Outline of talk

- Production of post-vocalic (R)
- Two options: Transmission/diffusion dichotomy (Labov 2007)
- ~11,000 tokens & Multivariate analysis confirms that (R) is undergoing change, BUT
  - not a straight-forward pattern of inter-generational transmission,
  - not diffusion, which entails simplification
  - the change toward rhoticity has progressed further in NH than in Boston, suggesting dis-accommodation by NH speakers
  - replicating findings reported for vowel mergers (Nagy 2001)
- A third option: Speech Accommodation Theory (Niedzielski & Giles 1996)
  - Also highlights that we need a method of quantifying how similar two grammars are
  - stay tuned for Heritage Language Variation & Change results
  - http://individual.utoronto.ca/ngn/research/heritage_lgs.htm

Transmission
- Family tree model
- change from within the dialect
- kids & acquisition
- incrementation
- change continues in same direction

Diffusion
- Wave model
- contact between dialects
- (when people move)
- adults & learning
- simplification
- change may flip-flop

Settlement and r-lessness

a Kurath mash-up

Traditional r-less region (Kurath & McDavid 1961)
- Settled (by English speakers) before 1675
- Settled by 1725
- Settled by 1750 (Lenney 2003:6, based on Kurath 1939-43 map)

Dependent variable: Coda r

- caR and carRd
- 2 variants
  - constricted ([ɪ]) = [r-1]
  - vocalized (Ø or [a] or [aː]) = [r-0]

Phono-morphological contexts

Non-linking contexts (Deletion)

<table>
<thead>
<tr>
<th>Following segment is in the same morpheme</th>
<th>Same syllable</th>
<th>Same word</th>
<th>Following segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. cart</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. carbon</td>
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<td></td>
<td></td>
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<tr>
<td>3. cars</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. car</td>
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<td></td>
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<tr>
<td>5. car go</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6. car on</td>
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<td></td>
</tr>
</tbody>
</table>

Vowel insertion Russia

<table>
<thead>
<tr>
<th></th>
<th>Non-linking contexts (Deletion)</th>
<th>Linking contexts (Insertion?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linking</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Image sources:
- commons.wikimedia.org
- aalexjacob.blogspot.com
- en.wikipedia.org/wiki/Photons
Methods

- 3 towns
- 2 ethnicities
  - White (W)
  - African American (AA)
- 55 speakers
  - Boston W (24)
  - Boston AA (15)
  - Manchester, NH (all W) (8)
  - Dover, NH (all W) (8)

Thanks, Jim Wood!

ANAE Map 16.1: r-vocalization in Eastern New England

Atlas of North American English

Data collection & analysis

- 3-page reading passage
  - "Blizzard of '78"
  - 224 words with post-vocalic /r/
  - Based on "real texts" from the WWW
- Auditory and acoustic analysis
- Multivariate analysis
  - Comparison within and across communities
  - Linguistic and social factors

Tokens

- Geographic & Ethnic distribution:
  - Boston (white): 4,959
  - Boston (African American): 3,216
  - Dover, NH (white): 1,599
  - Manchester, NH (white): 1,389
- Total N = 11,163 tokens

Results

- Overall, 53% [r-1] \( N = 11,163; \text{Input} = 0.56 \)
- No speaker was categorically r-ful
- No speaker was categorically r-less
  - The range:
    - Most [r]-ful speaker: 92% [r]
    - Least [r]-ful speaker: 5% [r]
Very variable

- No environment was categorically [r]-1
  - Not even stressed, linking environments
    “… part of the allure # of New England…”
- No environment was categorically [r]-0
  - Not even unstressed, non-final, reduced environments
    - “wintertime”

Plan of discussion:
Many 2x comparisons of Factor Weights
to see if we can interpret as Transmission or Diffusion
- Older vs. Younger
  - to see that there is a change in progress
- Sex, Education, Linguistic marketplace
  - to see that it’s a change from above
- NH vs. Boston
  - to see that it’s progressed further in NH
- Whites vs. African-Americans
  - to see differences between AAVE and White r-lessness
- Linking vs. Non-linking Environments
  - to see if it’s 1 or 2 processes (Insertion & Deletion)
- Northern New England vs. other North American dialects
  - to see if the shared effects in NNE are universal
  - to see if there are common trends as this change progresses

Education effect:
More educated speakers: more [r]-1

Age effect

Multivariate comparisons
- The following arguments are based on Factor Weights (FW).
- FWs are computed to show the relative strength of each linguistic or social factor on the probability of (R) surfacing as [r]-1 in a particular context.
- Factors are (putatively) independent of each other.

How do age & region interact?

Dividing the speakers by region and age group simultaneously, we can see that this is yet another case where young NH speakers are moving quickly to differentiate themselves from MA speakers.
Linguistic marketplace (a,b,c,d)

<table>
<thead>
<tr>
<th></th>
<th>Academic</th>
<th>Bureaucrat</th>
<th>Blue Collar</th>
<th>Developing/Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
<td>7</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

Correlation to Linguistic Marketplace

The prestige is a young (White) Boston thing

Comparing Ages: Boston Whites

- **Strongest factors**
  - Younger
    - 1. Linguistic Marketplace
    - 2. Preceding Vowel
  - Older
    - 1. Preceding Vowel
    - 2. Age
- **Other differences**
  - Frequency only sig. for younger speakers

Comparing Ages: New Hampshire

- **Strongest factors**
  - Younger
    - Preceding Vowel
    - Lexical frequency
  - Older
    - Linguistic Marketplace
    - Preceding Vowel
- **Other differences**
  - Frequency only sig. for younger
  - Lx. contexts rank differently

Comparing Ages: Boston African-Americans

- **Strongest factors**
  - Younger
    - Preceding Vowel
  - Age
  - Older
    - Preceding Vowel
- **Other differences**
  - Frequency only sig. for younger

Back to the Transmission vs. Diffusion Question

- **Different grammars:**
  - No transmission
    - 2 different factors are significant
    - Factors are ordered quite differently
    - Within factors, constraints are ordered similarly
    - Overall rates differ
      - Younger: 55%
      - Older: 20%

- **Similar grammars:**
  - Transmission
    - Except frequency, same factors are significant
    - Factors are ordered similarly
    - Within factors, constraints are ordered the same
    - Overall rates differ a little
      - Younger: 47%
      - Older: 33%
Comparing Ethnicities (Boston)

**Whites**
- Strongest factors
  - Younger
  - Preceding Vowel
  - Age
- Older
  - Preceding Vowel
  - Age

**African-American**
- Younger
- Preceding Vowel
- Age
- Older
- Preceding Vowel
- Age

Similar grammars (comparing across similar ages):
- Same factors are significant
- Factors are ordered very similarly
- Overall rates differ

Note: Skewing: More older speakers in White sample, more younger in AA sample

Comparing Places (Whites)

**Boston**
- Younger
- Preceding Vowel
- Age
- Linguistic Marketplace

**NH**
- Younger
- Preceding Vowel
- Age
- Linguistic Marketplace (inverse corr.)

Similar, not same, grammars (comparing across similar ages)
- Same factors are significant
- Factors are ordered differently
- Overall rates differ

Comparing Linking & Non-linking environments

**Ranking of factors**

**Linking**
- **car is**
  - Town
  - Linguistic Marketplace
  - Preceding Vowel
  - Lexical Frequency
  - Age
  - Sex (not significant)

**Non-Linking**
- **car goes**
  - Town
  - Preceding Vowel
  - Lexical Frequency
  - Sex

Frequency effects in 2 contexts

**Linking**
- *FW for [r-1] (all speakers)*

**Non-Linking**
- *FW for [r-1] (all speakers)*

Summary: Many 2x comparisons

- **Age**
  - **change in progress, but not simple incrementation**
- **Place**
  - progressed further in NH
  - patterns differ in each place
  - Not transmitted geographically
- **Ethnicity**
  - Whites vs. African-Americans
  - no difference between White and AA
  - Transmission within the City
- **Prestige**
  - Higher vs. Lower Linguistic Marketplace / Education
  - [r-1] is prestigious for younger Boston speakers (only)
  - the increase in [r-1] is a change from above (against Transmission)
- **Context**
  - Linking vs. Non-linking Environments
  - Age & Sex only sig. in the Non-linking (deletion) context
  - Lexical Frequency only sig. in the Non-linking context
  - “Simplification” of effects in the Linking context (only)
  - “Simplification” supports a Diffusion account
  - (or it might just be too little data)
Transmission or Diffusion?

<table>
<thead>
<tr>
<th>For</th>
<th>Against</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission</td>
<td>Incrementation in all subsectors</td>
</tr>
<tr>
<td></td>
<td>Change from above</td>
</tr>
<tr>
<td>Diffusion</td>
<td>Different patterns of effects in different</td>
</tr>
<tr>
<td></td>
<td>places and ages</td>
</tr>
<tr>
<td></td>
<td>Increasing complexity for younger speakers</td>
</tr>
<tr>
<td></td>
<td>(effect of Lexical Frequency)</td>
</tr>
</tbody>
</table>

Speech Accommodation Theory

(Giles 1973)

- Convergence and Divergence of Individual Speaker
- Response to Addressee & Audience
- A paradigm that attends to:
  1. social consequences (attitudinal, attributional, behavioral, communicative)
  2. ideological and macro-societal factors
  3. intergroup variables & processes
  4. discursive practices in naturalistic settings
- Individual life span and group-language shifts
  - (Welsh, Flemish, Fijian) speakers shown to diverge from a group they don’t like/approve of (reported in Niedz. & Giles 1996:336)

References

Austria, Arti and Ooi, Yong-mu. 1998. Variation and change in optimality theory. Long 104:31-56
Cromley, A. 1986. Awareness of linguistic constraints on variable no omission. French Language Studies 8:159-87