Dirichlet prior

Parametrization

This is a prior for $(\gamma_1, \ldots, \gamma_K)$, where $0 < \gamma_k < 1$ and $\sum_{k=1}^{K} \gamma_k = 1$. The density is

$$\pi(\gamma_1, \ldots, \gamma_K) = \frac{\Gamma(K\alpha)}{\Gamma(\alpha)^K} \prod_{k=1}^{K} \gamma_i^{\alpha-1}$$

using a common α for all k.

Specification

This prior for the hyperparameters is specified inside the `hyper`-spesification, as

```
hyper = list(<theta> = list(prior="dirichlet", param=<alpha>))
```

and the value of K is implicit for corresponding model.

Example

Notes

This is an experimental prior-function. The normalizing constant wrt to the internal representation is correct only up to a multiplicative constant due to a missing correction in the log-Jacobian for the sum-to-zero constraint for $\{\gamma_k\}$.