CORRESPONDENCE

To the Editor, *The Mathematical Gazette*

DEAR SIR,

I regret that I cannot accept Dr Geiringer's reply* to my review† of *Mathematical Theory of Probability and Statistics*.

Her first point was that the present book's account of the frequency theory was substantially different from that in *Probability, Statistics and Truth*. I should have made it plain that this account is more mathematical than PS & T, but the quotation I gave indicates that the increased use of mathematical techniques has done little to overcome difficulties facing the frequency theory which have been pointed out ever since PS & T appeared (and even earlier). Incidentally, I fail to see how any remark about Chapter II can refute my assertion (which was meant to refer to the book as a whole) that the book lacks mathematical sophistication; certainly some particular topics are dealt with in a sophisticated fashion.

Insofar as the book gives an account of the whole theory of mathematical statistics and probability it is bound to deal with many topics which are common to all books with this aim. And usually the account given bears some relation to that in other books; consequently, a knowledge of von Mises' frequency theory is rarely (*not* never) necessary in the later chapters.

I suppose that the adjectives "eccentric" and "exciting" with regard to Chapters III to VI refer to the same features. These chapters are certainly unorthodox, and different reviewers must react differently to these unorthodoxies.

I cannot believe that anyone with no statistical experience will find pp. 333–334 and pp. 498–504 sufficient to explain to him how a prior distribution is in practice determined. What I should like to see is the sort of extended discussion of this problem which is to be found in Jeffreys' *The Theory of Probability*; although presumably the arguments there cannot be used side by side with von Mises' frequency theory. But somehow guidance must be given as to what to do in a practical situation in which there is not a long run of previous observations easily available. I note that Dr Geiringer does not take up my point about the classical t, F and χ^2 tests.

Certainly it was not hidden that the book is two in one; but this is not in itself a justification for its publication in its present form. In short, I still find it difficult to recommend this book either to students or to teachers of statistics.

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* Mathematical Gazette, vol. 52 (1968), no. 380, p. 168.

† Mathematical Gazette, vol. 50 (1966), no. 374 p. 421.