Supplementary Material for
The Role of Prior Language Context on Bilingual Spoken Word Processing:
Evidence from the Visual World Task

Table S1.
Means, and standard deviations obtained on cognitive control measures.

	Native English Bilinguals				Native French Bilinguals			
	No-Switch (n = 15)		Switch (n = 14)		No-Switch (n = 15)		Switch (n = 13)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Non-Verbal Simon (ms)								
Congruent	485	71	509	82	477	53	519	85
Incongruent	513	55	539	83	497	70	565	93
Proportion Cost	0.07	0.08	0.07	0.11	0.04	0.09	0.07	0.06
Non-Verbal Stroop (ms)								
Congruent	525	132	466	76	521	112	465	77
Incongruent	555	122	498	87	539	102	486	73
Proportion Cost	0.05	0.09	0.06	0.05	0.06	0.07	0.03	0.07
Number Stroop (ms)								
Congruent	601	80	598	82	589	66	570	87
Incongruent	656	79	670	88	666	91	653	104
Proportion Cost	0.09	0.06	0.12	0.07	0.13	0.07	0.15	0.07
Mixed Antisaccade (%)								
Pro	91	8	93	5	93	6	92	6
Anti	81	20	77	16	84	12	87	8
Proportion Cost	0.12	0.20	0.17	0.16	0.10	0.13	0.05	0.08

Note. Proportion cost measures were obtained by subtracting the congruent/pro responses from the incongruent/anti responses, and dividing the results by the congruent/pro responses. The four groups were compared on proportion cost measures with one-way ANOVAs. No significant differences were found.

Table S2.

Effect sizes (b), standard errors (SE) and p_{MCMC} values for LME models examining cross- and within-language lexical competition (respectively upper and lower panels) during 200-600 ms and 600-1000 ms time bins (respectively left and right panels) using the proportion of fixations to the target picture.

Models for Proportion of Fixations to Target Picture

Cross-Language Competition

Fixed Effects	200-600 ms			600-1000 ms		
	b	SE	p_{df}	b	SE	p_{df}
Display viewed (FC/NC)[1]	-0.08	0.07	0.303	-0.04	-0.04	0.377
Language context manipulation (no-switch/switch)[2]	-0.04	0.09	0.616	-0.04	-0.03	0.518
Task language relative to participants' language background (L1/L2)[3]	-0.17	0.09	0.064	-0.05	-0.05	0.386
Trial presentation order	0.00	0.00	0.319	0.00	0.00	0.276
Display viewed x Language context	0.12	0.12	0.285	0.09	0.09	0.227
Display viewed x Task language	0.15	0.10	0.140	0.01	0.01	0.839
Language context x Task language	0.22	0.12	0.065	-0.08	-0.08	0.292
Display viewed x Trial presentation order	-0.00	0.00	0.690	0.00	-0.00	0.982
Language context x Trial presentation order	-0.00	0.00	0.765	0.00	0.00	0.629
Task language x Trial presentation order	0.00	0.00	0.109	0.00	0.00	0.976
Display viewed x Language context x Task language	-0.37	0.16	0.021*	-0.05	-0.05	0.655
Display viewed x Language context x Trial presentation order	0.00	0.00	0.593	-0.00	-0.00	0.489
Display viewed x Task Language x Trial presentation order	-0.00	0.00	0.061	-0.00	-0.00	0.322
Language context x Task Language x Trial presentation order	-0.00	0.00	0.083	0.00	0.00	0.298
Display viewed x Language context x Task language x Trial presentation order	0.00	0.00	0.032*	0.00	0.00	0.530
Control Predictors	**b**	**SE**	**p_{df}**	**b**	**SE**	**p_{df}**
Ratio of English-to-French nativeness	-0.01	0.02	0.702	0.00	0.00	0.807
(Intercept)	0.54	0.07	<0.001***	0.89	0.06	<0.001***
Random Effects	**Variance**			**Variance**		
Participant	0.0058807			0.0023584		
Item	0.0093544			0.0040867		
Residual	0.1389745			0.0595185		

Within-Language Competition

Fixed Effects	b	SE	p_{df}	b	SE	p_{df}
Display viewed (EC/NC)[1]	-0.15	0.08	0.087	-0.09	0.06	0.137
Language context manipulation (no-switch/switch)[2]	-0.11	0.09	0.237	-0.00	0.06	0.956
Task language relative to participants' language background (L1/L2)[3]	-0.19	0.09	0.059	-0.04	0.06	0.584
Trial presentation order	0.00	0.00	0.986	0.00	0.00	0.121
Display viewed x Language context	0.07	0.11	0.538	0.04	0.08	0.575
Display viewed x Task language	0.01	0.12	0.950	-0.03	0.08	0.681
Language context x Task language	0.23	0.12	0.075	-0.09	0.08	0.302
Display viewed x Trial presentation order	0.00	0.00	0.281	0.00	0.00	0.787
Language context x Trial presentation order	0.00	0.00	0.723	-0.00	0.00	0.734
Task language x Trial presentation order	0.00	0.02	0.076	0.00	0.00	0.972
Display viewed x Language context x Task language	-0.04	0.16	0.823	0.07	0.01	0.523
Display viewed x Language context x Trial presentation order	0.00	0.01	0.936	-0.00	0.00	0.830
Display viewed x Task Language x Trial presentation order	0.00	0.01	0.889	0.00	0.00	0.414
Language context x Task Language x Trial presentation order	-0.00	0.01	0.079	0.00	0.00	0.221
Display viewed x Language context x Task language x Trial presentation order	-0.00	0.02	0.854	-0.00	0.00	0.150
Control Predictors	**b**	**SE**	**p_{df}**	**b**	**SE**	**p_{df}**
Ratio of English-to-French nativeness	0.00	0.02	0.900	0.02	0.01	0.147
(Intercept)	0.59	0.07	<0.001***	0.86	0.05	<0.001***
Random Effects	**Variance**			**Variance**		
Participant	0.0082929			0.0036423		
Item	0.0061010			0.0048522		
Residual	0.1406215			0.0621647		

* p_{MCMC} < .05; ** p_{MCMC} < .01; *** p_{MCMC} < .001

[1] Contrasts were treatment coded; model assumes control display (NC) as a baseline.

[2] Contrasts were treatment coded; model assumes no-switch (English-to-English) as a baseline.

[3] Contrasts were treatment coded; model assumes L1 as a baseline.

Table S3

*Effect sizes (*b*), standard errors (*SE*) and* p_{MCMC} *values for LME models examining cross- and within-language lexical competition (respectively upper and lower panels) during 200-600 ms and 600-1000 ms time bins (respectively left and right panels) using the proportion of fixations to the competitor picture (respectively cross- and within-language competitors, upper and lower panels).*

Models for Proportion of Fixations to Competitor Picture						
Cross-Language Competition		**200-600 ms**			**600-1000 ms**	
Fixed Effects	**b**	**SE**	**p**$_{df}$	**b**	**SE**	**p**$_{df}$
Word heard (Target/Control)[1]	-0.03	0.06	0.602	-0.01	0.03	0.665
Language context manipulation (no-switch/switch)[2]	-0.09	0.06	0.162	0.03	0.03	0.348
Task language relative to participants' language background (L1/L2)[3]	0.01	0.07	0.915	-0.02	0.03	0.509
Trial presentation order	-0.00	0.00	0.068	-0.00	0.00	0.715
Word heard x Language context	0.14	0.09	0.102	-0.01	0.04	0.778
Word heard x Task language	-0.00	0.08	0.955	0.07	0.04	0.077
Language context x Task language	0.06	0.09	0.521	-0.01	0.04	0.885
Word heard x Trial presentation order	0.00	0.00	0.533	0.00	0.00	0.357
Language context x Trial presentation order	0.00	0.00	0.285	-0.00	0.00	0.479
Task language x Trial presentation order	-0.00	0.00	0.820	0.00	0.00	0.681
Word heard x Language context x Task language	-0.09	0.01	0.457	0.02	0.06	0.784
Word heard x Language context x Trial presentation order	-0.00	0.00	0.105	-0.00	0.00	0.847
Word heard x Task Language x Trial presentation order	0.00	0.00	0.495	-0.00	0.00	0.364
Language context x Task Language x Trial presentation order	-0.00	0.00	0.932	0.00	0.00	0.496
Word heard x Language context x Task language x Trial presentation order	0.00	0.00	0.965	-0.00	0.00	0.613
Control Predictors	**b**	**SE**	**p**$_{df}$	**b**	**SE**	**p**$_{df}$
Ratio of English-to-French nativeness	-0.00	0.01	0.795	-0.00	0.00	0.740
(Intercept)	0.24	0.05	<0.001***	0.03	0.02	0.228
Random Effects		**Variance**			**Variance**	
Participant		0.0010854			0.0002822	
Item		0.0017538			0.0000784	
Residual		0.0707373			0.0172810	
Within-Language Competition						
Fixed Effects	**b**	**SE**	**p**$_{df}$	**b**	**SE**	**p**$_{df}$
Word heard (Target/Control)[1]	0.06	0.06	0.376	0.01	0.03	0.724
Language context manipulation (no-switch/switch)[2]	-0.08	-0.08	0.231	-0.01	0.04	0.842
Task language relative to participants' language background (L1/L2)[3]	-0.08	-0.08	0.146	-0.03	0.03	0.326
Trial presentation order	-0.00	-0.00	0.007	-0.00	0.00	0.085
Word heard x Language context	0.19	0.19	0.046	0.04	0.05	0.417
Word heard x Task language	0.14	0.14	0.133	0.06	0.05	0.184
Language context x Task language	0.07	0.07	0.433	0.06	0.05	0.244
Word heard x Trial presentation order	0.00	0.00	0.178	0.00	0.05	0.376
Language context x Trial presentation order	0.00	0.00	0.136	0.00	0.00	0.924
Task language x Trial presentation order	0.00	0.00	0.039	0.00	0.00	0.345
Word heard x Language context x Task language	-0.25	-0.25	0.050	-0.08	0.00	0.258
Word heard x Language context x Trial presentation order	-0.00	-0.00	0.020	-0.00	0.07	0.473
Word heard x Task Language x Trial presentation order	-0.00	-0.00	0.042	-0.00	0.00	0.275
Language context x Task Language x Trial presentation order	-0.00	-0.00	0.492	-0.00	0.00	0.290
Word heard x Language context x Task language x Trial presentation order	0.00	0.00	0.043	0.00	0.00	0.076
Control Predictors	**b**	**SE**	**p**$_{df}$	**b**	**SE**	**p**$_{df}$
Ratio of English-to-French nativeness	0.01	0.01	0.240	-0.00	0.01	0.552
(Intercept)	0.22	0.22	<0.001***	0.06	0.02	0.012
Random Effects		**Variance**			**Variance**	
Participant		0.0000000			0.00029579	
Item		0.0022622			0.00082682	
Residual		0.0902127			0.02623247	

* p_{MCMC} < .05; ** p_{MCMC} < .01; *** p_{MCMC} < .001

[1] Contrasts were treatment coded; model assumes control word as a baseline.

[2] Contrasts were treatment coded; model assumes no-switch (English-to-English) as a baseline.

[3] Contrasts were treatment coded; model assumes L1 as a baseline.

Table S4.

*Effect sizes (*b*), standard errors (*SE*) and* p$_{MCMC}$ *values for LME models examining cross- and within-language lexical competition (respectively upper and lower panels using the latency of response (i.e., mouse click on target picture (respectively cross- and within-language competitors, upper and lower panels).*

Models for Latency of Response (i.e., Mouse Click)

Cross-Language Competition

Fixed Effects	b	SE	p$_{df}$
Word heard (Target/Control)[1]	23.51	73.27	0.771
Language context manipulation (no-switch/switch)[2]	-124.89	99.90	0.196
Task language relative to participants' language background (L1/L2)[3]	116.03	107.19	0.262
Trial presentation order	-1.71	0.62	0.005**
Word heard * Language context	-88.39	113.81	0.454
Word heard * Task language	76.63	101.72	0.451
Language context x Task language	148.25	138.64	0.268
Word heard x Trial presentation order	0.51	0.81	0.526
Language context x Trial presentation order	0.72	0.92	0.417
Task language x Trial presentation order	-0.01	0.86	0.996
Word heard * Language context * Task language	194.20	152.12	0.206
Word heard * Language context * Trial presentation order	0.32	1.22	0.817
Word heard * Task Language * Trial presentation order	-0.10	1.11	0.923
Language context * Task Language * Trial presentation order	-1.48	1.24	0.223
Word heard * Language context * Task language * Trial presentation order	-1.06	1.60	0.526
Control Predictors	**b**	**SE**	**p$_{df}$**
Ratio of English-to-French nativeness	15.10	26.34	0.539
(Intercept)	859.51	76.53	<0.001***
Random Effects		**Variance**	
Participant		21837.3	
Item		5055.6	
Residual		121456.9	

Within-Language Competition

Fixed Effects	b	SE	p$_{df}$
Word heard (Target/Control)[1]	133.33	91.54	0.150
Language context manipulation (no-switch/switch)[2]	12.70	113.74	0.908
Task language relative to participants' language background (L1/L2)[3]	110.53	110.12	0.298
Trial presentation order	-0.96	0.66	0.163
Word heard * Language context	-111.50	133.44	0.414
Word heard * Task language	21.02	127.20	0.869
Language context x Task language	-12.48	159.62	0.937
Word heard x Trial presentation order	-0.56	0.94	0.565
Language context x Trial presentation order	-0.74	0.99	0.471
Task language x Trial presentation order	-0.20	0.94	0.836
Word heard * Language context * Task language	325.59	180.01	0.078
Word heard * Language context * Trial presentation order	1.53	1.41	0.288
Word heard * Task Language * Trial presentation order	0.23	1.29	0.867
Language context * Task Language * Trial presentation order	0.94	1.34	0.486
Word heard * Language context * Task language * Trial presentation order	-3.50	1.87	0.065
Control Predictors	**b**	**SE**	**p$_{df}$**
Ratio of English-to-French nativeness	-4.15	31.83	0.880
(Intercept)	813.37	76.91	<0.001***
Random Effects		**Variance**	
Participant		30691.4	
Item		6358.5	
Residual		184443.7	

* p$_{MCMC}$ < .05; ** p$_{MCMC}$ < .01; *** p$_{MCMC}$ < .001
[1] Contrasts were treatment coded; model assumes control word as a baseline.
[2] Contrasts were treatment coded; model assumes no-switch (English-to-English) as a baseline.
[3] Contrasts were treatment coded; model assumes L1 as a baseline.