

The Individual Low Front Vowel Systems of New York City English Speakers

This study investigates the low front vowel tense/lax systems of eight speakers of New York City English (NYCE). Specifically, the data here propose an alternate view of the NYCE low front vowel system as described by Labov in his 2005 article “Transmission and Diffusion.” Labov’s system assumes an ideal NYCE speech community with all speakers showing a regular tense/lax distinction governed by the following phonological segment. In contrast, the eight speakers investigated here show individual systems that deviate from Labov’s system, suggesting a need to look within the speech community to the level of the idiolect to better understand the low front vowel usage of NYCE speakers.

The data were drawn from sociolinguistic interviews conducted with 8 speakers of European descent who both grew up and still live in one of the five boroughs of New York City. The speakers ranged in age from 25 to 67; four were female, and four were male. 373 tokens of /æ/ in stressed position were extracted for analysis in Praat (about 50 from each speaker). Tokens were measured in Praat at the midpoint of each vowel for F1, F2 and duration. In addition, each speaker’s F1, F2 and duration values were run as dependent variables in SPSS to determine statistical differences between various following phonological segments.

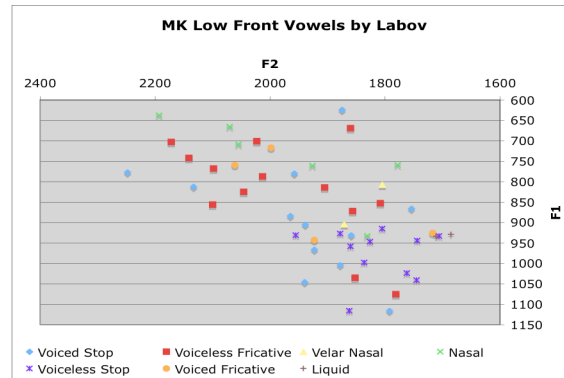
Labov characterizes NYCE as having a split short-a system, with /æ/ tensing – characterized as lower F1, higher F2, and longer duration values than lax /æ/ -- occurring before the nasals [n] and [m], voiceless fricatives, and voiced stops. The compiled data from the NYCE speakers studied here does not fit perfectly into this model, although it approximates it:

	Following Segment	F1	F2	Duration
expected tense	Nasals [n] and [m] (n = 78)	644	1976	0.135
	Voiceless Fricatives (n = 75)	681	1789	0.113
	Voiced Stops (n = 54)	728	1802	0.149
expected lax	Velar Nasals (n = 9)	712	1823	0.099
	Voiced Fricatives (n = 23)	743	1721	0.095
	Liquids (n = 18)	743	1686	0.118
	Voiceless Stops (n = 115)	760	1665	0.117

Table 1. Average F1, F2, and Duration by Following Segment for all Speakers

Two major deviations from Labov’s system stand out. First, there is no significant pattern of lengthening by following segment; that is, the expected tense vowels are not longer than the expected lax. Second, while the nasals [n] and [m] do show tensing relative to the other following segments, both voiceless fricatives and voiced stops do not appear to be strongly tense, particularly in the fronting dimension (F2). This is contrasted with the measurements for vowels with a following velar nasal, with expected measurements that are both higher and fronter than vowels followed by voiced stops. It is important to note that the number of velar nasal tokens was small (n = 9), but still this adds to the general picture of these eight speakers as differing from Labov’s proposed system.

The reason for these differences becomes clear when each speaker's system is analyzed individually. Only one speaker shows the crisp distinction between tense and lax vowels that Labov expects. Two speakers appear to show a nasal pattern, with a tense nasal class and lax vowels followed by all other segments. The remaining speakers behave generally alike, with tense vowels before front nasals and lax vowels before voiceless stops, but variable tokens before voiceless fricatives and voiced stops. Speaker MK exemplifies this:



Labov does not mention cases of variability before voiceless fricatives and voiced stops – he expects all these vowels to be tensed. This is an important deviation from his proposed system, as are the speakers who do not follow it at all, showing a nasal tensing system not unlike the low front vowel system attributed to speakers from New Jersey. On the whole, the eight speakers studied here do not follow the NYCE system he describes, nor do they all follow the same pattern.

The data here provide evidence against the notion of a speech community of NYCE speakers with identical tense/lax systems for their low front vowels. This is in contrast to the Labov system (2005). In addition, it calls into question methodologies that use the speech community as a unit of analysis, suggesting instead the possibility that phonetic patterns must be analyzed at the level of the idiolect.

References

Labov, W. 1982. *The Social Stratification of English in New York City*, 2nd Edition. Center for Applied Linguistics.

Labov, W. 2005. *Transmission and Diffusion*. Available on-line at <http://www.ling.upenn.edu/~wlabov/Papers/TD.html>.