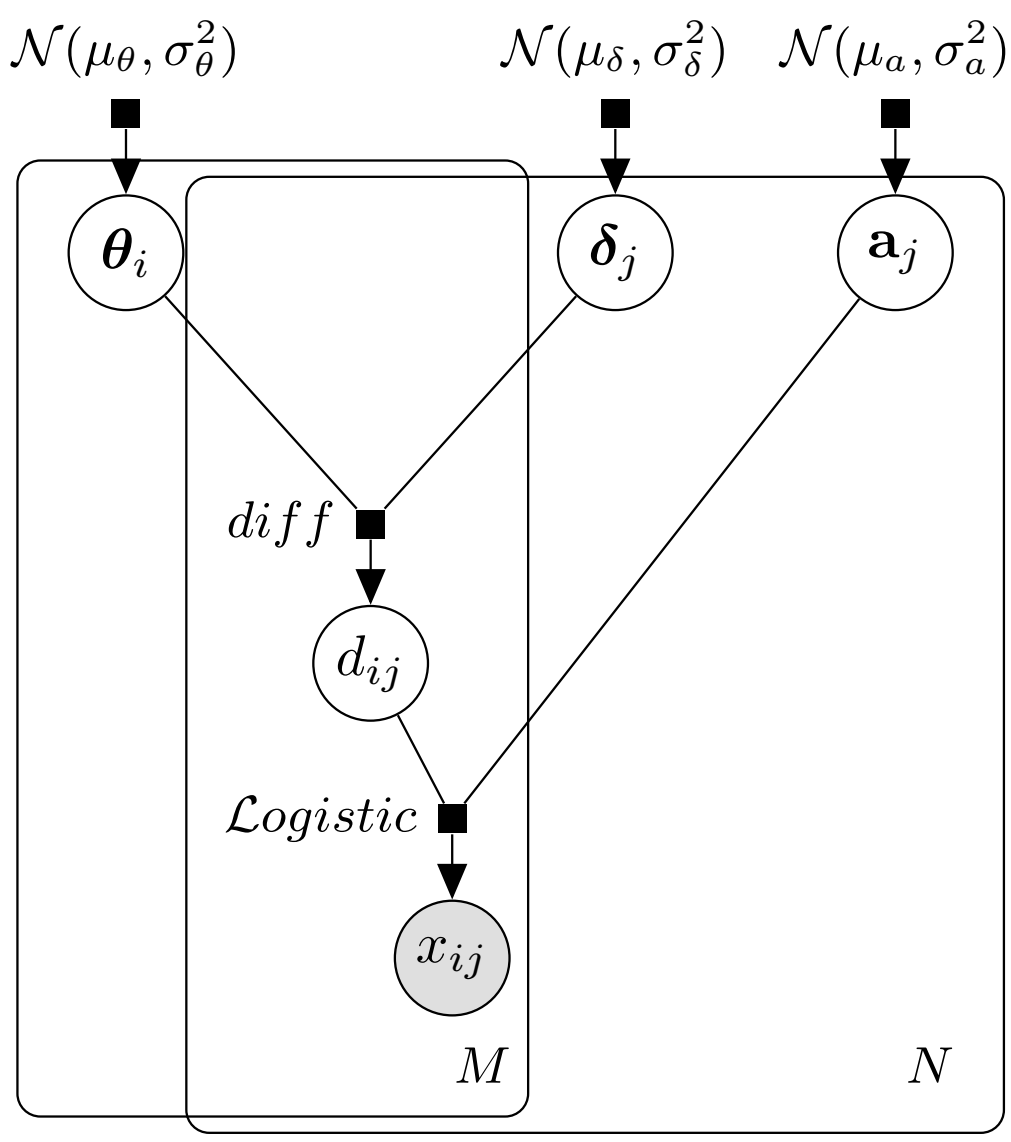

$$x_{ij} \sim \mathcal{L}(d_{ij}, a_j)$$
$$d_{ij} = \boldsymbol{\theta}_i - \boldsymbol{\delta}_j$$

Item Characteristic Curve
mapping ability to expected response:

$$E[x_{ij}|\boldsymbol{\delta}_j, a_j] = \frac{1}{1 + \exp\left(-a_j(\boldsymbol{\theta}_i - \boldsymbol{\delta}_j)\right)}$$