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1. Introduction. Diaconis and Freedman (D & F) have made important and interesting contributions to the problem of determining in which situations nonparametric Bayes estimates do and do not work. Investigating when statistical principles and techniques break down is an important enterprise which is not well enough appreciated. Thus, even though we often experience in life that nature serves up distributions consistent with Murphy's Law,[2] in applied research, there is a tendency to believe that nature provides nice simplistic distributions and models. Economists are starting to realize that this belief can lead to large errors in prediction. In other fields, it may take longer to discover similar problems.

We find it both surprising and interesting that inconsistency can occur when the prior on the location parameter, the Dirichlet parameter in the law of the error distribution, and the distribution sampled, are all "nice" and symmetric about zero. D & F (1986a (hereafter I), Section 3) suggest using the "device of imaginary results" or the "what if" method to deal with the inconsistency. This procedure involves modifying the prior after computing the posterior for "imaginary data sequences." In Section 2 below, we discuss the properties of a different and much simpler (subjectively speaking) approach which amounts to computing a posterior distribution based on partial information or to presmoothing before computing the posterior. In Section 3 we show that this "partial posterior" idea can be linked to partial likelihood.

But first we will focus on the following intriguing D & F statement:

> Any of the classical estimators, such as the mean or the median will be consistent in this situation, so the Bayes estimates do worse than available frequentist procedures. (D & F I, Remark 4, Section 1. See also D & F (1986b; hereafter II), Section 1.)

This statement refers to models where the "Bayes" procedure is given the job of coping with the infinitely dimensional nuisance parameter F as well as location while the "frequentist" procedure essentially only has to deal with location since any nuisance parameter difficulties have been removed by assuming symmetry. Thus we think that a fairer comparison would be the nonparametric Bayes procedure versus the semiparametric frequentists procedure where the pair (θ, F) is estimated using semiparametric maximum likelihood techniques.

Rather than pursuing this last remark, we claim that the D & F results lead to the conclusion that what is needed in the nonparametric framework are Bayes procedures for location that are not distracted by the problem of dealing with an infinitely dimensional nuisance parameter. Thus we propose using the posterior

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[2] When something can go wrong, it will.