Two Types of Dialect Features and Two Types of Dialect Boundaries

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Research questions:
Why are the geographic boundaries of dialect features where they are?
Why do different types of linguistic feature have different boundaries?
I'm addressing these questions with two dialect case studies in New York State.

Why New York State?
According to Atlas of North American English (Labov et al. 2006), NY is at the boundary of several dialect regions, including Inland North and Western New England:

**Western New England:**
- Includes Albany as well as cities in western New England proper
- Subdivided by Boberg (2001) into NW and SW New England

**Inland North:**
- Home of the Northern Cities Vowel Shift (NCS)
- Includes Syracuse, Rochester, Buffalo, and points west

Collecting data from the area between these regions will give insight into where the boundaries between dialect regions are located.

The data:
119 sociolinguistic interviews with speakers from Upstate New York (Dinkin 2009):
- 91 Short Sociolinguistic Interviews (Ash 2002 methodology) conducted in person
  (speakers recruited by approaching them in public places)
- 28 telephone interviews following methodology of ANAE
  (speakers recruited by cold-calling random phone numbers)

12 communities with at least 7 interviews each:
Amsterdam, Canton, Cooperstown, Glens Falls, Gloversville, Oneonta, Plattsburgh, Poughkeepsie, Sidney, Utica, Watertown

All speakers lived in or near towns where they were interviewed for whole childhood.

Case study 1, a lexical feature: *-mentary* words
Words like *elementary, documentary* are frequently pronounced in the data with secondary stress on penultimate syllable: *elementary, etc.*

Pronunciations of at least two *-mentary* words were elicited from each speaker;
425 total tokens of *-mentary* words collected; 15 ambiguous tokens are discarded.

*Elementary* shows stressed penult least often among -mentary words.

*Oldest* speakers (born before 1943) use stressed penult less than younger speakers do; this suggests change in apparent time toward stressed penult.

**Results**

<table>
<thead>
<tr>
<th>Word</th>
<th>% stressed penult</th>
<th>n</th>
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</thead>
<tbody>
<tr>
<td>elementary (phone &amp; wordlist)</td>
<td>70%</td>
<td>114</td>
</tr>
<tr>
<td>elementary (spontaneous)</td>
<td>70%</td>
<td>20</td>
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<tr>
<td>rudimentary</td>
<td>75%</td>
<td>8</td>
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<tr>
<td>documentary</td>
<td>81%</td>
<td>108</td>
</tr>
<tr>
<td>complimentary</td>
<td>84%</td>
<td>79</td>
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<tr>
<td>sedimentary</td>
<td>86%</td>
<td>81</td>
</tr>
</tbody>
</table>

Total 79% 410

Results for stressed-penult *-mentary* by lexical item (and style).

Results of multiple logistic regression demonstrating effect of interaction of age and lexeme; no other factors tested as statistically significant except region.
Interpret this as analogical change, bringing the pronunciation of -ary in -mentary words in line with other words, such as library, fragmentary, etc. As expected for analogical change (e.g., Bynon 1977:43), the most frequently used word (elementary) is least advanced in the change, especially for older speakers.

Geographical results:
- All communities sampled use at least 40% -mentary
- -mentary is least prevalent in the eastern part of the state

Sinhaubu (2007) anecdotally expands known range of -mentary westward:
"Four out of five women who grew up in Rochester and go out on Thursday night pronounce 'documentary' with the stress on the next-to-last syllable."

Evanini (2009) finds sharp boundary at the western edge of New York State:
18/21 speakers in Chautauqua County (western edge of N.Y.) used -mentary; only 2/33 speakers in northwestern Pennsylvania did so.
This contrasts with relatively gradual decline of -mentary frequency toward eastern N.Y.

Rapid and anonymous telephone survey to broaden data (Dinkin & Evanini 2010):
- Evanini and I phoned school offices across New York State and adjacent parts of Pennsylvania, etc. to elicit the word elementary in natural conversation
- Methodology suggested by rapid anonymous phone study of caught-cot merger conducted by Labov in 1966, described in ANAE (p. 65).
- Probably slightly underestimates actual range of -mentary, since elementary is least favorable word for stressed penult, and respondents aren’t guaranteed of local origin

Rapid and anonymous results:
- Confirms interview data: -mentary least frequent in eastern New York
- Confirms Evanini (2009): -mentary absent in northwestern Pennsylvania
- Further east, -mentary seems to respect traditional North–Midland boundary (Kurath 1949) separating northern counties of Pennsylvania from the rest of the state
- -mentary exists in all parts of New York State except NYC area and Long Island
  —i.e., it is an Upstate New York feature, but absent from Downstate.
-mémentory distribution follows communication patterns and culturally salient boundaries:

Historically low traffic flow across North-Midland line in north-central PA (Labov 1974) — so -mémentory boundary here corresponds to a communication minimum. In NW PA, high traffic flow across historical North-Midland line (Evanini 2009); and there, the -mémentory line corresponds to the state boundary instead. Upstate/Downstate line is a culturally salient regional boundary of NY State: In a map-drawing task given to Upstate New York informants (Dinkin 2013), an Upstate/Downstate line was one of the most frequent regional divisions drawn, and the most frequent perceptual dialect division. Upstate/Downstate boundary corresponds to no other known linguistic feature.

Case study 2, a phonetic pattern: the Northern Cities Shift

NCS is known to exist from Syracuse west to Wisconsin; eastern boundary of the NCS must be in the sampled region. F1/F2 measured by hand for 400–500 vowel nuclei for each speaker; measurements are normalized using ANAE methodology.

Labov (2007) defines vowel mean diagnostics for participation in NCS:
- LOT/STRUT: /o/ fronter than /ʌ/
- LOT/DRESS: /e/ less than 375 Hz fronter than /o/
- TRAP/DRESS: /æ/ both fronter and higher than /e/
- TRAP: /æ/ higher than 700 Hz (i.e., F1 is less than 700 Hz)
- LOT: /o/ fronter than 1500 Hz

NCS score defined as number of these criteria satisfied by any given speaker.

<table>
<thead>
<tr>
<th></th>
<th>number of NCS criteria satisfied</th>
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<tbody>
<tr>
<td></td>
<td>zero</td>
</tr>
<tr>
<td>ANAE NY Inland North</td>
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<tr>
<td>Utica</td>
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<td>Gloversville</td>
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<td>Glens Falls</td>
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<td>Ogdensburg</td>
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<td>Watertown</td>
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<td>Oneonta</td>
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<td>Poughkeepsie</td>
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<td>Plattsburgh</td>
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<td>Canton</td>
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<td>ANAE WNE</td>
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Most frequently drawn regional boundaries in New York State by 19 people from Oneonta area: 16/19 drew Upstate/Downstate boundary; 16/20 drew Western NY / Central NY boundary.
Cities with 7 or more speakers in sample, grouped by NCS score:
- Speakers in Utica mostly score 4–5, resembling ANAE Inland North.
- Speakers in Amsterdam, Oneonta, Poughkeepsie, Plattsburgh, and Canton mostly score 2 or less, similar to ANAE Western New England.
- Speakers in Gloversville, Glens Falls, Ogdensburg, and Watertown score 2–4, midway between WNE and Inland North speakers.
- Sidney and Cooperstown are apparently retreating from the NCS in apparent time.

Define regions based on these results:
- **Inland North core, Inland North fringe, Hudson Valley, North Country** (see map)

**Hudson Valley** name suggested by dialect region with similar boundary defined by Kurath (1949) on the basis of lexical features.

Dialect regions defined on the basis of NCS scores

![Dialect regions](image)

Although Hudson Valley has lower NCS scores than Inland North, it still has **higher** NCS scores than most non-Inland North regions. Hudson Valley is **same as Inland North** with respect to LOT/STRUT, LOT/DRESS criteria; **TRAP/DRESS** makes the sharpest regional distinction.

Define **TRAP/DRESS index** as F1 difference between /e/ and /æ/, so **higher index** means more Inland North–like pronunciation.

<table>
<thead>
<tr>
<th>ANAE NY</th>
<th>Utica</th>
<th>Gloversville</th>
<th>Sidney</th>
<th>Watertown</th>
<th>Glens Falls</th>
<th>Ogdensburg</th>
<th>Amsterdam</th>
<th>Cooperstown</th>
<th>Canton</th>
<th>Poughkeepsie</th>
<th>Plattsburgh</th>
<th>ANAE WNE</th>
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<tbody>
<tr>
<td>Inland North</td>
<td>−26</td>
<td>+266</td>
<td>+87</td>
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<tr>
<td>Oneonta</td>
<td>−140</td>
<td>−139</td>
<td>−88</td>
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<tr>
<td>Utica</td>
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<td>+280</td>
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<tr>
<td>Cooperstown</td>
<td>−150</td>
<td>−75</td>
<td>−96</td>
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<tr>
<td>Gloversville</td>
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<tr>
<td>Canton</td>
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<tr>
<td>Watertown</td>
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<td>−19</td>
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<tr>
<td>Poughkeepsie</td>
<td>−168</td>
<td>−43</td>
<td>−121</td>
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<td>−19</td>
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<tr>
<td>Plattsburgh</td>
<td>−184</td>
<td>−108</td>
<td>−148</td>
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<td>Ogdensburg</td>
<td>−87</td>
<td>+5</td>
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**TRAP/DRESS indices** of communities with seven or more speakers sampled

TRAP/DRESS index defines a sharp distinction:
- In Inland North (core or fringe), almost all TRAP/DRESS indices are above −62.
- In Hudson Valley and North Country, almost all TRAP/DRESS indices are below −62.
- Thus the eastern boundary of the Inland North is the maximum extent of **raised /æ**;
  other NCS features extend more or less across the boundary.

**Why the sharp linguistic boundary** between Inland North and Hudson Valley?
- It doesn’t correspond to modern-day communication patterns.

**Settlement history** of this region:
- **New York State** originally Dutch “New Netherland” colony; many settlements founded by Dutch settlers. Came under English control in 1664; but e.g. Poughkeepsie was Dutch-speaking until 1770s (Platt [1905] 1987).
- **Western New England** was staging ground for settlement of Inland North (Boberg 2001, ANAE, Labov 2011)

Compare two very close cities with very sharply different TRAP/DRESS indices:
- **Amsterdam** had leading Dutch families in early 19th c. (Donlon 1980); by 1804, “the hamlet had acquired a considerable population, with an almost equal proportion of Dutch and Yankees” (Frothingham 1892b).
- **Gloversville** area basically depopulated after Revolution; “the immigration was largely of Anglo-Saxon elements…. Among the early settlers the Connecticut influence seems to have been strongest.” (Frothingham 1892a).
Settlement history of the other communities:

- **Glens Falls** first settled by Quakers ultimately from Connecticut (Hyde 1936). Moreover, in 1784 “joining the Quakers were Yankees, many from Connecticut, in a migration that went on unabated until nearly 1850.” (GFHA 1978).
- **Utica**: by 1800 population mainly from New England (Roberts 1911).
- **Watertown** founded 1800 (Gould 1969); early landowners mostly from Oneida County, where Utica is located (Hough 1854).
- **Ogdensburg** was settled in 1800s by New Englanders, many migrating by way of Utica area (Merriam 1907).
- **Sidney**: county settled by New Englanders (Murray 1898); majority of settlers identified in History of Delaware County (1880) are natives of Connecticut.
- **Cooperstown**: settlers “principally from Connecticut” (Cooper 1838).
- **Poughkeepsie** was settled by Dutch families in 1680s, and Dutch was the main language of the city until almost the 1770s (Platt [1905] 1987).
- **Plattsburgh**: prominent settlers apparently mostly from Long Island (Hurd 1880).
- **Oneonta** had German, New England Yankee, and New York Dutch influences among earliest settlers (Campbell 1906).
- **Canton**: most settlers “from Vermont” (Hough 1853).

Communities with high TRAP/DRESS indices settled mainly from SW New England; others settled either from NYC and Hudson Valley or from NW New England. The distinction is most secure at the Inland North fringe / Hudson Valley boundary.

Although 1800s settlement history is not relevant to modern communication patterns, it’s still reflected in this modern dialect boundary for the NCS.

**Synthesizing the two case studies**

To sum up, NCS and -méntáry have very different boundaries:

- **NCS**, a systematic phonetic feature, has boundaries corresponding closely to settlement boundaries from the 1800s.
- **-méntáry**, a lexically specific feature, has boundaries corresponding to present-day culturally salient boundaries and communication patterns.

Can we find patterns like this for other dialect boundaries?

- The southern boundary of the NCS and other phonetic features in Ohio corresponds closely to 19th-century settlement history as well (Thomas 2010).
- The soda/pop boundary (Campbell 2003) matches the Western/Central NY boundary, the second most frequently identified region in the map-drawing task.

So again, the phonetic feature matches settlement patterns, while the lexical feature matches popularly recognizable cultural boundaries.

Settlement boundaries are hundreds of years old, not very relevant to modern life; but the origin of the NCS is seemingly much more recent than that: Mid–20th century dialectology such as Kurath & McDavid (1961) did not detect NCS.

- Hudson Valley / Inland North boundary in New York was known to Kurath (1949), but on the basis of lexical rather than phonetic features.
- North/Midland boundary in Ohio was initially defined through lexical features as well. Most of these lexical features are now archaic or rare agricultural terms (Labov 2010), which can no longer serve as important dialect-differentiating features but have been replaced by phonetic features with the same geographic boundaries.

From Labov (2010): Several mostly obsolete lexical variables used by Carver (1987) to define the North/Midland boundary.

In other words:

- In earlier dialect research, settlement boundaries were found to correspond to boundaries for lexical dialect features.
- As those lexical features have become obsolete, phonological dialect features have emerged with the same geographic boundaries.
- New lexical features have emerged, many with regional distributions unrelated to the distributions of the new phonological features and older lexical features.
- Instead, the new lexical features have boundaries corresponding to modern communication patterns and culturally salient regions.
What is the explanation for this pattern?

Lexical change takes place rapidly and can be noticed as soon as it happens.
- It spreads relatively quickly along lines of communication that are relevant at the time—settlement lines during periods of settlement, salient regions later on.
- Sound change may start small and/or result from subtle phonetic prerequisites.
- The early precursors of large-scale phonetic change may escape contemporary notice due to phonetic subtlety, they may go undetected by linguists.
- These precursors develop along lines of communication when they originate.
- But by the time major changes develop, culturally salient regions may change—thus major phonetic features match historic regional boundaries, not current ones.

This suggests a general proposal on the two kinds of dialect boundaries:

**Today’s lexical boundaries are tomorrow’s phonetic boundaries.**

References:


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Donlon Associates, Amsterdam, N.Y.


Hough, Franklin Benjamin (1853). *A history of St. Lawrence and Franklin Counties, New York; from the earliest period to the present time*. Little & Co., Albany, N.Y.


Lawrence Erlbaum Associates, Hillsdale, N.J.


