

13th March, 1956.

Dear Professor Darmois,

I have at last some progress to report in the matter of getting Kolmogorov translated. I am, however, still puzzled as to the title of the paper, which I would like to cite in English in my references although the original is in Russian. I have a title in French which may perhaps have been used in the French translation, or may really refer to another paper:

"Sur l'estimation statistique des parametres de la loi de Gauss".

From what my translator can tell me, the Russian original seems to be more like:

"The estimation of the ^{mean} ~~location~~ and precision of a finite sample of observations",

with the sub-title of Section 5 as,

"Fisher's fiducial limits and fiducial probability".

It has occurred to me that you might like to see how I should now wish to treat questions of fiducial probability, tests of significance etc., since I doubt if I made myself really clear at the sessions which you invited me to give years ago in

Paris, and so far as I can make out, Kolmogorov, although wanting to justify my results, is under the impression that I committed a most elementary error.

I feel sure that now a much more satisfactory and formally explicit demonstration is possible, and that it is not necessary, as Harold Jeffreys and Kolmogorov have ^{not} thought, to introduce a new axiom, but only to recognize that a statement of probability is a statement involving a well-defined measure of uncertainty, and therefore ^{it} this truth requires well-specified ignorance as well as well-specified knowledge, as must be the case with any statement of uncertainty. In fact the so-called "rigorous" statement of probability theory by Kolmogorov (or Feller in America) is, at the cost of ignoring the characteristic uncertainty, expressed by an accurate statement of probability, and ignoring, therefore, the applicability of this concept in the real world, since it is only in the manipulations within the formal theory that the uncertainty is inoperative.

However, I hope the text, of which I send a galley proof of one chapter, will be clearer than this letter!

Sincerely yours,

Enc.