June 9, 2019

Participants
First Seminar on Evidential Inference
Department of Statistics
Ferdowsi University of Mashhad

Dear Participant;

Thank-you to the organizers for the opportunity to write this letter addressed to the participants in the seminar on evidential inference. I note that it is called the first seminar and presumably this references that this is the first time this event is held in the Department of Statistics at Ferdowsi University of Marshad. But it may well be the first time a conference or workshop on this topic has ever been held anywhere, at least to the best of my knowledge. This is an accomplishment to be proud of. I hope it will be the beginning of a long series of such seminars because the topic is one of great importance to the field of statistics and to science more generally.

It is clear that statistical reasoning plays a key role in many branches of science from medicine to physics. So statistical reasoning is being used as part of knowledge acquisition and, as such, the process, and the justification for that process, needs to be as logical and as sound as possible. It is fair to say, however, that serious questions can be raised about many commonly used statistical tools. Perhaps the p-value is the best example of this, as considerable doubts have been raised about the suitability of using this as part of assessing evidence.

Although there has been much recent activity, concerns over the foundations of the subject of statistics have existed for many years with seemingly little headway being made on resolving difficulties. In fact, some have despaired of there ever being a resolution. My own view is much more optimistic and it centers on the topic of statistical evidence. To be clear about what statistical evidence means, and how this drives the inference process will, in my view, lead us to the promised land of a foundations for the subject of statistical reasoning.

To achieve this goal, however, will require change in many ways. Primarily we will collectively have to change the way we think about the subject. For example, there is a long debate in the field concerning subjectivity versus objectivity and various hard positions have been adopted. A deeper understanding of these topics is required, however, and I believe that being clear about what statistical evidence means can contribute to a resolution of strongly opposing views. This is accomplished through measures of bias which depend intrinsically on how statistical evidence is characterized.

My purpose here, however, is not to lecture about my own views on these matters, or on technical details, but to encourage the participants in the seminar to engage in a full and open investigation of the concept of statistical evidence. Perhaps most important is to be open to the possibility that, by being precise and clear about how we deal with this topic, this can indeed lead to the solution of many problems for the field that have previously seemed irresolvable.

Yours Sincerely

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