sample size increases.

Beyond the above stardard oversimplistic example, such an analysis might be the starting point to develop an objective quantitative measure of discriminatory power of the FBF, as a function of b. This measure could be combined with measures of sensitivity of the FBF to the prior, such the ones proposed in Conigliani and O'Hagan (2000), in a unifying tool to be used to choose b.

Two final comments are in order. First, in principle the above analysis can be also performed in the presence of *multiple fractions* FBF. Secondly, and more importantly, as noted above computation of the probabilities to be used to set the fraction(s) requires the knowledge of the marginal distributions of the data under the two models, and this is, in general, much more complicated than it is in this problem. The use of fractional priors might be, at least in some cases, of help (De Santis, 2000).

ADDITIONAL REFERENCES

Conigliani, C. and O'Hagan, A. (2000). Sensitivity measures of the fractional Bayes factor to prior distributions. *Canad. J. Statist.* **28**.

De Santis, F. (2000). Statistical evidence and sample size for robust and default Bayes testing. Technical Report, Univ. of Rome, "La Sapienza".

Gilks, W.R. (1995). Discussion of O'Hagan. *J. Roy. Statist. Soc. Ser. B* 57 118-120.

Liseo, B. (2000). Robustness issues in Bayesian model selection. In: *Robust Bayesian Analysis*. Lectures Notes in Statistics, 152, 197-222. Springer-Verlag.

Royall, M.R. (1997). *Statistical Evidence: A Likelihood Paradigm*. Chapman and Hall, London.

Verdinelli, I. (1996). Bayesian designs of experiments for the linear model. PhD dissertation, Dept. of Statistics, Carnegie Mellon Univ.

REJOINDER

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We thank the discussants for their very interesting comments and viewpoints. We respond to each in turn, using the numbering scheme of the discussants. If we do not mention a section of a discussion, it is because we appreciate and agree with the points mentioned therein.