utility

$$u_j^* = \boldsymbol{\beta}^{*'} \mathbf{x}_j - \alpha^* p_j + \varepsilon_j^*, \qquad \varepsilon_j^* \sim \text{Gumbel}\left(0, \sigma^2 \frac{\pi^2}{6}\right)$$

utilityPreferenceScaled

$$\left(\frac{u_j^*}{\sigma}\right) = \left(\frac{\mathbf{\beta}^*}{\sigma}\right)' \mathbf{x}_j - \left(\frac{\alpha^*}{\sigma}\right) p_j + \left(\frac{\varepsilon_j^*}{\sigma}\right), \qquad \left(\frac{\varepsilon_j^*}{\sigma}\right) \sim \text{Gumbel}\left(0, \frac{\pi^2}{6}\right)$$

utilityPreference

$$u_j = \mathbf{\beta}' \mathbf{x}_j - \alpha p_j + \varepsilon_j, \qquad \varepsilon_j \sim \text{Gumbel}\left(0, \frac{\pi^2}{6}\right)$$

utilityWtpScaled

$$\left(\frac{u_j^*}{\alpha^*}\right) = \left(\frac{\beta^*}{\alpha^*}\right)' \mathbf{x}_j - p_j + \left(\frac{\varepsilon_j^*}{\alpha^*}\right), \qquad \left(\frac{\varepsilon_j^*}{\alpha^*}\right) \sim \text{Gumbel}\left(0, \frac{\sigma^2}{(\alpha^*)^2} \frac{\pi^2}{6}\right)$$

utilityWtp

$$u_j = \lambda \left(\mathbf{w}' \mathbf{x}_j - p_j \right) + \varepsilon_j, \qquad \qquad \varepsilon_j \sim \text{Gumbel}\left(0, \frac{\pi^2}{6}\right)$$

wtpHatComputed

$$\hat{\mathbf{w}} = rac{\hat{\mathbf{\beta}}_j}{\hat{lpha}_j}$$

wtpComputed

$$\mathbf{w} = \frac{\mathbf{\beta}_j}{\alpha_j} \qquad \lambda = \alpha$$

betaNormal

$$\hat{\boldsymbol{\beta}} \sim \mathcal{N}\left(\hat{\boldsymbol{\mu}}, \hat{\boldsymbol{\Sigma}}\right)$$

alphaNormal

$$\hat{\alpha} \sim \mathcal{N}\left(\hat{\mu}, \hat{\sigma^2}\right)$$

omegaNormal

$$\hat{oldsymbol{\omega}} \sim \mathcal{N}\left(\hat{oldsymbol{\mu}}, \hat{oldsymbol{\Sigma}}
ight)$$