

Supplementary material 2

Final output of the LME model fit by ML – for noise maskers (section 4.1 in the article)

Model information:

Number of observations	768
Fixed effects coefficients	4
Random effects coefficients	268
Covariance parameters	7

Model fit statistics:

AIC	BIC	LogLikelihood	Deviance
5004.6	5055.7	-2491.3	4982.6

Fixed effects coefficients (95% CIs):

Name	Estimate	SE	tStat	DF	pValue	Lower	Upper
Intercept	0.175	0.889	0.197	764	0.844	-1.569	1.920
group_2	-0.786	1.219	-0.645	764	0.519	-3.178	1.607
target_L2	11.538	1.510	7.639	764	<0.001	8.573	14.503
group_2:target_L2	-0.838	2.609	-0.321	764	0.748	-5.961	4.284

Note: group_1 (chosen for the intercept) refers to the L1-English group and group_2 refers to the L1-French group. The target levels are L1 or L2, defined relative to the listener, not the materials.

Final output of the LME model fit by ML – for speech maskers (section 4.2 in the article)

Model information:

Number of observations	1536
Fixed effects coefficients	12
Random effects coefficients	536
Covariance parameters	14

Model fit statistics:

AIC	BIC	LogLikelihood	Deviance
8993.8	9132.5	-4470.9	8941.8

Fixed effects coefficients (95% CIs):

Name	Estimate	SE	tStat	DF	pValue	Lower	Upper
Intercept	-7.601	0.533	-14.274	1524	<0.001	-8.645	-6.556
group_2	-0.223	0.721	-0.309	1524	0.757	-1.637	1.191
target_L2	9.443	1.120	8.431	1524	<0.001	7.246	11.640
masker_L2	-0.018	0.588	-0.030	1524	0.976	-1.172	1.136
masker_Lf	-1.904	0.586	-3.248	1524	0.001	-3.053	-0.754
group_2:target_L2	-0.904	1.541	-0.587	1524	0.557	-3.926	2.117

group_2:masker_L2	-1.063	0.801	-1.328	1524	0.184	-2.634	0.508
group_2:masker_Lf	-0.685	0.798	-0.858	1524	0.391	-2.250	0.880
target_L2:masker_L2	-0.303	1.277	-0.237	1524	0.813	-2.808	2.203
target_L2:masker_Lf	-0.272	1.277	-0.213	1524	0.831	-2.777	2.233
group_2:target_L2:masker_L2	-0.447	1.396	-0.321	1524	0.749	-3.185	2.290
group_2:target_L2:masker_Lf	0.480	1.942	0.247	1524	0.805	-3.330	4.289

Note: group_1 (chosen for the intercept) refers to the L1-English group and group_2 refers to the L1-French group. The target levels are L1 or L2, defined relative to the listener, not the materials. The masker levels are L1, L2, or Lf, defined relative to the listener, not the materials.