Escaping the TRAP: Losing the Northern Cities Shift in Real Time

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ANAE (Labov et al. 2006): “diversity of regional dialects in North America is increasing over time”, in part via ongoing Northern Cities Shift, based on 1990s data. But post-ANAE, studies in many communities have found NCS diminishing; Wagner et al. (2016), Driscoll & Lape (2015), Jacewicz et al. (2011), inter alia. Perhaps sociolinguists spoke too soon about robustness of NCS!

The Northern Cities Shift

Ogdensburg, New York:

- city of 11,000 people in rural northern New York, on Canadian border
- 9 speakers interviewed in 2008 (Dinkin 2013)
  - 7 women, 2 men; born 1922–1989 (mean 1972)
  - 7 in-person short sociolinguistic interviews; 2 telephone interviews
  - moderate degree of NCS participation, apparently increasing in apparent time—four speakers have mean TRAP higher than DRESS, all among 5 youngest.
  - 2 male speakers have lower TRAP than female speakers.
  - towns to the east don’t have NCS (Dinkin 2013, 2017); to the north is Canada: Ogdensburg is northeastern limit of the NCS.

New data from Ogdensburg:

- 25 women, 14 men; born 1932–2002 (mean 1969); interviewed 2016 by Anja Thiel: full-length interviews, word lists, matched-guise attitudinal experiment.

Research goal: How is NCS socially situated in a small city at the edge of the region?

Normalized formants from conversation and wordlists extracted via FAVE (Rosenfelder et al. 2011). 2008 data re-normalized using same Lobanov method to allow direct comparison. Formants in 2008 data were measured by hand (Dinkin 2013); but Severance et al. (2015) find FAVE measurements usually close to Dinkin’s hand measurements, especially for front vowels. Phoneme means are calculated following ANAE methodology: excluding tokens before sonorants and after glides and clusters.

Results: 2016 data vs. 2008 data
- Unlike 2008, no 2016 speakers have TRAP higher than DRESS
- In 2008, 5 speakers have mean TRAP F1 < 700 Hz; in 2016, none do
- No significant age or gender correlation of spontaneous-speech TRAP in 2016

Despite seeming trend toward NCS in 2008, 2016 looks like a stable non-NCS system; 2016 also has backer LOT and seemingly fronter DRESS than 2008.

Results: style-shifting
- Most younger speakers shift away from NCS TRAP-raising in wordlist style
- Most older speakers shift toward raising in wordlist style; exceptions are all female

I.e., direction of style-shifting is reversing in apparent time; women lead this change.

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Mixed-effects linear model of interacting predictors of TRAP F1:

- age (in 2016), gender, style, year of interview, plus phonological factors (omitted for conciseness).

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<tr>
<th>predictor</th>
<th>coefficient</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>wordlist * age</td>
<td>-1.18/year</td>
<td>7 × 10^{-4}</td>
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<tr>
<td>wordlist * male</td>
<td>-27.5</td>
<td>0.002</td>
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<td>2008</td>
<td>767.6</td>
<td>0.045</td>
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<tr>
<td>intercept</td>
<td>814 Hz</td>
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3-way interaction age * year * style removed due to likelihood that it’s due to one outlier in 2008.

Matched-guise experiment in 2016:
- Raised & unraised TRAP vowels spliced into sentences read by 3 male non-NCS voices.
- TRAP vowels taken from Ogdensburg and Canton speakers from Dinkin (2013) data.
- Raw F1: 600 Hz raised, 782 Hz unraised. Normalized to original speakers: 721 Hz, 880 Hz.
- Each stimulus: 3 carrier sentences from one voice, containing two TRAP tokens each.
- 6 TRAP stimuli per participant: 2 guises (raised vs. unraised) × 3 carrier voices.

Participants evaluated guises on 6-point forced choice scale on 5 categories:
- friendliness, education, age, local-ness, Canadian-ness.

Results: young speakers judged raised TRAP less educated but more local than unraised;
older speakers didn’t distinguish raised/unraised TRAP on those dimensions.
- (But apparent rating differences between carrier voices suggest something perhaps more complex.)

Regression results for judgments of educatedness (left) and localness (right).

- Reference level: unshifted guise, carrier voice J.

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<th>predictor</th>
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<tr>
<td>unshifted</td>
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<tr>
<td>R</td>
<td>+0.324</td>
<td>0.046</td>
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<tr>
<td>T</td>
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Divide into older and younger cohorts at 1960:
- guise coefficients for younger speakers alone: +0.5 (educatedness), −0.71 (localness);
- for older speakers alone (n.s.): −0.02 (educatedness), −0.16 (localness).

NCS TRAP-raising developing from an indicator into a marker (Labov 2001:196)—younger speakers both evaluate it negatively and style-shift away from it.

Could the difference between 2008 and 2016 data be due to methodological differences?
- Pre-scheduled interviews, non-native speaker as interviewer in 2016:
  this could promote somewhat more careful speech than in 2008.
- F1 difference between 2008 and 2016 is bigger than between wordlist and spontaneous;
  unlikely that slightly-more-careful interview could account for a difference that large.
- Seems we must conclude: communal change away from raised TRAP in Ogdensburg.
  In 2008 younger speakers led NCS, but shifted away from it in careful speech;
  by 2016, negative evaluation was strong enough to spread to spontaneous speech too.

Gender pattern is reminiscent of loss of Philadelphia dialect features (Labov et al. 2013):
- women led the change from below, but now lead the retreat from it.
- But in 2016 Ogdensburg, apparent-time retreat is only clearly visible in wordlist style;
  spontaneous speech shows no significant age trend.

Why the flat age distribution, when we see apparent-time NCS loss in other cities?
NCS apparently relatively new to Ogdensburg—young speakers retreat from TRAP raising, but older speakers never had much of it to begin with.

Conclusion:
- This study shows a role of communal change in the indicator/marker transition:
  • a change from below develops negative social evaluation;
  • when the stigma becomes prominent enough, groups who share that evaluation retreat from the local feature.

By this process, Ogdensburg apparently lost its NCS TRAP-raising within eight years.

References: