Full conditional distribution of z

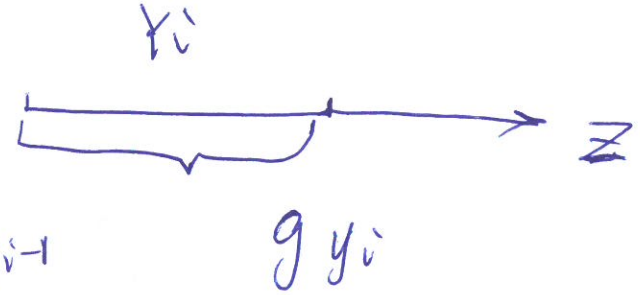
$$p(z_i/\beta, y, g) \propto p(z_i/\beta) \cdot p(y, g/z_i, \beta)$$

$$\propto p(z_i/\beta) \cdot p(g/y, z_i) \cancel{p(\beta)}$$

$$\propto p(z_i/\beta) \cdot p(g/y, z_i)$$

$$\propto dnorm(\cancel{\beta x_i^T} \; x_i^T\beta, 1) \times \delta_{(a,b)}(z_i)$$

constrained on interval (a, b)



$$F_j(y) = Pr(Y_{ij} \le y) = Pr(g_j(Z_{ij}) \le y)$$

$$= Pr(Z_{ij} \le g_j^{-1}(y)) \qquad Z_{ij} \sim N(0,1)$$

$$= \Phi(g_j^{-1}(y))$$