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On the role of /l/-vocalisation in Hungarian vowel harmony

In this paper, a hitherto uninvestigated part of Hungarian phonetics and loanword phonology is examined, namely, the interplay of /l/-vocalisation and Hungarian vowel harmony in stems containing a syllabic /l/.

The initial problem consists in the following. In Hungarian, there are no syllabic consonants, and word-final consonant–/l/ clusters are almost completely absent (cf. sonority hierarchy, by Clements 1990). However, some loanwords contain such (word-final) syllabic /l/ which inevitably trigger the vowel harmony, in which vowels can be classified as either back (B), front (F), or neutral (N). On the one hand, in the case of suffixes showing three-way alternation, [BL] stems (e.g. /gu(ː)gl̩ː/ <Google>) show large variation (/gu(ː)gl̩ː-hoz/ ~ /gu(ː)gl̩ː-høz/ 'Google-ALL'). On the other hand, [NL] stems (e.g. <Lidl>) seem to trigger front alternants mainly (/lidl̩ː-høz/ Lidl-ALL') while the neutral alternant (ʔ/lidl̩ː-hɛz/) appears to be marginal (Blaskovics & Ittzés 2022). Another observation of the latter study was that younger speakers tended to select front alternants mostly while older speakers showed variation to a greater extent.

The central question in Blaskovics & Ittzés (2022) was what consequences the acoustic realisation of the syllabic /l/ has on the affixation of Hungarian loanword stems containing a syllabic /l/. It was concluded based on the experimental data that even if there was a reduced epenthetic vowel (V) occurring before the /l/, the suffix alternant selected was statistically independent from it. Some preliminary investigations into the coarticulation of the first vowel in the stem and the optional V showed that this cannot explain the emerging harmonic patterns, either.

Cross-linguistically, it is not rare for /l/ in coda position to be (1) velarised or (2) vocalised (see e.g. Turton 2017 for English). In Hungarian, the deletion (or vocalisation) of /l/ in coda position is common, too (cf. Rácz et al. 2012), especially for younger speakers. In the case of syllabic /l/, deletion could not occur as its syllable would be dissolved. Vocalisation is possible, however. Firstly, even if it is syllabic, a part of /l̩ː/ could be parsed into coda since in the case of the superessive suffix *-(O)n*, the vowel-initial alternants are used. Secondly, in the data by Blaskovics & Ittzés (2022), there were also many instances of non-epenthetised but fully vocalised forms, which were not analysed in detail in the study, but regarded as [l] segments. It is also to be noted that the formant structure of [l] is the most similar to that of the front vowel [ø] as it can be seen below (the assertion and the data are from Markó 2017):

	[ø]	[l]
F_1 (Hz)	470 (m) / 520 (f)	300-400
F_2 (Hz)	1300 (m) / 1550 (f)	1300-1600

Therefore, a new experiment was designed to investigate (i) whether there is a clear generational distribution both in /l/-vocalisation and in the selection of harmonic suffix alternants, and especially (ii) whether the vocalisation of /l/ could determine the patterns in vowel harmony.

Data was collected from 8 speakers (4 men, 4 women—4 under 25 years, 4 over 50 years). They were asked to pronounce 14 target words (with both back, neutral, and front vowels in the first syllable) in syntactic contexts that enforced the nominative (3 instances), the accusative (-t), the superessive (-on/-ɛn/-øn), and the allative (-hoz/-hɛz/-høz) forms (1 instance each). This resulted in 672 target sentences (while having used the same amount of fillers).

It was also ensured that one can control for the syllabicity of /l/ on the basis of the "yes/no question" test (Siptár & Törkenczy 2000). The larger quantity of stem forms served for the separate study of /l/-vocalisation so that it could not be influenced by speech production planning (including selection of harmonic patterns).

The phonetic analysis was conducted in Praat (Boersma & Weenink 2022), the statistical one in R (R Core Team 2022). In the former (analysis of /l/-vocalisation), antiformants, intensity as well as indicators of rounding were exploited.

As for the results, the acoustic similarity of [l] and [ø] was reinforced (just like in Blaskovics & Ittzés 2022). The preliminary findings replicated previous results that (i) younger speakers are more prone to pronounce /l/ as vocalised. More strikingly, the participating younger speakers hardly ever opted for back (or neutral) alternants, compared to Blaskovics & Ittzés (2022) where the dominance of front alternants was not so extreme. In contrast, older speakers showed a much larger extent of variation. (ii) At first, the connection between /l/-vocalisation and the harmonic patterns seems to be corroborated, too, which could imply the following interpretation of the initial problem above.

In the case of younger speakers, the greater extent of vocalisation may contribute to the increasing tendency to favour *front* alternants whereas the non-vocalised /l/ in the case of older speakers could be *transparent* to vowel harmony—as it is a consonant after all. Yet, the fact that the latter still select mostly front alternants after [NL] and [FL] stems has to be accounted for: In stems containing only neutral of front vowels before the last syllable, it is always the last syllable which determines the harmony, and in the current case, the nucleus thereof is the /l/, which has to trigger some harmonic alternant, in turn. That it is exactly the front alternant which is selected might be due to the acoustic similarity.

"Supported by the ÚNKP-22-1 New National Excellence Program of the Ministry for Culture and Innovation from the source of the National Research, Development and Innovation Fund."

References

- Blaskovics, Ákos & Ittzés, Ambrus (2022). Ybl a Google-ön. A szillabikus *l* és a magyar magánhangzó-harmónia esete. In *Beszédtudomány / Speech Science 3(1)*, 225–272. DOI: https://doi.org/10.15775/Besztud.2022.225-272
- Boersma, Paul & Weenink, David (2022). *Praat: doing phonetics by computer* [Computer program]. Version 6.3. 2022. november 15. http://www.praat.org/ .
- Clements, G. N. (1990). The role of the sonority cycle in core syllabification. In *Papers in laboratory phonology I: Between the grammar and physics of speech*, 283–333. Cambridge University Press.
- Markó, Alexandra (2017). Hangtan. In Tolcsvai Nagy, Gábor (*ed.*): *Nyelvtan.* Budapest: Osiris.
- Rácz, Péter & Sóskuthy, Márton & Szeredi, Dániel (2012). *A phonetic study of l-deletion in Hungarian*. Poster presented at LabPhon 13, Stuttgart, Germany. Access: https://wp.nyu.edu/szeredi/wp-content/uploads/sites/3245/2015/12/labphon_poster_final.pdf (dowloaded 28 February 2023).
- R Core Team (2022). *R: A language and environment for statistical computing.* R Foundation for Statistical Computing, Vienna, Austria. https://www.R-project.org/ .
- Siptár, Péter & Törkenczy, Miklós (2000). *The phonology of Hungarian*. Oxford: Oxford University Press.
- Turton, Danielle (2017). Categorical or gradient? An ultrasound investigation of /l/-darkening and vocalization in varieties of English. *Laboratory Phonology* 8(1):13, 1–31.