The emergence of labial harmony in Old Hungarian: a Government Phonology analysis

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In addition to palatal harmony, Modern Hungarian (MoHu) is also generally regarded as exhibiting some form of labial harmony (e.g. Siptár & Törkenczy 2000: 63–74). The latter, however, is restricted in an unexpected way: it only applies to short mid front suffix vowels, resulting in the so-called ternary suffixes, seen in the superessive forms [ha:z-o̲n] 'house SUP', [tøk-ø̲n] 'pumpkin SUP' vs. [sɛm-ɛ̲n] 'eye SUP'. Historically, the two processes also differ: while palatal harmony is reconstructed already for Proto-Uralic, labial harmony only emerged in the Old Hungarian period (OHu, 11th–15th c.). The latter follows diachronically on a series of changes that introduced front rounded vowels. One of these, surprisingly, involved an extensive but variable spreading of rounding in the opposite direction, i.e. regressively, starting from final vowels that were themselves deleted eventually (Losonczi 1915, Kiss & Pusztai 2003). In this talk, we will argue that it is possible to make sense of the apparent change of direction of labial harmony if, following the Government Phonology (GP) analysis of Polgárdi & Rebrus (1998), we do not regard the MoHu process as spreading, but as delinking. Then, OHu regressive labialisation and MoHu progressive delabialisation can be understood as different responses to the same requirement of licensing of the marked combination of frontness and rounding in a weak position.

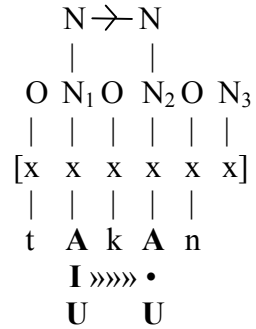
The synchronic pattern. (1a–b) show examples of the suffix vowel alternations found in palatal vs. labial harmony in MoHu.

(1) a. -[u̲l/y̲l] 'ESS', -[u̲:/y̲:] 'ADJ', -[nɔ̲k/nɛ̲k] 'DAT', -[na̲:l/ne̲:l] 'ADESS', -[bo̲:l/bø̲:l] 'ELAT'
b. -[o̲n/ø̲n/ɛ̲n] 'SUP'

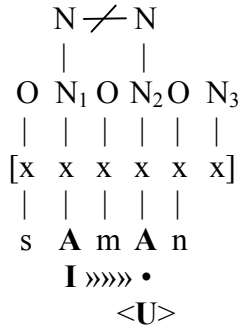
Apart from the non-alternating neutral vowel suffixes (containing [i], [i:], and [e:]), the only vowels missing from (1a) are the short mid pair [o/ø]. And these are exactly the vowels which are found in the only type of ternary suffixes, [o/ø/ɛ], in (1b). Polgárdi & Rebrus (1998) claim that this is not a coincidence, and they derive the ternary alternation [o/ø/ɛ] from the lack of a binary alternation [o/ø] as follows.

GP analysis. In GP, vowels are made up of the three elements |**I**| (frontness), |**U**| (rounding), and |**A**| (lowness). The lexical representation of a ternary suffix contains the back vowel [o] |**A U**|, which results in [ø] |**A I U**| via palatal harmony, by acquiring |**I**|. Front rounded vowels are universally marked, and in some languages their appearance in a weak position requires external support, expressed by licensing in GP. In MoHu, the combination of the elements |**I**| and |**U**| in a suffix vowel needs to be licensed by the same combination in the stem vowel, indicated by an arrow on the nuclear projection (P^1) in (2). |**I**| is shared between the vowels as a result of palatal harmony, shown by »»»» and a bullet. In (2a) the combination is licensed, but in (2b) the stem vowel doesn't contain |**U**|. As a result, licensing fails, and the |**U**| of the suffix delinks, signalled by angle brackets. Long vowels start a new licensing domain, therefore the [ø:] in e.g. [sem-bø:l] 'eye ELAT' does not become unrounded. Finally, unrounding of [y] is prevented by an independent constraint prohibiting modification of the head-dependent relationships within a segment. (We'll discuss (3) below.)

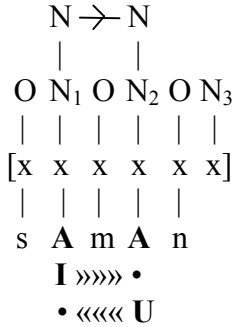
(2) a. [tøk-ø̲n]



b. [sɛm-ɛ̲n]



(3) [søm-ø̲n]



The diachronic pattern. The vowel system of early OHu (Kiss & Pusztai 2003) did not contain [ø], and the [i] – [y] contrast had very low functional load, it was probably highly variable (cf. PFU **kit*V or **küt*V 'middle, gap' > Hu [køz] as per Benkő 1993: s.v. *köz*). Thus, most actual instances of front rounded vowels result from internal development.

During the OHu period, many long vowels developed via various lengthening changes and contractions affecting Pre-OHu [Vβ, Vɣ, Vj] (4). Certain sound changes resulted in rounded vowels (5); and loanwords also increased the number of front rounded vowels (6).

(4) *[fiβ] > *[fiɥ] > [fy:] 'grass', *[fɛɣ] > *[fɛɥ] > [fø:] 'head', *[loβ] > *[low] > [lo:] 'horse'
(5) [ɛ, e, a] > [ø, o] / _lC[cor] e.g. [hala:l] 'death' vs. [holt] 'dead'; [tɛlɛ] 'full' vs. [tølt] 'fill'
(6) [yvɛg] 'glass' Iranian, [økør] 'ox' Turkic (all with variable vowels)

The labialisation of short final vowels followed by regressive spreading of rounding from these vowels was also a variable but robustly attested phenomenon (Losonczi 1915) (7a).

(7) a. [beregy], [bereg] ([berek]), [beryg]/[berøg], [byryk]/[børøk] 'riverside, grove'
b. [fɛhe:ry] 'white', [fɛhe:rɛ-k]/[fɛhe:rø-k]'white-PL'

The short final vowels themselves were eventually deleted. When followed by a suffix they remained and were variably levelled (7b). This led to pervasive but systematic variaton where the regressive spreading implied paradigmatic levelling, but not vice versa, as in (8) (the example is [pyʃpøk] 'bishop' + PL, originally *[piʃpeke-k] from SG *[piʃpeky]).

(8) attested variation in the forms of [pyʃpøk] 'bishop' + PL

	levelling	no levelling
regressive labialisation	[piʃpøkøk], [pyʃpøkøk]	—
no regressive labialisation	[piʃpekøk]	[piʃpekek]

Finally, non-round variants of suffix vowels appeared following non-round stem vowels in forms like [ɟɛrmek-hez] 'child ALLAT', from an etymological round vowel [ɟɛrmek-høz] (< [-huz] < PUg **kuć*- 'side'). This is identical to the MoHu pattern of unrounding, analysed in (2b). The result of regressive labialisation was lexicalised in some examples in MoHu, as in the one in (8), whereas in other examples it wasn't, as in those in (7).

GP proposal. The fundamental question posed by regressive labialisation is how and why such a process would emerge in a language already exhibiting progressive (palatal) harmony. And if it did emerge, how and why it changed its direction later. Such changes of direction are not characteristic of processes of vowel harmony. However, we've already seen above that it makes sense to analyse labial harmony in MoHu in terms of delinking instead of spreading. The key of Polgárdi & Rebrus's (1998) analysis is the requirement that the marked combination of the elements |**I**| and |**U**| in a suffix vowel must be licensed by the same combination in the stem vowel. When such licensing is not available, delinking ensues.

We propose that the same licensing requirement already existed in OHu, only the response to its failure was different. Instead of delinking of |**U**| in the weak position, as in (2b), another option is to spread |**U**| to the strong position, as in (3), enabling in this way the licensing required. This is thus not classical harmony, but rather an example of strengthening, commonly involving assimilation. The subsequent change from regressive labialisation to progressive delabialisation can then be understood as the choice of weakening in a weak position instead of the earlier strengthening observed in a strong position, to satisfy the same licensing requirement.

References: Benkő, Loránd (ed. 1993) *Etymologisches Wörterbuch des Ungarischen*. Budapest: Akadémiai. ● Kiss, Jenő & Ferenc Pusztai (eds. 2003) *Magyar nyelvtörténet*. Budapest: Osiris. ● Losonczi Zoltán (1915), Az ö-zés története. *Nyelvtudományi Közlemények* 44: 373–406, 45: 45–116, 195–266. ● Polgárdi, Krisztina & Péter Rebrus (1998) There is no labial harmony in Hungarian: A Government Phonology analysis. In Casper de Groot & István Kenesei (eds.), *Approaches to Hungarian. Vol. 6. Papers from the Amsterdam Conference*, 3–20. Szeged: JATEPress. ● Siptár, Péter & Miklós Törkenczy (2000) *The Phonology of Hungarian*. Oxford: OUP.