

Table A3: Descriptive statistics of the 13 acoustic cues measured at both onset and midpoint of the vowel in both JA and MA, with the *Mean* and *SD* (Standard Deviation), for both contexts (All), and in /d/ or /d<sup>ɛ</sup>/ in the *Original* and the *Z-scored* scales with /d<sup>ɛ</sup>-d/ (difference between /d<sup>ɛ</sup>/ and /d/ values) in original scale.

		JA											MA												
		All(n=692)		/d/ (n=347)				/d <sup>ɛ</sup> / (n=345)				/d <sup>ɛ</sup> -d/		All(n=499)		/d/ (n=249)				/d <sup>ɛ</sup> / (n=250)				d <sup>ɛ</sup> -d	
				Original		Original		Z-score		Original		Z-score				Original		Original		Z-score		Original		Z-score	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	
F1(Hz)	Onset	372.97	73.65	347.71	67.67	-0.34	0.92	398.37	70.70	0.34	0.96	50.66		388.64	82.17	340.77	69.52	-0.58	0.85	436.31	64.15	0.58	0.78	95.54	
	Mid	464.46	124.70	441.88	130.46	-0.18	1.05	487.17	114.38	0.18	0.92	45.29		442.28	121.13	380.75	95.71	-0.51	0.79	503.56	112.55	0.51	0.93	122.81	
Z1(Bk)	Onset	3.73	0.71	3.49	0.66	-0.34	0.93	3.98	0.67	0.35	0.95	0.49		3.88	0.79	3.42	0.68	-0.58	0.87	4.34	0.60	0.58	0.76	0.92	
	Mid	4.55	1.10	4.34	1.16	-0.19	1.05	4.76	1.00	0.19	0.91	0.42		4.35	1.08	3.79	0.88	-0.52	0.82	4.91	0.96	0.51	0.89	1.12	
F2(Hz)	Onset	1482.73	366.81	1772.35	217.34	0.79	0.59	1191.42	230.30	-0.79	0.63	-580.93		1555.67	244.85	1724.02	193.09	0.69	0.79	1388.00	161.85	-0.68	0.66	-336.02	
	Mid	1492.56	488.98	1614.34	503.99	0.25	1.03	1370.09	441.37	-0.25	0.90	-244.25		1457.23	414.36	1612.39	400.97	0.37	0.97	1302.69	367.69	-0.37	0.89	-309.70	
Z2(Bk)	Onset	10.84	1.66	12.15	0.81	0.79	0.49	9.52	1.17	-0.80	0.71	-2.63		11.26	1.04	11.98	0.74	0.69	0.72	10.55	0.76	-0.69	0.73	-1.43	
	Mid	10.76	2.14	11.28	2.13	0.24	0.99	10.23	2.03	-0.24	0.95	-1.05		10.68	1.88	11.38	1.76	0.37	0.94	9.98	1.73	-0.37	0.92	-1.40	
F3(Hz)	Onset	2707.66	195.02	2700.99	169.83	-0.03	0.87	2714.37	217.48	0.03	1.12	13.38		2682.83	178.00	2680.08	157.36	-0.02	0.88	2685.56	196.69	0.02	1.11	5.48	
	Mid	2685.11	226.35	2680.44	243.14	-0.02	1.07	2689.81	208.35	0.02	0.92	9.37		2657.86	221.80	2637.24	222.06	-0.09	1.00	2678.40	220.06	0.09	0.99	41.16	
Z3(Bk)	Onset	15.00	0.47	14.99	0.42	-0.02	0.88	15.01	0.53	0.02	1.11	0.02		14.95	0.44	14.94	0.38	-0.01	0.88	14.95	0.48	0.01	1.11	0.01	
	Mid	14.94	0.55	14.93	0.59	-0.03	1.07	14.96	0.51	0.03	0.92	0.03		14.87	0.55	14.82	0.56	-0.09	1.00	14.93	0.55	0.09	0.99	0.11	
Z1-Z0(Bk)	Onset	2.31	0.71	2.06	0.67	-0.36	0.93	2.57	0.67	0.36	0.94	0.51		2.52	0.80	2.09	0.70	-0.53	0.88	2.94	0.65	0.53	0.81	0.85	
	Mid	3.04	1.17	2.82	1.24	-0.18	1.06	3.25	1.05	0.18	0.90	0.43		2.98	1.09	2.43	0.90	-0.51	0.83	3.53	0.98	0.51	0.90	1.10	
Z2-Z1(Bk)	Onset	7.11	2.07	8.66	1.27	0.75	0.61	5.54	1.44	-0.76	0.70	-3.12		7.38	1.56	8.56	1.06	0.75	0.68	6.21	1.00	-0.75	0.64	-2.35	
	Mid	6.21	2.67	6.94	2.69	0.27	1.01	5.47	2.45	-0.28	0.92	-1.47		6.33	2.44	7.58	2.02	0.52	0.83	5.08	2.16	-0.51	0.89	-2.50	
Z3-Z2(Bk)	Onset	4.16	1.69	2.84	0.77	-0.78	0.45	5.49	1.27	0.79	0.75	2.65		3.68	1.05	2.96	0.66	-0.68	0.63	4.40	0.86	0.68	0.82	1.44	
	Mid	4.18	2.02	3.64	1.86	-0.27	0.92	4.72	2.04	0.27	1.01	1.08		4.20	1.80	3.45	1.41	-0.42	0.78	4.94	1.85	0.41	1.02	1.49	
H1*-H2*(dB)	Onset	-6.35	4.50	-6.50	4.77	-0.03	1.06	-6.20	4.20	0.03	0.93	0.30		-4.50	4.37	-4.56	4.63	-0.01	1.06	-4.45	4.10	0.01	0.94	0.11	
	Mid	-7.65	4.51	-7.57	4.51	0.02	1.00	-7.74	4.52	-0.02	1.00	-0.17		-6.02	4.25	-6.28	4.69	-0.06	1.11	-5.76	3.74	0.06	0.88	0.52	
H1*-A1*(dB)	Onset	-8.90	6.14	-7.85	5.85	0.17	0.95	-9.95	6.25	-0.17	1.02	-2.10		-9.09	5.60	-6.94	5.12	0.39	0.91	-11.24	5.23	-0.38	0.93	-4.30	
	Mid	-12.57	7.46	-11.47	7.61	0.15	1.02	-13.67	7.13	-0.15	0.96	-2.20		-10.75	6.37	-8.79	5.86	0.31	0.92	-12.71	6.27	-0.31	0.98	-3.92	
H1*-A2*(dB)	Onset	-2.52	8.87	-0.49	8.94	0.23	1.01	-4.56	8.32	-0.23	0.94	-4.07		-3.11	8.14	0.40	8.25	0.43	1.01	-6.60	6.34	-0.43	0.78	-7.00	
	Mid	-8.29	9.31	-6.61	9.04	0.18	0.97	-9.98	9.29	-0.18	1.00	-3.37		-4.53	9.45	-0.72	9.35	0.40	0.99	-8.32	7.91	-0.40	0.84	-7.60	
H1*-A3*(dB)	Onset	-0.23	9.47	-1.12	9.69	-0.09	1.02	0.66	9.17	0.09	0.97	1.78		1.94	9.62	3.14	9.78	0.12	1.02	0.75	9.32	-0.12	0.97	-2.39	
	Mid	-2.81	11.61	-1.68	12.06	0.10	1.04	-3.95	11.04	-0.10	0.95	-2.27		2.66	11.04	4.26	11.23	0.15	1.02	1.06	10.63	-0.14	0.96	-3.20	
A1*-A2*(dB)	Onset	6.38	7.32	7.36	7.59	0.13	1.04	5.39	6.92	-0.13	0.95	-1.97		5.99	5.73	7.34	6.45	0.24	1.12	4.64	4.55	-0.23	0.79	-2.70	
	Mid	4.27	7.05	4.85	7.43	0.08	1.05	3.69	6.62	-0.08	0.94	-1.16		6.22	6.75	8.07	7.10	0.27	1.05	4.38	5.84	-0.27	0.86	-3.69	
A1*-A3*(dB)	Onset	8.67	8.09	6.73	8.11	-0.24	1.00	10.62	7.60	0.24	0.94	3.89		11.04	7.62	10.08	8.08	-0.13	1.06	11.99	7.03	0.13	0.92	1.91	
	Mid	9.75	9.64	9.78	10.33	0.00	1.07	9.72	8.90	0.00	0.92	-0.06		13.41	9.27	13.06	9.44	-0.04	1.02	13.77	9.10	0.04	0.98	0.71	
A2*-A3*(dB)	Onset	2.29	7.51	-0.63	6.39	-0.39	0.85	5.23	7.42	0.39	0.99	5.86		5.05	6.89	2.74	6.25	-0.34	0.91	7.35	6.73	0.33	0.98	4.61	
	Mid	5.48	8.44	4.93	8.87	-0.07	1.05	6.03	7.95	0.07	0.94	1.10		7.19	8.44	4.98	7.98	-0.26	0.95	9.38	8.32	0.26	0.99	4.40	