Dear Mr Tyrrell,

Thanks for your letter of February 15th. The $x$ in table I of my book stands for the whole fraction

$$\frac{x - m}{\sigma}$$

or for the deviation from expectation divided by the standard deviation.

Experimentalists do not often concern themselves with probabilities less than one in a thousand and still less with one in a million. The use of a more extended table would, in fact, only give psychological satisfaction.

As regards the order of probability the number of zeros is not far from $0.2171x^2$. But really once significance is established, the practical question is always to what cause, other than chance, which is now excluded, are the effects due. Testing significance is in fact only the preliminary process of seeing what effects should not be discarded as due with reasonable probability to chance.
Towards the end of your letter you speak of blocks of trials. If trials in the same block are truly independent, their arrangement in blocks is a purely arbitrary convenience and they may be rearranged at will. But if the trials are not independent, it may be necessary to recalculate the probability for a set of trials as a whole and not treat it as though the chance were independent.

Yours sincerely,

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