Social Networks, Ethnic Communities and Linguistic Repertoires (working title...help?)

Book Progress Report | Alicia Beckford Wassink
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Acknowledgement

• Shane Lubold •

PhD, 2023, UW Dept. of Statistics
Currently Research Mathematical Statistician in the
Missing Data and Observational Data Modeling
Group in the Center for Statistical Research and
Methodology at the U.S. Census Bureau

this project was his PhD capstone project!
Goals

• SNEC takes both broad and close-up views of the relationship between social networks and linguistic repertoire in Underrepresented minority speakers (URMs).

Social Network: “An individual’s social network is the aggregate of relationships contracted with others, a boundless web of ties which reaches out through social and geographical space linking many individuals, sometimes remotely.”

--Dubois and Horvath (1998)
Background

• Pioneering applications of social network methods in sociolinguistics engaged with social networks mainly in small, closed, monoethnic, territorially-bounded communities.


• Studies of mobile, urban URM communities remain few.


*not really a network study
Background, cont.

• However, ...

• **Mobile, minority ethnic speech communities are not the exception to the rule!**
  - Cheshire et al. – The Netherlands, Germany, France and the United Kingdom
  - Ash & Myhill – interethnic contact with the “opposite ethnicity” in Philadelphia
  - Marshall – adoption of change in mobile speakers in Aberdeenshire, Scotland
  - Bortoni-Ricardo – rurban migration into Brasilia

• *book blends old and new (for sociolinguistics) social network methods to allow expansion of network methods to large, mobile, minoritized communities*
Themes

- how might we best characterize the social networks of mobile underrepresented minority (URM hereafter) speakers?

- what do “localness” and “mobility” mean for such speakers?
  - e.g., Milroy and Milroy (1978) Network Strength score
  - how might network structure serve to resist or promote the uptake of regional vowel changes?

- what does it mean to study ethnic linguistic repertoires in 2024?
  - ethnicity, ethnolect as stigmatized terms
  - the norm in sociolinguistic studies has been to assume that underrepresented minority (URM) speakers do not participate in ongoing changes-in-progress, and to thus a priori hold them aside from large-scale studies of dialect change, assuming they’re separate subcultures
  - current focus is on multiethnolects (Cheshire)

- how might sociolinguists’ network tools be extended to study such network types?
1) A monograph is a specialist-written work on one subject or one aspect of a scholarly subject, often by a single author or artist. 2) In-depth academic work that presents original research, analysis, and arguments.

## Monograph Outline

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<td>Part II: Ethnicities of the PNWE study</td>
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*working titles*

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<thead>
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<th>Part II: Communities of the PNWE Study</th>
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<td>Chapter 5</td>
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Problems

• aren’t modern urban people’s networks too big to study?
• how do we deal with “localness” when URMs may live in a subculture in a city AND exhibit integration into the mainstream life of their city...what’s “local” for such speakers?
• If we don’t use a network strength score, then what???
Barnes & Bott (& Mitchell) – the Manchester School

John Arundel Barnes. coined the phrase, "Social Network" in "Class and Committees in a Norwegian Island Parish," *Human Relations* VII
Posited that 3 separate ‘fields’ (types of social relationships), subsume human interactions: industrial, territorial, personal (kinship, friendship and neighborliness).

Elizabeth Bott Spillius. *Family and Social Networks*
Independently determined the importance of these personal networks as an intervening structure between persons and institutional (or organized) groups.
Demonstrated this relationship by examining kin structures and role sets, particularly conjugal roles and women’s networks.
The Bott hypothesis

Network density:

“When many of the people a person knows interact with one another, that is when the person's network is close knit, the members of his network tend to reach consensus on norms and they exert consistent informal pressure on one another to conform to the norms, to keep in touch with one another, and, if need be, to help one another.
— Elizabeth Bott, Family and Social Network. 1971

Network multiplexity:

“Multiplexity is the overlap of roles, exchanges, or affiliations in a social relationship.
— L. Verbrugge, Multiplexity in Adult Friendships. 1979

“Where we see high network density, we are more likely to find multiplex social role relationships.
Traditional Milroyan Network Strength Scale

5 possible points:
1. Membership in a territorially-based, high density cluster
2. Substantial ties of kinship within the neighborhood
3. Employment in the same place as 2 others
4. Workmates include members of the same gender
5. Voluntary association with workmates
Upper limits on network size

• 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

• Network Localness score (adapted from Lippi-Green 1989)

• Network Homophily of close-friend network (Macionis 1978, McPherson et al. 2001)

• Network Reach (Heterophily) of close-friend network (Macionis 1978, McPherson et al. 2001)

• Simulated Aggregated Relational Data (ARD) (Breza et al. 2019)

• n=135 PNWE speakers

  - African-American
  - Caucasian-American
  - Mexican-American
  - Yakama
  - Japanese-American

  - 21-item network
  - questionnaire
  - Kinship, Occupation, Vol Assn.
  - name 10 closest friends
  - shared values, beliefs (tie formation)
Network homophily

- **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)

- **baseline homophily:** network similarity effects created by the demography of the potential tie pool, conceptualized as an opportunity set.

- e.g.,

<table>
<thead>
<tr>
<th>College W: 1000 students</th>
<th>Me: 10 close friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% Asian 90% Caucasian</td>
<td>10% Asian 90% Caucasian</td>
</tr>
</tbody>
</table>
Network homophily

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• e.g.,

  ![Graph](image)
Network homophily

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• e.g.,

  ![](image1)

  **College W:**
  - 1000 students
  - 10% Asian
  - 90% Caucasian

  **Me (Japanese):**
  - 10 close friends
  - 50% Asian
  - 50% Caucasian

  **Ethnic / Inbreeding Homophily!**
Homophily Index

\[ H_i = \frac{s_i}{s_i + d_i} \]

- \( H_i \) = Homophily
- \( N_i \) = # of i individuals in population
- \( s_i \) = same friends type i
- \( d_i \) = different friends \( j...k \)
- \( t_i \) = total friends that speakers of type i form
- \( w_i \) = baseline weighting factor

• Homophily is known to be biased towards own-types (“inbreeding”). How can we tell if this is really by choice, or a function of the opportunity pool? Weight our homophily measure by the baseline proportion of the speaker’s group. Is \( H_i > w_i \)? Inbreeding homophily is present.

\[ IH_i = \frac{H_i - w_i}{1 - w_i} \]
### Baseline Data, Washington state

<table>
<thead>
<tr>
<th>Group</th>
<th>2020 Census Count</th>
<th>proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>5,656,119</td>
<td>.81</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>270,420</td>
<td>.04</td>
</tr>
<tr>
<td>American Indian and Alaska Native</td>
<td>127,578</td>
<td>.02</td>
</tr>
<tr>
<td>Asian</td>
<td>538,828</td>
<td>.08</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>48,369</td>
<td>.0007</td>
</tr>
<tr>
<td>Two or more races</td>
<td>326,856</td>
<td>.05</td>
</tr>
</tbody>
</table>


Calculations were weighted by baseline proportion, by county [not shown here].

\[
\text{number of people I know in a group} = \frac{\text{number of people in that group in the population}}{\text{total population of WA State}}.
\]
Homophily RQ

• Early PNWE study finding: ethnicity is not associated with participation in vowel changes (Wassink 2015). Is network homophily a better predictor?

  • H0: There is no association between ethnic homophily [in close friend net] and advancement in PNWE changes / sociolectal features.
  • H1: Ethnic homophily is positively associated with a speaker’s participation in use of their ethnic group’s sociolectal features.
  • H2: Ethnic homophily is negatively associated with participation in regional vowel changes if a phonological competitor exists in the competing vernacular.
# Homophily results

Within-group correlation analysis of individual PCT homophily scores and Advancement in prevelar raising.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Prevelar Advancement Score</th>
<th>PctHomophily Score</th>
<th>Pearson r</th>
<th>t</th>
<th>p-value</th>
<th>sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>0.55</td>
<td>0.44</td>
<td>0.68</td>
<td>0.37</td>
<td>0.18</td>
<td>0.56</td>
</tr>
<tr>
<td>Caucasian</td>
<td>0.58</td>
<td>0.37</td>
<td>0.91</td>
<td>0.89</td>
<td>0.30</td>
<td>1.00</td>
</tr>
<tr>
<td>Japanese American</td>
<td>0.55</td>
<td>0.31</td>
<td>0.82</td>
<td>0.53</td>
<td>0.10</td>
<td>1.00</td>
</tr>
<tr>
<td>Mexican American</td>
<td>0.51</td>
<td>0.38</td>
<td>0.75</td>
<td>0.62</td>
<td>0.20</td>
<td>0.82</td>
</tr>
<tr>
<td>Yakama</td>
<td>0.53</td>
<td>0.35</td>
<td>0.68</td>
<td>0.77</td>
<td>0.54</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Network Reach RQ

• Range of ethnic types in the close-tie network (heterophily)
• Close-tie network sizes might be different, which requires proportion rather than count, be used:

\[
\frac{s_i}{s_i + d_i} - w_i
\]

RQ: Is the likelihood of uptake of PNWE changes greater when URMs are connected through ties of close friendship to the Caucasian-American group?
• H0: Network reach (in close-friend network) is not associated with advancement in regional vowel changes.
• H1: Higher values for network reach are associated with greater participation in regional vowel changes.
Network reach results

**positive correlation**: as homophily in the friend group increases, so does the number of friend types

**negative correlation**: as homophily in the friend group increases, the number of friend types decreases

Caucasians: $r = -0.64$, $p < 0.001^{**}$
Hispanics: $r = -0.26$, $p < 0.1$ (ns)
Native Ams: $r = -0.4$, $p < 0.1$ (ns)
African Ams: $r = -0.56$, $p < 0.05^{*}$
Asian Ams: $r = -0.09$, $p < 0.5$ (ns)
Network Homophily by County Baseline Proportion (Af–Am, Biracial, Yakama, J–Am only)

A

B

N

S

County
- King County
- Pierce County
- Snohomish County
- Spokane County
- Yakima County

Network Homophily by County Baseline Proportion (Caucasian and Chicano/a only)

C

H

County
- Benton County
- Island County
- King County
- Pierce County
- Snohomish County
- Spokane County
- Stevens County
- Whatcom County
- Yakima County

Respondent Close Tie Homophily

Local Baseline (propn)
Cross-ethnicity connections: centrality & peripherality

N=Yakama
H=Hispanic/Chicano/a
C=Caucasian American
A=African American
S=Japanese American
B=biracially-identifying
Heterophily: Probability of connection

C=Caucasian American
H=Hispanic/Chicano/a
S=Japanese American
A=African American
AC=biracially-identifying (African-American + Caucasian)
N=Yakama

outdegrees: send a tie out to alter (x-axis)
indegrees: receive a tie from alter (y-axis)
Perceived Ethnic connectedness in the Japanese-American Community

• 2 sisters from Capitol Hill (lawyer, healthcare professional)
• schools had high diversity & highest propn of Japanese in J-Am subsample
• neither claims fluency in Japanese

Network localness scores for two Japanese-American sisters, compared to ethnic cohort (0=no local ties in network subsector; 1=all local ties)

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Overall NLS</th>
<th>Kinship Subsector</th>
<th>Schooling/Occupation Subsector</th>
<th>Voluntary Association Subsector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese-American cohort average (n=15)</td>
<td>0.51</td>
<td>0.39</td>
<td>0.66</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>Karen</td>
<td>47</td>
<td>0.42</td>
<td>0.25</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Anna</td>
<td>57</td>
<td>0.61</td>
<td>0.50</td>
<td>0.50</td>
<td>0.83</td>
</tr>
</tbody>
</table>
Karen: “...but they [Japanese-American kin] all lived over in Beacon Hill area, so we felt kinda like we didn't belong...” (0:47:36.908).

Anna (57)

Karen (47)

“[...] I, w- went shopping with my cousin [...] and I said ‘let me do it myself’ so I, y’know, bought this thing and I spoke Japanese and, um... then the, saleswomen were together and they were whispering and, ...‘they s- thought you spoke really good, good Japanese for being, retarded.’ ” (00:44:31.458, ‘Shopping Trip’)
### Closest Friends or Acquaintances

<table>
<thead>
<tr>
<th>Initials</th>
<th>Gender</th>
<th>Same Ethnicity?</th>
<th>Ethnicity</th>
<th>Place of Residence</th>
<th>Occupation</th>
<th>Value Homophily Category</th>
</tr>
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<tbody>
<tr>
<td>Friend 1</td>
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<td>Friend 2</td>
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<td>Friend 3</td>
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<td>Friend 4</td>
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<td>Friend 5</td>
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<td>Friend 6</td>
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<td>Friend 7</td>
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<td>Friend 8</td>
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<td>Friend 9</td>
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<td>Friend 10</td>
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Value homophily key [fieldworker use]:

- **Preferences**: common tastes, hobbies, sports, politics
- **Attitudes**: studious, community, or family-oriented
- **Beliefs**: shared history, faith, civic concerns
- **Other (not value)**: shared culture, ethnicity
References


