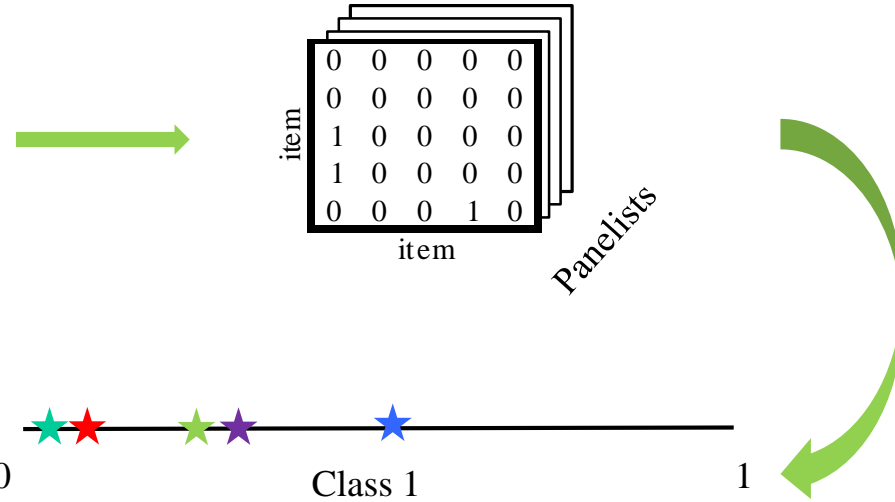


Paired Comparison experiments and Bradley-Terry-Luce Model

Paired comparison experiments:

Response: $y_{ij,h}$

0 if j is chosen against i
 1 if i is chosen against j



Latent class approach and Bradley-Terry-Luce model (1952):

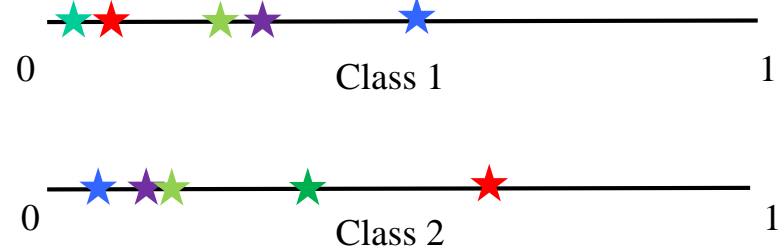
Take into account heterogeneity of consumers

$$\pi_{ij,t} = \frac{\pi_{i,t}}{\pi_{i,t} + \pi_{j,t}} \text{ with } \pi_{i,t} \in]0; 1[\text{ and } \sum_{i=1}^n \pi_{i,t} = 1$$

Maximum likelihood estimates:

Bradley's scores $\boldsymbol{\pi}_t = (\pi_{i,t})_{i=1 \text{ to } n}$

Weights $\alpha(t)$ $t = 1$ to T of the different classes



Feature of CompR package

Function: **“EstimBradley”**

Maximum likelihood estimates, covariance matrices,
 Multiple comparison tests for Bradley's scores
 Information criteria (AIC, BIC, CAIC).

Function: **“ResSimulLvrRatio”**

Monte Carlo simulation

