

expressed in terms of the integral of the probability density inside (or beyond) the boundary of the region, rather than in terms of the likelihood ratio on the boundary.

Thus it seems to me that Professor Savage, and Professor Barnard, are again at the same points, but with new arguments which in their view lead to different conclusions from ours. I think to a large extent we are or were trying to meet the same requirements of a 'rational man' in different ways, and to me at any rate it will be illuminating to explore the parallelism further than has so far been done. The personal probability which Professor Savage expresses in so far as he can in numerical measure, using, if I understand correctly, the analogy of betting odds, is undoubtedly paralleled by my own conception of the need for the exercise of personal judgement in such matters as choosing the appropriate significance level or trying to decide on the magnitude of a worthwhile effect or on the balance of utilities. I have little doubt that when expressed in a variety of situations, where possible in numerical terms, the composition of Professor Savage's expressions for the posterior estimation of odds will throw light on the different facets of the more intuitive process of personal judgement to which the 'frequentist' must appeal.

But to throw illumination on one approach by comparison with another is not the same thing as to substitute one approach for the other. I would hope somehow to reach a blend of the two! My own personal difficulty is that there seem to be so many situations in which I cannot imagine how I would assign numerical values which would satisfy me to prior probabilities and utilities. The number of matters to be taken into account under the heading of prior information seems to be so vast. There are not only the prior distributions for μ and σ , but for normality, for equality of variance, for the degree of homogeneity of the data and its randomness. In the questions of utility it seems to me that we are often not faced with straight economic comparisons; how, for example, as occurs in medical research, are we to balance in precise numerical terms the possible chance of saving life against the waste of a limited supply of experimental effort?

If the complete formulation, even in algebraic terms, of all the factors which in some way influence human judgement is not possible it seems that the new theory cannot be mathematically complete as a

