Report

Procedure

Stimuli

Duration

Location	Language	Version	Trial type	*M* duration (s)	*SD*	*M* overlap (s)*
Barcelona	Catalan	i	Cognate	1.21	0.20	0.51
Barcelona	Catalan	i	Non-cognate	1.28	0.19	0.58
Barcelona	Catalan	i	Unrelated	1.25	0.17	0.55
Barcelona	Catalan	ll	Cognate	1.21	0.20	0.51
Barcelona	Catalan	ll	Non-cognate	1.28	0.19	0.58
Barcelona	Catalan	ll	Unrelated	1.25	0.17	0.55
Barcelona	Catalan			1.22	0.20	0.52
Oxford	English			0.88	0.15	0.18
Barcelona	Spanish	euro	Cognate	1.08	0.13	0.38
Barcelona	Spanish	euro	Non-cognate	1.06	0.13	0.36
Barcelona	Spanish	euro	Unrelated	1.05	0.14	0.35
Barcelona	Spanish	latin	Cognate	1.08	0.13	0.38
Barcelona	Spanish	latin	Non-cognate	1.06	0.13	0.36
Barcelona	Spanish	latin	Unrelated	1.05	0.14	0.35
Barcelona	Spanish			1.20	0.14	0.50
Oxford	Spanish			1.14	0.13	0.44

Sample

We tested 24 participants, of which 6 we excluded. The final sample included 10 monolinguals (3 Catalan monolinguals, 7 Spanish monolinguals) and 7 bilinguals (4 Catalan-dominant, 3 Spanish-dominant).

Table 2: Sample size by age group, testing language, and list. Only participants that made it in the final sample are included.

LP	Age group	Language	List 1	List 2	List 3
Bilingual	30	Catalan	2	2	-
Bilingual	30	Spanish	1	2	-
Monolingual	30	Catalan	1	1	1
Monolingual	30	Spanish	2	2	3

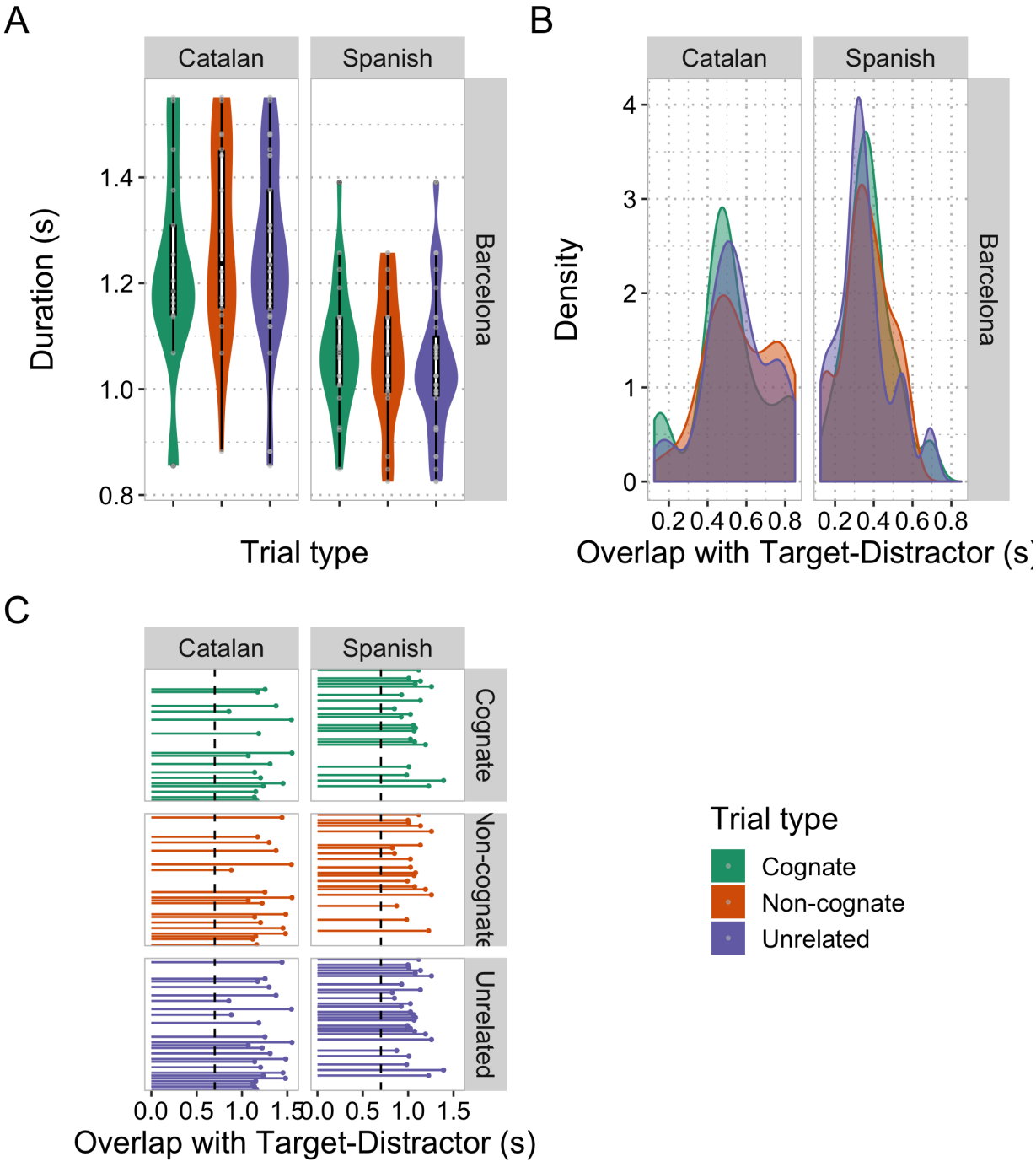

Figure 1: Audio duration. A) Distribution of audio durations by trial type, split by testing language and location. Boxplots indicate median duration, 25% and 75% percentiles, and maximum and minimum. B) Distribution of overlap between audio and target-distractor presentation, split by testing language and location. C) Individual audio duration by word, split by trial type, testing language, and location. The dashed lines indicate the onset of target and distractor pictures presentation.

Results

Trackloss

Table 3: Mean proportion of samples lost by trial.

Participant ID	Mean	*SD*
cognatepriming19	0.01 %	0.03
cognatepriming21	0.01 %	0.02
cognatepriming23	0.00 %	0.01
cognatepriming26	0.03 %	0.04
cognatepriming27	0.01 %	0.02
cognatepriming28	0.02 %	0.05
cognatepriming29	0.00 %	0.01
cognatepriming30	0.01 %	0.01
cognatepriming31	0.02 %	0.04
cognatepriming32	0.02 %	0.03
cognatepriming33	0.00 %	0.00
cognatepriming34	0.01 %	0.03
cognatepriming36	0.03 %	0.04
cognatepriming38	0.01 %	0.02
cognatepriming39	0.01 %	0.03
cognatepriming40	0.01 %	0.02
cognatepriming41	0.01 %	0.01

Growth Curve Analysis

Table 4: Results of the Growth Curve Analysis, reporting the estimated coefficients of the fixed effects included in the model. *p*-values were extracted using Wald's χ^2 approximation.

Term	β	*SEM*	χ^2	*Df*	*p*	95%*CI*
Intercept	0.02	0.40	-	-		[-0.76,0.80]
TimeBin1	0.02	1.19	0.00	1	.986	[-2.30,2.35]
TimeBin2	-0.79	0.78	1.04	1	.309	[-2.32,0.73]
TimeBin3	0.25	0.84	0.09	1	.761	[-1.38,1.89]
TrialType	0.09	0.11	0.58	1	.446	[-0.14,0.31]
LangProfile	-0.05	0.15	0.10	1	.748	[-0.35,0.25]
FreqTarget	0.00	0.09	0.00	1	.985	[-0.18,0.17]
LevenshteinPrime	0.03	0.02	1.26	1	.262	[-0.02,0.07]
TimeBin1 × TrialType	2.20	0.90	6.02	1	.014	[0.44,3.95]
TimeBin2 × TrialType	0.40	0.63	0.40	1	.526	[-0.84,1.65]
TimeBin3 × TrialType	-1.56	0.63	6.16	1	.013	[-2.78,-0.33]
TimeBin1 × LangProfile	-0.12	1.53	0.01	1	.938	[-3.11,2.87]
TimeBin2 × LangProfile	-0.29	0.96	0.09	1	.765	[-2.18,1.60]
TimeBin3 × LangProfile	-0.13	1.10	0.01	1	.904	[-2.29,2.02]
TrialType × LangProfile	-0.06	0.13	0.24	1	.627	[-0.31,0.19]
TimeBin1 × TrialType × LangProfile	-2.23	1.09	4.21	1	.040	[-4.36,-0.10]
TimeBin2 × TrialType × LangProfile	0.48	0.76	0.40	1	.526	[NA,NA]
TimeBin3 × TrialType × LangProfile	2.01	0.78	6.57	1	.010	[NA,NA]

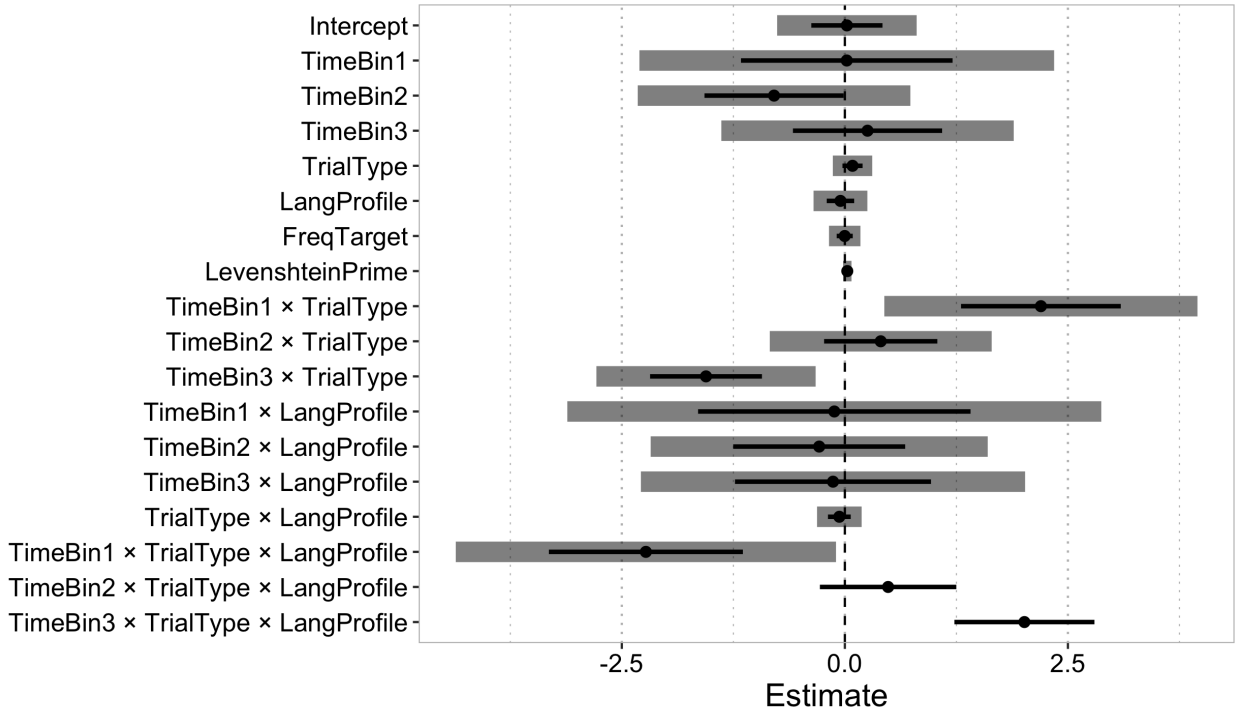

Figure 2: Coefficients of the fixed effects included in the Growth Curve Analysis. Black dots and whiskers represent the estimated coefficient and standard error of the mean, respectively. Grey boxes represent two-sided 95% confidence intervals, calculated using the Wald χ^2 approximation to degrees of freedom.

Predictions

Variance-covariance parameters

Checking assumptions

Normality

Table 5: Multicollinearity

Term	*VIF*
Intercept	-
TimeBin1	13.13
TimeBin2	4.24
TimeBin3	11.05
TrialType	2.51
LangProfile	3.22
FreqTarget	1.01
LevenshteinPrime	1.05
TimeBin1 × TrialType	12.37
TimeBin2 × TrialType	5.69
TimeBin3 × TrialType	9.51
TimeBin1 × LangProfile	12.11

Term	*VIF*
TimeBin2 × LangProfile	5.22
TimeBin3 × LangProfile	9.92
TrialType × LangProfile	3.56
TimeBin1 × TrialType × LangProfile	9.06
TimeBin2 × TrialType × LangProfile	5.04
TimeBin3 × TrialType × LangProfile	7.38

Appendix

Participants

Table 6: Complete list of participants. *LP* = Language profile.

Participant ID	***LP***	**Age group**	**Lang.**	**List**	**Date**	**Age**	**Sex**	**Valid?**
cognatepriming26	Bilingual	30	Catalan	1	2019-12-14	27.93	m	TRUE
cognatepriming34	Bilingual	30	Catalan	1	2020-01-28	27.67	f	TRUE
cognatepriming19	Bilingual	30	Catalan	2	2019-11-28	29.93	m	TRUE
cognatepriming32	Bilingual	30	Catalan	2	2020-01-18	27.83	m	TRUE
cognatepriming29	Bilingual	30	Spanish	1	2020-01-15	27.83	m	TRUE
cognatepriming21	Bilingual	30	Spanish	2	2019-11-30	28.73	f	TRUE
cognatepriming30	Bilingual	30	Spanish	2	2020-01-17	27.50	f	TRUE
cognatepriming40	Monolingual	30	Catalan	1	2020-02-14	27.13	m	TRUE
cognatepriming27	Monolingual	30	Catalan	2	2019-12-14	28.73	m	TRUE
cognatepriming38	Monolingual	30	Catalan	3	2020-02-10	27.37	m	TRUE
cognatepriming33	Monolingual	30	Spanish	1	2020-01-23	27.37	f	TRUE
cognatepriming36	Monolingual	30	Spanish	1	2020-02-06	26.70	f	TRUE
cognatepriming39	Monolingual	30	Spanish	2	2020-02-10	27.63	f	TRUE
cognatepriming41	Monolingual	30	Spanish	2	2020-02-15	27.07	m	TRUE
cognatepriming23	Monolingual	30	Spanish	3	2019-11-30	27.20	m	TRUE
cognatepriming28	Monolingual	30	Spanish	3	2019-12-14	28.43	f	TRUE
cognatepriming31	Monolingual	30	Spanish	3	2020-01-18	27.23	f	TRUE
cognatepriming37	Bilingual	20	Spanish	3	2020-02-08	23.67	f	FALSE
cognatepriming35	Bilingual	30	Catalan	2	2020-02-01	27.00	m	FALSE
cognatepriming22	Bilingual	30	Catalan	3	2019-11-30	36.57	f	FALSE
cognatepriming18	Bilingual	30	Spanish	1	2019-11-26	28.63	m	FALSE
cognatepriming20	Bilingual	30	Spanish	1	2019-11-30	27.23	f	FALSE
cognatepriming25	Monolingual	30	Catalan	1	2019-12-14	30.47	m	FALSE
-	-	30	Catalan	1	2020-02-15	27.20	f	-

Figure 3: Predicted unfolding of target fixations across the time course of the trial for each participant, split by trial type, language profile, and testing language.

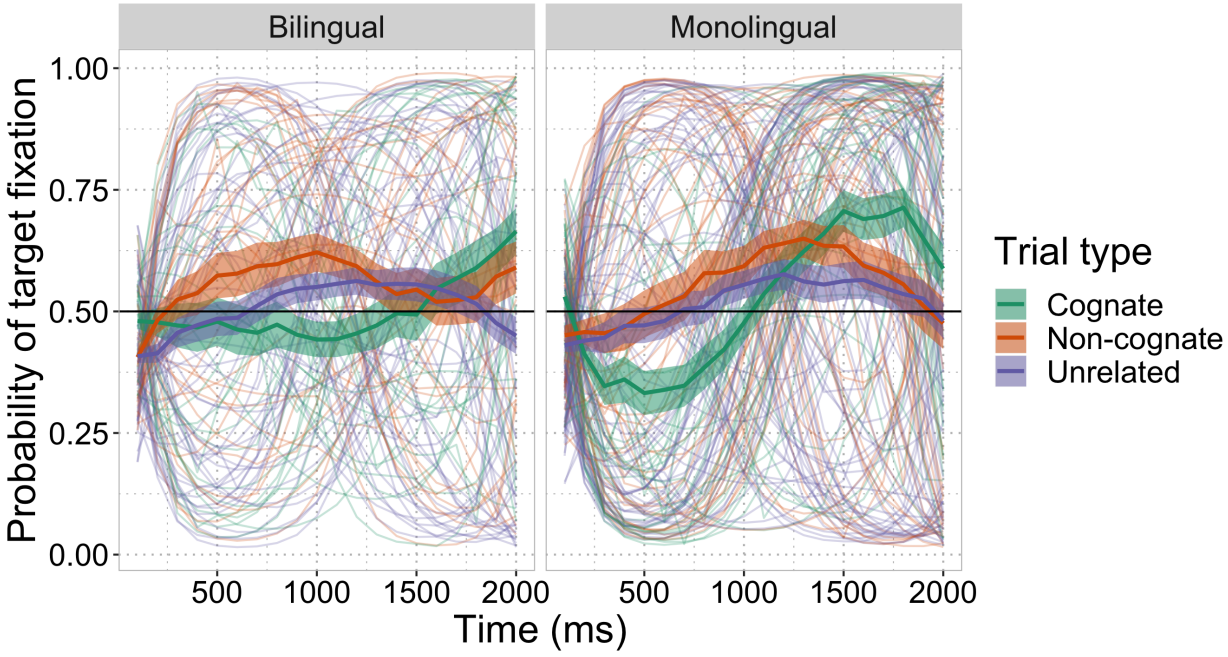

Figure 4: Predicted unfolding of target fixations across the time course of the trial for each trial, split by trial type, language profile, and testing language.

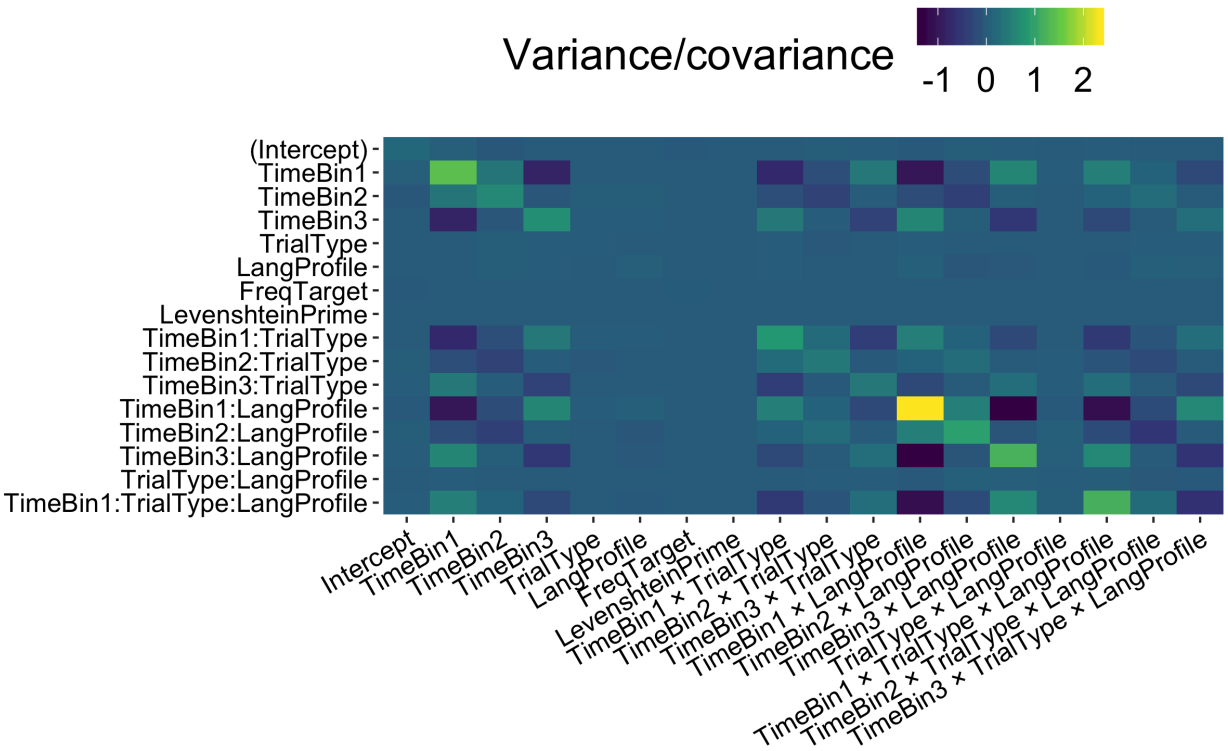

Figure 5: Variance-covariance matrix.

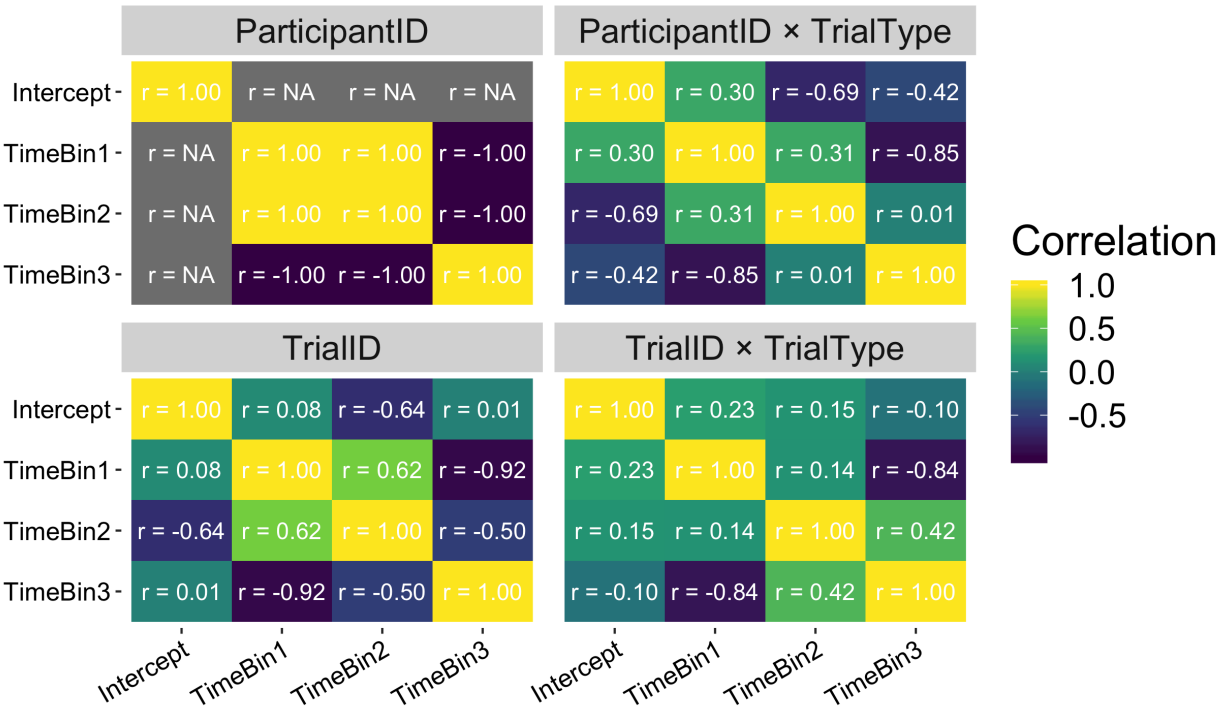

Figure 6: Correlations between random effects split by fixed effect.

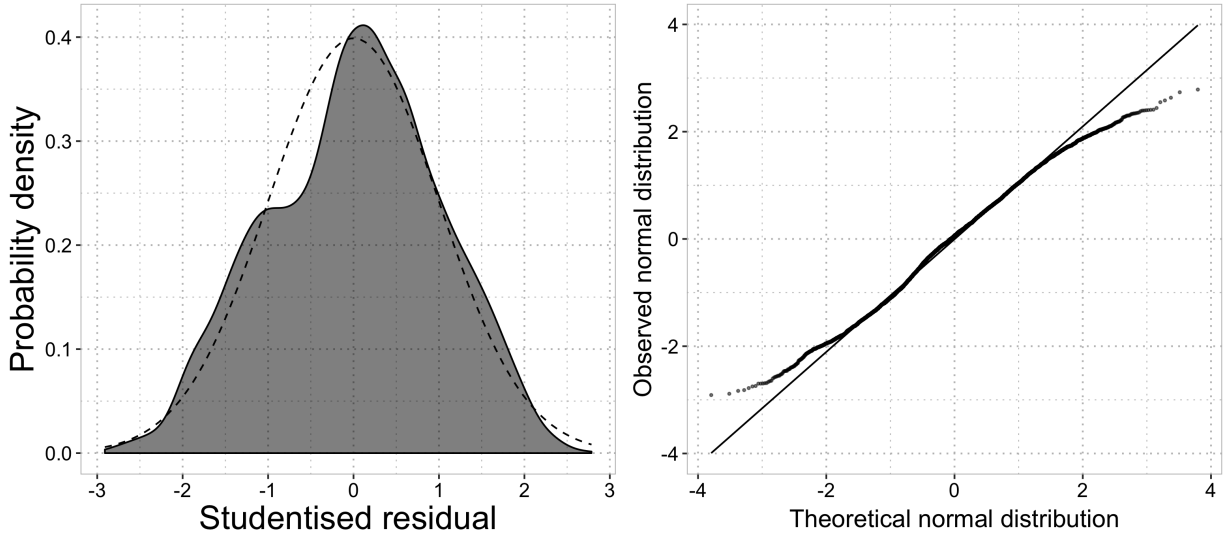

Figure 7: Distribution of the observed studentised residuals, compared with the theoretical normal distribution.