Mapping the maintenance versus the merger of /a/-/ɔ/ in Moundridge Schweitzer German

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Overview

• Introduction to the project
• Previous research
• Moundridge Schweitzer German
• Present study
  • Research question
  • Participants/Data
  • Methodology
  • Findings
• Future directions
Introduction

• How does language change through language contact?

• Attempt to answer this question by studying heritage dialects of German.
  • In this study: potential changes in phonology brought about by language contact
Previous research

• Defining ‘convergence’:

  “In order to properly speak of convergence, the structural property that is ultimately the locus of change must already be manifested to some degree in both languages. Under this view, the result of convergence is that the languages in contact have become uniform with respect to a property that was initially merely congruent (i.e. similar), even if one language remains unchanged in the process.” (Bullock, Dalola, & Gerfen, 2006:96)

In other words…

- Languages in contact must have similar structures in order for convergence to be possible.
Previous research

However, the possibility for convergence to occur (a “convergence vulnerable environment”) does not mean convergence *will* occur.

- Bullock & Gerfen (2004) show evidence of phonological convergence with the dominant language in a moribund heritage dialect of French in Frenchville, PA.
  - Mid vowels [œ] (peu) and [ø] (peur) converged to American English rhoticized schwa, like in “bird”
- Bullock, Dalola, & Gerfen (2006) showed maintenance of vowel distinction in a convergence vulnerable environment of Frenchville French (low back a’s)
Moundridge Schweitzer German

- Community of German speakers in Moundridge, KS, who speak a heritage dialect called Moundridge Schweitzer German (MSG)
- Sister settlement in Freeman, SD, studied by Rein (1977)
  - Full phonetic description of Freeman, SD heritage dialect as it was in 1977
- Both settlements of Swiss Mennonite origin
Moundridge Schweitzer German

“most of its grammatical elements reflect an Eastern Palatinate heritage.”

“… it was during the time in the Eastern Palatinate region that the Moundridge Schweitzer dialect (and others related to it) acquired the phonological and morphological features common to this dialectal region.”

(Putnam, 2012)
Present study

- Hypothesis based on the definition of convergence:
  - There is a “convergence vulnerable environment” between Moundridge Schweitzer German (MSG) and American English, because both languages have /a/ and /ɔ/, which means there is potential for convergence.
  - In the variety of American English spoken around Moundridge, Kansas, /a/ and /ɔ/ display a merger.
  - In order to confirm convergence, we must first determine whether or not these vowels have also merged in Moundridge Schweitzer German.
### Research question

<table>
<thead>
<tr>
<th>/a/-/ʊ/ merge</th>
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<th>German</th>
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<tbody>
<tr>
<td>Freeman, SD</td>
<td>no</td>
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</tr>
<tr>
<td>Moundridge, KS</td>
<td>yes</td>
<td>?</td>
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Participants/Data

- 5 speakers (2 M, 3 F)
- Speak MSG with a few people but predominantly English
  - Do not pass language down to the younger generations
- Average age 77.5 years
  - Youngest 61
  - Oldest 93
- Recordings of free-speech conversation
Well - like Dan – when he was a little boy, went to school, and the teacher, the teacher, he stood up and he said, today we will, we will learn about the whale. The whale is the largest animal in the ocean and we know what the throat is, but so small – It is a large and powerful animal, but the thro-, the throat is so – like an orange.

And Dan stood up and he said, that can’t be, I read in the Bible where a whale swallowed Jonah and Jonah was sure larger than an orange.

And the teacher said, no, that’s how it was and Dan said, when I die and go to Heaven, I will ask Jonah how it all happened. And the teacher said, what if Jonha isn’t in Heaven, what if he went to Hell? Dan said, dunno, you can ask him.
Methodology

1. Imported recordings to Praat (formant measurements in the midpoint of vowel)
2. Lobonov normalization method
3. Generated scatter plots for individuals, as well as all speakers
4. Considered the following factors:
   - Word class
   - Interaction of frequency and word class (Phillips 2006)
   - Gender
   - Vowel duration
Results

1. All tokens: /a/ vs. /ɔ/
2. Word class
   - Function words: grammaticalized words, e.g. auxiliary verbs, conjunctions (Phillips, 2006)
   - Lexical words: carrying actual meaning, nouns, adjectives
3. Frequency
   - Lexical: high vs. low
   - Function: high vs. low
4. Gender: male vs. female
5. Duration: long vs. short
Function words: /a/ vs. /ɔ/
Lexical words: /a/ vs. /ɔ/
Function words: High vs. low frequency

hat (3356 per mil.)

manche (67 per mil.)
Lexical words: High vs. low frequency

Kaffee (52 per mil.)

gemacht (296 per mil.)
Male: /a/ vs. /ɔ/
Female: /a/ vs. /ɔ/
Duration: 45-142 ms vs. 143-240 ms

short

long
Findings

- Previous findings from our pilot study suggested a merger of /a/ and /ɔ/ in function words but a maintenance in lexical words.
- However, the full set of data shows evidence of a merger in both word classes.
- Merger by expansion (Labov, 1994)

In summary:
- Word class: no effect
- Frequency: no effect
- Gender: no gender difference
- Duration: no effect
## Research question: revisited

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Future directions

- Look at English production to draw further conclusions on the change happening: is this convergence with the dominant language, American English?
  - Do our speakers actually display the /æ/-/ɔ/ merger in English?
- Integrate data from 2011 to increase data pool
- Planned trip to Moundridge this month to collect more data
References


Thank you!
Female 3: Function words

Female 3: Lexical words
Male 1: Function words

Male 1: Lexical words