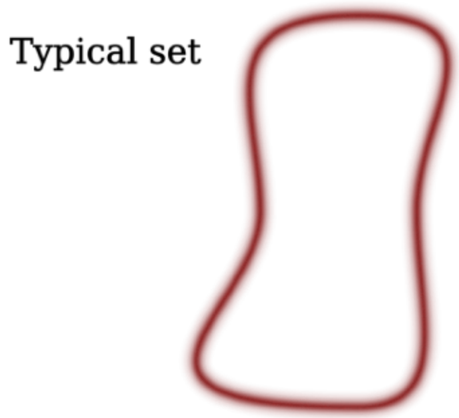
Finding the typical set

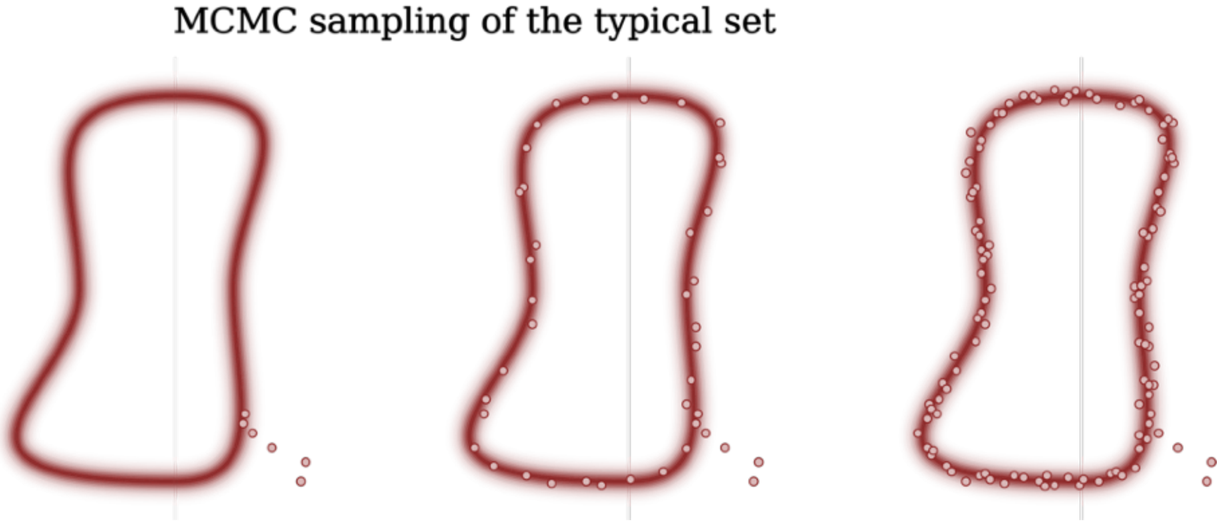
Find a sequence of points in the parameter space that converge to the typical set:

$$\theta_1 \rightarrow \theta_2 \rightarrow \theta_3 \rightarrow \theta_4 \rightarrow \cdots$$

Such that:

$$\{\theta_1, \cdots, \theta_n\} \sim P(\theta \mid y)$$





MCMC samplers

- Metropolis–Hastings algorithms (broad class of samplers, very general).
  - Most methods in the wild are some flavor of this.
- Reversible Jump MCMC (used in many phylogenetic packages).
  - Allows for posterior distributions with variable dimensionality.
- Usable non-mcmc methods: R-INLA - integrated nested Laplace approximation.
  - Great for structural equation modeling, much faster for some classes of models.