

22nd March, 1955.

My dear Professor Darmois,

Perhaps Dugué has told you that I am hoping to get him over in England for a few days to give a lecture in this University. I should particularly like other members of my department to have the opportunity of making his acquaintance.

I suppose you will be going to Brazil, and I look forward to the opportunity of seeing you there next June, if they do not organize so many meetings of different international bodies that we never get a chance to see one another!

I am writing to you now primarily to seek your assistance in a literary reference, for I recall about 1946 when I was on a visit to Paris, at your invitation, that you were good enough to show me a paper of Kolmogoroff's in French translation; in particular you wished to show me the curious axiom which Kolmogoroff had excogitated in wrestling with the problem of fiducial inference.

As I am now engaged in setting out more fully, from the point of view of mathematical logic, the bases, as I understand them, of scientific inference, I am wanting to recover the reference of this little essay in axiomatics.

For a time, as perhaps you know, I was doubtful whether

Sir Harold Jeffreys and others were not perhaps right in thinking that the form of reasoning, to which I gave the name 'fiducial', required some special axiom, but I am now fully satisfied that this is not so, but that the matter turns on the fact that the word 'probability' was framed by our predecessors in the 17th and 18th centuries not only with abstract and deductive inferences in view, but with the intention of actually applying the idea to the real world, for example, in the advice given to gamblers, and that in consequence the true meaning of the word includes both the specification of what is known, which enters readily into deductive processes, but also a specific requirement as to what is unknown, which is a type of datum we constantly have to use in inductive reasoning, but which is not easily accommodated to the canons of deduction.

All this confirms me in my belief that what is inferred, using the method of fiducial probability, is a classical probability just as conceived by de Moivre or Montémort, and not in any sense a special kind, or species, of probability, as has been diligently insinuated. In fact there are a great many cases in which fiducial inferences could be experimentally verified to any degree of accuracy.

It is in trying to make it clear that I am myself introducing no new axiom, ^{that} ~~but~~ I want to refer to the attempts of Jeffreys and Komogoroff to cope with the problem in this way.

I hope you will recall the reference without trouble.

With best wishes,

I remain

Yours sincerely,