



THE MEDIUM-TERM DYNAMICS OF ACCENTS ON REALITY TELEVISION:  
ONLINE SUPPLEMENTAL MATERIALS

MORGAN SONDEREGGER  
*McGill University and  
Centre for Research on Brain,  
Language, and Music*

MAX BANE  
*University of Chicago*

PETER GRAFF  
*University of Vienna*

**1. DYNAMIC MODEL RESULTS.** Tables S1–S3 supplement the results of the dynamic models reported in §5 of the main text. Table S1 summarizes predicted time dependence in VOT for voiced and voiceless stops for each speaker: predicted average VOT (a speaker’s ‘offset’ in the static model), whether the model includes by-day variability and/or a time trend, and  $\sigma$ , which quantifies the degree of by-day variability. Table S2 summarizes the predicted time dependence in the CSD rate for each speaker (analogously to Table S1): predicted average CSD rate (the intercept of a speaker’s dynamic model), whether there is by-day variability and/or a time trend, and  $\sigma$ , which quantifies the degree of by-day variability (when present). Table S3 summarizes predicted time dependence in F1 and F2 for each vowel, for each speaker, similarly to VOT.

SPEAKER	VOICED STOPS				VOICELESS STOPS			
	MEAN	BDV?	$\sigma$	TT?	MEAN	BDV?	$\sigma$	TT?
Dale	16.79	T	0.17	F	66.96	T	0.09	T
Darnell	10.81	T	0.22	F	47.06	T	0.10	F
Lisa	20.79	T	0.09	F	55.84	T	0.03	F
Luke	10.66	T	0.13	F	38.07	T	0.04	F
Michael	16.50	T	0.17	T	62.58	T	0.08	T
Mohamed	12.27	T	0.26	F	38.47	T	0.05	T
Rachel	17.42	T	0.13	T	57.56	T	0.11	T
Rebecca	15.88	T	0.17	T	50.78	T	0.06	T
Rex	20.23	T	0.09	T	51.63	T	0.09	T
Sara	18.07	T	0.21	F	49.14	T	0.16	F
Stuart	16.17	T	0.12	F	68.52	T	0.11	F

TABLE S1. Summary of predicted time dependence in VOT for each speaker for voiced and voiceless stops. Mean: model-predicted average VOT. T/F values are Boolean values describing which kind of time dependence a speaker shows (Fig. 1): none, by-day variability (BDV), time trends (TT), or both.  $\sigma$  measures the size of by-day variability. (See main text.)

SPEAKER	MEAN CSD RATE	BDV?	$\sigma$	TT?
Dale	0.62	T	0.15	F
Darnell	0.68	T	0.22	F
Lisa	0.52	F	—	F
Luke	0.43	T	0.08	F
Michael	0.51	T	0.12	T
Mohamed	0.67	T	0.20	F
Rachel	0.59	T	0.05	F
Rebecca	0.48	F	—	T
Rex	0.52	T	0.15	F
Sara	0.60	F	—	T
Stuart	0.61	T	0.13	T

TABLE S2. Summary of predicted time dependence in coronal stop deletion rate for each speaker. T/F columns are defined as in Table S1.  $\sigma$  measures the size of by-day variability. (See main text.)

**2. PLASTICITY.** Tables S4 and S5 give supplemental information for the phonetic plasticity analysis (§8). Table S4 shows the plasticity value for each variable/speaker pair. Table S5 shows Kendall's  $\tau$ , a measure of rank correlation, between the plasticities for each pair of variables (across speakers), with an associated  $p$ -value. (We use rank correlation because plasticity for different variables is on different scales.) With one exception (VOT for voiced and voiceless stops), all pairs of variables are positively associated ( $\tau \in [0.05, 0.67]$ ). However, these correlations are usually not significant ( $p > 0.05$ ; exceptions: STRUT/TRAP, GOOSE/CSD). Thus, while there is a consistent trend for a speaker who varies more in a given variable to vary more in another, the trend for individual pairs of variables is usually weak.

VOWEL	SPEAKER	F1 + F2		F1				F2			
		BDV?	TT?	MEAN	BDV	$\sigma$	TT	MEAN	BDV	$\sigma$	TT
GOOSE	Dale	T	T	-1.02	T	0.00	T	0.40	T	0.08	F
	Darnell	T	T	-1.25	T	0.14	F	0.05	T	0.14	T
	Kathreya	T	F	-0.86	T	0.17	F	-1.23	T	0.09	F
	Lisa	T	F	-0.84	T	0.03	F	0.40	F	—	F
	Luke	T	F	-1.13	T	0.08	F	-0.23	T	0.21	F
	Michael	T	T	-0.81	T	0.11	T	0.12	T	0.06	F
	Mohamed	T	F	-1.09	T	0.16	F	-0.24	T	0.17	F
	Rachel	T	T	-0.94	T	0.08	F	-0.54	T	0.11	T
	Rebecca	T	T	-1.01	T	0.06	F	0.52	T	0.51	T
	Rex	T	F	-1.02	T	0.12	F	0.29	T	0.05	F
	Sara	T	T	-1.03	T	0.11	T	0.21	T	0.23	F
Stuart	T	T	-0.93	F	—	T	0.25	T	0.31	F	
STRUT	Dale	T	T	-0.17	T	0.08	F	-1.51	T	0.03	T
	Darnell	T	T	0.35	T	0.07	T	-0.99	T	0.07	F
	Kathreya	T	T	0.45	T	0.21	T	-0.95	T	0.09	T
	Lisa	T	F	-0.34	T	0.08	F	-1.61	T	0.07	F
	Luke	T	T	-0.31	F	—	F	-1.39	T	0.06	T
	Michael	T	T	0.88	T	0.09	F	-1.06	T	0.05	T
	Mohamed	T	T	0.65	T	0.16	F	-0.89	T	0.07	T
	Rachel	T	F	0.25	T	0.15	F	-0.47	T	0.13	F
	Rebecca	T	T	-0.09	T	0.13	F	-0.74	T	0.18	T
	Rex	T	F	0.49	T	0.12	F	-1.10	T	0.02	F
	Sara	T	F	0.79	T	0.09	F	-0.92	T	0.06	F
Stuart	T	T	-0.27	T	0.03	T	-1.47	T	0.10	F	
TRAP	Dale	T	T	1.54	T	0.15	F	-0.78	T	0.14	T
	Darnell	T	T	1.06	T	0.26	F	0.29	T	0.21	T
	Kathreya	T	T	1.05	T	0.20	T	-0.07	T	0.11	T
	Lisa	T	T	1.58	T	0.05	F	-0.51	T	0.04	T
	Luke	T	T	1.58	T	0.14	F	-0.45	T	0.07	T
	Michael	T	T	1.50	T	0.09	F	-0.59	T	0.05	T
	Mohamed	T	F	1.28	T	0.15	F	-0.14	T	0.06	F
	Rachel	T	T	1.68	T	0.19	T	-0.71	T	0.08	F
	Rebecca	T	T	1.41	T	0.36	T	-0.48	T	0.12	F
	Rex	T	T	1.26	T	0.12	F	-0.26	T	0.06	T
	Sara	T	T	1.23	T	0.24	T	-0.22	T	0.08	F
Stuart	T	F	1.30	T	0.15	F	-0.63	F	—	F	

TABLE S3. Summary of predicted time dependence in (Lobanov-normalized) F1 and F2 for each speaker, for GOOSE, STRUT, and TRAP. T/F columns are defined as in Table S1, with T in an ‘F1 + F2’ column if either F1 or F2 is ‘T’ in the corresponding column.  $\sigma$  measures the size of by-day variability. (See main text.)

SPEAKER	VOT (ms)		CSD (% deleted)	GOOSE	STRUT	TRAP
	VOICED	VOICELESS				
Dale	0.118	0.072	0.111	0.094	0.082	0.123
Darnell	0.172	0.068	0.210	0.129	0.085	0.197
Kathreya	—	—	—	0.090	0.238	0.197
Lisa	0.060	0.008	0.000	0.006	0.049	0.028
Luke	0.097	0.022	0.035	0.119	0.035	0.098
Michael	0.139	0.065	0.173	0.062	0.051	0.063
Mohamed	0.179	0.038	0.164	0.108	0.100	0.080
Rachel	0.096	0.076	0.014	0.065	0.109	0.163
Rebecca	0.156	0.069	0.543	0.445	0.113	0.280
Rex	0.071	0.081	0.137	0.054	0.069	0.080
Sara	0.158	0.119	0.223	0.144	0.046	0.138
Stuart	0.088	0.077	0.297	0.171	0.068	0.075

TABLE S4. Plasticity value for each core housemate for each phonetic variable. (See main text.)

	VOT (vcd)	VOT (vl)	CSD	GOOSE	STRUT	TRAP
VOT (vcd)	—	0.648	0.121	0.165	0.359	0.121
VOT (vl)	-0.127	—	0.165	0.542	0.879	0.445
CSD	0.382	0.345	—	0.003	0.648	0.445
GOOSE	0.345	0.164	0.673	—	0.737	0.116
STRUT	0.236	0.055	0.127	0.091	—	0.014
TRAP	0.382	0.200	0.200	0.364	0.545	—

TABLE S5. Correlation across speakers in plasticity between each pair of phonetic variables. Below diagonal: rank correlation (Kendall's  $\tau$ ). Above diagonal: associated  $p$ -values.

[morgan.sonderegger@mcgill.ca]

[max@thebanes.org]

[graffmail@gmail.com]