Title: Data, Virtual Data, and Anti-Data.

Author: Carlos C. Rodriguez

Abstract

\delta-priors optimize natural notions of ignorance.
When the likelihood is in the exponential family the
0-priors become the standard cojugate priors relative
to the information volume. In this case prior information
is equivalent to having \alpha > 0 extra virtual
observations. On the other hand 1-priors are not conjugate
and where the 0-priors add the \alpha virtual observations
to the actual n sample points, the 1-priors subtract
the \alpha from the n. I call this "anti-data" since
\alpha of these points annihilate \alpha of the observations
leaving us with a total of n-\alpha. Thus, 1-priors are
more ignorant than 0-priors. True ignorance, that claims
only the model and the observed data, has a price.
To build the prior we must spend some of the information
cash in hand. No free lunches.