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

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

utilityPreference

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

utilityWtpScaled

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

utilityWtp

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

wtpHatComputed

$$\hat{\boldsymbol{\omega}} = \frac{\hat{\boldsymbol{\beta}}_j}{\hat{\alpha}_j}$$

wtpComputed

$$\boldsymbol{\omega} = \frac{\boldsymbol{\beta}_j}{\alpha_j} \qquad \lambda = \alpha$$

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

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