

## The impact of higher education on local phonology

This paper examines the effects of higher education on local phonetics and phonology. Bigham (2010) showed that college students can accommodate towards supra-local norms without abandoning their local dialect. We present new data revealing more fine-grained differences among those who go on for post-secondary education in Philadelphia.

We interviewed nine upper-working-class natives of South Philadelphia, whose backgrounds were similar but who differed in their pursuit of post-secondary education. We distinguished not simply between high school and college education, but also between community colleges, regionally-oriented universities, and nationally-oriented universities. Interviews were transcribed and forced-aligned, and the formants measured automatically (Yuan and Liberman 2008, Evanini 2009).

We examined the four vocalic variables in Figure 1.

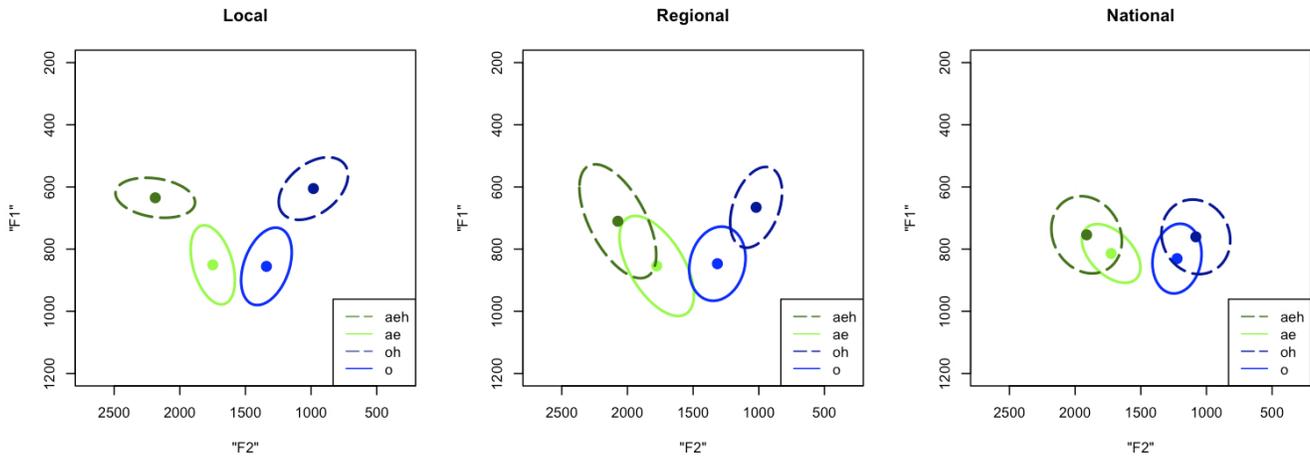
<u>Variable</u>	<u>Description</u>
Split short-a (N=862)	Stable local feature with salient phonetics
Low-back distinction (N=1172)	Stable local feature with salient phonetics
Raising of checked /ey/ (N=838)	Local change from below (in progress)
Fronting of /uw/ (N=568)	National change from below (in progress)

**Figure 1:** Four Philadelphia vocalic variables with token counts (Labov 2001)

The speakers who did not attend college showed the traditional short-a split and distinct low-back vowels, with the characteristic Philadelphia phonetics of extreme tensing. They participate in /ey/-raising and /uw/-fronting as expected given their demographics (Labov 2001). The one speaker who has attended a two-year community college shows the same traditional pattern. In contrast, the two speakers who have attended a nationally-oriented research university both show a strikingly different pattern. They have retreated dramatically from the socially salient phonetics of the Philadelphia short-a and low-back vowels, with heavy overlap of the categories of both variables. Meanwhile, these same speakers are participating vigorously in both the national-level change in progress (/uw/-fronting) and the local change from below (checked /ey/-raising). Among speakers who have attended regionally-oriented four-year colleges, the attenuation of the short-a and low-back distinctions is also present, but to a lesser degree. They too participate in /ey/-raising and /uw/-fronting according to their age and gender. Figure 2 shows the different short-a and low-back patterns as exemplified by three typical speakers.

Our interpretation of these results is twofold. First, social awareness plays an important role in determining which variables are subject to correction. Speakers who are motivated by the promise of upward mobility and exposed to a variety of non-local accents modulate their speech away from Philadelphia features that are socially salient, but not from features below the level of consciousness. Second, this retreat from marked local features is not a wholesale rejection of the local accent, but rather a gradient

sociolinguistic phenomenon. As illustrated in Figure 2, different degrees of attenuation of the short-a and low-back distinctions are associated with different types of institutions.



**Figure 2:** The short-a and low-back distinctions of three Philadelphia speakers. From left to right: a 19-year-old male attending the local community college; a 22-year-old female attending a regionally-oriented university; and her brother, a 20-year-old male attending a nationally-oriented university. Ellipses are 1 s.d. from the mean, and measurements have been Lobanov normalized and rescaled.

## References

- Bigham, D. 2010. Mechanisms of accommodation among emerging adults in a university setting. *Journal of English Linguistics* 38: 193-210.
- Evanini, K. 2009. The permeability of dialect boundaries: A case study of the region surrounding Erie, Pennsylvania. Doctoral dissertation, University of Pennsylvania.
- Labov, W. 2001. *Principles of Linguistic Change: Social Factors*. Oxford: Blackwell.
- Yuan, J. and M. Liberman. 2008. Speaker identification on the SCOTUS corpus. *Proceedings of Acoustics '08*.