



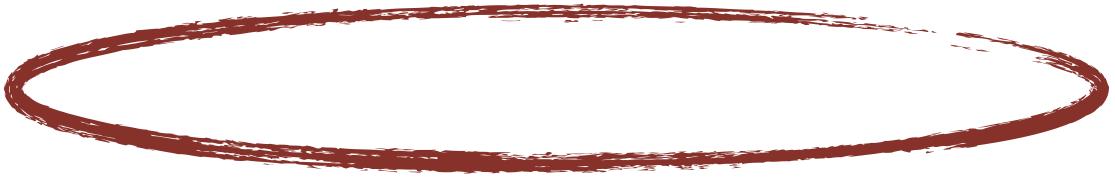
## ADDING REGULARIZING PRIORS FOR BLOCK



Outcome:  $L_i$  = pulled left

 $L_i \sim Bernoulli(p_i)$  $logit(p_i) = \alpha_{actor[i]} + \gamma_{block[i]} + \beta_{treatment[i]}$ 

$$\gamma_j \sim Normal(0, \sigma_{\gamma}), \text{ for } j=1..6$$





## This estimates how similar the $\gamma_i$ coefficients are to each other and changes the estimates accordingly

## ADDING REGULARIZING PRIORS FOR BLOCK

 $\begin{aligned} \text{Outcome:} \ L_i &= \text{pulled left} \\ L_i &\sim Bernoulli(p_i) \\ logit(p_i) &= \alpha_{actor[i]} + \gamma_{block[i]} + \beta_{treatment[i]} \\ \gamma_i &\sim Normal(0, \ \sigma_{\gamma}), \text{for} \ j = 1..6 \end{aligned}$ 

This estimates how similar the  $\gamma_j$  coefficients are to each other and changes the estimates accordingly

## REGULARIZING PRIOR FOR THE ACTOR COEFFICIENT

Outcome:  $L_i$  = pulled left

$$\begin{split} L_i \sim Bernoulli(p_i) \\ logit(p_i) &= \alpha_{actor[i]} + \gamma_{block[i]} + \beta_{treatment[i]} \\ \gamma_j \sim Normal(0, \, \sigma_\gamma), \text{for } j = 1..6 \\ \alpha_j \sim Normal(\alpha_0, \, \sigma_\alpha), \text{for } j = 1..7 \end{split}$$