

Supplemental Material S2. Estimated pairwise differences for four-vowel articulation index (VAI) from the final model.

	Estimate	Standard error	df	t	Lower CI	Upper CI	p	Effect size
Sex female–male	0.039	0.066	10.2	0.59	−0.107	0.185	.568	0.397
Frequency low–mid	0.015	0.016	226.2	0.98	−0.015	0.046	.326	0.153
Frequency low–high	0.048	0.020	226.2	2.41	0.009	0.087	.017	0.488
Frequency mid–high	0.032	0.017	226.3	1.88	−0.002	0.066	.061	0.325
Sex:frequency female low–male low	0.083	0.069	12.6	1.21	−0.067	0.233	.25	0.844
Sex:frequency female low–female mid	0.032	0.023	226.2	1.39	−0.014	0.078	.166	0.325
Sex:frequency female low–male mid	0.082	0.068	11.8	1.20	−0.067	0.230	.255	0.834
Sex:frequency female low–female high	0.097	0.030	226.1	3.29	0.039	0.156	.001	0.986
Sex:frequency female low–male high	0.081	0.070	13.3	1.16	−0.070	0.233	.266	0.824
Sex:frequency male low–female mid	−0.051	0.067	11.4	−0.76	−0.199	0.097	.465	−0.519
Sex:frequency male low–male mid	−0.002	0.020	226.2	−0.10	−0.042	0.038	.924	−0.020
Sex:frequency male low–female high	0.014	0.070	13.1	0.20	−0.137	0.165	.845	0.142
Sex:frequency male low–male high	−0.002	0.026	226.3	−0.08	−0.054	0.050	.939	−0.020
Sex:frequency female mid–male mid	0.049	0.066	10.6	0.74	−0.098	0.196	.476	0.498
Sex:frequency female mid–female high	0.065	0.025	226.2	2.56	0.015	0.115	.011	0.661
Sex:frequency female mid–male high	0.049	0.068	12.0	0.72	−0.100	0.198	.488	0.498
Sex:frequency male mid–female high	0.016	0.069	12.2	0.23	−0.134	0.165	.821	0.163
Sex:frequency male mid–male high	0.000	0.023	226.5	0.00	−0.046	0.046	.998	0.000
Sex:frequency female high–male high	−0.016	0.071	13.8	−0.23	−0.168	0.136	.825	−0.163