

## Appendix B: Mixed Effects Regression Models for Five Time Points Throughout /l/

Appendix B, Table 1: Experiment 1, mixed effects regression models for F2-F1 at 5 time points during /l/, all data

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	1217.52	12.05	<0.0001	903.66	14.72	<0.0001	711.58	21.57	<0.0001	695.13	24.72	<0.0001	833.27	17.41	<0.0001
Initial vs. Final	-254.32	-9.64	<0.0001	-249.64	-10.57	<0.0001	-228.66	-9.13	<0.0001	-189.15	-8.95	<0.0001	-39.63	-1.84	0.09
Rhyme Duration	-8.08	-0.21	0.83	-197.20	-5.91	<0.0001	-220.56	-5.11	<0.0001	-127.57	-2.20	0.04	-15.65	-0.33	0.74
Phrase vs. Compound	-15.27	-0.08	0.94	30.75	0.25	0.81	40.59	0.70	0.50	47.21	1.03	0.33	124.67	1.36	0.21
Initial vs. Final: Duration	-41.22	-0.67	0.51	-63.82	-1.31	0.22	-59.45	-0.86	0.40	5.70	0.07	0.95	-7.54	-0.12	0.90
Initial vs. Final: Phrase vs. Compound	40.78	0.95	0.37	-4.29	-0.13	0.90	-0.25	-0.01	0.99	-36.32	-0.95	0.34	12.45	0.24	0.82

Appendix B, Table 2: Experiment 1, mixed effects regression models for F2-F1 at 5 time points during /l/, word-initial tokens only

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	1425.28	12.57	<b>&lt;0.0001</b>	1055.09	15.37	<b>&lt;0.0001</b>	831.64	20.25	<b>&lt;0.0001</b>	791.27	24.76	<b>&lt;0.0001</b>	853.58	16.79	<b>&lt;0.001</b>
Rhyme Duration	18.71	0.37	0.72	-179.31	-3.15	<b>&lt;0.01</b>	-191.92	-3.73	<b>&lt;0.01</b>	-136.80	-2.18	<b>0.04</b>	-19.18	-0.38	0.71
Phrase vs. Compound	29.97	0.13	0.90	50.19	0.40	0.70	51.87	0.78	0.46	78.68	1.45	0.18	115.97	1.20	0.26
Rhyme Duration: Phrase vs. Compound	-39.31	-0.45	0.67	-117.25	-1.18	0.27	-156.71	-1.88	0.08	-10.91	-0.11	0.92	-49.24	-0.61	0.56

Appendix B, Table 3: Experiment 1, mixed effects regression models for F2-F1 at 5 time points during /l/, word-final tokens only

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	1105.82	10.14	<b>&lt;0.0001</b>	782.44	13.09	<b>&lt;0.0001</b>	596.62	21.10	<b>&lt;0.0001</b>	604.35	23.60	<b>&lt;0.0001</b>	814.41	16.98	<b>&lt;0.0001</b>
Rhyme Duration	-52.93	-1.30	0.24	-243.95	-5.38	<b>&lt;0.001</b>	-246.28	-4.30	<b>&lt;0.001</b>	-126.75	-1.52	0.15	-34.38	-0.54	0.60
Phrase vs. Compound	43.57	0.20	0.85	34.18	0.29	0.78	30.98	0.59	0.57	26.08	0.56	0.59	135.06	1.40	0.19
Rhyme Duration: Phrase vs. Compound	33.28	0.44	0.68	-54.96	-0.70	0.50	-29.62	-0.32	0.76	6.27	0.04	0.97	-5.77	-0.05	0.96

Appendix B, Table 4: Experiment 2, mixed effects regression models for F2-F1 at 5 time points during /l/, with both unreduced and reduced following vowels

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	943.44	13.89	<0. 0001	812.44	19.09	<0. 0001	786.82	23.01	<0. 0001	849.51	33.42	<0. 0001	1021.62	62.44	<0. 0001
Medial vs. Initial	34.15	1.06	0.32	52.51	3.82	<0. 001	86.47	2.90	0.01	101.85	2.26	0.04	101.43	1.88	0.08
Medial vs. Final	-84.17	-1.90	0.09	-55.38	-3.98	<0. 001	-60.35	-2.99	0.02	-21.76	-0.83	0.43	20.58	0.55	0.60
Rhyme Duration	-1.47	-0.04	0.97	-58.91	-1.87	0.08	-85.22	-2.09	0.06	-41.84	-1.16	0.27	25.73	0.78	0.45
Unreduced vs. Reduced	-206.27	-1.52	0.17	-185.54	-2.38	0.04	-157.89	-2.84	0.02	-135.50	-3.41	<0. 01	-215.37	-6.15	<0. 0001
Medial vs. Initial: Unreduced vs. Reduced	44.47	0.70	0.51	41.48	1.49	0.14	75.29	1.95	0.09	80.65	1.35	0.21	98.95	1.20	0.26
Medial vs. Final: Unreduced vs. Reduced	-28.19	-0.31	0.76	-3.74	-0.14	0.89	30.69	0.75	0.48	69.84	1.31	0.23	93.38	1.26	0.24

Appendix B, Table 5: Experiment 2A, mixed effects regression models for F2-F1 at 5 time points during /l/ for unreduced vowels

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	1077.35	17.47	<b>&lt;0.001</b>	927.46	20.87	<b>&lt;0.0001</b>	882.58	23.08	<b>&lt;0.0001</b>	933.74	28.73	<b>&lt;0.0001</b>	1146.14	45.97	<b>&lt;0.0001</b>
Medial vs. Initial	11.74	0.38	0.73	29.68	1.12	0.34	38.49	1.33	0.20	23.18	0.92	0.44	7.85	0.50	0.62
Medial vs. Final	-65.24	-2.48	0.06	-51.06	-2.48	<b>0.01</b>	-75.92	-3.39	<b>&lt;0.001</b>	-65.02	-2.73	0.06	-32.53	-2.04	0.11
Rhyme Duration	-11.73	-0.59	0.56	-35.15	-1.41	0.23	-52.38	-1.36	0.24	-31.93	-0.85	0.45	-1.98	-0.06	0.96

Appendix B, Table 6: Experiment 2B, mixed effects regression models for F2-F1 at 5 time points during /l/ for reduced vowels

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	861.79	8.50	<b>&lt;0.001</b>	737.15	12.44	<b>&lt;0.0001</b>	721.49	16.27	<b>&lt;0.0001</b>	793.06	24.33	<b>&lt;0.0001</b>	937.74	34.92	<b>&lt;0.001</b>
Medial vs. Initial	44.173	0.90	0.41	68.20	3.77	<b>&lt;0.001</b>	112.54	3.61	<b>&lt;0.01</b>	129.43	2.42	<b>0.04</b>	110.74	1.60	0.17
Medial vs. Final	-99.71	-1.36	0.23	-58.24	-2.94	<b>0.02</b>	-46.04	-1.42	0.22	6.99	0.16	0.87	21.88	0.27	0.79
Rhyme Duration	10.15	0.42	0.69	-23.67	-1.02	0.34	-27.08	-1.24	0.25	-9.04	-0.37	0.72	17.68	0.72	0.49

Appendix B, Table 7: Experiment 3, mixed effects regression models for F2-F1 at 5 time points during /l/, all data

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	923.68	16.85	<b>&lt;0.0001</b>	779.29	18.82	<b>&lt;0.0001</b>	788.31	21.47	<b>&lt;0.0001</b>	919.63	21.58	<b>&lt;0.0001</b>	1248.41	15.87	<b>&lt;0.0001</b>
Final vs. Other	-423.67	-11.17	<b>&lt;0.0001</b>	-267.31	-6.60	<b>&lt;0.01</b>	-189.80	-4.62	<b>&lt;0.01</b>	-5.96	-0.12	0.91	-31.36	-0.52	0.63
Initial vs. Medial	-11.80	-0.56	0.58	-16.09	-0.85	0.40	-6.39	-0.29	0.77	-10.07	-0.38	-0.70	22.14	1.25	0.21
Lexical vs. Functional	16.94	0.86	0.39	-9.51	-0.54	0.59	7.90	0.39	0.70	24.93	1.01	0.32	-7.91	-0.49	0.63
Unreduced vs. Reduced	-310.04	-3.00	<b>0.04</b>	-264.32	-3.74	<b>0.02</b>	-102.61	-1.83	0.10	-29.40	-0.35	0.74	84.45	0.56	0.61
Rhyme Duration	93.32	2.09	<b>0.04</b>	-14.61	-0.38	0.72	36.65	1.01	0.31	22.13	0.43	0.69	179.42	3.26	<b>0.01</b>
Final vs. Other:															
Unreduced vs. Reduced	129.03	1.84	0.12	141.67	1.86	0.14	179.53	2.36	0.08	147.11	1.53	0.21	141.15	1.15	0.31

Appendix B, Table 8: Experiment 3A, mixed effects regression models for F2-F1 at 5 time points during /l/, preceding unreduced vowels

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	1094.91	10.18	<0.01	898.19	14.29	<0.01	824.77	21.97	<0.0001	936.95	22.27	<0.001	1243.08	13.93	<0.01
Final vs. Other	-471.08	-7.68	<0.001	-321.49	-9.23	<0.0001	-262.69	-5.33	0.03	-53.75	-0.74	0.54	-94.57	-1.06	0.40
Initial vs. Medial	-7.33	-0.26	0.79	-11.36	-0.43	0.67	-7.84	-0.25	0.80	-14.54	-0.40	0.69	37.76	1.54	0.13
Lexical vs. Functional	-24.51	-1.02	0.31	-21.71	-0.91	0.37	-5.61	-0.20	0.84	0.21	0.01	0.99	-17.72	-0.84	0.40
Rhyme Duration	20.24	0.33	0.74	-29.23	-0.41	0.71	1.16	0.03	0.98	-37.54	-0.49	0.68	85.86	1.49	0.25

Appendix B, Table 9: Experiment 3B, mixed effects regression models for F2-F1 at 5 time points during /l/, preceding reduced vowels

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	736.49	17.01	<b>&lt;0.001</b>	649.59	20.27	<b>&lt;0.0001</b>	726.61	12.77	<b>&lt;0.001</b>	889.65	11.80	<b>&lt;0.01</b>	1221.15	8.77	<b>&lt;0.01</b>
Final vs. Other	-354.88	-7.35	<b>0.02</b>	-194.23	-2.55	0.13	-90.63	-1.35	0.30	78.59	1.56	0.14	81.80	0.90	0.44
Initial vs. Medial	-34.29	-1.09	0.28	-25.97	-0.92	0.36	-8.40	-0.28	0.78	-10.13	-0.27	0.79	-0.53	-0.02	0.98
Lexical vs. Functional	61.87	2.04	<b>0.04</b>	5.61	0.21	0.84	18.97	0.65	0.52	44.09	1.19	0.24	-4.80	-0.20	0.84
Rhyme Duration	53.98	1.52	0.13	-15.45	-0.48	0.63	70.34	1.65	0.12	59.39	1.36	0.18	223.05	5.41	<b>&lt;0.0001</b>

Appendix B, Table 10: Experiment 4, mixed effects regression models for F2-F1 at 5 time points during /l/, all data

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	705.21	12.17	<b>&lt;0.0001</b>	571.52	16.20	<b>&lt;0.0001</b>	554.33	20.02	<b>&lt;0.0001</b>	694.25	37.52	<b>&lt;0.0001</b>	959.31	77.89	<b>&lt;0.0001</b>
Internal vs. Final	-2.32	-0.15	0.87	-16.95	-1.28	0.22	-20.56	-1.79	0.10	-10.45	-0.98	0.34	1.45	0.18	0.86
Clitic vs. Suffix	-206.33	-1.70	0.11	-154.79	-2.28	<b>0.04</b>	-73.83	-1.62	0.13	-27.13	-0.89	0.39	24.40	1.02	0.32
/ɪŋ/ vs. /əɪ/	420.02	3.50	<b>&lt;0.01</b>	274.66	3.94	<b>&lt;0.01</b>	171.03	3.75	<b>&lt;0.01</b>	82.93	2.83	<b>0.01</b>	86.22	4.21	<b>&lt;0.001</b>
Rhyme Duration	32.62	0.95	0.35	-37.68	-1.53	0.14	-13.35	-0.66	0.51	-16.77	-1.05	0.31	45.49	3.39	<b>&lt;0.01</b>
Internal vs. Final: Clitic vs. Suffix	18.32	0.54	0.60	3.79	0.13	0.89	51.98	2.26	<b>0.04</b>	15.13	0.72	0.49	2.98	0.15	0.88
Internal vs. Final: /ɪŋ/ vs. /əɪ/	41.36	1.22	0.24	39.81	1.42	0.18	-36.33	-1.60	0.13	-17.18	-0.77	0.45	-11.33	-0.67	0.51



Appendix B, Table 11: Experiment 4A, mixed effects regression models for F2-F1 at 5 time points in time during /l/, inflection data

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	1118.15	12.57	<0.01	848.90	9.87	<0.01	723.87	17.64	<0.0001	772.55	23.77	<0.0001	1022.40	42.24	<0.0001
Internal vs. Final Rhyme Duration	4.93	0.19	0.85	-1.51	-0.06	0.96	-62.13	-2.68	<0.01	-19.22	-0.86	0.44	-0.80	-0.02	0.98
	97.75	1.24	0.31	-14.55	-0.32	0.75	-33.68	-1.23	0.24	-56.15	-2.75	<0.01	26.72	1.08	0.41

Appendix B, Table 12: Experiment 4B, mixed effects regression models for F2-F1 at 5 time points in time during /l/, derivation data

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	560.30	6.08	<0.01	487.23	11.15	<0.0001	493.49	14.48	<0.0001	659.16	27.51	<0.0001	909.43	40.47	<0.0001
Internal vs. Final Rhyme Duration	-32.28	-1.51	0.20	-39.96	-2.28	0.02	-23.03	-1.41	0.17	-9.91	-0.74	0.47	5.937	0.49	0.65
	30.26	0.56	0.59	-55.20	-1.31	0.19	-17.76	-0.53	0.60	-12.77	-0.40	0.70	17.46	0.80	0.44

Appendix B, Table 13: Experiment 4C, mixed effects regression models for F2-F1 at 5 time points in time during /l/, clitic data

	Point 1			Point 2			Point 3			Point 4			Point 5		
	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>	Est.	<i>t</i>	<i>p</i>
(Intercept)	632.96	6.29	<0.01	506.18	9.36	<0.001	535.09	11.70	<0.0001	686.97	24.16	<0.0001	989.05	71.85	<0.0001
Internal vs. Final	13.86	0.50	0.64	-10.66	-0.44	0.68	8.27	0.36	0.73	-3.36	-0.16	0.88	3.02	0.26	0.80
Rhyme Duration	-3.02	-0.09	0.93	-86.20	-2.40	0.05	-0.66	-0.02	0.98	-20.50	-0.82	0.44	63.44	4.16	0.01

