Vowel-consonant harmony in Uyghur

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Overview

- Uyghur (Eastern Turkic) exhibits a typologically rare pattern of vowel-consonant interactions.
- The velars /g/, /k/ and uvulars /ɢ/, /q/ participate in backness harmony.
- This V-C interaction will be captured by Agreement by Correspondence.

Data

<table>
<thead>
<tr>
<th>Vowels</th>
<th>Relevant consonants</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-bk]</td>
<td>velar /g/, /k/ and uvular /ɢ/, /q/ do not participate, lack a uvular /velar counterpart.</td>
</tr>
<tr>
<td>[-zd]</td>
<td>/ŋ/ does not participate in backness harmony.</td>
</tr>
<tr>
<td>[+b]</td>
<td>/ɛ/ /=/ and uvular /ø/, /o/</td>
</tr>
<tr>
<td>[+k]</td>
<td>velar /g/, /k/ and uvular /ɢ/, /q/ do not participate, lack a uvular /velar counterpart.</td>
</tr>
<tr>
<td>[+t]</td>
<td>/ɛ/ /=/ and uvular /ø/, /o/</td>
</tr>
</tbody>
</table>

Vowel harmony

- Affix vowels surface as either [+bk] or [-bk] depending on the vowel backness in the root:
  1. kynler ‘day-PL’
  2. adeler ‘man-PL’
- The vowels /i/ and /e/ are neutral to backness harmony and appear with both [-bk] and [+bk] vowels in the stem:
  3. kuerler ‘burn’
  4. kyseri ‘day by day’
  5. keler ‘burn’

Consonant harmony

- Some suffixes feature velar/uvular consonants that alternate according to backness:
  1. jex-ɛ ‘place-DAT’
  2. kylfɛ ‘power-DAT’
  3. kurn-ɛ ‘seeing’
  4. jyxyɛr-ɛ ‘running’

Analysis

The Agreement by Correspondence mechanism

- ABC (Rose & Walker 2004; Hansson 2001) establishes agreement between segments via output-output-correspondence relations based on similarity.
- Similarity between segments is defined by constraints of the CORR[1] family: Segments sharing a given feature enter a correspondence relation.
- CORR[1] ((i) for each pair of segments specified for [dorsal], being closest neighbours and not in a correspondence relation.
- Harmony is regulated by the IDENT[1] constraints: They determine the feature that corresponding segments have to agree for.
- Vowel- and velar/uvular consonants are assumed to be [dorsal] (Sagey 1986).

Vowel / consonant harmony

- This mechanism can account for simple vowel and consonant harmony.
  1. ade-ler ‘man-PL’
  2. kiʃ-ɛ ‘human-ADV’

One or two harmony processes?

- Evidence for two distinct harmony processes comes from “inconsistent roots” (with segments of different [±bk] specification):
  1. Affix vowels agree with the last harmonic root vowel in backness.
  2. Affix consonants agree with the closest harmonic/hammonizing segment.
  3. An affix consonant adjacent to both a participating vowel and consonant agrees with the consonant.

Vowel-consonant interactions

- \( \text{ID}_{\text{VC}} \geq \text{ID}_{\text{CV}} \)
- \( \text{ID}_{\text{VC}} \geq \text{ID}_{\text{CC}} \) follows from the fact that the consonant does not agree with the closest harmonic consonant, but with the closest harmonic vowel instead.
- \( \text{ID}_{\text{VC}} \geq \text{ID}_{\text{CV}} \) follows from the fact that the harmonizing vowel does not agree with a closer harmonic consonant, but with a more distant harmonic vowel instead.

Concluding remarks

- Uyghur features the rather rare interaction of backness harmony between vowels and velar/uvular consonants.
- “Inconsistent” roots reveal that there are two separate but interacting harmony processes: vowels agree with vowels, while consonants agree with the closest participating segment.
- This interaction can be viewed as argument for vowel and consonant harmony being rather similar and not fundamentally different.
- ABC could account for the observed patterns in a straightforward way: [dorsal] is the feature of correspondence and [+back] the harmonic feature.