Back to Laplace's historical example

1. **The question**

   ...

2. **Sampling model**

   ...

3. ***prior***

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   A uniform prior on θ (the probability that a newborn would be a girl rather than a boy):

   $$\theta \sim \mathcal{U}_{[0,1]}$$

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Purpose of a Bayesian modeling: **infer the *posterior*** distribution of the **parameters**

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Posterior is calculated from:

1. the sampling model $f(y|\theta)$ – which yields the likelihood $f(\boldsymbol{y}|\theta)$ for all observations
2. the *prior* $\pi(\theta)$

Application to the historical example

1. **the likelihood**

2. **the prior**

3. **the posterior**

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