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HARPENDEN
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8th December, 1955

My dear Ron,

I am afraid practically no progress has been made with the translation of Kolmogorov. I am still endeavouring to get Pauline to tackle it. Maybe it can be managed over Christmas. I feel that once it is started, with the aid of a tape recorder it should not take impossibly long. The reference is

> A.N. Kolmogorow. "Sur l'estimation statistique des parametres de la loi de Gauss." Bulletin de l'Academie des Sciences de l'U.R.S.S. Serie mathematique, 6, (1942), 3-32.

I am afraid I haven't done anything with Payne's asymptotic corrections to the test of significance of a weighted mean. I feel that it would be a good thing to have it tabulated. I don't know whether Payne has taken any steps to do this, but if not it seems the sort of computation which should go relatively simply on the electronic computer. If you like, I will ask one of my people to tackle it. Before starting, I would like some guidance on what values to take. Your values of θ (Table V.2) go by 10° from 0° to 90°, whereas Sukhatme's go by 15°. Your values of n_2 are also different from Sukhatme's and you include more significance levels. Would it be reasonable as a first step to compute values for the points given by Sukhatme's table?

I don't think this matter of values is of great importance as once the programme is written I imagine it will be easy enough to compute some further values if they are required.

It would be a good plan for Payne to publish his results somewhere though I doubt if one would normally want to go to this degree of refinement when considering the results of an experiment

on incomplete blocks. In any case, are there ~~any~~ not further complications here in experiments with more than two treatments, since there will in that case be more than one d? There is the further fact to be taken into account that one uses a priori knowledge of the relative errors - at least, I do - in that I normally do not give the between-blocks component a greater weight per plot than the within-blocks component.

Yours sincerely,

Frank.

Professor Sir Ronald Fisher