

26 July 1930.

J. Gray, Esq., M.A.,
King's College,
CAMBRIDGE.

Dear Gray,

Your integral is quite manageable, and will certainly give a good imitation of your curves, though this of course is to say less than that the hypothesis of an initial distribution of longevity is the right one.

Pearson has published extensive tables which he calls the Incomplete Gamma Function, and which I will send you if you cannot lay hands on a copy. He has, however, modified the notation in rather a complicated manner which it will save you some time if I sort out now.

He tabulates $I(n, \beta)$ where

$$\beta = R - 1 \quad \text{of your notation}$$
$$n = \frac{ct}{\sqrt{R}}$$

Your second integral for total oxygen consumed comes out very nicely to

$$\frac{\sqrt{R}}{c}$$

which should give rather a good line on the constants if it can be determined satisfactorily.

Yours sincerely,