Northern Arizona

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Northern Arizona: Sound Change and Dialect Contact

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Introduction

Arizona, along with New Mexico, is situated in an interesting dialectological position: in between California and the Southern States. However, little work has been done on the vowels of Arizona English. This paper presents data on the realization of the TRAP vowel among 44 Arizonans recorded in 2002.

Linguistic Influences on Arizona

Our predictions of Arizonan vowel quality stem from knowledge of its settlement history, plus fieldwork in 2002 documenting related local origin discourses:

- First migration from the South (i.e. the Midwest)
- Later from California (i.e. the Northeast + Midwest)

Previously observed (Hall-Lew 2004, 2005)

- Fronting of GOOSE in Apparent Time, urban
- Fronting of GOOSE in Apparent Time, rural
- Fronted GOOSE by older speakers with cattle ranching affiliations (rural)

Current expectations:

- Fronting/raising of BAN in Apparent Time, urban
- Backing/lowering of TRAP in Apparent Time, urban
- No nasal split pattern (TRAP/BAN) among speakers with cattle ranching affiliation
- Overall frontier (more Southern) TRAP vowel for ranch speakers than urban

Table 1: Significant predictors for each best-fit model

- Variation in BAN could not be modeled for the MEN subset.
- FOLLOWING MANNER was significant for TRAP in all models.
- FOLLOWING PLACE was never significant in any model.
- There were no interaction effects.

Discussion

- TRAP lowering and fronter showing apparent-time correlations, suggesting the presence of a nasal system. Women are leading in TRAP lowering.
- Women also favor a backer TRAP and a higher line than men, although neither variable shows an apparent-time correlation.
- TRAP F2 correlates with TOWN/RANCH, with rancher men producing a fronter vowel than town men. Qualitatively, this is also true for the age-matched subset of women.

Conclusion

- We take these results as additional evidence that Arizona in 2002 can be described as a dialect contact between Californian and Southern Englishes.

Methods

The demographic representation of the 44 speakers is not balanced:

- The TOWN/RANCH contrast is tested within the male group only.
- The TOWN/RANCH contrast is tested within the town group only.

Dataset Vowel Formant Significant Fixed Effects

- 8 linear mixed-effect models (SPEAKER & WORD as random intercepts)
- Normalized (Fabriu et al. 2005) midpoint F1 and F2 values, BAN & TRAP vowels
- 8 models with following phonological environment (PLACE, MANNER) and YEAR-OF-BIRTH

Table: Speaker sample

<table>
<thead>
<tr>
<th></th>
<th>Town VOB range</th>
<th>Ranch VOB range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1948-1958</td>
<td>1958</td>
</tr>
<tr>
<td>Male</td>
<td>1957-1958, 8</td>
<td>1950-1958</td>
</tr>
</tbody>
</table>

Figure 1: Settlement patterns into the state of Arizona over the 20th century (source: NYT)

Figure 2: Vowel Plots for Four Representative Arizonans

Figure 3: Town TRAP F1 by Gender & Year of Birth

Figure 4: TRAP F2 by Gender & Town/Ranch (no interaction)

Figure 5: BAN F1 by Gender

Figure 6: Town BAN F2 by Year of Birth

Future Directions: StoryCorps

We clearly need data more recent than 2002. To achieve this we have partnered with StoryCorps, Inc., "a nationwide initiative to record and collect oral history interviews" which has provided our research team access to all of their Arizona-based interviews (N=318), recorded between 2006-2015. Analysis of those born after 2002 and after the expansion to all of Arizona is our next step.

StoryCorps interviews are typically conducted by a family member or close friend of the speaker. They also often naturally contain 'Danger of Death' questions, especially for interviews with older speakers. However, the prestige and high public profile of StoryCorps also means that the speaker's style is sometimes very self-conscious. Each interview has a different interviewer.