

# OPEN SESAME, OR: INTERACTIONS OF VOWEL HEIGHT AND LENGTH IN HUNGARIAN

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they heavily interact with each other

tested against the intricate system of Hungarian vowels

## GP2.0 (Pöchtrager 2006 et seq.):

- a representation-based theoretical framework
- phonological structure: a hierarchical configuration represented by tree diagrams
- heads project to form higher-level constituents, whose positions contract various relations like (p-)licensing or m-command
- terminal nodes are either annotated with a melodic prime or are empty
- melody: a reduced set of Elements; **AIU** -> **IU**
- vowel height (old **A**) is taken to be structural: additional layers with (empty) nodes, cf. (1)
- ➔ **extra empty structure ~ openness**
- the height effect in VH (Pöchtrager 2018)
- + **extra structure coming with length**, cf. (2)
- this extra structure: room for “coda” C’s; else, it needs to be licensed (cf. Pöchtrager to appear: distribution of tense/lax)
- openness and length contribute to structural complexity, while the elements **I** and **U** contribute to melodic complexity, cf. (3)
- **both length and height are taken to be manifestations of extra (empty) structure**
- ➔ **they are expected to heavily interact with each other**

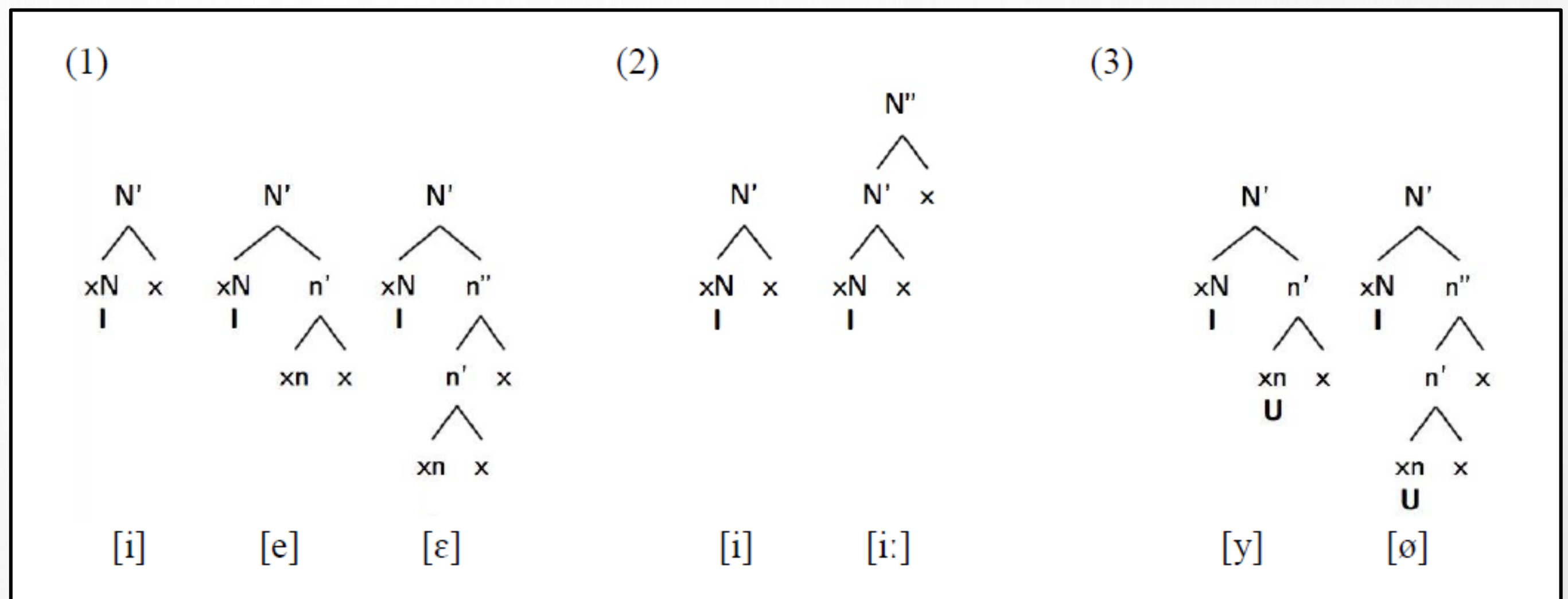
(following on from Balogné Bérces 2018)

## The vowel system of (Educated Colloquial) Hungarian

i [i]	ü [y]	u [u]	í [i:]	ű [y:]	ú [u:]
ö [ø/œ]	o [o]		ő [ø:]	ó [o:]	
e [ɛ]	a [ɔ/ɒ]		é [e:]	á [a:]	

## evidence for “phonologically low”:

- Low Vowel Lengthening (*macska* – *macskát* ‘cat NOM-ACC’, *kecske* – *kecskét* ‘goat NOM-ACC’) (Siptár--Törkenczy 2000) (100% productive, no exceptions, cf. *Obama* – *Obamát* ‘Obama NOM-ACC’)
- in V:CC## and V:C.C, V: is low (just a few exceptions like *tóaszt* ‘toast’) (*érc* ‘ore’/ *érték* ‘value’, *márt* ‘dip’/ *árpa* ‘barley’) (Siptár--Törkenczy 2000)



## LOW VOWELS

- empty structure ➔ dispreferred in hiatus:
  - partly borne out:
    - all long vowels (not just low ones) are dispreferred in hiatus
    - height-sensitive suffixes avoid hiatus with low Vs: ✓ *szomorúak* / ?*szomorúk* ‘sad PLU’ vs. \**csúnyúak* / ✓ *csúnyák* ‘ugly PLU’
- empty structure ➔ dispreferred word-finally:
  - borne out: very few examples with final low Vs (roots e.g., *burzsoá* ‘bourgeois’, *kordé* ‘cart’; *fá* ‘fa’, *lá* ‘la’, *lé* ‘juice’, *tré* ‘crappy’, and a few suffixes)
- preferred in (medial) “superheavy” syllables: their empty nodes are able to accommodate the “coda” C:
  - borne out: only low Vs in monomorphemic V:CC## and V:C.C; recall *érc*/ *érték*, *márt*/ *árpa* etc. vs. \**órc*, \**írpi* (just a few counterexamples)<sup>1</sup>

## MID VOWELS

- long mid vowels: structural complexity + melodic material (their structure is partly filled by melody) ➔ more easily tolerated in hiatus and word-finally:
- borne out:
    - \*-o/ö# (even loans lengthen the final V, e.g. *libretto* [libretto:])
    - height-sensitive suffixes exhibit variation in hiatus with mid Vs, cf. e.g., *bántó(a)k* ‘offensive PLU’

<sup>1</sup> Similar phonotactic effects can be identified in English (see, e.g., Pöchtrager 2006); also cf. an analysis along the same lines in Voeltzel (2016) for V[-high] + preaspiration.

## HIGH VOWELS

- always contain **I** or **U** ➔ related to the issue of the asymmetry between **I** and **U** (also manifesting itself in the behaviour of **mid and low vowels**)
- GP2.0: **I** binds **U** ➔ asymmetries:
  - with height-sensitive suffixes, [i] deletes suffix vowel (e.g., \**kicsiék* / ✓ *kicsik* ‘small PLU’, cf. **LOW VOWELS**)
  - final high vowels may be short or long with [u] and [y] (*falu-* ‘village’ and *ágyú-* ‘cannon’ type words) but [i:] is very rare (similarly to -á/é (see **LOW VOWELS**))
  - element **I** is unable to make the vowel *phonologically* mid: [ɔ a: ɛ e:], as opposed to [o o: ø ø:], all count as *phonologically* low (e.g., [a:] and [e:] are both rare word-finally, are both found in superheavy syllables, etc., [o:, ø:] aren’t) (cf. **LOW VOWELS**)
  - element **I** seems to contribute less to melodic complexity (as a result, [u:] = [y:] in distribution)

**These phenomena are not exclusively phonological but governed to varying degrees by morphology. But morphonology operates over phonological representations, referring to phonological terms (without being phonological itself), and it is these phonological terms that we focus on. We are aware that some of the data are more complex than presented and there are problem cases resisting an explanation, but we submit that the strong tendencies we observe can be linked to the phonological shape of vowels.**

**References:** Balogné Bérces, K. 2018. *Minőség és mennyiség a magyar magánhangzók szerkezetében*. Invited lecture delivered as part of the event “Vágó Róbert köszöntése”, celebrating Robert M. Vago (CUNY) on his 70th birthday, RIL HAS, 3 April 2018. ⇨ Pöchtrager, M. A. 2006. *The structure of length*. PhD diss., University of Vienna. ⇨ Pöchtrager, M. A. 2018. *Transparent vowels: Small cogs in large machines*. Paper presented at OCP 2018. ⇨ Pöchtrager, M. A. To appear. *Tense? (Re)lax. A new formalisation for a controversial contrast*. *Acta Linguistica Academica*. ⇨ Siptár, P. & Törkenczy, M. 2000. *The phonology of Hungarian*. Oxford: Oxford University Press. ⇨ Voeltzel, L. 2016. *Preaspiration of singletons in Faroese*. In: K. Bellamy et al. (eds.): *ConSOLE XXIII: Proceedings of the 23rd conference of the Student Organization of Linguistics in Europe*. Leiden: Leiden University Centre for Linguistics. 530–553.