The Social Networks of Minority Ethnicity Group Members in Washington State

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Research Questions

RQ 1. What does localness of social network look like for mobile, non-white speakers?
- “No matter how frequently [non-whites] are exposed to the local vernacular, the new speech patterns of regional sound change do not surface in their speech.” (Labov, 2001, p. 506)
- Interethnic contact investigated: (Edwards, 1992; Ash & Myhill 1986; Rampton, 1999)

RQ 2. To what communities (ethnicities) are speakers linked via ties of close friendship?
- Network homophily is a latent notion in Sociolinguistics
- Homophily (Def.): “The tendency for individuals to form positive ties with people who are similar to them in socially significant ways (for ‘birds of a feather flock together’).” (Byrne 1971; McPherson, Smith-Lovin and Cook 2001)"
“Local Team”:
– ethnically homogeneous neighborhood (Milroy and Milroy, 1978)
– adolescent peer network (Cheshire, 1987; Eckert, 1988)
– mixed-ethnicity friendship group (Ash and Myhill, 1986)

Community-specific index:
– kin, workplace contacts, voluntary association
– local cultural norms: fighting, stealing
– lovers or schoolmates of “other” ethnicity

Cheshire et al. (2008: 1): “[nonwhite] speakers who are part of multi-ethnic friendship groups make greater use of certain linguistic features”
The problem: Urban Life and the Study of Network structure

- How to apply notion of “speech community?”

  - *shared perceptions of group identity*: “In complex societies some networks are... ‘*referential*’ [and] may not exist in a physical sense and the verbal repertoires referentially acquired are implemented by force of symbolic integration.” Fishman (1972: 80)

  - *network range*: extent of connectedness to a variety of types of individuals. Bortoni-Ricardo (1985: 119)
    - both referential and experiential networks are enlarged
    - ties were formed with a greater proportion of people who are not like ego (e.g., less ethnically insular)
    - dwell both physically and psychologically in the city (symbolic integration)

Common cultural history, shared experiences have the power to affect behavior.
Social Network Analysis

• Mitchell (1973): For modern urbanites, life often takes place in separate, unconnected groups with specialized functions: find jobs, arrange for childcare, seek financial assistance.

• BUT…. even modern urban people tend to find strongest sense of social connectedness in close networks (of limited size)...

**THE NEW YORKER**

**THE LIMITS OF FRIENDSHIP**

BY MARIA KONNIKOVA

“Dunbar Number”: 5 intimates → 15 closest friends → 150 named friends → 500 acquaintances → 1500 “known” in name only (Konnikova, 2015)
Methods

5 Ethnic groupings present in the State of Washington since mid 1800s:

<table>
<thead>
<tr>
<th>n=91</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Caucasian-American</td>
<td>35</td>
<td>16</td>
</tr>
<tr>
<td>Mexican-American</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Yakama</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Japanese-American</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

Sociolinguistic Interviews (2006-2014)

Word List Unscripted Conversation
Reading Passage Network Questionnaire
Lexical Tasks

Vowel Analysis Procedures:

22,214 tokens
F1, F2, F3, duration measures (Nearey-2 normalized; Nearey 1977)
Plotting in phonR (McCloy 2015)
Linguistic Variables

1. (a~oh) COT CAUGHT merger
   • dependent variable: VOIS3D spectral overlap fraction, $\Omega$ (continuous value, ranging from 0=no overlap – 1=complete overlap)
   • (Wassink 2006)

2. /uw/-fronting
   • dependent variable: Nearey-2 normalized mean F2 (continuous)

3. Pre-voiced velar raising /æɡ, ɛɡ, eyɡ/ BAG, BEG, BAGEL
   • dependent variable: Advancement Scores (Riebold 2015; Wassink 2015, in press)

3 linear models constructed: Ethnicity, PctHomophily, NLS as social predictors in R (R Core Team, 2016)
Advancement Score (raising of /æg~ɛg~eyg/)

“Brianne”
HIGH Advancement: .71

“Ben”
LOW Advancement: .29
Network Localness Score (NLS)

• Adapted from network strength score (L. Milroy, 1987)
• 21-item questionnaire, covering local embedding in traditional subsectors:
  • 13 possible points (converted to proportion from 0=low to 1=high)

1) Kinship:
   - mother, father and spouse born locally (1 pt each, if local, 3 possible)
   - extended family localness (1 pt if most relatives reside locally)

2) Occupation:
   - local school(s) attended (1 pt)
   - only local jobs worked (1 pt)
   - no tourists encountered at work (1 pt) [Lippi-Green, 1989]

3) Voluntary association:
   - Mother, Father, Grandmother, Grandfather involved in local activities (1 pt each, 4 possible)
   - local friends (1 pt)
   - respondent involved in local activities (1 pt)
Results

RQ 1. What does localness of social network look like for mobile, non-white speakers?

Highest NLS scorers in each ethnic group...
“Selwin”

Highest NLS Scorer: Male, aged 59

NLS: .97

Kinship: Local (1.0 pts)

Occupation: 30 year leader of Toppenish longhouse/unemployed (1.0 pts)

Vol Assn: Police Association, Local historian (.90 pts)
- “Selwin” (Yakama)
“Ben” Japanese-American

“Ben”
Highest NLS Scorer: Male, aged 46
NLS: .73
Kinship: Local (1.0 pts)
Occupation: Museum Curator (.5 pts)
* deduction for travel and meeting tourists at work
Vol Assn: Participates in ethnic festivals; (.7 pts)
• “Ben” (Japanese-American)
“Robert”

Highest NLS Scorer: Spokane Male, aged 35
NLS: .78

Kinship: Local (0.5 pts)
Occupation: Audio-Visual company (1.0 pts)
Vol Assn: Track coach (.83 pts)
• “Robert” (African-American)

ESP81AM3X 1σ ellipses
“Brianne”

Highest NLS Scorer: Seattle Female, aged 42

NLS: .97

Kinship: Local (1.0 pts)

Occupation: Clerk at shipping company (1.0 pts)

Vol Assn: Auto racing (.92 pts)
• “Brianne” (Caucasian-American)

SN7CF2D 1σ ellipses
“Lucia”

Highest NLS Scorer: Seattle Female, aged 42

NLS: .69

Kinship: Local mother, Mexican father (.25 pts)

Occupation: baker (1.0 pts)

Vol Assn: Church, Sun Fair (.92 pts)
• “Lucia” (Mexican-American)

YY52HF3I 1σ ellipses
# Advancement Results

Table 1b: Highest and lowest NLS scorers, by advancement in prevelar raising

<table>
<thead>
<tr>
<th>NLS</th>
<th>Kinship</th>
<th>School/Occ.</th>
<th>Vol Assn.</th>
<th>Advancement</th>
<th>Ethnicity</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LOWEST RANKING:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.17</td>
<td>0</td>
<td>0.50</td>
<td>0</td>
<td>0.33</td>
<td>Japanese-Am</td>
<td>SB93SM3D</td>
</tr>
<tr>
<td>0.22</td>
<td>0</td>
<td>0.50</td>
<td>0.17</td>
<td>0.69</td>
<td>Mexican-Am</td>
<td>YW43HM3H</td>
</tr>
<tr>
<td>0.31</td>
<td>0.25</td>
<td>0.50</td>
<td>0.17</td>
<td>0.29</td>
<td>Mexican-Am</td>
<td>YH48HF3H</td>
</tr>
<tr>
<td>0.36</td>
<td>0.25</td>
<td>0.50</td>
<td>0.33</td>
<td>0.47</td>
<td>Caucasian-Am</td>
<td>ECL84CF1Z</td>
</tr>
<tr>
<td>0.39</td>
<td>0</td>
<td>1</td>
<td>0.17</td>
<td>0.46</td>
<td>African-Am</td>
<td>STA107AF3N</td>
</tr>
<tr>
<td><strong>HIGHEST:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.97</td>
<td>1</td>
<td>1</td>
<td>0.9</td>
<td>0.65</td>
<td>Native-Am</td>
<td>“Selwin”</td>
</tr>
<tr>
<td>0.97</td>
<td>1</td>
<td>1</td>
<td>0.92</td>
<td>0.71</td>
<td>Caucasian-Am</td>
<td>“Brianne”</td>
</tr>
<tr>
<td>0.90</td>
<td>1</td>
<td>1</td>
<td>0.70</td>
<td>0.40</td>
<td>Caucasian-Am</td>
<td>ESV108CF3O</td>
</tr>
<tr>
<td>0.92</td>
<td>1</td>
<td>1</td>
<td>0.75</td>
<td>0.63</td>
<td>Caucasian-Am</td>
<td>SK14CM2I</td>
</tr>
<tr>
<td>0.73</td>
<td>1</td>
<td>0.5</td>
<td>0.70</td>
<td>0.46</td>
<td>Japanese-Am</td>
<td>“Ben”</td>
</tr>
<tr>
<td>0.78</td>
<td>0.5</td>
<td>1</td>
<td>0.83</td>
<td>0.67</td>
<td>African-Am</td>
<td>“Robert”</td>
</tr>
<tr>
<td>0.69</td>
<td>0.25</td>
<td>1</td>
<td>0.83</td>
<td>0.61</td>
<td>Mexican-Am</td>
<td>“Lucia”</td>
</tr>
</tbody>
</table>

| predictor | Estimate | t   | Pr(>|t|) |
|-----------|----------|-----|---------|
| /uw/      | Ethnicity-Cauc | 0.216 | 2.253   | 0.03    |
| Adv. of /æɡ,ɛɡ,eg/ | PctHomoph | -1.405 | -2.508  | 0.01    |
| NLS:PctHomoph | 1.575    | 2.415 | 0.02    |
For all ethnicities, as Network Localness Score increases, Advancement in pre-velar raising does, too.

Model:
\text{lm(formula = Advancement.3} \sim \text{ethnicity + NLS + PctHomoph, data = network.model.data)\text{)}
RQII. Ethnic Homophily

To what ethnic groups are speakers actually connected via ties of close friendship?

\[
(PctH) \text{ Percent homophily} = \frac{\# \text{ ethnically homophilous friends}}{\text{total number of friends}} \times W
\]
• Close-friend network of “Selwin” (Yakama)
• NLS: .97
• PCTH: 0.0

Legend: Native-American: Black diamond; Caucasian: upward-pointing triangle.
Network homophily (closest friends)

- Close-friend network of “Brianne” (Caucasian)
- NLS: .97
- PCTH: .78

Legend: Caucasian: upward-pointing triangle.
• Close-friend network of “Ben” (Japanese-American)
• NLS: .73
• PCTH: .60

Legend: Caucasian: upward-pointing triangle; Japanese-American: downward-pointing triangle;
Mexican-American: Circle-in-box; Two or more races (non-homophilous): Plus-in-box; Two or more races (homophilous): open square.
• Close-friend network of “Robert” (African-American)
• NLS: .78
• PCTH: .60

• Close-friend network of “Lucia” (Mexican-American)
• NLS: .69
• PCTH: .57

Legend: Caucasian: upward-pointing triangle; Two or more races (non-homophilous): square; Two or more races (homophilous): Plus-in-box; Mexican-American: Circle-in-box.
Within-ethnicity correlations

Table 3: Within-group correlation analysis examining association between individual Homophily Score and Advancement in prevelar raising pattern

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Avg. PCTH</th>
<th>Min.-Max. (æg<del>ɛg</del>eyg) Advancement</th>
<th>Pearson r</th>
<th>t</th>
<th>p-value</th>
<th>sig. (*=p&lt;0.05, **=p&lt;0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-Am</td>
<td>0.37</td>
<td>0.44-0.67</td>
<td>0.27</td>
<td>0.55</td>
<td>0.61</td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>0.89</td>
<td>0.37-0.91</td>
<td>-0.11</td>
<td>-0.62</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Japanese-Am</td>
<td>0.53</td>
<td>0.31-0.82</td>
<td>-0.73</td>
<td>-3.82</td>
<td>0.00</td>
<td>**</td>
</tr>
<tr>
<td>Mexican-Am</td>
<td>0.62</td>
<td>0.38-0.75</td>
<td>0.04</td>
<td>0.11</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Yakama Nation</td>
<td>0.77</td>
<td>0.35-0.68</td>
<td>-0.72</td>
<td>-2.56</td>
<td>0.04</td>
<td>*</td>
</tr>
</tbody>
</table>
Conclusions

1. Speakers in each of 5 non-white ethnicities use PNWE forms.
   Prevelar raising: *Network Localness and Homophily were related to Advancement.*
   /oh~a/ merger: well-established in all groups.

2. When working with an ethnically-diverse sample, we should avoid assigning speakers to ethnolectal groupings without network information.
   Deep localness doesn’t always mean embedding in a ethnically-homophilous network.

3. RQ1: Need to study what “localness” looks like for the ethnicity of interest.
   Selwin, Lucia, Ben, Robert: wide network range AND deep local attachments

4. RQ2: Is a high level of ethnic homophily in close-tie networks inversely correlated with participation in a regional vowel change?
   It depends!
   Ethnic groups whose vernacular is the supraregional standard may show comparable levels of participation to whites’, despite ethnic homophily (e.g., Japanese-Americans in Washington).
acknowledgements

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Valerie Freeman
Michael Scanlon
Robert Squizzerro

Pacific Northwest English Study

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Thank you!
References


Blake, R. (2014) African-American and Black as Demographic Codes, Language and Linguistics Compass 313:


AfricanAm means

Caucasian means

JapaneseAm means

MexicanAm means
Yakama Nation means

\[
\begin{align*}
F2 & \quad 2.5 & 2.0 & 1.5 & 1.0 & 0.5 \\
F1 & \quad 0.1 & 0.2 & 0.3 & 0.4 & 0.5 & 0.6 & 0.7 & 0.8
\end{align*}
\]