



$$\tau_i^H \sim \text{Gaussian}(0, 1)$$

$$\tau_i^F \sim \text{Gaussian}(0, 1)$$

$$\mu\theta^H \sim \text{Gaussian}(0, 1)$$

$$\mu\theta^F \sim \text{Gaussian}(0, 1)$$

$$\mu\theta_A^H \leftarrow \mu\theta^H + \frac{\tau^H}{2}$$

$$\mu\theta_B^H \leftarrow \mu\theta^H - \frac{\tau^H}{2}$$

$$\mu\theta_A^F \leftarrow \mu\theta^F - \frac{\tau^F}{2}$$

$$\mu\theta_B^F \leftarrow \mu\theta^F + \frac{\tau^F}{2}$$

$$\lambda\theta_j^H \sim \text{Gamma}(.001, .001)$$

$$\lambda\theta_j^F \sim \text{Gamma}(.001, .001)$$

$$\theta_{ij}^H \sim \text{Gaussian}(\mu\theta_j^H, \lambda\theta_j^H)$$

$$\theta_{ij}^F \sim \text{Gaussian}(\mu\theta_j^F, \lambda\theta_j^F)$$

$$H_{ij} \sim \text{Binomial}(\theta_{ij}^H, s)$$

$$Fa_{ij} \sim \text{Binomial}(\theta_{ij}^F, s)$$