2 > 30$  that direct interpolation using second differences <sup>fails</sup> ~~finite~~ in any row or column, and in this corner the approximation based on normal distribution, though a little tedious, is quite good, as far as is needed for tests of significance.

I have tested interpolation with 7- or 8-figure material by calculating  $n_2 = 7$ , exactly and by interpolation; this is I think the most difficult point

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from  $n_2 = 6, 8, 12, 24, \infty$ , with very reassuring results.

I am sure there would be a great deal of use made of Tables for other values of P. Both the decile series, and higher improbabilities  $P = .003, .001$  etc., and in view of this need I should be inclined not to overload the Table by increasing values of  $n_1$ , beyond what a page can <sup>comfortably</sup> completely hold.

Yours sincerely,