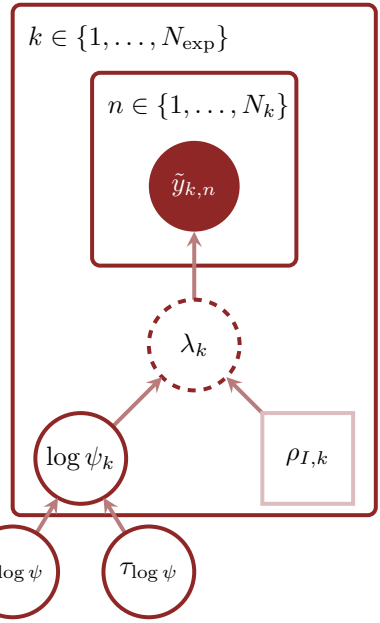

$$\tilde{y}_{k,n} \sim \text{Poisson}(\lambda_k)$$

$$\lambda_k = \exp(\log \psi_k) \cdot \rho_{I,k}$$

$$\log \psi_k \sim \text{normal}(\mu_{\log \psi}, \tau_{\log \psi})$$

$$\mu_{\log \psi} \sim \text{normal}(0, \log 10)$$

$$\tau_{\log \psi} \sim \text{half-normal}(0, \tfrac{\log 10}{2})$$