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Comment

D. R. Cox

The use and misuse of significance tests has been a popular topic of comment for many years and from many points of view. Although the matter could hardly be said to be underdiscussed in the recent literature, Professors Berger and Delampady have made a valuable addition to that literature by their careful account of the relation between P-values and the posterior probabilities of "precise" null hypotheses, a matter

D. R. Cox is Professor of Statistics, SERC Senior Research Fellow, Department of Mathematics, Imperial College, London SW7 2BZ, United Kingdom. first raised many years ago by H. Jeffreys. The extension of the discussion to include broad classes of priors is particularly striking.

For those taking an eclectic view of statistical theory the comparison of different approaches to the same or similar problems is important, sometimes soothing and occasionally constructively alarming. What is one to make of the present comparisons? The authors are in no doubt.

(i) "Rejoinder 5. P-values have a valid frequentist interpretation. This rejoinder is simply not true" (Section 4.5).