Northern Arizona

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Northern Arizona: Sound Change and Dialect Contact

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

- First migration from the South (and the Midwest)
- Later from California (and the Northeast × Midwest)
- Fronted /æʊ/ by older speakers with cattle ranching affiliations (rural)
- Overall frontier (more ‘Southern’ TRAP vowel for ranch speakers than urban)

Previously observed (Hall-Lew 2004, 2005)
- Fronting of /æʊ/ in Apparent Time, urban
- Fronting of /ɡɔʊz/ in Apparent Time, urban
- Fronted /ɡɔʊz/ by older speakers with cattle ranching affiliations (rural)

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

Previously observed (Hall-Lew 2004, 2005)
- Fronting of /æʊ/ in Apparent Time, urban
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- Fronted /ɡɔʊz/ by older speakers with cattle ranching affiliations (rural)
- Overall frontier (more ‘Southern’ TRAP vowel for ranch speakers than urban)

Table 1: Speaker sample

<table>
<thead>
<tr>
<th>Gender</th>
<th>Town</th>
<th>YOB range</th>
<th>Ranch</th>
<th>YOB range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>13</td>
<td>1948-1980</td>
<td>1</td>
<td>1958</td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>1957-1986</td>
<td>8</td>
<td>1950-1985</td>
</tr>
</tbody>
</table>

Therefore, two subsets of the data were analyzed separately:
- The TOWN/RANCH contrast is tested within the male group only.
- The TOWN/RANCH contrast is tested within the town group only.

8 linear mixed-effect models (SPEAKER & WORD as random intercepts)
- normalized (Fabricius et al. 2006) midpoint F1 and F2 values, /æʊ/ & TRAP vowels
- 8 models with following phonological environment (FACE, MANDEL, and YOB-OF-BIRTH)
  - 4 on the town subset with TOWN/RANCH as a predictor
  - 4 on the men subset with TOWN/RANCH as a predictor

Table 2: Significant predictors for each best-fit model

<table>
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<tr>
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<th>Formant</th>
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<tr>
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<td>TRAP</td>
<td>F2</td>
<td>MANDEL, GENDER</td>
</tr>
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<td>SAN</td>
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<td>GENDER</td>
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<tr>
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Note: y-axis is reversed for F1; lower on the figure = a lower vowel

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Note extent of /ɡɔʊz/ & /ɡɔʊz/ fronting; TRAP/BATH distinction

Discussion
- TRAP lowering and SAN fronting show 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 frontier 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 site of dialect contact between Californian and Southern Englishes.

Results

Methods
The demographic representation of the 44 speakers is not balanced:
- The TOWN/RANCH contrast is tested within the town group only.
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Results

Figure 2: Vowel Plots for Four Representative Arizonans

Figure 3: Town TRAP F1 by Gender & Year of Birth (no interaction)

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

Figure 5: SAN 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 and living in Flagstaff (N=6) 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.

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