$$\mu^d \sim \text{Gaussian}(0,1)_{T(0,6)}$$

$$\delta^d \sim \text{Gaussian}(0,1)_{T(0,6)}$$

$$\mu_A^d = \mu^d + \frac{\delta}{2}$$

$$\mu_B^d = \mu^d - \frac{\delta}{2}$$

$$\sigma_j^d \sim \text{Uniform}(0,5)$$

$$d_{ij} \sim \text{Gaussian}(\mu_j^d, \sigma_j^d)$$

$$c_{ij} \sim \text{Gaussian}(0,0.7)$$

$$\theta_{ij}^h = \phi(\tfrac{1}{2}d_{ij} - c_{ij})$$

$$\theta_{ij}^f = \phi(-\tfrac{1}{2}d_{ij} - c_{ij})$$

$$y_{ij}^h \sim \text{Binomial}(\theta_{ij}^h, s)$$

$$y_{ij}^f \sim \text{Binomial}(\theta_{ij}^f, n)$$