

Supplementary material: Model summaries

Table 2: Fixed-effect terms in the main model of VOT in English voiced stops (omitting Block and interactions with Block). Model = `lme(VOT ~ POA * Block * Week * Group, random=~1|SpkrLabel, data=stopdata.vcd.shortlag, na.action=na.exclude)`. Significance code: *** $p < .001$.

Predictor	β	SE	t	p	
(Intercept)	17.146	0.984	17.432	<.001	***
Place: bilabial	-3.944	0.707	-5.575	<.001	***
Place: velar	4.346	0.736	5.901	<.001	***
Week: 2	-0.851	0.696	-1.223	.222	
Week: 3	-0.436	0.704	-0.619	.536	
Week: 4	0.782	0.700	1.117	.264	
Week: 5	0.767	0.695	1.104	.270	
Week: 52	-0.445	0.688	-0.647	.518	
Group: HU	-0.096	1.429	-0.067	.947	
Place: bilabial x Week: 2	0.371	0.974	0.381	.703	
Place: velar x Week: 2	-1.507	0.999	-1.508	.132	
Place: bilabial x Week: 3	-0.623	0.977	-0.637	.524	
Place: velar x Week: 3	0.404	1.023	0.395	.693	
Place: bilabial x Week: 4	0.224	0.982	0.228	.820	
Place: velar x Week: 4	0.264	1.002	0.263	.792	
Place: bilabial x Week: 5	-1.471	0.959	-1.534	.125	
Place: velar x Week: 5	0.587	1.011	0.581	.562	
Place: bilabial x Week: 52	0.382	0.949	0.402	.688	
Place: velar x Week: 52	-0.304	0.999	-0.304	.761	
Place: bilabial x Group: HU	-0.421	1.015	-0.414	.679	
Place: velar x Group: HU	-0.457	1.047	-0.437	.662	
Week: 2 x Group: HU	1.308	1.011	1.294	.196	
Week: 3 x Group: HU	0.516	1.015	0.509	.611	

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Table 2 – *Continued from previous page*

Predictor	β	SE	t	p
Week: 4 x Group: HU	-0.761	1.025	-0.742	.458
Week: 5 x Group: HU	-0.983	1.001	-0.982	.327
Week: 52 x Group: HU	-0.913	1.014	-0.900	.368
Place: bilabial x Week: 2 x Group: HU	-0.507	1.420	-0.357	.721
Place: velar x Week: 2 x Group: HU	2.464	1.448	1.701	.089
Place: bilabial x Week: 3 x Group: HU	1.071	1.431	0.748	.455
Place: velar x Week: 3 x Group: HU	-0.961	1.462	-0.657	.511
Place: bilabial x Week: 4 x Group: HU	1.187	1.430	0.830	.407
Place: velar x Week: 4 x Group: HU	-1.833	1.468	-1.249	.212
Place: bilabial x Week: 5 x Group: HU	0.799	1.394	0.573	.567
Place: velar x Week: 5 x Group: HU	-1.121	1.445	-0.776	.438
Place: bilabial x Week: 52 x Group: HU	-0.853	1.400	-0.609	.542
Place: velar x Week: 52 x Group: HU	0.349	1.481	0.236	.814

Table 3: Fixed-effect terms in the main model of VOT in English voiceless stops (omitting Block and interactions with Block). Model = `lme(VOT ~ POA * Block * Week * Group, random=~1|SpkrLabel, data=stopdata.vcls.longlag, na.action=na.exclude)`. Significance codes: * $p < .05$, ** $p < .01$, *** $p < .001$.

Predictor	β	SE	t	p
(Intercept)	101.776	4.812	21.151	<.001 ***
Place: bilabial	-4.504	2.970	-1.517	.130
Place: velar	4.296	2.971	1.446	.148
Week: 2	-4.882	2.963	-1.648	.100
Week: 3	-1.563	2.955	-0.529	.597
Week: 4	1.413	2.955	0.478	.633
Week: 5	8.265	2.963	2.790	.005 **
Week: 52	-1.637	2.963	-0.553	.581

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Table 3 – *Continued from previous page*

Predictor	β	<i>SE</i>	<i>t</i>	<i>p</i>	
Group: HU	-26.733	7.008	-3.815	.002	**
Place: bilabial x Week: 2	-0.484	4.211	-0.115	.909	
Place: velar x Week: 2	3.003	4.180	0.719	.473	
Place: bilabial x Week: 3	-1.043	4.173	-0.250	.803	
Place: velar x Week: 3	-0.064	4.190	-0.015	.988	
Place: bilabial x Week: 4	1.022	4.190	0.244	.807	
Place: velar x Week: 4	-7.847	4.174	-1.880	.060	
Place: bilabial x Week: 5	-0.302	4.212	-0.072	.943	
Place: velar x Week: 5	3.079	4.180	0.737	.462	
Place: bilabial x Week: 52	-1.633	4.195	-0.389	.697	
Place: velar x Week: 52	2.591	4.195	0.618	.537	
Place: bilabial x Group: HU	5.591	4.321	1.294	.196	
Place: velar x Group: HU	-6.246	4.301	-1.452	.147	
Week: 2 x Group: HU	9.048	4.303	2.103	.036	*
Week: 3 x Group: HU	8.999	4.311	2.088	.037	*
Week: 4 x Group: HU	10.868	4.298	2.529	.012	*
Week: 5 x Group: HU	4.046	4.296	0.942	.347	
Week: 52 x Group: HU	21.307	4.310	4.944	< .001	***
Place: bilabial x Week: 2 x Group: HU	-3.719	6.105	-0.609	.543	
Place: velar x Week: 2 x Group: HU	-2.103	6.083	-0.346	.730	
Place: bilabial x Week: 3 x Group: HU	-6.023	6.088	-0.989	.323	
Place: velar x Week: 3 x Group: HU	2.629	6.099	0.431	.667	
Place: bilabial x Week: 4 x Group: HU	-2.803	6.104	-0.459	.646	
Place: velar x Week: 4 x Group: HU	8.753	6.064	1.443	.149	
Place: bilabial x Week: 5 x Group: HU	-6.702	6.101	-1.099	.272	
Place: velar x Week: 5 x Group: HU	2.392	6.064	0.394	.693	
Place: bilabial x Week: 52 x Group: HU	-4.144	6.112	-0.678	.498	

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Table 3 – Continued from previous page

Predictor	β	SE	t	p
Place: velar x Week: 52 x Group: HU	7.450	6.098	1.222	.222

Table 4: Fixed-effect terms in the main model of onset f_0 following English voiced stops (omitting Block and interactions with Block). Model = `lme(F0.norm ~ POA * Block * Week * Group, random=~1|SpkrLabel, data=stopdata.vcd.shortlag, na.action=na.exclude)`. Significance codes: * $p < .05$, ** $p < .01$, *** $p < .001$.

Predictor	β	SE	t	p	
(Intercept)	-1.109	0.104	-10.622	< .001	***
Place: bilabial	-0.061	0.118	-0.515	.607	
Place: velar	0.151	0.123	1.229	.219	
Week: 2	0.285	0.116	2.462	.014	*
Week: 3	0.462	0.117	3.938	< .001	***
Week: 4	0.700	0.117	5.994	< .001	***
Week: 5	0.742	0.116	6.405	< .001	***
Week: 52	0.369	0.115	3.224	.001	**
Group: HU	0.052	0.150	0.346	.734	
Place: bilabial x Week: 2	-0.034	0.162	-0.209	.835	
Place: velar x Week: 2	-0.156	0.167	-0.935	.350	
Place: bilabial x Week: 3	-0.007	0.163	-0.044	.965	
Place: velar x Week: 3	-0.148	0.171	-0.865	.387	
Place: bilabial x Week: 4	0.004	0.164	0.026	.979	
Place: velar x Week: 4	-0.143	0.167	-0.854	.393	
Place: bilabial x Week: 5	0.014	0.160	0.087	.930	
Place: velar x Week: 5	-0.182	0.169	-1.082	.280	
Place: bilabial x Week: 52	-0.085	0.158	-0.537	.592	
Place: velar x Week: 52	-0.094	0.167	-0.566	.572	
Place: bilabial x Group: HU	-0.258	0.169	-1.525	.128	

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Table 4 – Continued from previous page

Predictor	β	SE	t	p
Place: velar x Group: HU	0.0003	0.175	0.002	.999
Week: 2 x Group: HU	0.100	0.169	0.594	.553
Week: 3 x Group: HU	-0.356	0.169	-2.108	.035 *
Week: 4 x Group: HU	-0.512	0.171	-2.996	.003 **
Week: 5 x Group: HU	-0.215	0.167	-1.287	.198
Week: 52 x Group: HU	-0.092	0.169	-0.547	.584
Place: bilabial x Week: 2 x Group: HU	0.208	0.237	0.880	.379
Place: velar x Week: 2 x Group: HU	0.098	0.242	0.407	.684
Place: bilabial x Week: 3 x Group: HU	0.254	0.239	1.062	.288
Place: velar x Week: 3 x Group: HU	0.054	0.244	0.222	.825
Place: bilabial x Week: 4 x Group: HU	0.331	0.238	1.388	.166
Place: velar x Week: 4 x Group: HU	0.004	0.245	0.017	.986
Place: bilabial x Week: 5 x Group: HU	0.225	0.233	0.968	.334
Place: velar x Week: 5 x Group: HU	0.136	0.241	0.565	.572
Place: bilabial x Week: 52 x Group: HU	0.432	0.234	1.852	.064
Place: velar x Week: 52 x Group: HU	-0.082	0.247	-0.331	.741

Table 5: Fixed-effect terms in the main model of onset f_0 following English voiceless stops (omitting Block and interactions with Block). Model = `lme(F0.norm ~ POA * Block * Week * Group, random=~1|SpkrLabel, data=stopdata.vcls.longlag, na.action=na.exclude)`. Significance codes: * $p < .05$, ** $p < .01$, *** $p < .001$.

Predictor	β	SE	t	p
(Intercept)	-0.416	0.152	-2.737	.006 **
Place: bilabial	0.024	0.093	0.260	.795
Place: velar	0.031	0.093	0.330	.742
Week: 2	0.297	0.093	3.206	.001 **
Week: 3	0.548	0.092	5.928	< .001 ***

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Table 5 – Continued from previous page

Predictor	β	SE	t	p	
Week: 4	0.717	0.092	7.755	< .001	***
Week: 5	0.798	0.093	8.609	< .001	***
Week: 52	0.289	0.093	3.121	.002	**
Group: HU	-0.122	0.222	-0.552	.589	
Place: bilabial x Week: 2	0.010	0.132	0.073	.942	
Place: velar x Week: 2	-0.041	0.131	-0.310	.757	
Place: bilabial x Week: 3	0.070	0.131	0.539	.590	
Place: velar x Week: 3	-0.150	0.131	-1.143	.254	
Place: bilabial x Week: 4	0.087	0.131	0.661	.509	
Place: velar x Week: 4	-0.017	0.131	-0.132	.895	
Place: bilabial x Week: 5	0.075	0.132	0.567	.571	
Place: velar x Week: 5	-0.039	0.131	-0.297	.766	
Place: bilabial x Week: 52	0.137	0.131	1.041	.298	
Place: velar x Week: 52	-0.089	0.131	-0.678	.498	
Place: bilabial x Group: HU	-0.016	0.135	-0.117	.907	
Place: velar x Group: HU	0.060	0.135	0.448	.655	
Week: 2 x Group: HU	0.113	0.135	0.838	.402	
Week: 3 x Group: HU	-0.293	0.135	-2.169	.030	*
Week: 4 x Group: HU	-0.410	0.134	-3.050	.002	**
Week: 5 x Group: HU	-0.195	0.134	-1.448	.148	
Week: 52 x Group: HU	0.117	0.135	0.868	.386	
Place: bilabial x Week: 2 x Group: HU	0.008	0.191	0.042	.967	
Place: velar x Week: 2 x Group: HU	0.025	0.190	0.133	.894	
Place: bilabial x Week: 3 x Group: HU	-0.154	0.190	-0.809	.419	
Place: velar x Week: 3 x Group: HU	0.179	0.191	0.939	.348	
Place: bilabial x Week: 4 x Group: HU	0.029	0.191	0.154	.878	
Place: velar x Week: 4 x Group: HU	-0.123	0.190	-0.650	.516	
Place: bilabial x Week: 5 x Group: HU	0.037	0.191	0.192	.848	

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Table 5 – Continued from previous page

Predictor	β	SE	t	p
Place: velar x Week: 5 x Group: HU	-0.122	0.190	-0.641	.522
Place: bilabial x Week: 52 x Group: HU	-0.195	0.191	-1.022	.307
Place: velar x Week: 52 x Group: HU	-0.0002	0.191	-0.001	.999

Table 6: Fixed-effect terms in the main model of F_1 in English vowels (omitting Block and interactions with Block). Model = lme(F1.norm ~ Vowel * Block * Week * Group, random=~1|SpkrLabel, data=voweldata.eng, na.action=na.exclude). Significance codes: * $p < .05$, ** $p < .01$, *** $p < .001$.

Predictor	β	SE	t	p
(Intercept)	-0.006	0.013	-0.445	.656
Vowel: /i/	-1.262	0.041	-30.521	< .001 ***
Vowel: /ɪ/	-0.517	0.040	-12.895	< .001 ***
Vowel: /e/	-0.986	0.040	-24.608	< .001 ***
Vowel: /ɛ/	0.402	0.040	10.041	< .001 ***
Vowel: /æ/	1.337	0.040	33.358	< .001 ***
Vowel: /u/	-1.106	0.040	-27.586	< .001 ***
Vowel: /ʊ/	-0.301	0.041	-7.399	< .001 ***
Vowel: /o/	-0.670	0.040	-16.723	< .001 ***
Vowel: /ʌ/	0.785	0.040	19.580	< .001 ***
Vowel: /ɑ/	1.247	0.040	31.123	< .001 ***
Week: 2	0.043	0.018	2.416	.016 *
Week: 3	-0.006	0.018	-0.356	.722
Week: 4	0.007	0.018	0.382	.703
Week: 5	-0.016	0.018	-0.879	.379
Week: 52	0.072	0.018	3.980	< .001 ***
Group: HU	0.005	0.018	0.252	.805
Vowel: /i/ x Week: 2	-0.169	0.058	-2.910	.004 **

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Predictor	β	<i>SE</i>	<i>t</i>	<i>p</i>
Vowel: /ɪ/ x Week: 2	-0.054	0.057	-0.956	.339
Vowel: /e/ x Week: 2	-0.031	0.057	-0.547	.585
Vowel: /ɛ/ x Week: 2	0.048	0.057	0.844	.399
Vowel: /æ/ x Week: 2	0.157	0.057	2.768	.006 **
Vowel: /u/ x Week: 2	-0.058	0.057	-1.030	.303
Vowel: /ʊ/ x Week: 2	-0.041	0.057	-0.710	.478
Vowel: /o/ x Week: 2	-0.102	0.057	-1.793	.073
Vowel: /ʌ/ x Week: 2	0.036	0.057	0.635	.526
Vowel: /ɑ/ x Week: 2	0.186	0.057	3.248	.001 **
Vowel: /i/ x Week: 3	-0.028	0.058	-0.488	.626
Vowel: /ɪ/ x Week: 3	-0.003	0.057	-0.048	.962
Vowel: /e/ x Week: 3	0.048	0.057	0.841	.400
Vowel: /ɛ/ x Week: 3	-0.043	0.057	-0.763	.446
Vowel: /æ/ x Week: 3	-0.015	0.057	-0.263	.793
Vowel: /u/ x Week: 3	-0.030	0.057	-0.526	.599
Vowel: /ʊ/ x Week: 3	0.042	0.057	0.727	.467
Vowel: /o/ x Week: 3	-0.033	0.057	-0.589	.556
Vowel: /ʌ/ x Week: 3	0.030	0.057	0.525	.600
Vowel: /ɑ/ x Week: 3	0.033	0.057	0.579	.563
Vowel: /i/ x Week: 4	-0.063	0.058	-1.098	.272
Vowel: /ɪ/ x Week: 4	-0.067	0.057	-1.175	.240
Vowel: /e/ x Week: 4	0.00009	0.057	0.002	.999
Vowel: /ɛ/ x Week: 4	-0.056	0.057	-0.992	.321
Vowel: /æ/ x Week: 4	0.0007	0.057	0.012	.990
Vowel: /u/ x Week: 4	0.043	0.057	0.763	.446
Vowel: /ʊ/ x Week: 4	0.002	0.058	0.030	.976
Vowel: /o/ x Week: 4	-0.006	0.057	-0.105	.917
Vowel: /ʌ/ x Week: 4	-0.029	0.057	-0.509	.611

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Table 6 – *Continued from previous page*

Predictor	β	<i>SE</i>	<i>t</i>	<i>p</i>
Vowel: / α / x Week: 4	0.058	0.057	1.019	.308
Vowel: /i/ x Week: 5	0.008	0.058	0.142	.887
Vowel: / \imath / x Week: 5	-0.067	0.057	-1.185	.236
Vowel: /e/ x Week: 5	0.070	0.057	1.227	.220
Vowel: / ε / x Week: 5	-0.019	0.057	-0.332	.740
Vowel: / \ae / x Week: 5	-0.074	0.057	-1.299	.194
Vowel: /u/ x Week: 5	0.041	0.057	0.730	.466
Vowel: / \u028a / x Week: 5	-0.039	0.058	-0.671	.502
Vowel: /o/ x Week: 5	-0.007	0.057	-0.126	.900
Vowel: / Λ / x Week: 5	-0.043	0.057	-0.755	.450
Vowel: / α / x Week: 5	0.094	0.057	1.640	.101
Vowel: /i/ x Week: 52	-0.073	0.058	-1.270	.204
Vowel: / \imath / x Week: 52	-0.131	0.057	-2.316	.021 *
Vowel: /e/ x Week: 52	-0.005	0.057	-0.097	.923
Vowel: / ε / x Week: 52	-0.068	0.057	-1.195	.232
Vowel: / \ae / x Week: 52	0.065	0.057	1.143	.253
Vowel: /u/ x Week: 52	-0.048	0.057	-0.845	.398
Vowel: / \u028a / x Week: 52	-0.051	0.057	-0.901	.368
Vowel: /o/ x Week: 52	0.054	0.057	0.947	.344
Vowel: / Λ / x Week: 52	-0.001	0.057	-0.021	.983
Vowel: / α / x Week: 52	0.142	0.057	2.487	.013 *
Vowel: /i/ x Group: HU	-0.084	0.058	-1.454	.146
Vowel: / \imath / x Group: HU	-0.004	0.057	-0.063	.950
Vowel: /e/ x Group: HU	0.070	0.057	1.242	.214
Vowel: / ε / x Group: HU	-0.001	0.057	-0.022	.982
Vowel: / \ae / x Group: HU	0.093	0.057	1.637	.102
Vowel: /u/ x Group: HU	-0.067	0.057	-1.174	.240
Vowel: / \u028a / x Group: HU	-0.089	0.057	-1.557	.120

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Table 6 – *Continued from previous page*

Predictor	β	<i>SE</i>	<i>t</i>	<i>p</i>	
Vowel: /o/ x Group: HU	0.022	0.057	0.388	.698	
Vowel: /ʌ/ x Group: HU	-0.054	0.057	-0.953	.341	
Vowel: /ɑ/ x Group: HU	0.118	0.057	2.074	.038	*
Week: 2 x Group: HU	-0.060	0.025	-2.356	.019	*
Week: 3 x Group: HU	0.027	0.026	1.074	.283	
Week: 4 x Group: HU	-0.010	0.025	-0.389	.698	
Week: 5 x Group: HU	0.013	0.026	0.508	.612	
Week: 52 x Group: HU	-0.062	0.025	-2.430	.015	*
Vowel: /i/ x Week: 2 x Group: HU	0.253	0.081	3.102	.002	**
Vowel: /ɪ/ x Week: 2 x Group: HU	0.072	0.081	0.891	.373	
Vowel: /e/ x Week: 2 x Group: HU	0.083	0.081	1.025	.306	
Vowel: /ɛ/ x Week: 2 x Group: HU	-0.115	0.080	-1.438	.151	
Vowel: /æ/ x Week: 2 x Group: HU	-0.279	0.080	-3.483	< .001	***
Vowel: /u/ x Week: 2 x Group: HU	0.136	0.080	1.698	.090	
Vowel: /ʊ/ x Week: 2 x Group: HU	0.026	0.081	0.327	.744	
Vowel: /o/ x Week: 2 x Group: HU	0.202	0.081	2.497	.013	*
Vowel: /ʌ/ x Week: 2 x Group: HU	-0.032	0.080	-0.404	.686	
Vowel: /ɑ/ x Week: 2 x Group: HU	-0.270	0.080	-3.354	< .001	***
Vowel: /i/ Week: 3 x Group: HU	0.036	0.081	0.448	.654	
Vowel: /ɪ/ x Week: 3 x Group: HU	-0.007	0.081	-0.084	.933	
Vowel: /e/ x Week: 3 x Group: HU	-0.051	0.081	-0.626	.531	
Vowel: /ɛ/ x Week: 3 x Group: HU	-0.028	0.080	-0.351	.726	
Vowel: /æ/ x Week: 3 x Group: HU	0.0005	0.080	0.007	.995	
Vowel: /u/ x Week: 3 x Group: HU	0.045	0.081	0.562	.574	
Vowel: /ʊ/ x Week: 3 x Group: HU	-0.059	0.081	-0.7359	.462	
Vowel: /o/ x Week: 3 x Group: HU	0.130	0.081	1.602	.109	
Vowel: /ʌ/ x Week: 3 x Group: HU	-0.031	0.080	-0.391	.696	
Vowel: /ɑ/ x Week: 3 x Group: HU	-0.061	0.081	-0.759	.448	

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Table 6 – *Continued from previous page*

Predictor	β	<i>SE</i>	<i>t</i>	<i>p</i>
Vowel: /i/ Week: 4 x Group: HU	0.033	0.081	0.404	.686
Vowel: /ɪ/ x Week: 4 x Group: HU	0.021	0.080	0.262	.794
Vowel: /e/ x Week: 4 x Group: HU	-0.077	0.080	-0.951	.342
Vowel: /ɛ/ x Week: 4 x Group: HU	0.044	0.080	0.543	.587
Vowel: /æ/ x Week: 4 x Group: HU	0.036	0.080	0.452	.651
Vowel: /u/ x Week: 4 x Group: HU	-0.077	0.080	-0.964	.335
Vowel: /ʊ/ x Week: 4 x Group: HU	0.035	0.081	0.437	.662
Vowel: /o/ x Week: 4 x Group: HU	-0.024	0.081	-0.293	.770
Vowel: /ʌ/ x Week: 4 x Group: HU	0.082	0.080	1.014	.311
Vowel: /ɑ/ x Week: 4 x Group: HU	-0.050	0.081	-0.617	.537
Vowel: /i/ Week: 5 x Group: HU	0.014	0.081	0.170	.865
Vowel: /ɪ/ x Week: 5 x Group: HU	0.061	0.080	0.757	.449
Vowel: /e/ x Week: 5 x Group: HU	-0.060	0.080	-0.744	.457
Vowel: /ɛ/ x Week: 5 x Group: HU	0.005	0.080	0.057	.955
Vowel: /æ/ x Week: 5 x Group: HU	-0.058	0.080	-0.727	.468
Vowel: /u/ x Week: 5 x Group: HU	-0.031	0.080	-0.380	.704
Vowel: /ʊ/ x Week: 5 x Group: HU	0.102	0.081	1.265	.206
Vowel: /o/ x Week: 5 x Group: HU	-0.016	0.082	-0.194	.846
Vowel: /ʌ/ x Week: 5 x Group: HU	0.065	0.081	0.803	.422
Vowel: /ɑ/ x Week: 5 x Group: HU	-0.129	0.080	-1.606	.108
Vowel: /i/ Week: 52 x Group: HU	0.090	0.081	1.115	.265
Vowel: /ɪ/ x Week: 52 x Group: HU	0.001	0.080	0.014	.989
Vowel: /e/ x Week: 52 x Group: HU	-0.017	0.080	-0.218	.828
Vowel: /ɛ/ x Week: 52 x Group: HU	0.028	0.080	0.351	.726
Vowel: /æ/ x Week: 52 x Group: HU	-0.061	0.080	-0.761	.447
Vowel: /u/ x Week: 52 x Group: HU	0.141	0.080	1.759	.079
Vowel: /ʊ/ x Week: 52 x Group: HU	0.067	0.081	0.832	.405
Vowel: /o/ x Week: 52 x Group: HU	-0.049	0.080	-0.606	.544

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Table 6 – Continued from previous page

Predictor	β	SE	t	p
Vowel: / Λ / x Week: 52 x Group: HU	-0.035	0.080	-0.436	.663
Vowel: / α / x Week: 52 x Group: HU	-0.111	0.081	-1.368	.171

Table 7: Fixed-effect terms in the main model of F_2 in English vowels (omitting Block and interactions with Block). Model = lme(F2.norm ~ Vowel * Block * Week * Group, random=~1|SpkrLabel, data=voweldata.eng, na.action=na.exclude). Significance codes: * $p < .05$, ** $p < .01$, *** $p < .001$.

Predictor	β	SE	t	p	
(Intercept)	-0.032	0.011	-2.933	.003	**
Vowel: /i/	1.724	0.035	49.132	< .001	***
Vowel: /I/	0.826	0.034	24.286	< .001	***
Vowel: /e/	1.555	0.034	45.723	< .001	***
Vowel: / ϵ /	0.484	0.034	14.232	< .001	***
Vowel: / \ae /	0.170	0.034	4.996	< .001	***
Vowel: /u/	-0.953	0.034	-28.028	< .001	***
Vowel: / \bar{u} /	-0.317	0.035	-9.182	< .001	***
Vowel: /o/	-1.199	0.034	-35.242	< .001	***
Vowel: / Λ /	-0.332	0.034	-9.762	< .001	***
Vowel: / α /	-0.851	0.034	-25.011	< .001	***
Week: 2	0.042	0.015	2.721	.007	**
Week: 3	0.032	0.015	2.099	.036	*
Week: 4	0.054	0.015	3.502	< .001	***
Week: 5	0.042	0.015	2.711	.007	**
Week: 52	0.061	0.015	4.008	< .001	***
Group: HU	0.020	0.016	1.307	.212	
Vowel: /i/ x Week: 2	-0.019	0.049	-0.390	.696	
Vowel: /I/ x Week: 2	0.027	0.048	0.567	.571	

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Table 7 – Continued from previous page

Predictor	β	<i>SE</i>	<i>t</i>	<i>p</i>
Vowel: /e/ x Week: 2	-0.015	0.048	-0.305	.760
Vowel: /ɛ/ x Week: 2	0.011	0.048	0.225	.822
Vowel: /æ/ x Week: 2	-0.007	0.048	-0.155	.877
Vowel: /u/ x Week: 2	0.011	0.048	0.227	.820
Vowel: /ʊ/ x Week: 2	-0.022	0.048	-0.457	.648
Vowel: /o/ x Week: 2	-0.082	0.048	-1.701	.089
Vowel: /ʌ/ x Week: 2	0.020	0.048	0.407	.684
Vowel: /ɑ/ x Week: 2	0.064	0.048	1.330	.184
Vowel: /i/ x Week: 3	-0.028	0.049	-0.576	.565
Vowel: /ɪ/ x Week: 3	0.007	0.048	0.135	.893
Vowel: /e/ x Week: 3	-0.015	0.048	-0.313	.754
Vowel: /ɛ/ x Week: 3	-0.017	0.048	-0.354	.723
Vowel: /æ/ x Week: 3	-0.004	0.048	-0.081	.936
Vowel: /u/ x Week: 3	-0.011	0.048	-0.228	.820
Vowel: /ʊ/ x Week: 3	0.073	0.048	1.505	.132
Vowel: /o/ x Week: 3	-0.063	0.048	-1.309	.191
Vowel: /ʌ/ x Week: 3	-0.019	0.048	-0.402	.688
Vowel: /ɑ/ x Week: 3	0.028	0.048	0.574	.566
Vowel: /i/ x Week: 4	-0.003	0.049	-0.068	.946
Vowel: /ɪ/ x Week: 4	-0.020	0.048	-0.406	.685
Vowel: /e/ x Week: 4	-0.027	0.048	-0.568	.570
Vowel: /ɛ/ x Week: 4	-0.039	0.048	-0.801	.423
Vowel: /æ/ x Week: 4	0.017	0.048	0.356	.722
Vowel: /u/ x Week: 4	0.019	0.048	0.403	.687
Vowel: /ʊ/ x Week: 4	0.002	0.049	0.039	.969
Vowel: /o/ x Week: 4	-0.035	0.048	-0.737	.461
Vowel: /ʌ/ x Week: 4	-0.005	0.048	-0.105	.916
Vowel: /ɑ/ x Week: 4	0.059	0.048	1.213	.225

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Table 7 – Continued from previous page

Predictor	β	SE	t	p	
Vowel: /i/ x Week: 5	-0.050	0.049	-1.021	.308	
Vowel: /ɪ/ x Week: 5	-0.028	0.048	-0.590	.555	
Vowel: /e/ x Week: 5	-0.098	0.048	-2.046	.041	*
Vowel: /ɛ/ x Week: 5	-0.075	0.048	-1.551	.121	
Vowel: /æ/ x Week: 5	-0.044	0.049	-0.906	.365	
Vowel: /u/ x Week: 5	0.163	0.048	3.398	<.001	***
Vowel: /ʊ/ x Week: 5	0.017	0.049	0.341	.733	
Vowel: /o/ x Week: 5	0.033	0.048	0.691	.489	
Vowel: /ʌ/ x Week: 5	0.037	0.049	0.766	.444	
Vowel: /ɑ/ x Week: 5	0.013	0.049	0.277	.782	
Vowel: /i/ x Week: 52	-0.012	0.049	-0.255	.799	
Vowel: /ɪ/ x Week: 52	0.039	0.048	0.803	.422	
Vowel: /e/ x Week: 52	-0.029	0.048	-0.612	.540	
Vowel: /ɛ/ x Week: 52	-0.018	0.048	-0.384	.701	
Vowel: /æ/ x Week: 52	-0.037	0.048	-0.761	.447	
Vowel: /u/ x Week: 52	-0.058	0.048	-1.199	.231	
Vowel: /ʊ/ x Week: 52	0.006	0.048	0.129	.897	
Vowel: /o/ x Week: 52	-0.050	0.048	-1.047	.295	
Vowel: /ʌ/ x Week: 52	0.027	0.048	0.558	.577	
Vowel: /ɑ/ x Week: 52	0.074	0.048	1.533	.125	
Vowel: /i/ x Group: HU	0.038	0.049	0.780	.436	
Vowel: /ɪ/ x Group: HU	0.036	0.048	0.741	.459	
Vowel: /e/ x Group: HU	-0.017	0.048	-0.348	.728	
Vowel: /ɛ/ x Group: HU	0.023	0.048	0.486	.627	
Vowel: /æ/ x Group: HU	-0.0002	0.048	-0.003	.997	
Vowel: /u/ x Group: HU	-0.003	0.048	-0.056	.955	
Vowel: /ʊ/ x Group: HU	-0.101	0.048	-2.082	.037	*
Vowel: /o/ x Group: HU	-0.078	0.048	-1.616	.106	

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Table 7 – Continued from previous page

Predictor	β	SE	t	p
Vowel: /ʌ/ x Group: HU	0.006	0.048	0.124	.901
Vowel: /ɑ/ x Group: HU	0.027	0.048	0.558	.577
Week: 2 x Group: HU	-0.045	0.022	-2.099	.036 *
Week: 3 x Group: HU	-0.032	0.022	-1.487	.137
Week: 4 x Group: HU	-0.049	0.022	-2.285	.022 *
Week: 5 x Group: HU	-0.018	0.022	-0.840	.401
Week: 52 x Group: HU	-0.032	0.022	-1.500	.134
Vowel: /i/ x Week: 2 x Group: HU	0.044	0.069	0.640	.522
Vowel: /ɪ/ x Week: 2 x Group: HU	-0.131	0.069	-1.915	.056
Vowel: /e/ x Week: 2 x Group: HU	-0.050	0.069	-0.730	.466
Vowel: /ɛ/ x Week: 2 x Group: HU	-0.106	0.068	-1.561	.119
Vowel: /æ/ x Week: 2 x Group: HU	-0.055	0.068	-0.807	.420
Vowel: /u/ x Week: 2 x Group: HU	0.082	0.068	1.208	.227
Vowel: /ʊ/ x Week: 2 x Group: HU	0.086	0.069	1.255	.209
Vowel: /o/ x Week: 2 x Group: HU	0.129	0.069	1.882	.060
Vowel: /ʌ/ x Week: 2 x Group: HU	0.036	0.068	0.534	.594
Vowel: /ɑ/ x Week: 2 x Group: HU	-0.031	0.068	-0.459	.647
Vowel: /i/ Week: 3 x Group: HU	-0.099	0.069	-1.447	.148
Vowel: /ɪ/ x Week: 3 x Group: HU	-0.064	0.068	-0.937	.349
Vowel: /e/ x Week: 3 x Group: HU	0.024	0.069	0.349	.727
Vowel: /ɛ/ x Week: 3 x Group: HU	-0.055	0.068	-0.814	.415
Vowel: /æ/ x Week: 3 x Group: HU	-0.038	0.068	-0.554	.580
Vowel: /u/ x Week: 3 x Group: HU	0.076	0.068	1.111	.266
Vowel: /ʊ/ x Week: 3 x Group: HU	-0.065	0.069	-0.945	.345
Vowel: /o/ x Week: 3 x Group: HU	0.163	0.069	2.352	.019 *
Vowel: /ʌ/ x Week: 3 x Group: HU	0.067	0.068	0.980	.327
Vowel: /ɑ/ x Week: 3 x Group: HU	-0.012	0.068	-0.175	.861
Vowel: /i/ Week: 4 x Group: HU	-0.041	0.069	-0.596	.551

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Table 7 – Continued from previous page

Predictor	β	<i>SE</i>	<i>t</i>	<i>p</i>
Vowel: /ɪ/ x Week: 4 x Group: HU	-0.008	0.068	-0.123	.902
Vowel: /e/ x Week: 4 x Group: HU	0.095	0.068	1.386	.166
Vowel: /ɛ/ x Week: 4 x Group: HU	-0.055	0.068	-0.813	.416
Vowel: /æ/ x Week: 4 x Group: HU	-0.033	0.068	-0.483	.630
Vowel: /u/ x Week: 4 x Group: HU	-0.047	0.068	-0.692	.489
Vowel: /ʊ/ x Week: 4 x Group: HU	-0.001	0.069	-0.020	.984
Vowel: /o/ x Week: 4 x Group: HU	0.050	0.069	0.722	.470
Vowel: /ʌ/ x Week: 4 x Group: HU	0.067	0.068	0.982	.326
Vowel: /ɑ/ x Week: 4 x Group: HU	-0.026	0.069	-0.377	.706
Vowel: /i/ Week: 5 x Group: HU	0.047	0.069	0.686	.493
Vowel: /ɪ/ x Week: 5 x Group: HU	-0.041	0.068	-0.599	.550
Vowel: /e/ x Week: 5 x Group: HU	0.090	0.068	1.321	.187
Vowel: /ɛ/ x Week: 5 x Group: HU	-0.005	0.068	-0.072	.943
Vowel: /æ/ x Week: 5 x Group: HU	-0.014	0.068	-0.199	.843
Vowel: /u/ x Week: 5 x Group: HU	-0.166	0.068	-2.436	.015 *
Vowel: /ʊ/ x Week: 5 x Group: HU	0.061	0.069	0.885	.376
Vowel: /o/ x Week: 5 x Group: HU	-0.022	0.069	-0.314	.754
Vowel: /ʌ/ x Week: 5 x Group: HU	0.036	0.069	0.519	.604
Vowel: /ɑ/ x Week: 5 x Group: HU	0.044	0.068	0.648	.517
Vowel: /i/ Week: 52 x Group: HU	-0.037	0.069	-0.535	.593
Vowel: /ɪ/ x Week: 52 x Group: HU	-0.068	0.068	-0.996	.319
Vowel: /e/ x Week: 52 x Group: HU	0.066	0.068	0.970	.332
Vowel: /ɛ/ x Week: 52 x Group: HU	-0.016	0.068	-0.240	.811
Vowel: /æ/ x Week: 52 x Group: HU	0.0007	0.068	0.010	.992
Vowel: /u/ x Week: 52 x Group: HU	0.036	0.068	0.525	.599
Vowel: /ʊ/ x Week: 52 x Group: HU	-0.002	0.069	-0.025	.980
Vowel: /o/ x Week: 52 x Group: HU	0.039	0.068	0.576	.565
Vowel: /ʌ/ x Week: 52 x Group: HU	0.032	0.068	0.475	.635

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Table 7 – *Continued from previous page*

Predictor	β	<i>SE</i>	<i>t</i>	<i>p</i>
Vowel: /a/ x Week: 52 x Group: HU	0.007	0.069	0.098	.922