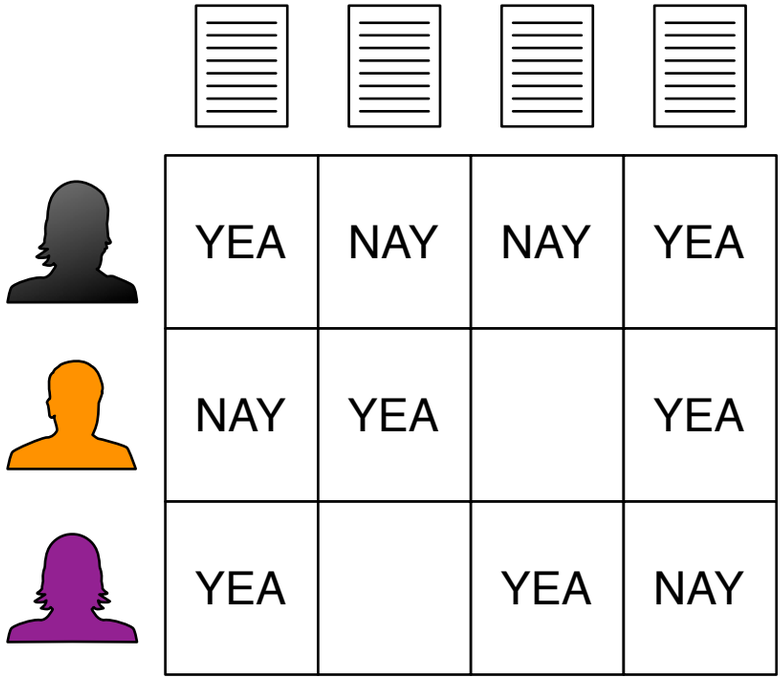
Legislator a votes 'Yea' on bill b with probability



YEA	NAY	NAY	YEA
NAY	YEA		YEA
YEA		YEA	NAY

$$p(v_{a,b} = \text{Yea}) = \Phi(u_a x_b + y_b)$$

$$\Phi(\alpha) = \frac{\exp(\alpha)}{\exp(\alpha) + 1}$$