Various "flat"-priors

Parametrization

The flat prior has density

$$\pi(\widetilde{\theta}) = 1 \tag{1}$$

(with obvious imprecise notation) for continuous $\widetilde{\theta}$. Various transformations gives rise to different priors. The following priors are implemented:

flat for $\theta = \widetilde{\theta}$

logflat for $\widetilde{\theta} = \exp(\theta)$

logiflat for $\widetilde{\theta} = \exp(-\theta)$

Specification

Example

Assume $\theta = \log \tau$ where τ is a precision. Then prior `flat` implies that $\pi(\theta) \propto 1$ or $\pi(\tau) \propto 1/\tau$, prior `logflat` implies that the prior for $\widetilde{\theta} = \exp(\theta)$ is $\propto 1$ or $\pi(\tau) \propto 1$, and prior `logiflat` implies that the prior for $\widetilde{\theta} = \exp(-\theta)$ is $\propto 1$ or $\pi(1/\tau) \propto 1$.

Notes