Front and center: Neutral vowels in Hill Mari
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Introduction
The proposed talk concerns vowel harmony and, more specifically, neutral vowels in the Hill (Western) Mari language (ISO 639-3: mrj) spoken in the Gornomariysky district of the Mari El Republic, Russian Federation. Hill Mari is closely related to a better studied and more widely spoken Meadow (East) Mari and belongs to the Uralic family (along with Finnic, Mordvinic, Saamic, and other languages, see Janhunen 2009 for more details). My data come from descriptive sources (primarily Alhoniemi 1993; Bradley 2014) as well as field experience in the Gornomariysky district (summer 2016). Mari uses a modified Cyrillic script, so I adopt IPA for the sake of easier presentation.

Vowel and vowel harmony
Hill Mari contrasts 10 vowels presented below (as opposed to Meadow Mari, which has an inventory of 8 vowels), deploying oppositions in height, backness, and roundedness.

(1)

\[
\begin{array}{cccc}
& i & y & u \\
est & e & ø & ø \\
& æ & æ & æ \\
\end{array}
\]

Like many other Uralic languages (and, indeed, Proto-Uralic, see Janhunen 1982 among many others), Hill Mari demonstrates a consistent backness harmony both within morphologically simplex units (with sporadic exceptions) and within morphologically complex words (again, there are suffixes that resist harmony, e.g. the plural -flæ; below I assume the default case where harmony applies, unless otherwise stated). Alhoniemi (1993: 24) distinguishes three classes of vowels according to their harmonic behaviour:

(2)

<table>
<thead>
<tr>
<th>Hintervokale</th>
<th>/æ ø ø ø/</th>
</tr>
</thead>
<tbody>
<tr>
<td>(starke) Vordervokale</td>
<td>/æ ø y ø/</td>
</tr>
<tr>
<td>neutrale Vokale</td>
<td>/e i/</td>
</tr>
</tbody>
</table>

At first glance, this system is not unlike the one found in Finnish (see Suomi et al. 2008: 51 ff.; Nevins 2010: 69 ff.) with the exception of the two schwas in Hill Mari. However, the patterns of harmony found in Hill Mari differ from those in Finnish. Disyllabic words adhere to the patterns in (3); U stands here for /æ ø ø ø/, Y for /æ ø y ø/, and I for /e i/:

(3)

\[
\begin{array}{cccc}
U & *Y & U & I \\
*Y & Y & Y & Y \\
*Y & Y & Y & I \\
\end{array}
\]

As (3) shows, U-vowels expectedly cannot co-occur with Y-vowels, yet more surprisingly they cannot follow I-vowels (*IU), so that the alternating comparative suffix -la: -la: cannot attach to a stem with an I-vowel in its back form, e.g. not *pikf-la, but pikf-la: 'like an arrow'. Now I turn to the trisyllabic patterns that involve I-vowels (the rest follow the logic explained above) and present them in (4).

(4)

\[
\begin{array}{cccc}
U & *Y & U & I \\
U & Y & Y & Y \\
*Y & I & Y & I \\
*Y & I & Y & Y \\
\end{array}
\]
What we see here is the simple fact that a U-vowel may never follow an I-vowel in addition to the restriction that it may not be adjacent to a Y-vowel. In fact, back and front vowels can occur within one phonological word when they are separated by a neutral vowel (UIY, not in the reverse order *YIU).

**Feature specifications**

In his analysis of Finnish, Nevins (2010) claims that the vowels /i/ and /e/ are transparent to vowel harmony for the reason they are not contrastive, and we do not find vowels like */ɯ/ and */ɤ/ to contrast with them (see also Kiparsky 1985 or a very recent update by Hall 2018). Hill Mari /i/ and /e/ are clearly not transparent contra the traditional descriptive label applied to them by Alhoniemi, otherwise patterns like *UIU would be possible. Thus, another feature specification is required for them.

I propose that, assuming the Search Principle (Nevins 2010), both Y-vowels and I-vowels are specified in the lexicon as [-back] as opposed to U-vowels that are [+back]. The search proceeds leftwards, and the [+back] feature is copied by an underspecified vowel in an alternating suffix (or elsewhere), deriving the patterns in (3) and (4). The key difference between Y-vowels and I-vowels with regards to the [+back] feature lies in the mere fact that the former can be underspecified in the lexicon and alternate with U-vowels, whereas the latter cannot, always remaining [-back] (and non-contrastive, for that matter). In other words, you can still be a donor even if you do not have a twin (although it is equally possible that Y-vowels are assigned [-back] by default when they follow I-vowels).

An alternative proposal could be that only [+back] is specified in the lexicon for U-vowels and copied by underspecified vowels, whereas [-back] is assigned to Y-vowels by default when no [+back] feature is found (cf. Nevins 2010: 40, for instance). In that case the unspecified I-vowels would have to bear a blocking feature to prevent harmony in patterns like *UIU. This kind of argument does not seem felicitous for when it comes to interactions with consonants, I-vowels behave much like Y-vowels in that they palatalize the preceding consonant. In fact, a recent development in the phonology of Hill Mari has been the introduction of contrastive /t/ absent in Meadow Mari (Bradley 2014: 48), which is found before both Y- and I-vowels, thus supporting the [-back] specification of both classes.

**References**


