

Parent L1-effects in NYC English short-a variation

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1. Introduction

A set of recent studies has reported evidence of change in the New York City English (NYCE) short-a system (Becker & Wong 2010, Becker 2010, Newman 2014, Newlin-Lukowicz 2015, Coggshall 2017). Taken together, these results suggest that the complex set of conditions on short-a tensing described in previous work (Trager 1930, Labov 1966, Labov et al. 2006, Labov 2007) are increasingly absent in the speech of younger speakers—particularly non-whites. Excepting Newlin-Lukowicz (2015), none of the recent studies suggesting change have taken into account parent L1 in sampling independent of ethnicity (Payne 1976, Labov 1994, Labov 2007).

p	t	č	k
b	d	ǰ	g
m	n		ŋ
f	θ	š	
v	ð	ž	r
	l	r	

Figure 1: Tautosyllabic following sounds triggering tensing in Tragerian system (from Labov 2007).

Goal

To test for age and ethnicity effects on short-a constraints, controlling for parent L1.

2. Method

Subjects & materials: Subjects were 28 men and 45 women, with year of birth ranging from 1906 to 2001 ($M=1972$). Residents of five boroughs, Nassau or Suffolk from age nine. 7 Asian, 14 Black, 16 Latinx, 36 White. 36 ≥ 1 native NYCE-speaking parent. Six samples are oral histories from the Bronx Oral History Archive. The other 67 are sociolinguistic interviews by student researchers.

Procedure: 13,372 stressed short-a vowels were measured at 35% of duration using FAVE-Extract (Rosenfelder et al. 2014) and Prosodylab-Aligner (Gorman et al. 2011), via DARLA (Reddy & Stanford 2015).

3. Results

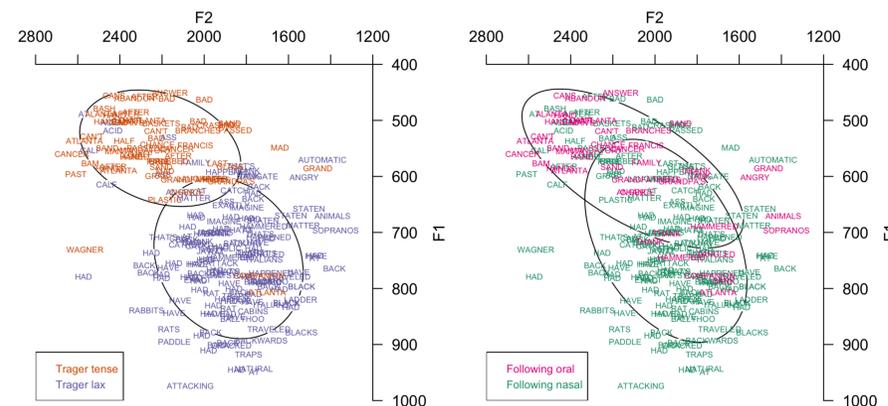


Figure 2: White man, 59, from Brooklyn, L1-NYCE parents.

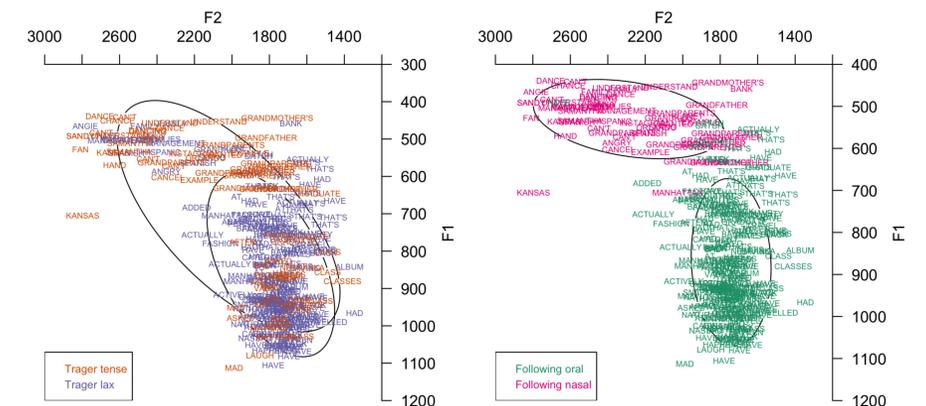


Figure 3: Af. Am. woman, 25, from Brooklyn, L2-NYCE parents.

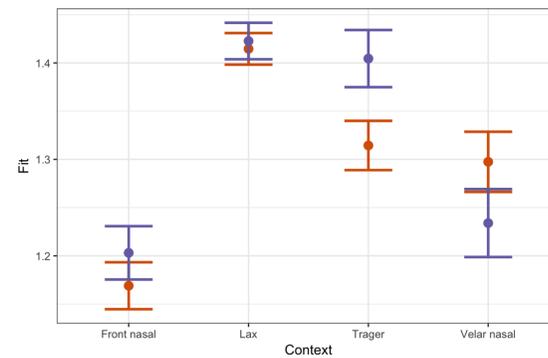


Figure 4: Model estimates for Parent(L1)*Context.

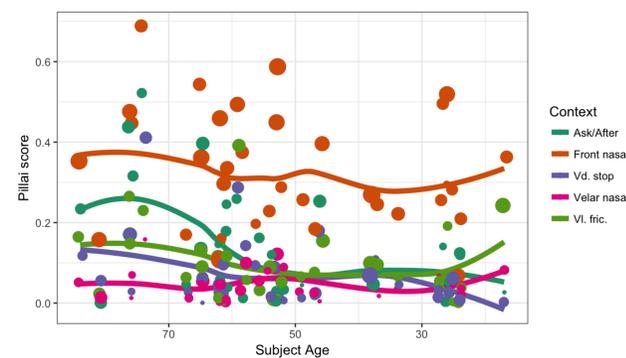


Figure 5: Pillai's for contrasts with lax contexts (≥ 1 L1 parent).

Variable	Coeff.	Std.Err.	t	p
Intercept	1.394	0.050	27.658	<0.0001
Duration (sec.)	0.662	0.037	17.766	<0.0001
Context				
Front nasal	-0.176	0.060	-2.922	0.0063
Trager	-0.005	0.056	-0.088	0.9302
Velar nasal	-0.143	0.065	-2.215	0.0320
Age (years)				
Black	-0.001	0.001	-1.618	0.1157
Ethnicity				
Black	-0.016	0.035	-0.463	0.6463
Latinx	0.002	0.072	0.021	0.9833
Context:Age				
Front nasal:age	-0.002	0.001	-1.591	0.1229
Trager:age	-0.002	0.001	-2.569	0.0151
Velar nasal:age	0.001	0.001	1.446	0.1612
Context:Ethnicity				
Front nasal:Black	0.007	0.042	0.178	0.8603
Trager:Black	0.112	0.039	2.853	0.0075
Velar nasal:Black	-0.045	0.037	-1.190	0.2483
Front nasal:Latinx	-0.117	0.083	-1.405	0.1714
Trager:Latinx	0.202	0.077	2.614	0.0140
Velar nasal:Latinx	-0.277	0.100	-2.766	0.0077

Table 1: A model of effects on F1. Subjects with ≥ 1 native NYCE-speaking parent. Reference levels White for Ethnicity and Lax for Context. Obs.=6606. ($F1 \sim \dots + (\text{Context}|\text{Speaker}) + (1|\text{Lexical root})$).

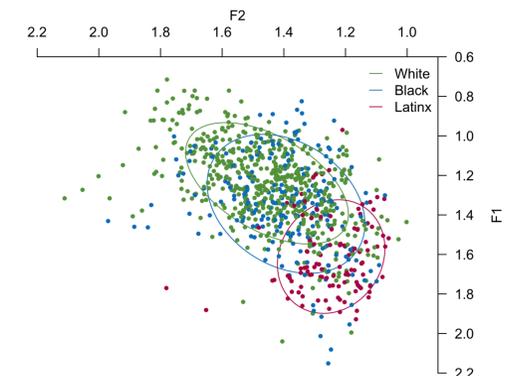


Figure 6: F1~F2 for Trager tensing contexts (≥ 1 L1 parent).

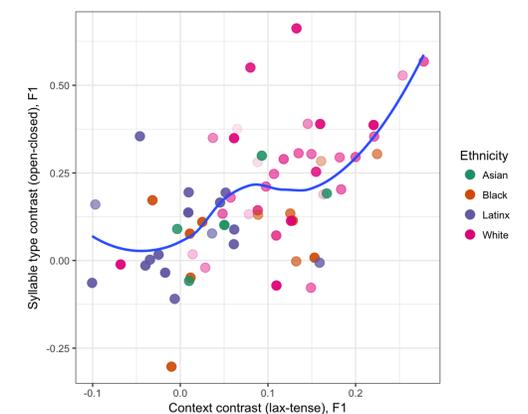


Figure 7: By-speaker contrasts for syllable type & following sound.

4. Conclusions

Three main findings

- 1. Age effects.** Evidence that the set of recent results suggesting change in the short-a system cannot be exclusively attributed to parent-L1 effects. Even among whites with an L1 speaking parent, Tragerian constraints are weakening.
- 2. Parent L1-effects independent of ethnicity.** Similarly, ethnicity effects appear to be partially independent of parent-L1 effects.
- 3. Tragerian constraints being lost in one fell swoop.** Our results are consonant with Labov et al.'s (2016) results from Philadelphia suggesting the Tragerian constraints are not being lost one by one. Rather the process of change appears to apply to the system as a whole.

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