Variation in front round vowels across Western Armenians from Syria

Samuel Chakmakjian (he/him), Hossep Dolutian (he/him)
[sam.wɛ́l ʃakmakdʒjάn], [ho.sép dolɔtjάn]
Սամուէլ Չաքմաքճեան
Յովսէփ Տէօվլէթեան

samuel.chakmakjian@inalco.fr

L’Institut national des langues et civilisations orientales, Stony Brook University

N WAV50 - Stanford University
14 October 2022
TABLE OF CONTENTS

- INTRODUCTION
- BACKGROUND
- DATA AND RESULTS
- CONCLUSION AND NEXT STEPS
Armenian

• Understudied pluricentric Indo-European language (Cowe, 1992)
• Two standardized variants:
  ▶ **Eastern Armenian** - Rep. of Armenia, Iran, post-Soviet zone
  ▶ **Western Armenian** - Post-Ottoman zone (across the Middle East). Diaspora communities (Europe, the Americas)
• Two different phonological systems, very different consonant systems, largely similar vowel systems
**QUESTION**

- **What?** Variation in the production of phoneme /γ/ in Western Armenian
- **Who?** Syrian refugees
- **When?** Colloquial speech
Table of Contents

- Introduction
- Background
- Data and Results
- Conclusion and Next Steps
Vowels in Armenian

- There are 6 basic monophthong vowels that are phonemic (= can form near-minimal pairs)
  
  /i/ [pir] ‘club’ բիր  <pir>
  /e/ [per] ‘burden’ բեռ  <per>
  /ɑ/ [par] ‘word’ բառ  <par>
  /u/ [pur] ‘over’ փուռ  <p’ur>
  /o/ [por] ‘belly’ փոր  <p’or>
  /ə/ [pərel] ‘to spread’ փռել  <p’rel>

- Some vowel-glide sequences are attested, and probably not diphthongal

  /ɑj/ [pajd] ‘wood’ փայտ  <p’ayd>
  /uj/ [pujs] ‘plant’ բոյս  <p’oys>
Vowels in Armenian

- There are 6 basic monophthong vowels that are phonemic (= can form near-minimal pairs)
  
  `/i/  [pir]  ‘club’  բիր  <pir>
  `/e/  [per]  ‘burden’  բեռ  <peɾ>
  `/a/  [par]  ‘word’  բառ  <paɾ>
  `/u/  [pur]  ‘over’  փուռ  <p’uɾ>
  `/o/  [por]  ‘belly’  փոր  <p’or>
  `/ə/  [pərel]  ‘to spread’  փռել  <p’rel>

- Some vowel-glide sequences are attested, and probably not diphthongal
  `/ɑj/  [pɑjd]  ‘wood’  փայտ  <p’ayd>
  `/uj/  [pujs]  ‘plant’  բոյս  <p’oys>

- A complicated sound is the digraph ḡl <iw> ...
  `/γ/  [pγɾ]  (name of the letter փ)  փհեր  <p’iwɾ>
  ... OR  [pujɾ]
The vowel /y/

- Historically, the oldest attested Armenian variety is Classical Armenian (CA).
- CA had a digraph ḫl < iw > that was probably some sort of diphthong like [iu̯] when pre-consonantal.
- E.g., the word ‘guest’ ḥlŋ < hiwr >
  - CA  [hiu̯ɾ]
The vowel /y/

- Historically, the oldest attested Armenian variety is Classical Armenian (CA).
- CA had a digraph իւ <iw> that was probably some sort of diphthong like [iɯ] when pre-consonantal
  - e.g., the word ‘guest’ հիւր <hiwr>
    - CA  [hiu̯ɾ]
    - EA  [hjʊɾ]
    - WA  [hʏɾ]
- Two descendants treat this sound differently
  - Eastern Armenian changed [iɯ] to [ju]
  - Western Armenian changes [iɯ] to [ɣ] prescriptively
The vowel /y/

- Western Armenian digraph իլ <iw> is prescriptively pronounced [Y].
- In colloquial speech in its place we see a vowel-glidediphthong [uʃ~Yʃ] or a glide-vowel diphthong [ju~jY]

**Orthography** | **Prescriptive pron.** | **Alternate pronunciations**
--- | --- | ---
հիւր <hiwr> | [hYɾ] | [hujɾ], [hjɾ]
ձիւն <jiwn> | [t͡sYɾ] | [t͡sujɾ], [t͡sjun]
միւս <miws> | [mYɾ] | [mujs], [mjus]

- Some speakers hyper-correct prescriptive [uʃ] to [Y] (ex. prescriptive քոյր [kʰuʃɾ] ‘sister’ gets hyper-corrected to [kʰYɾ])
- In short, the /Y/ acts different from other high vowels (Khanjian, 2011)

---

1But why did [iu] change to [Y] instead of [ju] or anything else? Possibly from contact with Turkish and French, both prestige languages that have a front round /Y~ɣ/ which contrasts with back round /u/
TABLE OF CONTENTS

- Introduction
- Background
- Data and results
- Conclusion and next steps
1. Elicitations
   ▶ Small corpus of elicited utterances with (Western Armenian speaking) Syrian immigrants from Aleppo, now residing in Armenia
   ▶ 9 speakers (5F, 4M), 10hrs
   ▶ Speakers 18-42 years old
   ▶ Recorded in Yerevan April/May 2022

2. Interviews
   ▶ Video interviews with Western Armenian refugees originating from different cities and villages in Syria
   ▶ 104 speakers, 90hrs
   ▶ Wide range of age, city of origin, sociolinguistic profile
   ▶ Recorded mostly in Yerevan 2018-2022

• For this task, focus on the elicitation data as a pilot
During an elicitation experiment, we asked participants to pronounce some words in isolation.

Two of those words have a prescriptive [y]²:

- ‘lion’ [aɾyd͡z] <aɾiwc>
- ‘ant’ [məɾtʃyn] <mrǯiwn>

A speaker would say the words ‘lion’ and ‘ant’ a many times over the course of an hour.

²Pictures taken from Wiktionary for ant and lion.
**Descriptive Statistics**

- For the words ‘lion’ and ‘ant’, Samuel impressionistically heard a LOT of variation in how 9 people said these two words.

- ‘lion’ [aɾyɗz]  
  - ‘ant’ [məɾʃyn]  
  - cf. the word ‘clock’ [ʒəmatsʰuʃts] was almost always pronounced [uʃ]
  - More inter-speaker variation for ‘lion’ than ‘ant’
  - PS: no obvious effects from gender, minimal effects of age (see appendix)
Phonetic analysis

• The previous slides are based on what we (Samuel) impressionistically heard.
• Let’s see what the variation looks like phonetically:³

³Thanks to scripts and code from John Riebold and Joey Stanley
Phonetic Analysis

- Distribution of target vowels averages by word (c = clock; a = ant; l = lion)
Phonetic Analysis

- Distribution of perceived vowels for ‘ant’ /mərtʃyn/
Phonetic Analysis

- Distribution of perceived vowels for ‘lion’ /arydz/
TABLE OF CONTENTS

- **Introduction**
- **Background**
- **Data and results**
- **Conclusion and next steps**
CONCLUSION AND NEXT STEPS

- Looked at variation in production of high round vowel /ʏ/
- Process our second corpus, and extract more vowels!
- A lot of our effort has been collecting + analyzing data using simple acoustic measurements
- Before we jump into our much larger corpus (~90hrs), we want to make sure that our measurement/analysis methodology from our pilot is sound

Q1 Do high round vowels present any phonetic anomalies that make them special for variationist sociophonetics?

Q2 Is there any close-enough precedent on round-vowel sociophonetic variation?
   ➤ (e.g., a suggested pipeline to replicate, an optimal normalization, or a bibliography)

😊 feel free to email before we do something wrong :D
samuel.chakmakjian@inalco.fr

● Slightly higher percentages of prescriptive [y] in for both ‘ant’ and ‘lion’ among older speakers
● Sample size is too small to tell - more vowels!
- No obvious effect of gender
## Descriptive Statistics

<table>
<thead>
<tr>
<th>Word/Vowel</th>
<th>ju</th>
<th>jy</th>
<th>u</th>
<th>uj</th>
<th>u</th>
<th>oj</th>
<th>y</th>
<th>yj</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>'ant' /mərtʃyn/</td>
<td>7</td>
<td>6</td>
<td>1</td>
<td>53</td>
<td>6</td>
<td>73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'lion' /ɑɾydʒ/</td>
<td>5</td>
<td>3</td>
<td>31</td>
<td>1</td>
<td>18</td>
<td>6</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>clock /ʒamatsuʃtʃ/</td>
<td>4</td>
<td>80</td>
<td>1</td>
<td>4</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


 VARIABLES IN SECOND CORPUS

- See if the variation is lexical, using high-frequency words such as ‘village’ <kiwł> [kʰyʁ] and ‘other’ <miws> [mys]
- The oldest speaker in the pilot was 42, and produced some of the most divergent vowels, in expanding the scope of speakers, we can check for:
  - Generational trends
  - Socio-economic status & education
  - City of origin (all of the participants of this presentation were from Aleppo)