

Moral judgment in relational contexts

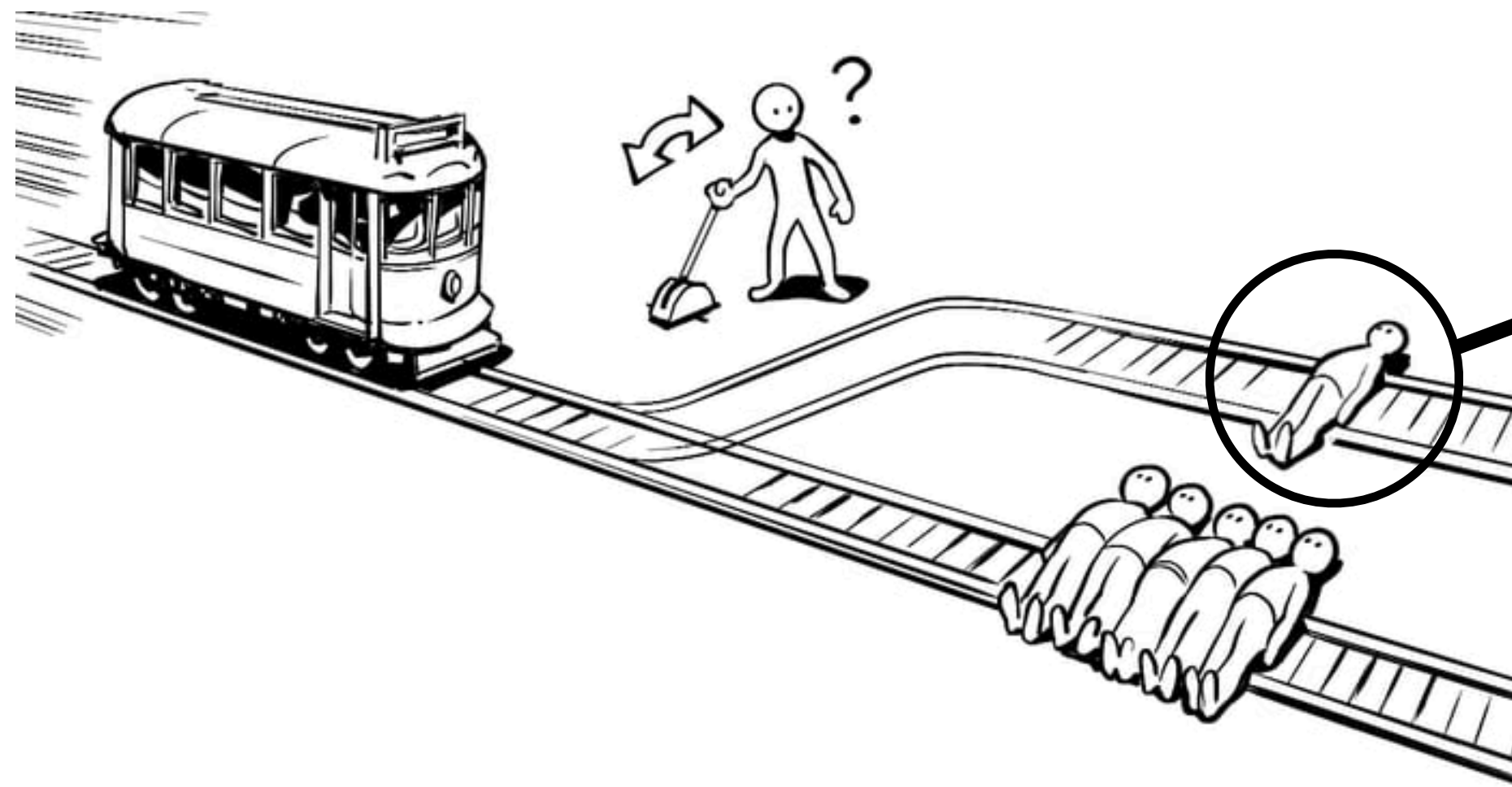
Analyzing Forbes & Stellar (2021) using a Bayesian approach

PSYC-573

Yi Zhang

Background

- Moral psychology research has been largely focusing on the behaviors of “Raceless, Genderless Strangers” (Hester & Gray, 2020).
- However, morality is theorized to regulate social relationships, and should be sensitive to relationship context (Rai & Fiske, 2011).



What if this is your friend?

Your partner?

Your enemy?

Moral judgment in relational contexts

- Moral judgments are sensitive to relationship context.
 - People's expectation of the moral responsibility between two agents depends on their relationship (Earp et al., 2021).
 - People are more reluctant to update belief about immoral characters for friends than strangers (Park & Young, 2020).
- However, past work mainly measured people's judgment of hypothetical vignettes, rather than actual behaviors. In addition, the psychological consequences of observing moral transgressions by close others remain unclear.
- The current research aims to address these limitations by examining how people respond to moral transgressions committed by close others versus strangers.

Current research overview

Research question: How do people respond to moral transgressions committed by close others, compared with strangers?



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When the Ones We Love Misbehave: Exploring Moral Processes Within Intimate Bonds

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Study 1: Lab study using vignettes (serves as prior)

Study 4: Lab study involving real partners (analysis)

Current research overview

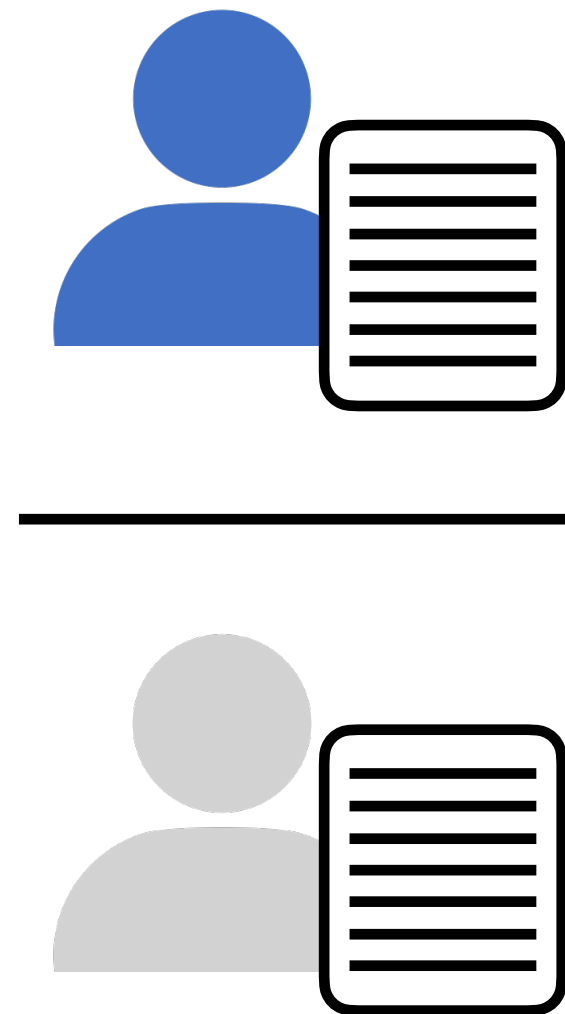
Hypotheses:

- Moral transgressions by close others (friend, romantic partner) receive more lenient judgments
- Moral transgressions by close others lead to greater self-conscious emotions

Procedures

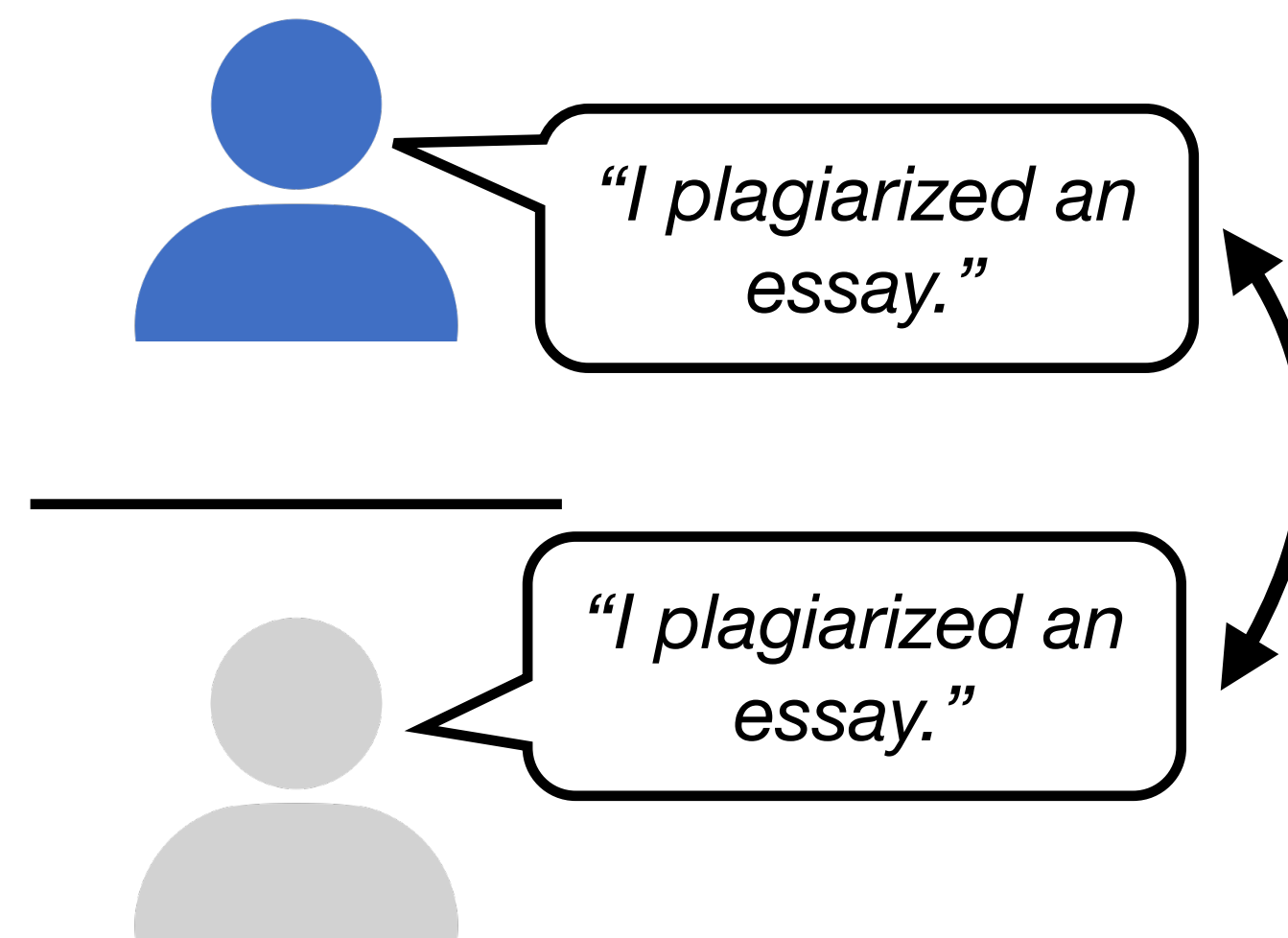
Study 4 Random assignment into 1) Romantic Partner, 2) friend, and 3) Stranger Groups

“Please rate the morality of the other person.”



1. Completed baseline moral ratings in separate rooms

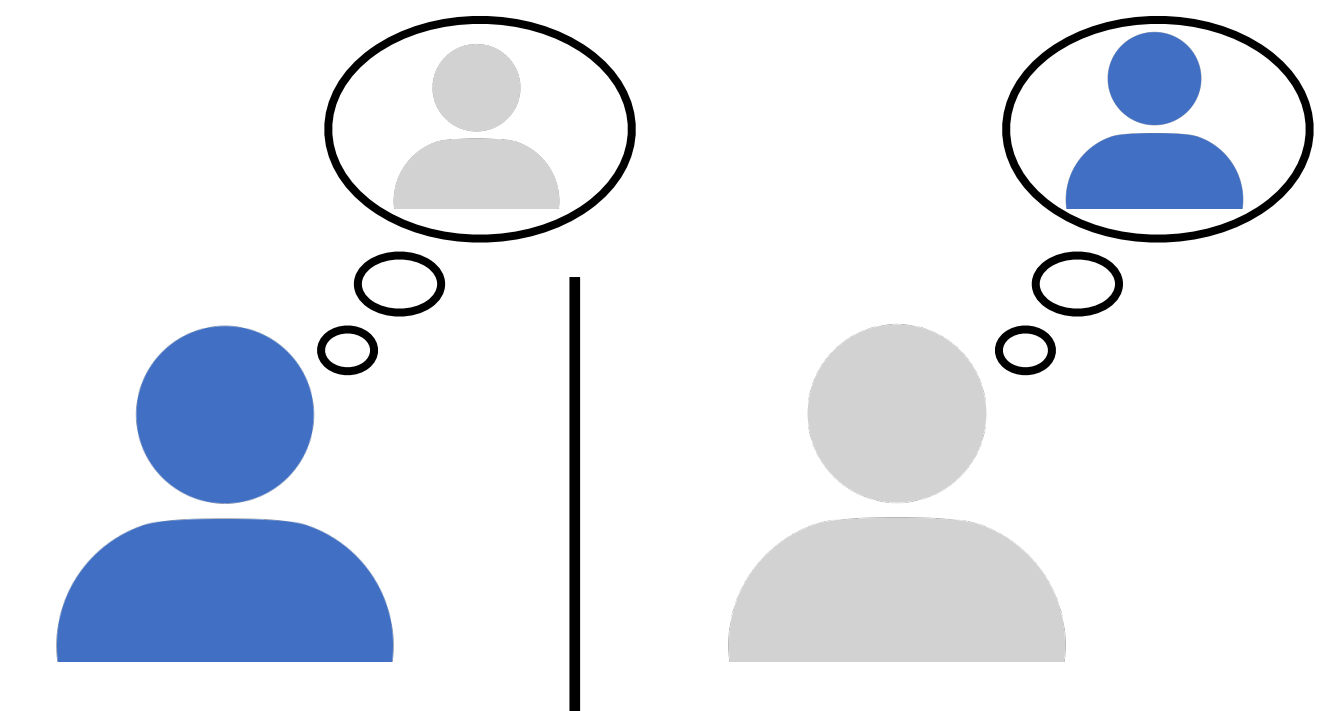
“Have you done anything immoral? If so, what?”



2. Write about one’s own immoral behaviors and read each other’s (ostensible) response

*“Please rate the morality of the other person on the following traits: **honest/trustworthy/fair/ethical.**”*

*“How much [**embarrassment/shame/guilt**] do you feel?”*



3. Make moral ratings again and report self-conscious emotions

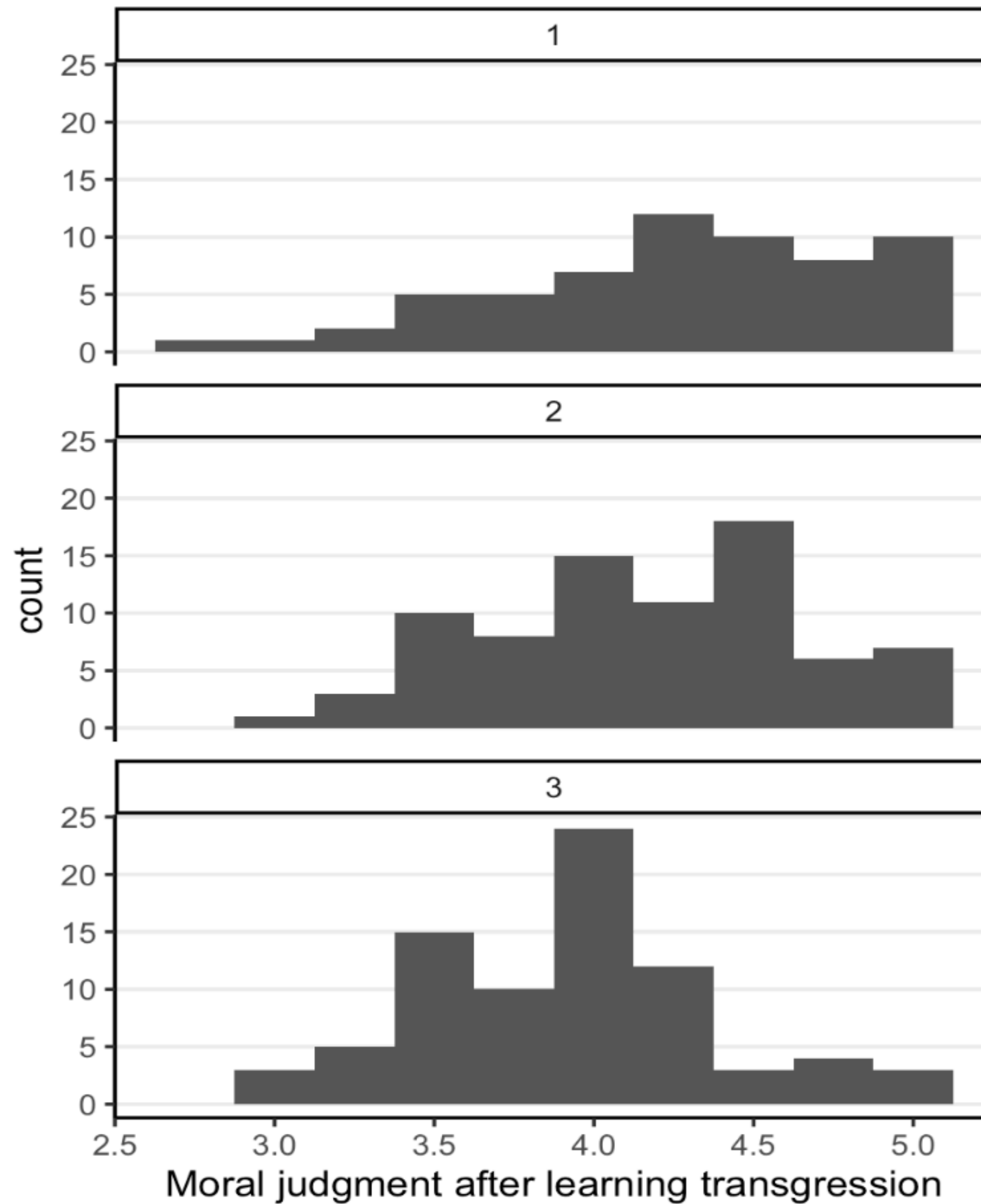
Data

- Retrieved from https://osf.io/9utgm/?view_only=91c641b22bd2453d91243219237839db
- Study 4: $N = 271$ (R: 61, F: 82, S: 128); 145 dyads (R: 35, F: 44, S: 66)

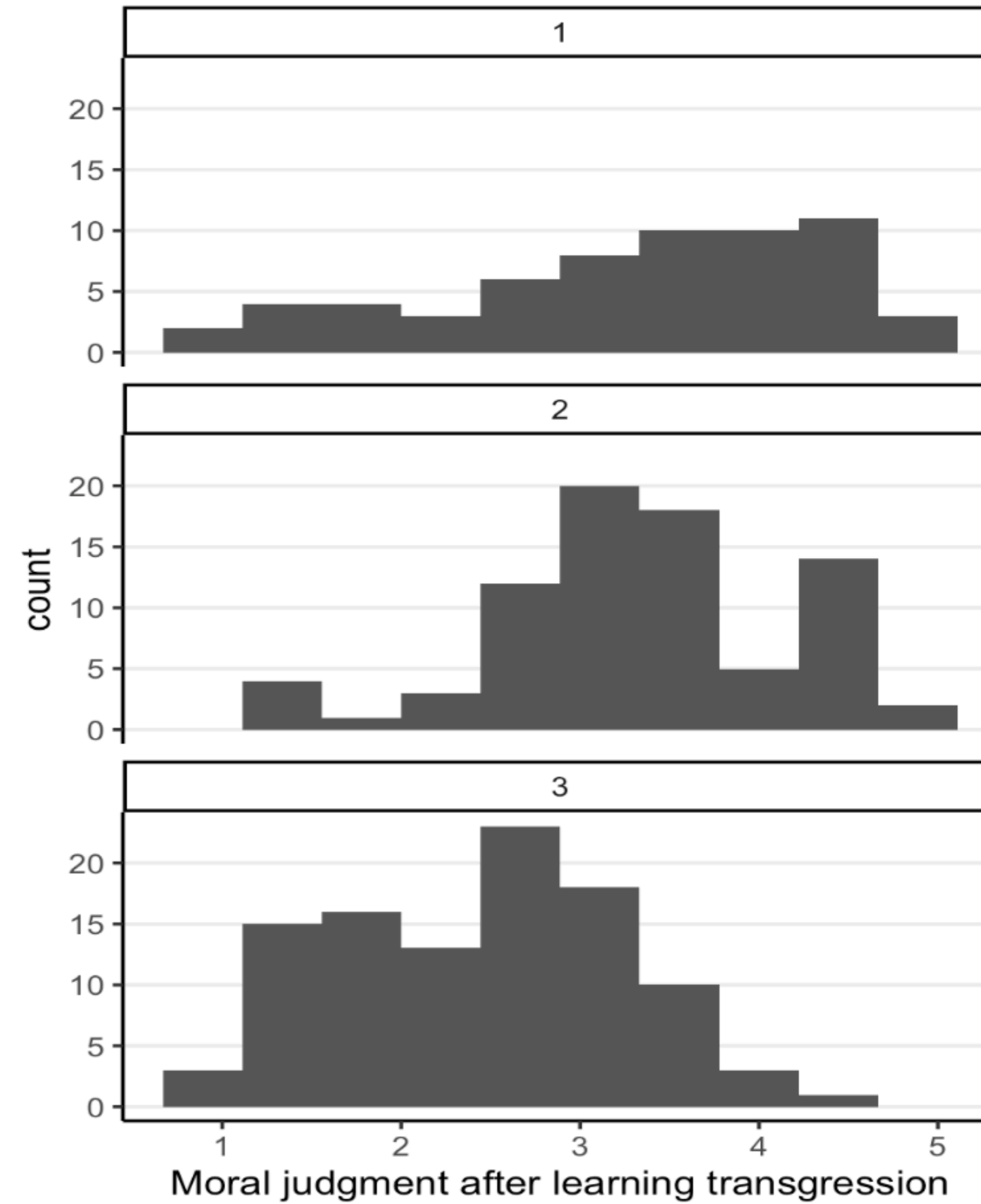
		Romantic Partner	Friend	Stranger			Romantic Partner	Friend	Stranger			
Baseline moral judgment (mean centered)	Other1Moral_GC	N	61	79	79	SCEmo	N	61	77	79	Self-conscious emotions	
		Mean	0.16	0.06	-0.18		Mean	2.08	1.60	1.48		
		SD	0.56	0.49	0.46		SD	1.76	1.00	1.04		
		Min	-1.36	-1.11	-1.11		Min	1.00	1.00	1.00		
		Max	0.89	0.89	0.89		Max	7.67	5.33	5.67		
Moral judgment after transgress	Other2Moral	N	61	79	102	SD = standard deviation						
		Mean	3.32	3.32	2.47							
		SD	1.03	0.81	0.78							
		Min	1.00	1.25	1.00							
		Max	5.00	4.75	4.25							

Data

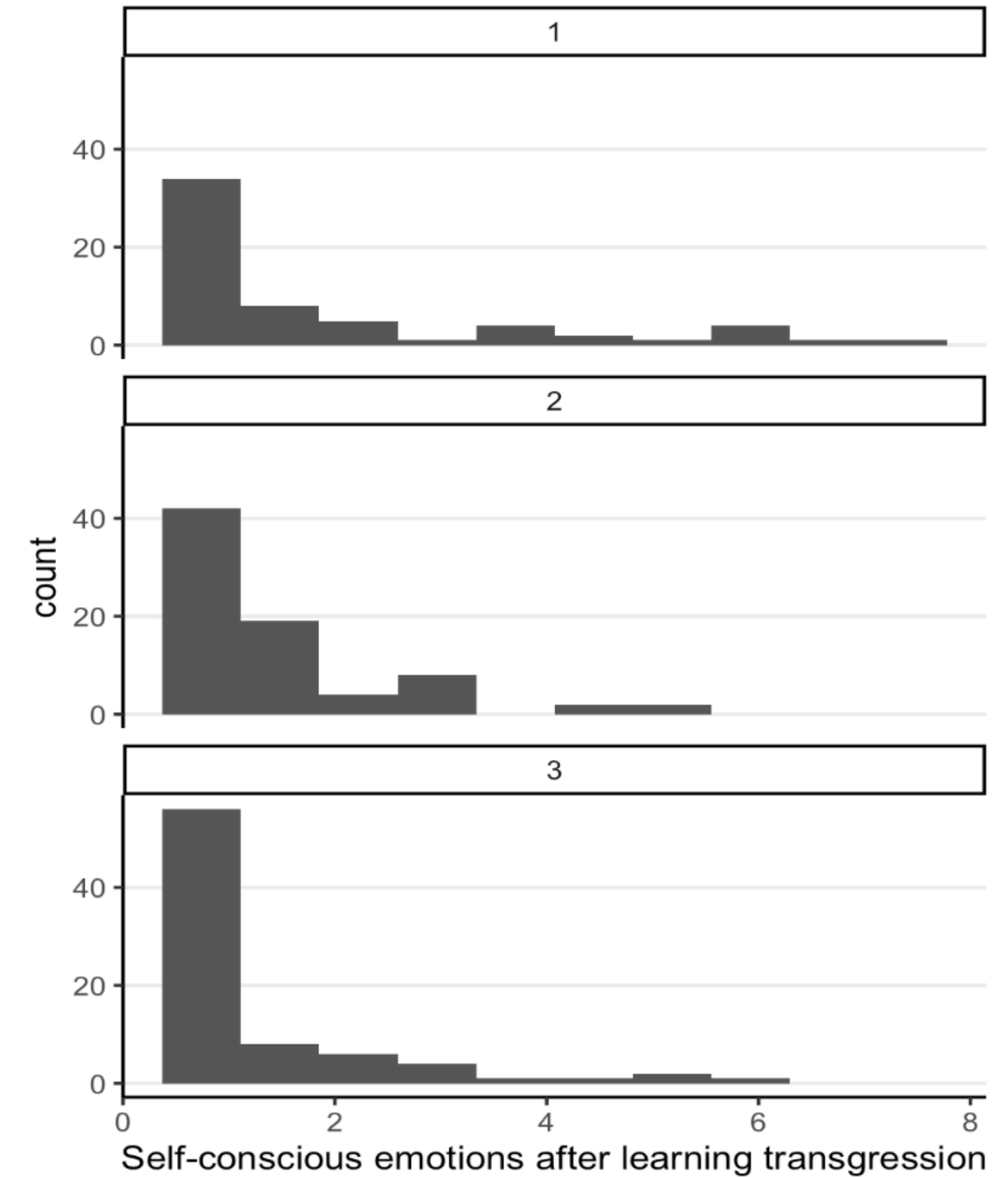
Moral judgment (Baseline)



Moral judgment (After learning)

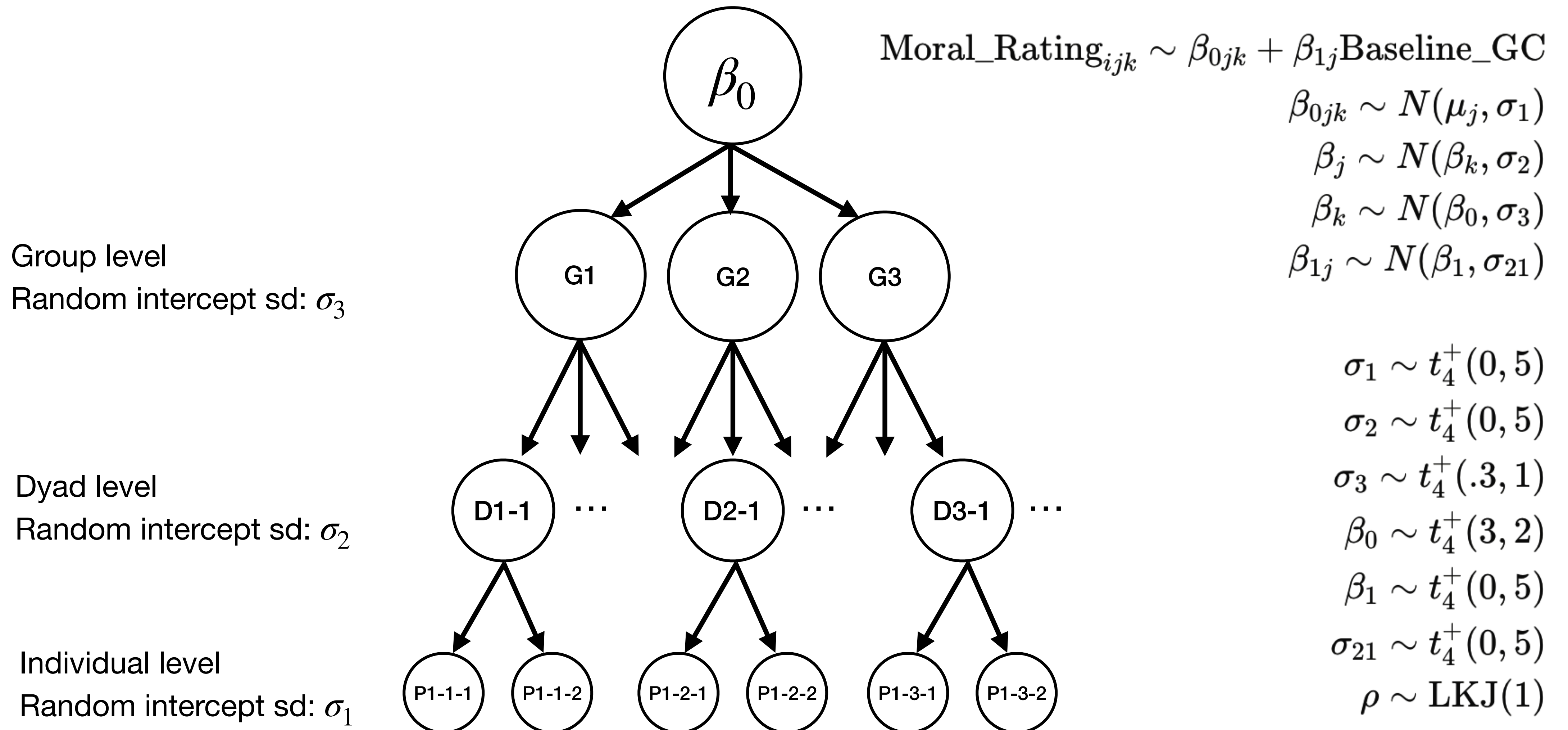


Self-conscious emotions



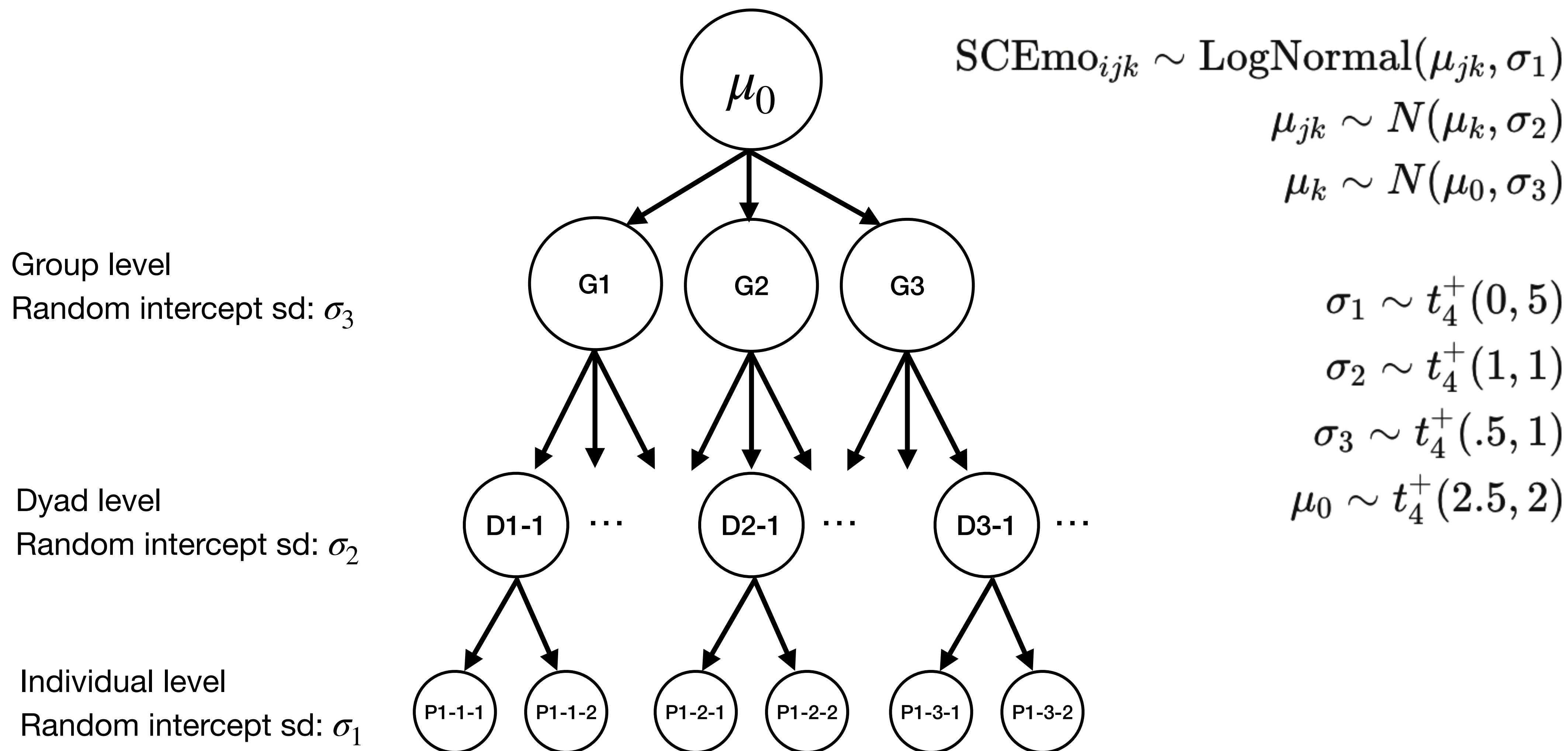
Model equations and priors (moral judgment)

$\text{MoralRating} \sim \text{BaselineMoral.GC} + (1|\text{Group}) + (\text{BaselineMoral.GC} | \text{Group:Pair_ID})$

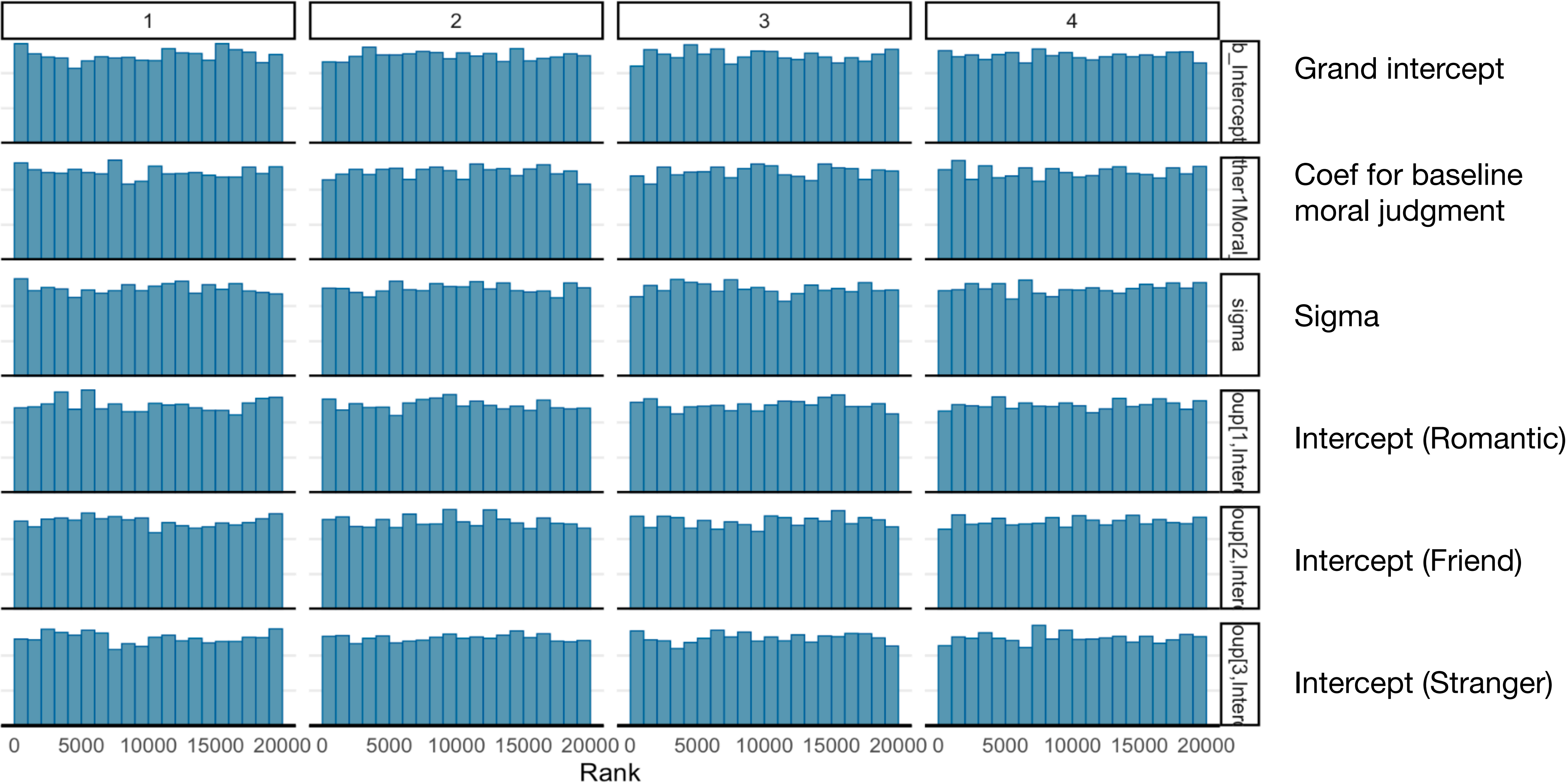


Model equations and priors (emotions)

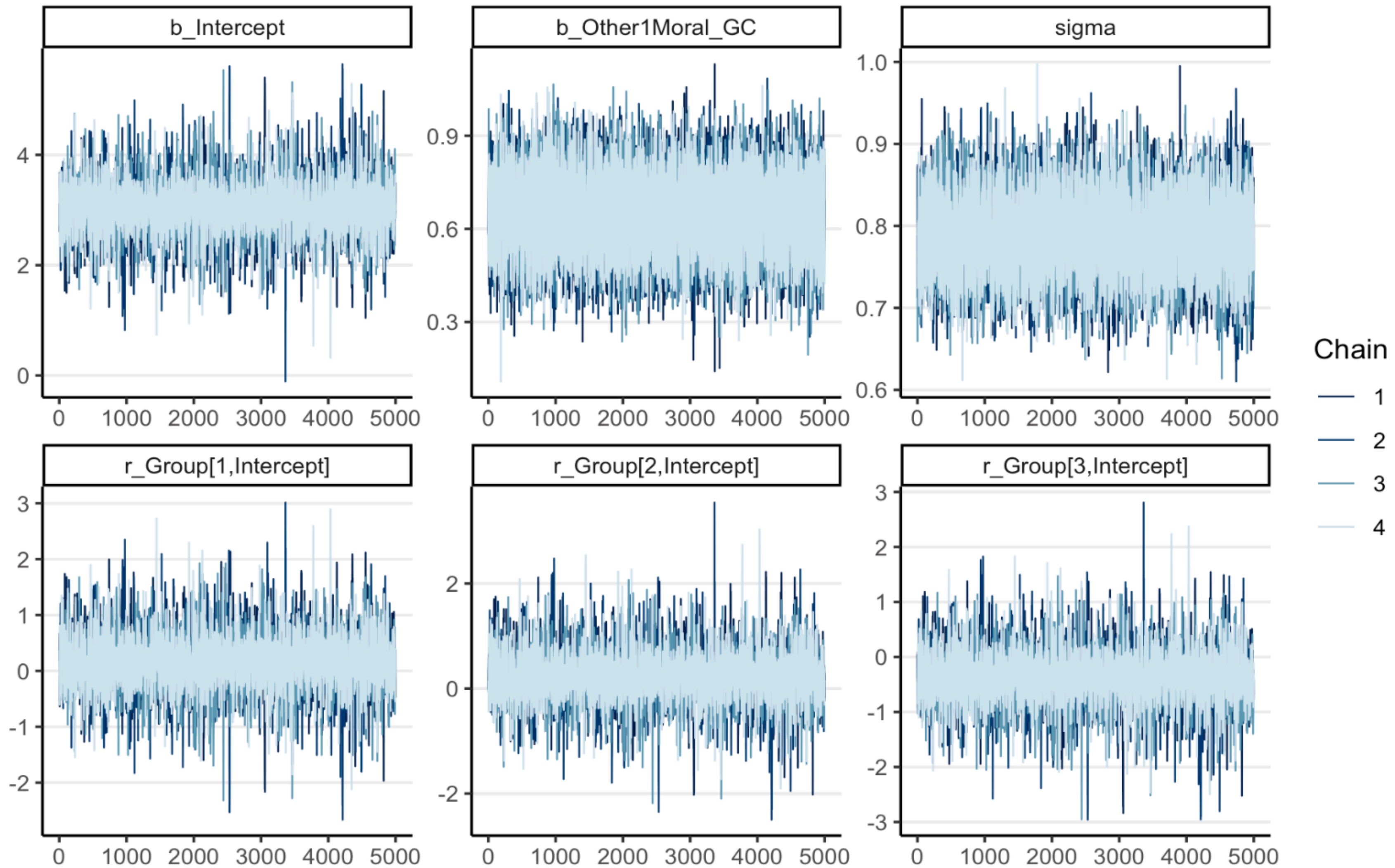
$$\text{SCEmo} \sim (1|\text{Group}) + (1|\text{Group:Pair_ID})$$



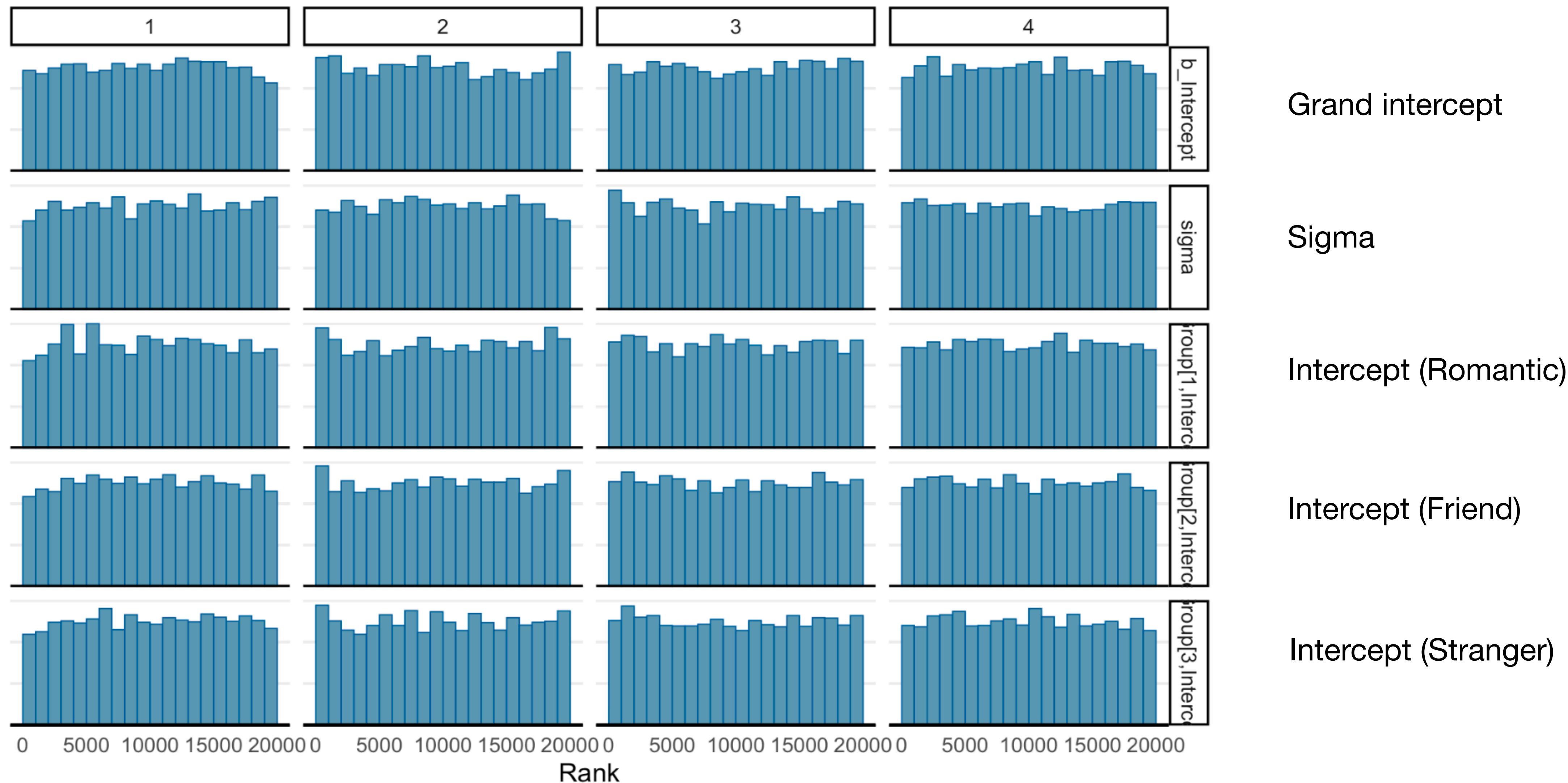
Check convergence - Moral judgment



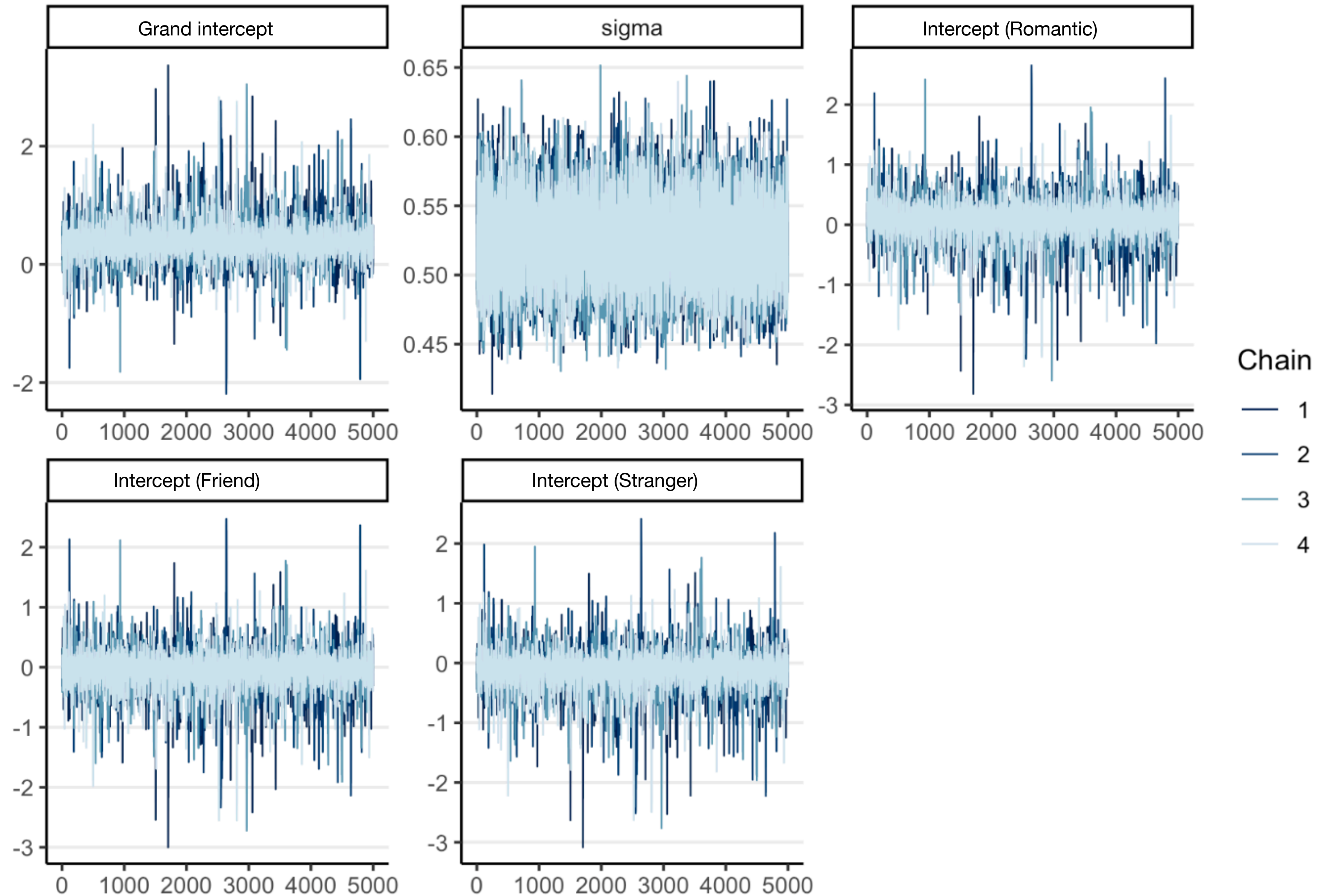
Check convergence - Moral judgment



Check convergence - Self-conscious emotions

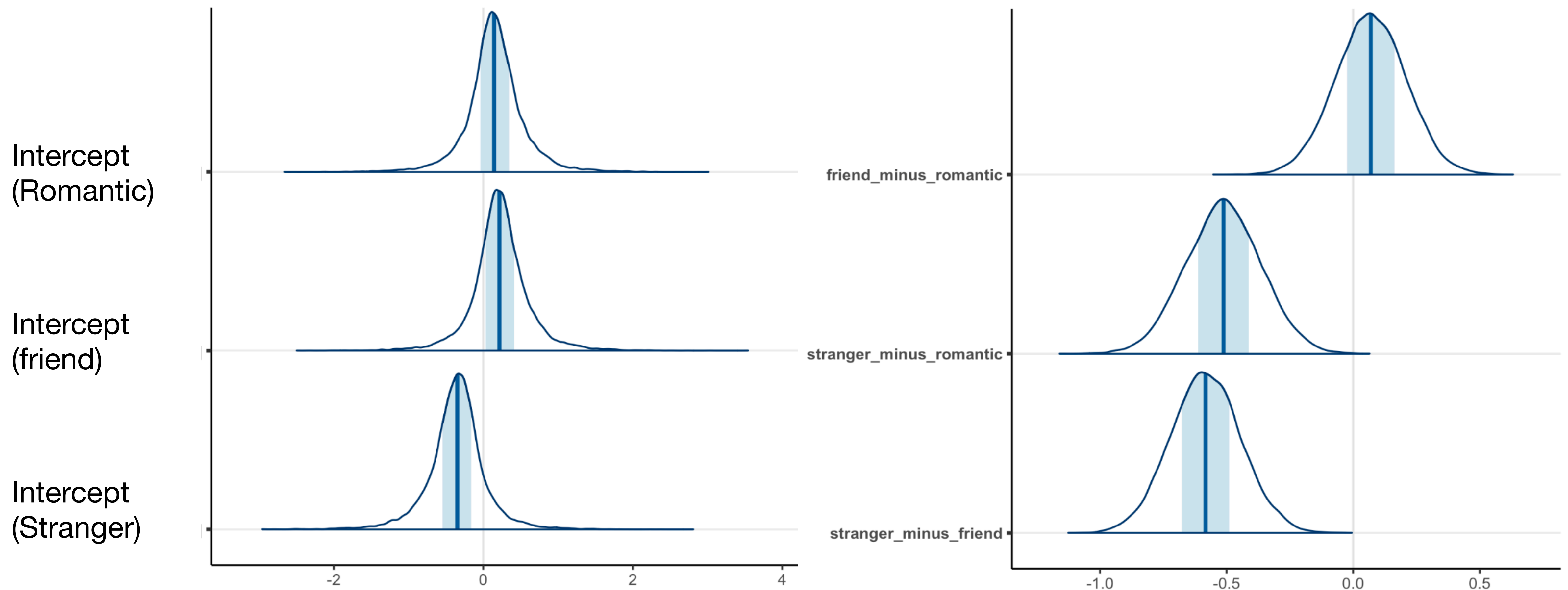


Check convergence - Self-conscious emotions



Result: Moral judgment

Moral judgment was less lenient for strangers, compared with romantic partners and friends. However, leniency did not differ between romantic partners and friends. 90% CI = [-.76, -.27], [-.81, .35].



Result: Moral judgment

Moral judgment was less lenient for strangers, compared with romantic partners and friends. However, leniency did not differ between romantic partners and friends. 90% CI = [-.76, -.27], [-.81, .35].

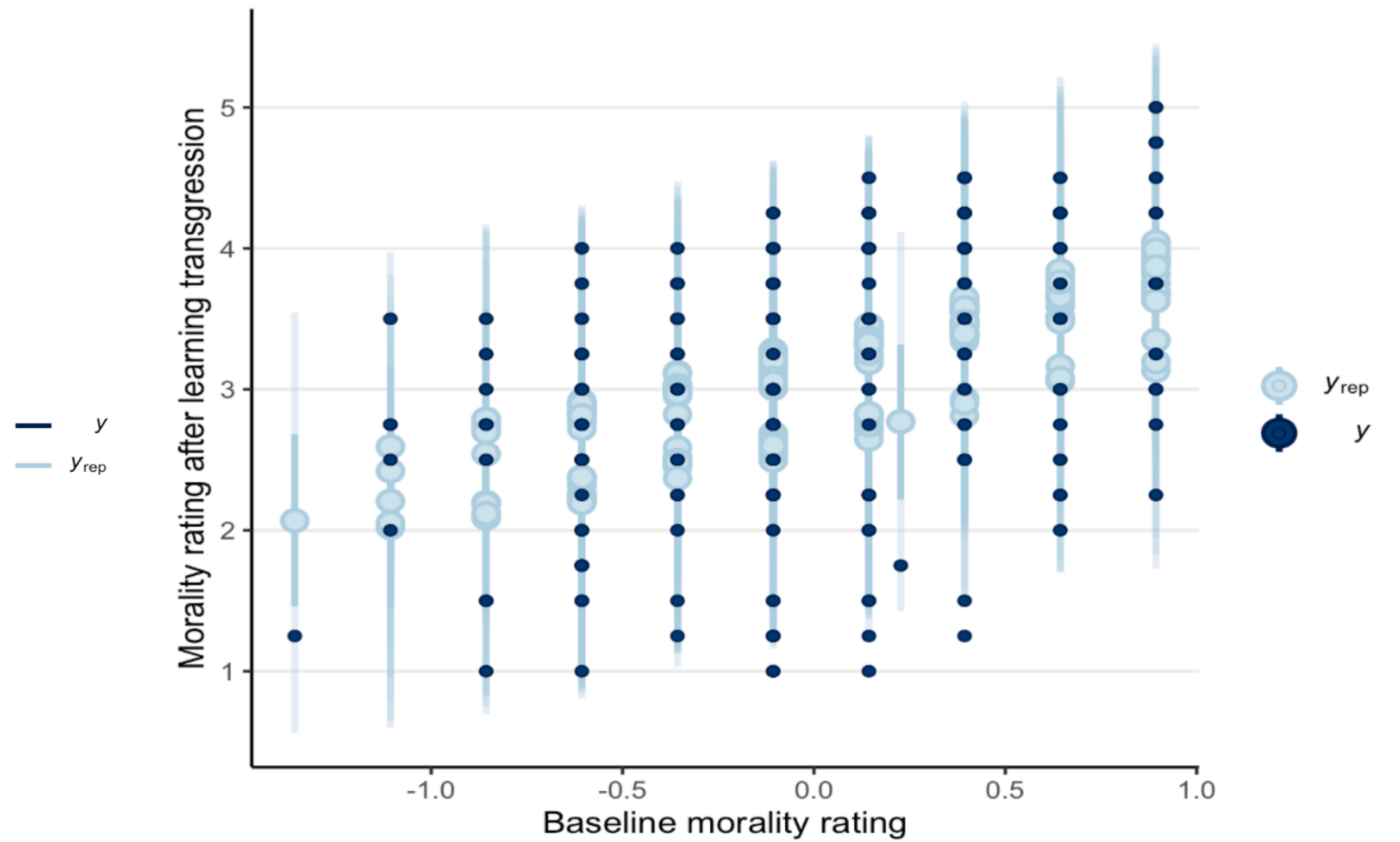
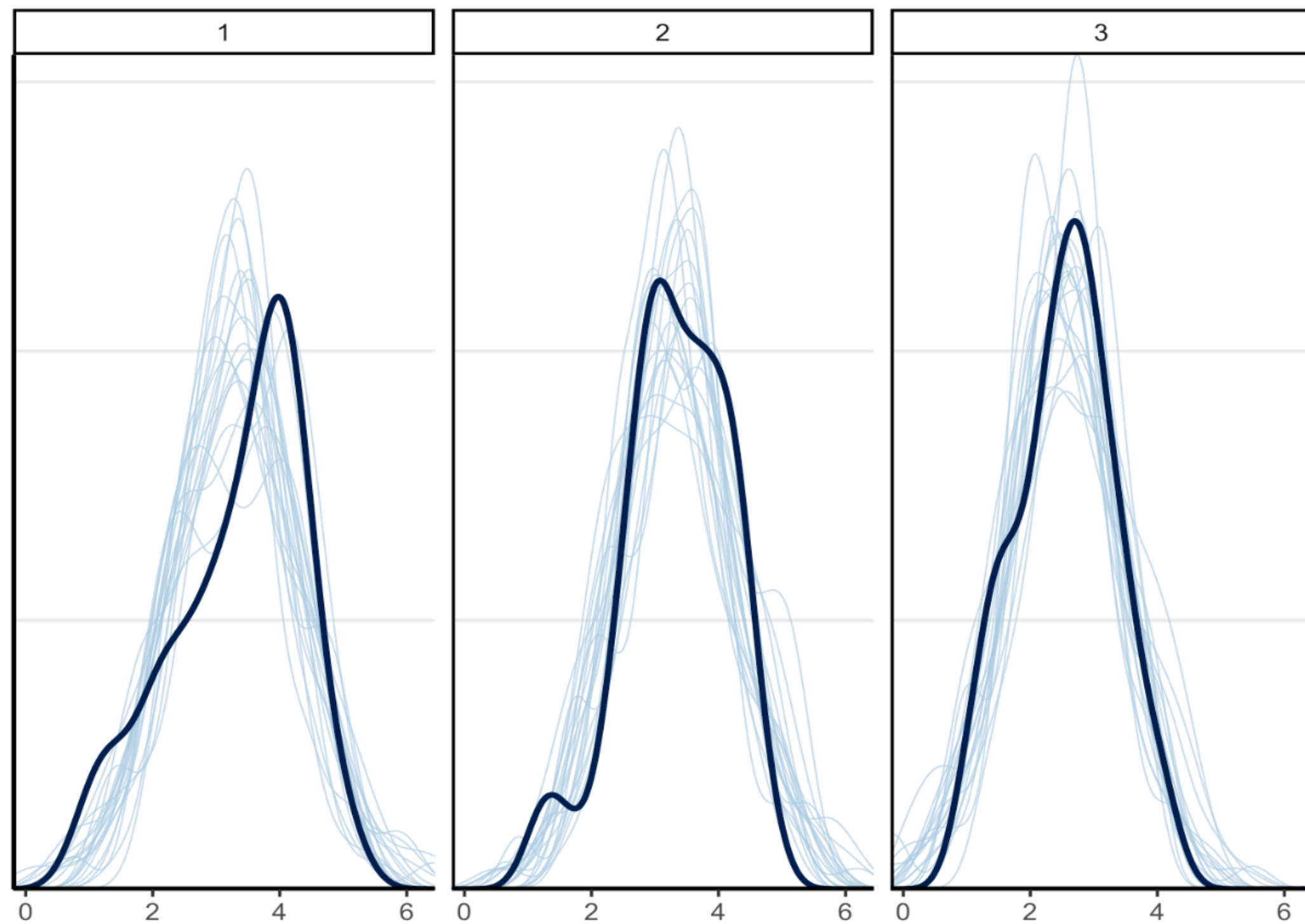
A tibble: 9 × 10

variable <chr>	mean <dbl>	median <dbl>	sd <dbl>	mad <dbl>	q5 <dbl>	q95 <dbl>	rhat <dbl>	ess_bulk <dbl>	ess_tail <dbl>
b_Intercept	3.04287696	3.04308159	0.39024314	0.27072281	2.4353837	3.6475320	1.0002146	6982.100	7502.971
b_Other1Moral_GC	0.64789349	0.64815273	0.11709133	0.11582322	0.4531151	0.8385369	1.0000949	24555.596	15401.929
sigma	0.78703417	0.78601740	0.04551735	0.04458544	0.7134735	0.8640288	1.0000888	9892.809	11640.680
r_Group[1,Intercept]	0.15332259	0.14474494	0.39563926	0.28230699	-0.4531775	0.7863380	1.0001145	7196.659	8099.209
r_Group[2,Intercept]	0.22297952	0.21487779	0.39405625	0.27996244	-0.3814375	0.8421337	1.0001780	7048.603	7741.582
r_Group[3,Intercept]	-0.35969025	-0.34836079	0.39589223	0.28451301	-0.9900002	0.2388992	1.0002608	7160.568	7510.754
friend_minus_romantic	0.06965692	0.06942051	0.14008752	0.13907723	-0.1605145	0.2981947	0.9998954	22832.237	16488.385
stranger_minus_romantic	-0.51301284	-0.51197541	0.14974510	0.14872056	-0.7587030	-0.2667556	1.0001490	18819.307	15437.081
stranger_minus_friend	-0.58266976	-0.58333215	0.13951584	0.13829211	-0.8103803	-0.3518184	1.0010548	17267.061	13205.816

9 rows

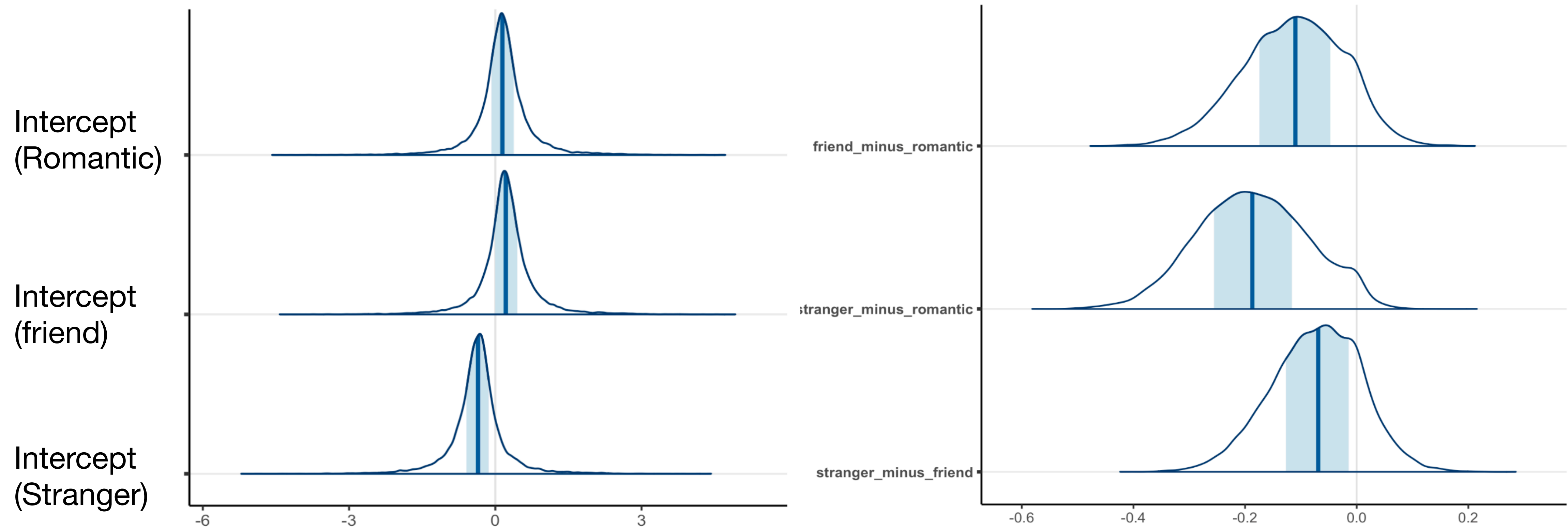
Posterior predictive check - Moral judgment

Model prediction fits well with observed data



Result: Self-conscious emotions

Participants experienced *more self-conscious emotions* after learning that their romantic partners acted immorally, compared with strangers. 90% CI = [-.35, -.01]



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Participants experienced *more self-conscious emotions* after learning that their romantic partners acted immorally, compared with strangers. 90% CI = [-.35, -.01]

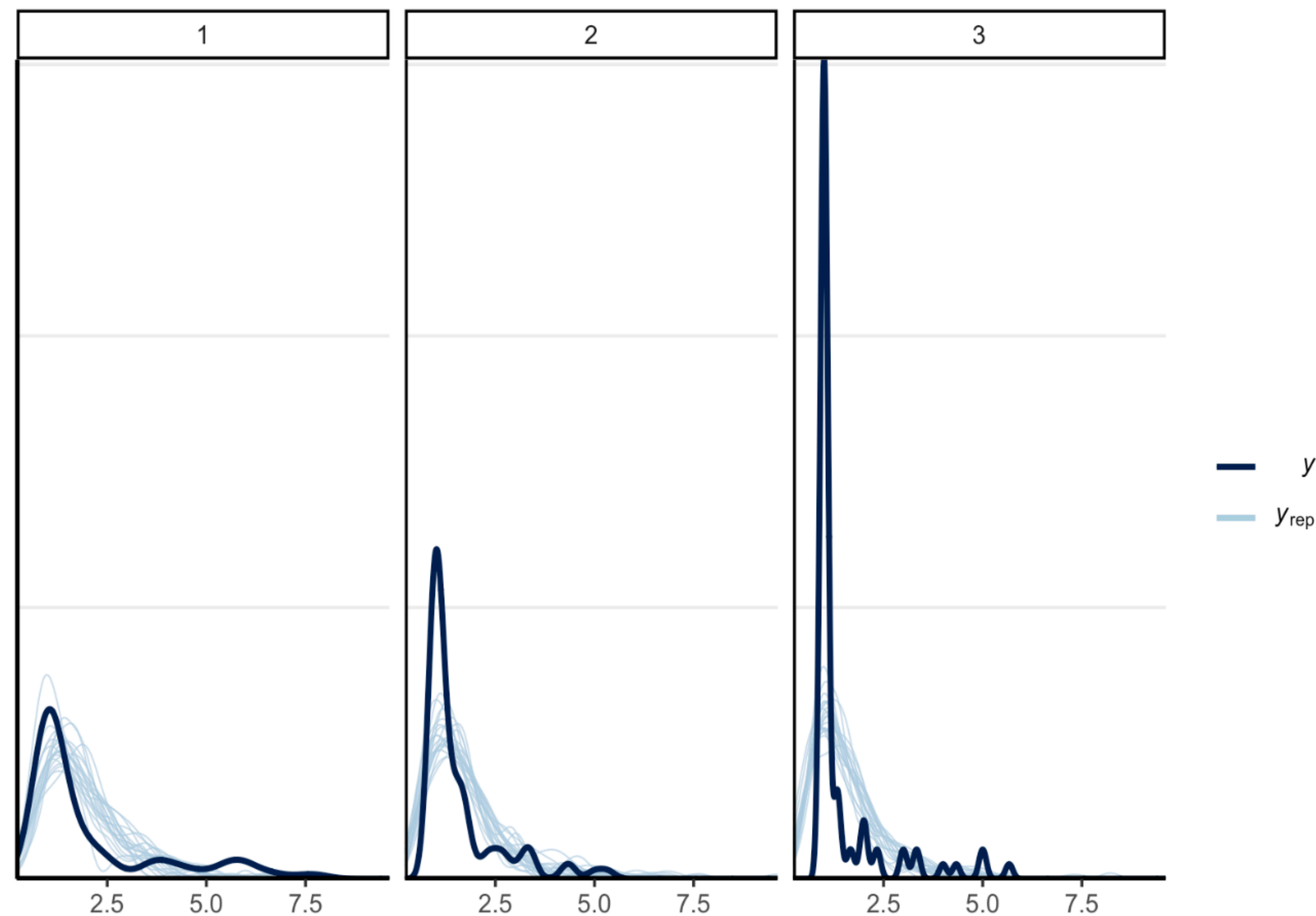
A tibble: 8 × 10

variable <chr>	mean <dbl>	median <dbl>	sd <dbl>	mad <dbl>	q5 <dbl>	q95 <dbl>	rhat <dbl>	ess_bulk <dbl>	ess_tail <dbl>
b_Intercept	0.38105606	0.35982821	0.26920246	0.11527633	0.06174231	0.77396304	1.000368	7594.025	4611.040
sigma	0.52425464	0.52354861	0.02771292	0.02741076	0.48000934	0.57082438	1.000346	16856.617	12985.343
r_Group[1,Intercept]	0.07217841	0.07417412	0.27000191	0.12490137	-0.29904013	0.41906094	1.000294	7770.411	4556.392
r_Group[2,Intercept]	-0.04094983	-0.01581181	0.27066260	0.11607290	-0.44389156	0.27982462	1.000298	7523.212	4712.312
r_Group[3,Intercept]	-0.11348006	-0.08020230	0.27292921	0.12322188	-0.52929266	0.19527466	1.000154	7301.790	4527.907
friend_minus_romantic	-0.11312824	-0.10969104	0.09060251	0.09447769	-0.26669057	0.02493077	1.000083	14510.279	16513.652
stranger_minus_romantic	-0.18565847	-0.18695431	0.09953121	0.10340861	-0.34722710	-0.01469580	1.000091	10495.110	8506.131
stranger_minus_friend	-0.07253023	-0.06893635	0.08128515	0.08302390	-0.21163926	0.05361440	1.000153	18412.763	17475.148

1–8 of 8 rows

Posterior predictive check - Self-conscious emotion

However, the prediction of the model does not fit well with observed data (especially in the *stranger* condition), suggesting that the model needs improvement.



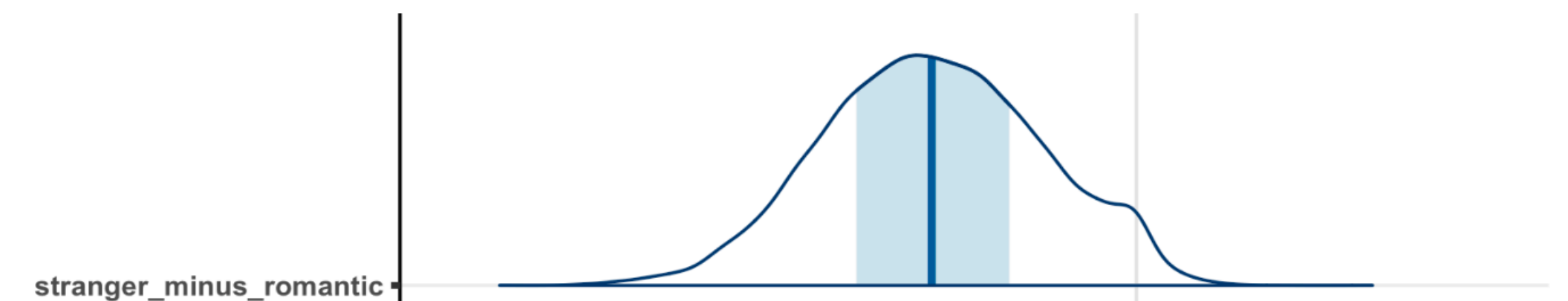
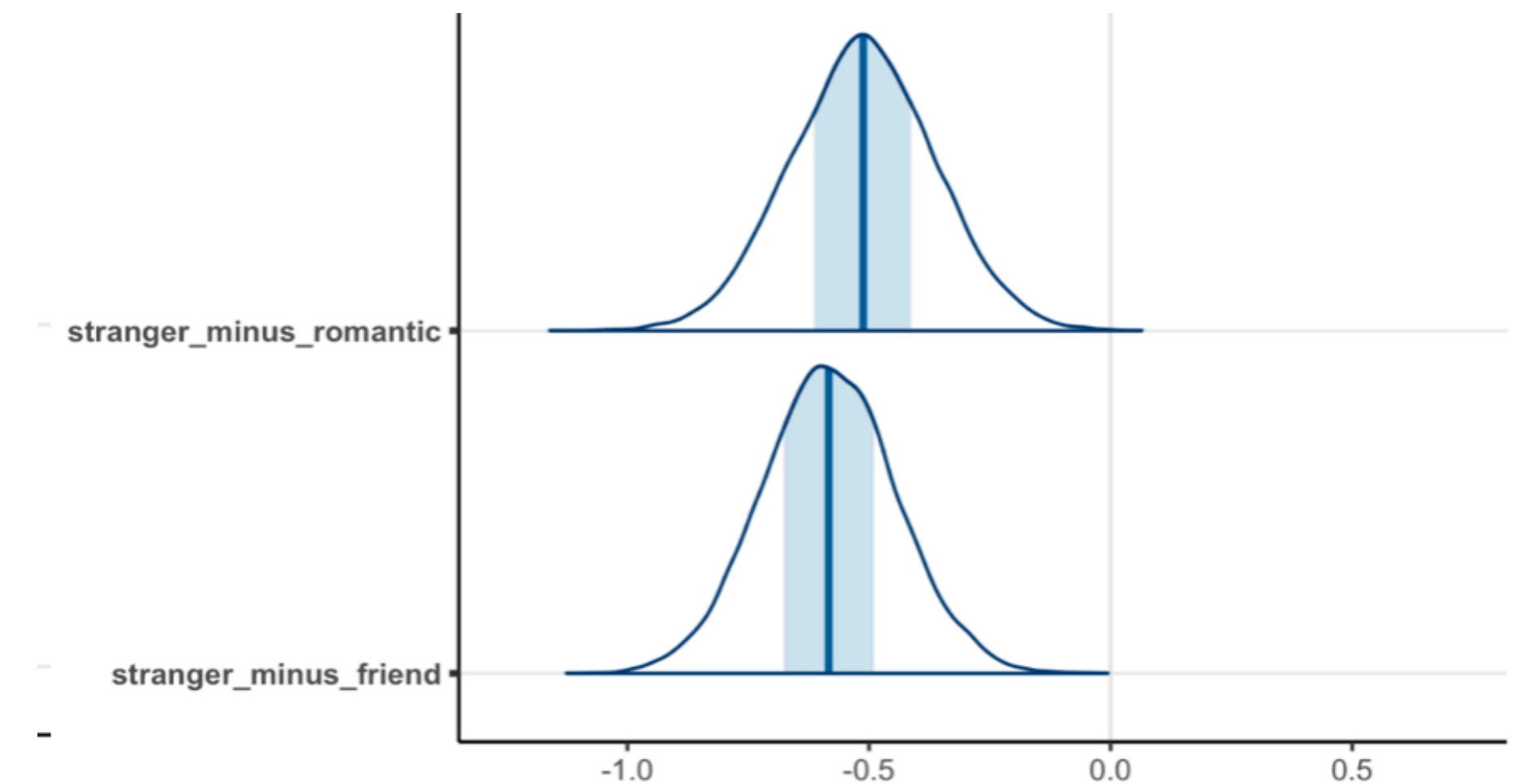
Comparing with frequentist approach

Measures of the Transgressor

There was a significant effect of condition on moral judgments of transgressors, controlling for moral ratings before learning the unethical information, $F(2, 109.44) = 12.30$, $p < .001$, $R^2 = .18$, and a marginal effect on other-critical emotions, $F(2, 199.10) = 2.88$, $p = .06$, $R^2 = .03$. Close others were rated as more moral than acquaintances, $t(108.54) = 4.86$, $p < .001$. However, contrary to earlier studies, participants felt higher levels of other-critical emotions toward close others than acquaintances, $t(123.39) = 2.36$, $p = .02$. Within the close other conditions, relationship length did not predict moral judgments of transgressors, $F(1, 65.81) = .28$, $p = .60$, $R^2 = .004$, or other-critical emotions, $F(1, 62.46) = .53$, $p = .47$, $R^2 = .01$.

Measures of the Self

There was a significant effect of condition on self-conscious emotions, $F(2, 104.28) = 4.54$, $p = .01$, $R^2 = .08$, but not on participants' ratings of their own morality, $F(2, 111.34) = .84$, $p = .44$, $R^2 = .01$. Participants reported higher levels of self-conscious emotions when learning unethical information about close others compared with acquaintances, $t(100.58) = 2.11$, $p = .04$.



Discussion

- We replicated findings from Forbes & Stellar (2021)—people are more lenient towards close others' (i.e. romantic partners and friends) immoral behaviors, compared with strangers.
- However, this leniency comes at a cost by increasing one's own *emotional burden*. People experience more embarrassment, guilt, and shame after learning immoral behaviors of close others.
- Convergence and Model fit was not optimal for SCEmo, likely due to zero-inflation. Log-normal model needs to be improved.

Thank you for listening!

Link to Github repository with data and reproducible code:

<https://github.com/yizhang96/PSYC-573-Project.git>

References :

- Earp, B. D., McLoughlin, K. L., Monrad, J. T., Clark, M. S., & Crockett, M. J. (2021). How social relationships shape moral wrongness judgments. *Nature communications*, 12(1), 1-13.
- Forbes, R. C., & Stellar, J. E. (2021). When the ones we love misbehave: Exploring moral processes within intimate bonds. *Journal of personality and social psychology*.
- Hester, N., & Gray, K. (2020). The moral psychology of raceless, genderless strangers. *Perspectives on Psychological Science*, 15(2), 216-230.
- Park, B., & Young, L. (2020). An association between biased impression updating and relationship facilitation: a behavioral and fMRI investigation. *Journal of Experimental Social Psychology*, 87, 103916.
- Rai, T. & Fiske., A. P. (2011). Moral psychology is relationship regulation: Moral motives for unity, hierarchy, equality, and proportionality. *Psychological Review*, 118, 57-75.

Supplemental materials - Prior justification

Moral rating

$\beta_0 \sim t_4^+(3,2)$ Grand intercept (Based on Study 1 average moral rating)

$\beta_1 \sim t_4^+(0,5)$ Slope for Other1Moral_GC (Weak prior)

$\sigma_3 \sim t_4^+ (.3,1)$ SD for random intercept among Groups (Based on average SD among groups in Study 1)

$\sigma_{21} \sim t_4^+(0,5)$ SD for slope of Other1Moral_GC (Weak prior)

$\sigma_2 \sim t_4^+(0,5)$ SD for random intercept among dyads (Weak prior)

$\sigma_1 \sim t_4^+(0,5)$ SD for random intercept among observations (Weak prior)

$\rho \sim \text{LKJ}(1)$ Correlation between Intercept and Slope (Weak prior)

Self-conscious emotions

$\mu_0 \sim t_4^+(2.5,2)$ Grand intercept (Based on Study 1 average emotion rating (2.62))

$\sigma_3 \sim t_4^+ (.5,1)$ SD for random intercept among Groups (Based on Study 1: .52)

$\sigma_2 \sim t_4^+(1,1)$ SD for random intercept among dyads (Based on Study 1: 1.1)

$\sigma_1 \sim t_4^+(0,5)$ SD for random intercept among observations (Weak prior)

*Weak priors are selected when no information is available from Study 1.