

Appendix A

Correlation matrices

Table A1. Correlation matrix of lexical variables used in Experiment 2.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Entropy										
2. Left-Whole LSA	-0.15**									
3. Right-Whole LSA	-0.21***	0.18***								
4. Compound freq.	0.19***	0.10*	-0.09							
5. Left freq.	0.14**	-0.08	-0.08	0.24***						
6. Right freq.	0.26***	0.06	-0.31***	0.26***	0.16**					
7. Left fam. size	-0.01	-0.02	-0.05	0.09	0.56***	0.04				
8. Right fam. size	0.12*	0.03	-0.18***	0.06	0.01	0.60***	-0.17***			
9. UP	0.03	-0.05	-0.01	0.02	-0.14**	0.03	-0.15**	-0.01		
10. CUP	0.04	0.02	0.02	0.00	-0.07	0.04	-0.18***	0.08	0.51***	
11. Compound duration	0.08	0.03	0.06	0.11*	0.06	0.03	0.08	0.08	0.00	-0.20***

Lower triangle provides Spearman correlation coefficients.

***Correlation is significant at the .001 level.

**Correlation is significant at the .01 level.

*Correlation is significant at the .05 level.

Table A2. Correlation matrix of lexical variables used in Experiment 3.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Entropy										
2. Left-Whole LSA	-0.13**									
3. Right-Whole LSA	-0.22***	0.16***								
4. Compound freq.	0.06	0.16***	0.11*							
5. Left freq.	0.09	-0.04	-0.04	0.18***						
6. Right freq.	0.17***	0.06	-0.25***	0.18***	0.13**					
7. Left fam. size	0.03	-0.02	-0.04	0.07	0.63***	0.06				
8. Right fam. size	0.10*	0.05	-0.19***	0.09	-0.05	0.63***	-0.14**			
9. UP	-0.02	-0.02	0.02	-0.03	-0.11*	0.06	-0.14**	0.01		
10. CUP	-0.01	0.05	0.02	-0.03	-0.10	0.07	-0.16***	0.10*	0.50***	
11. Compound duration	-0.04	-0.09	-0.05	-0.21***	-0.11*	-0.07	-0.07	0.02	0.09	0.30***

Lower triangle provides Spearman correlation coefficients.

***Correlation is significant at the .001 level.

**Correlation is significant at the .01 level.

*Correlation is significant at the .05 level.

Table A3. Correlation matrix of lexical variables used in Experiment 4.

	1.	2.	3.	4.	5.	6.	7.	8.
1. Entropy								
2. Left-Whole LSA	-0.18***							
3. Right-Whole LSA	-0.19***	0.19***						
4. Compound freq.	0.08	0.15***	0.11*					
5. Left freq.	0.04	-0.02	-0.02	0.15***				
6. Right freq.	0.14**	0.06	-0.21***	0.21***	0.11*			
7. Left fam. size	0.00	-0.02	-0.06	0.08	0.59***	0.01		
8. Right fam. size	0.08	0.04	-0.17***	0.12**	-0.05	0.65***	-0.15***	
9. Compound length	-0.01	0.10*	0.03	-0.03	-0.07	-0.10*	-0.22***	-0.04

Lower triangle provides Spearman correlation coefficients.

***Correlation is significant at the .001 level.

**Correlation is significant at the .01 level.

*Correlation is significant at the .05 level.

Table A4. Correlation matrix of lexical variables used in Experiment 5.

	1.	2.	3.	4.	5.	6.	7.	8.
1. Entropy								
2. Left-Whole LSA	-0.17***							
3. Right-Whole LSA	-0.19***	0.17***						
4. Compound freq.	0.07	0.16**	0.02					
5. Left freq.	0.07	-0.01	-0.02	0.17***				
6. Right freq.	0.11*	0.11*	-0.25***	0.21***	0.14**			
7. Left fam. size	0.01	-0.01	-0.07	0.05	0.64***	0.02		
8. Right fam. size	0.06	0.04	-0.19***	0.11*	-0.04	0.70***	-0.16***	
9. Compound length	-0.07	0.12*	0.06	0.03	-0.10	-0.06	-0.23***	-0.04

Lower triangle provides Spearman correlation coefficients.

***Correlation is significant at the .001 level.

**Correlation is significant at the .01 level.

*Correlation is significant at the .05 level.

Appendix B

Model summaries

The following tables provide the fixed effects coefficients of the final models in which significant effects of Entropy of conceptual relations were found.

Table B1. Fixed effects of the linear mixed-effects model fitted to auditory lexical decision RTs in Experiment 2. Conditional R² = 0.5. SD of the residual = 0.15. SD for the random effect of Compound = 0.08. SD for the random effect of Participant = 0.11. N = 1,693. N after trimming = 1,659.

	Estimate	Std. Error	t	p
Intercept	-1.128	0.010	-118.219	0.000
Entropy of conceptual relations	0.016	0.007	2.399	0.017
Left-Whole similarity	-0.006	0.006	-0.894	0.372
Right-Whole similarity	-0.015	0.007	-2.342	0.020
Compound frequency	-0.055	0.007	-8.114	0.000
Left constituent frequency	-0.000	0.008	-0.064	0.949
Right constituent frequency	0.010	0.008	1.265	0.207
Left constituent family size	0.005	0.007	0.708	0.479
Right constituent family size	0.002	0.007	0.220	0.826
Uniqueness point	0.011	0.007	1.578	0.115
Complex uniqueness point	-0.016	0.007	-2.176	0.030
Compound duration	-0.065	0.006	-10.176	0.000
Trial number	-0.028	0.005	-5.901	0.000

Table B2. Fixed effects of the linear mixed-effects model fitted to auditory lexical decision RTs in Experiment 3. Conditional $R^2 = 0.41$. SD of the residual = 0.15. SD for the random effect of Compound = 0.07. SD for the random effect of Participant is 0.1. N = 8,002. N after trimming = 7,809.

	Estimate	Std. Error	t	p
Intercept	-1.066	0.015	-70.560	0.000
Entropy of conceptual relations	0.009	0.004	2.294	0.022
Left-Whole similarity	-0.013	0.004	-3.317	0.001
Right-Whole similarity	-0.001	0.004	-0.148	0.883
Compound frequency	-0.040	0.004	-9.696	0.000
Left constituent frequency	0.001	0.005	0.297	0.767
Right constituent frequency	0.012	0.005	2.570	0.011
Left constituent family size	0.005	0.004	1.117	0.265
Right constituent family size	-0.006	0.004	-1.417	0.157
Uniqueness point	-0.000	0.004	-0.033	0.974
Complex uniqueness point	0.006	0.005	1.242	0.215
Compound duration	0.029	0.004	6.952	0.000
Trial number	-0.015	0.002	-8.245	0.000

Table B3. Fixed effects of the linear mixed-effects model fitted to ELP lexical decision RTs in Experiment 4. Conditional $R^2 = 0.53$. SD of the residual = 0.26. SD for the random effect of Compound = 0.09. SD for the random effect of Participant = 0.26. N = 15,145. N after trimming = 14,938.

	Estimate	Std. Error	t	p
Intercept	-1.462	0.010	-141.294	0.000
Entropy of conceptual relations	0.015	0.006	2.751	0.006
Left-Whole similarity	-0.010	0.006	-1.817	0.070
Right-Whole similarity	0.009	0.006	1.634	0.103
Compound frequency	-0.086	0.006	-14.733	0.000
Left constituent frequency	-0.016	0.006	-2.633	0.009
Right constituent frequency	-0.034	0.006	-5.290	0.000
Left constituent family size	-0.013	0.006	-2.084	0.038
Right constituent family size	0.010	0.006	1.591	0.112
Compound length	0.018	0.005	3.410	0.001
Trial number	-0.016	0.002	-6.639	0.000

Table B4. Fixed effects of the linear mixed-effects model fitted to BLP lexical decision RTs in Experiment 5. Conditional $R^2 = 0.41$. SD of the residual = 0.3. SD for the random effect of Compound = 0.08. SD for the random effect of Participant = 0.22. N = 13,208. N after trimming = 14,977.

	Estimate	Std. Error	t	p
Intercept	-1.652	0.025	-65.706	0.000
Entropy of conceptual relations	0.016	0.005	2.837	0.005
Left-Whole similarity	-0.004	0.006	-0.736	0.462
Right-Whole similarity	-0.006	0.006	-0.997	0.320
Compound frequency	-0.098	0.006	-17.774	0.000
Left constituent frequency	-0.010	0.006	-1.650	0.100
Right constituent frequency	-0.013	0.006	-2.127	0.034
Left constituent family size	-0.015	0.007	-2.318	0.021
Right constituent family size	-0.007	0.006	-1.218	0.224
Compound length	-0.004	0.005	-0.661	0.509
Trial number	-0.001	0.010	-0.120	0.905