

# ALL THE MISSING PRIORS TO COMPLETE THE MODEL

$$L_i \sim \text{Bernoulli}(p_i)$$

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

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

$$\alpha_j \sim \text{Normal}(\alpha_0, \sigma_\alpha), \text{ for } j = 1..7$$

$$\beta_j \sim \text{Normal}(0, 0.5), \text{ for } j = 1..4$$

$$\alpha_0 \sim \text{Normal}(0, 1.5)$$

$$\sigma_\alpha, \sigma_\gamma \sim \text{Exponential}(1)$$

# PROSOCIAL CHIMP MODEL CODE

```
## Model
m1 <- ulam(
  alist(
    pulled_left ~ binomial( 1 , p ) ,
    logit(p) <- a[actor] + g[block_id] + b[treatment] ,
    b[treatment] ~ normal( 0 , 0.5 ),
    ## regularizing multi level priors
    a[actor] ~ normal( a_0 , sigma_a ),
    g[block_id] ~ normal( 0 , sigma_g ),
    ## hyper-priors
    a_0 ~ normal( 0 , 1.5 ),
    sigma_a ~ exponential(1),
    sigma_g ~ exponential(1)
  ) , data=dat_list , chains=4 , cores=4 , log_lik=TRUE )
```