

November 3, 1937

Dear Professor Thomson,

Thanks for your letter of November 1st. The 1925 paper on Theory of Statistical Estimation in the Cambridge Philosophical Proceedings is the best formal statement on the distinctions to be drawn and the consequences of using estimates satisfying various criteria. I do not see how any development of this principle can cope with a problem in which the number of parameters exceeds, as you say, the number of tests, unless I may understand this as meaning that you have many observations independently taken of the different tests. What I mean is, that, unless the frequency to be expected of each distinguishable observation can be specified formally ~~in terms~~ of the parameters, one has really no defined quantities to make estimates of. One begins, in fact, by elaborating an hypothesis which may be somewhat complex, including, for example, errors of measurement, but capable of expressing reasonable ~~reasonable~~ expectations in view of what is already known, and then any indeterminate parameters involved in this hypothesis can have estimates made of them, and about

each or any set of them jointly there will be a measurable quantity of information supplied by the data, determining, in effect, the precision of the estimate.

I would not, however, like you to put yourself to any trouble to fit your approach into my scheme, for it is really of the utmost generality, therefore a particular problem worked out logically on its own merits must certainly find a place within it. \*

If you will be in town some time before November 26th I should like you to come and lunch with me at this Department; but on that date I shall be sailing for India, returning about the middle of February.

Yours sincerely,