Using Speech Community Data as Phonological Evidence

**Phonology**

Phonetic Alignment

uw [+back]/__ l

tu:n

**Phonetic Implementation** [+back] — small F2

**Phonetic Change**

In a phonetic change, a phonetic target moves continuously through phonetic space. (Labov, Yaeger & Steiner, 1972)

**Unity Principle**

**a)** Phonological Unity —> Phonetic Unity

**b)** ¬Phonetic Unity —> ¬Phonological Unity

**Phonetic Analysis**

**Synchronic Phonological Analysis**

[C # #]
[C # V]

[+peripheral/C...word]

**Diachronic Phonetic Change**

/ey/ → [+peripheral] __ C...word

/ey/ → More Phonetically Peripheral

/ey/ → Diachronically Stable

**Diachronically Stable Phonetic Effects**

[ ]/l/ has a peripheralizing effect

[ ]/V/ has a laxing effect

**The Philadelphia Neighborhood Corpus**

- 272 interviews with native Philadelphians
- Interviews conducted between 1973 and 2010
- Dates of birth between 1888 and 1991

**The Data**

- Transcribed and automatically force aligned
- Vowel formant data automatically extracted using the FAVE suite (Rosenfelder, Fruehwald, Evanini & Yuan, 2011; fave.ling.upenn.edu)
- 654,820 vowel measurements

**Value of Speech Community Data**

The natural class behavior evident in the speech community data is not apparent in smaller subsets of the same data.

**Future Directions**

- This analysis assumes that the phonological /ey/ peripheralization process already existed in the dialect, or entered into it simultaneously with the phonetic change.
- Eventually, there must be a phonological reanalysis in the course of most phonetic changes.

**References**

- Rosenfelder, I, J. Fruehwald, K. Evanini & J. Yuan 2011, FAVE Program Suite. fave.ling.upenn.edu
- Cohn, A., 1993. Nasalisation in English: Phonology or Phonetics. Phonology, 10(1):43‐81
- Future Directions
- This analysis assumes that the phonological /ey/ peripheralization process already existed in the dialect, or entered into it simultaneously with the phonetic change.
- Eventually, there must be a phonological reanalysis in the course of most phonetic changes.