difficult to understand what they do mean. Perhaps the best way of making my objection clear will be to give an analogous problem where the same point occurs in a more obvious fashion.

Suppose it is required to find the plane closed curve which satisfies the following two conditions:—

(i) it encloses a given area A.

(ii) it is such that the integral of the square of the curvature, taken along the curve, is a minimum.

The required curve is a circle of radius $\surd(A/\pi)$.

Now, since the integral of the square of the curvature is to be made a minimum, Mr. Lidstone would (I presume) say that the *most probable* curve was that for which the curvature was everywhere zero: that is to say, a straight line. But it seems to me that this is a misuse of the term *most probable*: a straight line has really nothing whatever to do with the problem.

Similarly, I demur to Mr. Lidstone's reference to the simple curve of the second degree as the *most probable* curve in the graduation problem: this curve has, I think, nothing to do with the method.

I am, Sir,

Yours faithfully,

E. T. WHITTAKER.

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16 CHAMBERS STREET,
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After having seen Professor WHITTAKER'S reply, Mr. LIDSTONE wrote as follows:—

To the Editor of the Transactions of the Faculty of Actuaries.

SIR,

I used the term "most probable" with the ordinary meaning "having the greatest chance"—in this case the *a priori* chance discussed in Whittaker's hypothesis.

I am sorry that Professor Whittaker has not removed my difficulty by explaining where my argument is erroneous or misconceived. It seems to me that his interesting geometrical problem has really nothing to do with the case even as a parallel, for its data are self-contained, and therefore involve no such *hypothesis* as I have been discussing.

I am, Sir,

Your obedient Servant,

G. J. Lidstone.

9 St. Andrew Square,
Edinburgh.