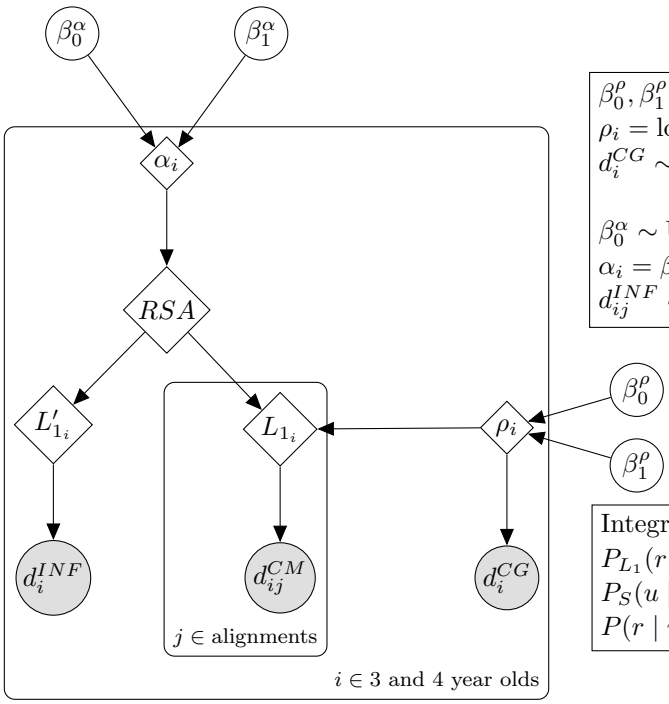
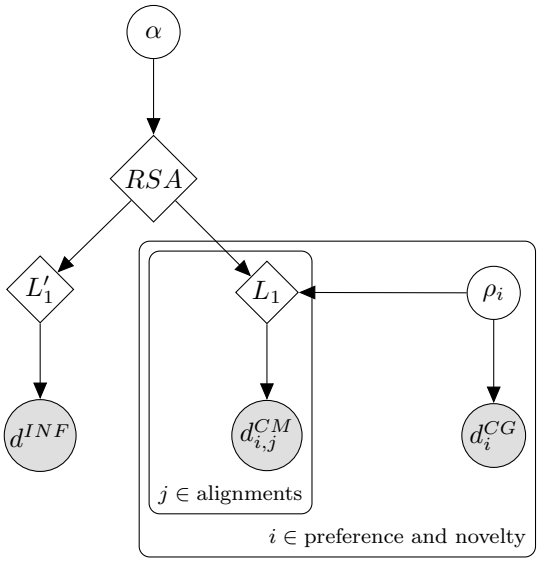


$\beta_0^\rho, \beta_1^\rho \sim \text{Uniform}(-2, 2)$
$\rho_i = \text{logistic}(\beta_0^\rho + i \cdot \beta_1^\alpha)$
$d_i^{CG} \sim \text{Bernoulli}(\rho_i)$

$\beta_0^\alpha \sim \text{Uniform}(-3, 3); \beta_1^\alpha \sim \text{Uniform}(-0, 4)$
$\alpha_i = \beta_0^\alpha + i \cdot \beta_1^\alpha$
$d_{ij}^{INF} \sim L'_{ij}, d_{ij}^{CM} \sim L_{ijk}$

Integration model
$P_{L_1}(r \mid u; \{\alpha_i, \rho_i\}) \propto P_S(u \mid r; \{\alpha_i, \rho_i\}) \cdot P(r \mid \rho_i)$
$P_S(u \mid r; \{\alpha_i, \rho_i\}) \propto P(r \mid u; \{\rho_i\})^{\alpha_i}$
$P(r \mid u; \{\rho_i\}) \propto \mathcal{L}(u, r \mid \rho_i)$



$\alpha \sim \text{Cauchy}(1, 2)$
$d^{INF} \sim L', d_{ij}^{CM} \sim L_{ij}$

Integration model
$P_{L_1}(r \mid u; \{\alpha, \rho_i\}) \propto P_S(u \mid r; \{\alpha, \rho_i\}) \cdot P(r \mid \rho_i)$
$P_S(u \mid r; \{\alpha, \rho_i\}) \propto P(r \mid u; \{\rho_i\})^{\alpha}$
$P(r \mid u; \{\rho_i\}) \propto \mathcal{L}(u, r \mid \rho_i)$