February 23, 1942

Dear Peters,

Your letter raises a little paradox which I have seen before, in think in Mellor's Mathematics for Students of Physics and Chemistry, where he discusses estimating the wave length from a number of measurements of the positions of the little heaps of dust which appear at regular intervals down a Kunst tube set into vibration. Rather comically, and quite erroneously, he says, if I remember right, that the number of positions measured ought to be even, for, if it is odd, the middle one is not used in the formula - which seems to seem to him rather wasteful - but, of course, the existence of an extra wave in the middle is not ignored in establishing the coefficients of the other measurements, any more than in any series of weighings the fact that a fortnight has elapsed, rather than a week; or six weeks rather than three, between the two weighings on either side of the middle when there is an odd number. Quite simply, all that I was doing was to make the comparison of average growth rate between different sheep more accurate by about 40%, by taking into account the additional and independent information as to growth rate in

the central periods supplied by the intermediate weighings. This is worth while, because individual sheep weights are pretty variable from a number of causes.

It is far better to write to me about a point like this when it is on your mind than to leave it over to be tucked into a long letter.

Yours sincerely,