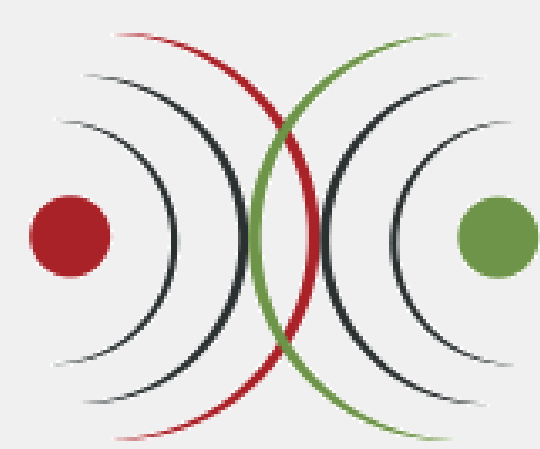




The Root-Like Nature of Words with Truncated Stems

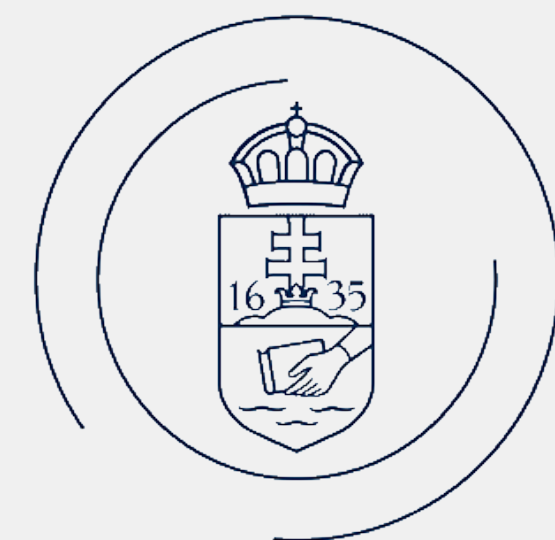
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Ordinary vs. truncative morphology in Hungarian

① ordinary morphology essentially

- concatenative: stem+suffix allowing systematic allomorphy (max. 1 V deletable)
- stem-controlled vowel harmony (e.g., *elem-et*, *cimbalom-ot*, *történel(e)m-et*, *puh(a)-ul*, *somor(ú)-od-ik*)

② truncative morphology

- no upper limit to what can be deleted from the stem (two-syllable template)
- vowel harmony suspended (only harmonically invariant suffixes) (e.g., *tör(ténelem)-i*, *som(orú)-i*, *alk(oholista)-es*, *čer(esnye)-kó*)

truncation is an uncommon morphological operation and has uncommon phonological consequences (cf. Alber & Arndt-Lappe 2012)

Harmony: vowel sequences in words

stem-controlled backness harmony triggered by last non-neutral vowel; neutral vowels (*i*, *í*, *é* [e:], *e* [ɛ]) are (variably) transparent

- back stem + back vowelised suffix(es) ({*u*, *ú*, *o*, *ó*, *a*, *á*})
- front stem + front vowelised suffix(es) ({*ü*, *ű*, *ö*, *ő*, *e*, *é*})
- any stem + suffix with {*i*, *í*, *é*}

accents mark length, *ő* = long *ö*

types of words (for simplicity only bisyllabic):

(1) harmonic

- only back (*hazug*, *olas*, *gaz-uk*, *bor-ban*)
- only front (*siget*, *öreg*, *ezüšt*, *hit-ben*, *tök-nek*, *kez-ük*)
- back and *i/í/é* (*forint*, *pucér*, *bika*, *šéta*, *bot-ig*, *bus-ért*, *hid-at*, *cél-nak*)

(2) weakly disharmonic: back and *e* (*haver*, *peron*, *eď-kor*)

(3) rarely other: back and front rounded (*kajüt*, *šofőr*, *nüans*, *öt-kor*)

Type frequencies: ordinary morphology, bisyllabic nominal word forms

vocalism	root	inflected	due to
BB (1a)	5.3k	11k	regular suffix harmony
FF (1b)	4.0k	12k	regular suffix harmony
Bi, Bí, Bé (1c)	1.5k	3.2k	invariable <i>i/í/é</i> suffixes
iB, íB, éB (1c)	1.4k	450	base antiharmonic
Be (2)	250*	0	no invariable <i>e</i> suffix
eB (2)	280	7	invariable <i>B</i> suffixes
Bü, Bö (3)	17**	0	no invariable <i>ü/ö</i> suffix
üB, öB (3)	13**	2	invariable <i>B</i> suffixes

very frequent, frequent, rare/unattested, *only loans, **only recent loans
data from the Hungarian Webcorpus (Halácsy et al. 2004)

Nominal diminutives

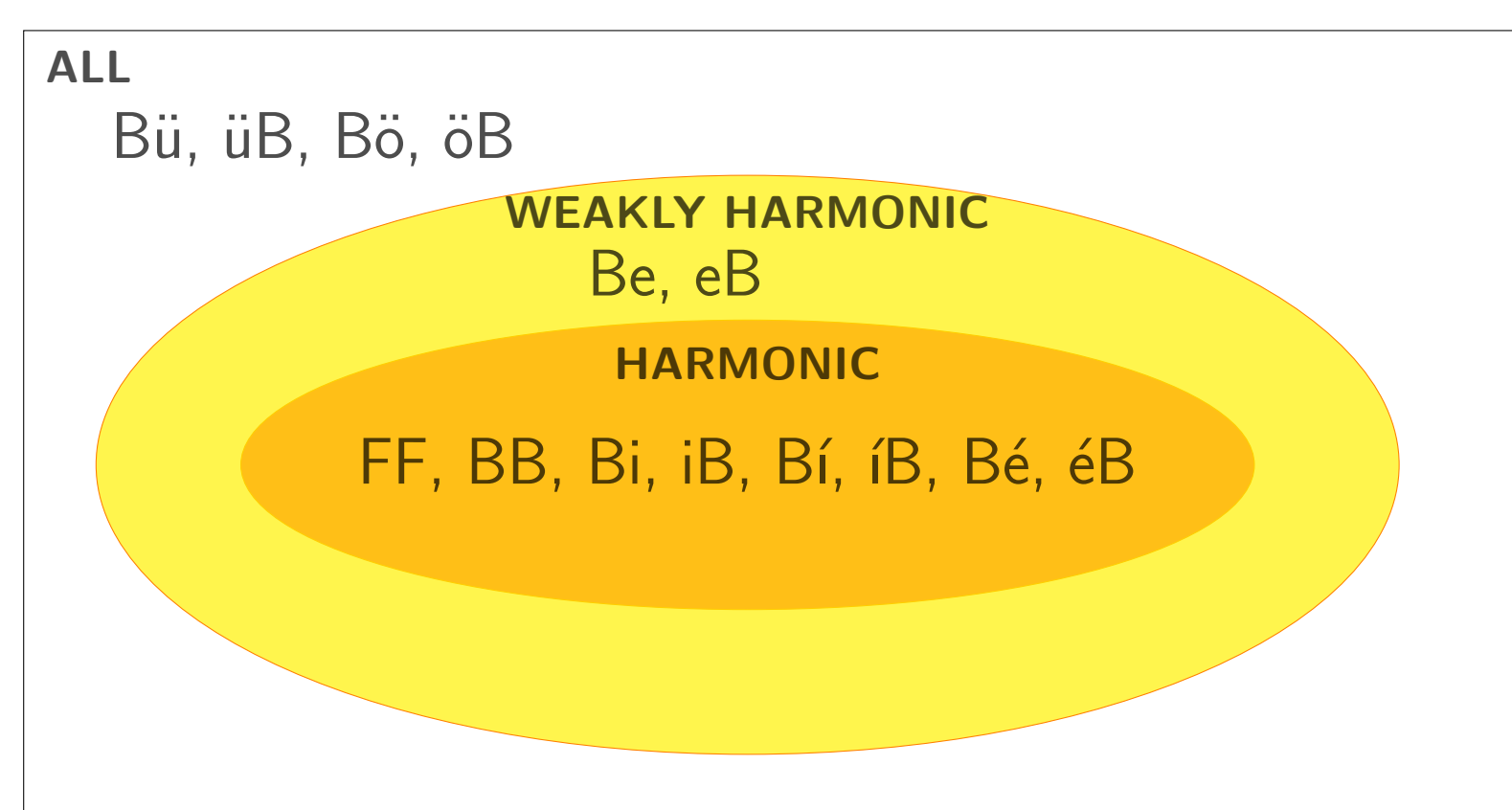
one-syllable stem	two-syllable stem	longer stem
ordinary morphology: no limit on word length, harmonic alternation in suffix		
(láñ-ka) cím-ke só-čka, nő-čke dal-očka, kép-ečke	malac-ka, Teréz-ke Anná-čka, cipő-čke patak-očka, siget-ečke	Katalin-ka, közepeš-ke gorillá-čka, terítő-čke diktátor-očka, történet-ečke
truncative morphology: two-syllable word only, no harmonic alternation in suffix		
(láñ-ka, tál-ka) kač-ó, ap-ó aň-uš, cic-uš haš-i, Žolt-i boč-es, Dör(ď)-es	Jóž(ef)-ka, Ter(éz)-ka Jánoš~Jan-ó, send(vič)-ó kuť(a)-uš, Meň(hért)-uš dok(tor)-i, Mik(lóš)-i Čab(a)-es, pör(költ)-es	Bor(bála)-ka, cer(uzá)-ka Kat(alin)-ó, tel(efon)-ó Magd(olna)-uš, pel(enka)-uš And(rea)-i, čer(esnye)-i pál(inka)-es, cig(aretta)-es

weakly disharmonic words are highlighted

Phonological layers of harmony

- HARMONIC: all *B*; all *F*; combinations of *B* and *i/í/é*
- WEAKLY HARMONIC: all *B*; all *F*; combinations of *B* and *i/í/é/e*
- ALL: unrestricted (including combinations of *B* and *ü/ö*)

subsumption: ALL $\supset$ WEAKLY HARMONIC $\supset$ HARMONIC



OT interpretation:
layer-specific faithfulness
ranking within fixed
markedness hierarchy of
harmony constraints (e.g.,
Itô & Mester 2008)

Morphological operations assigned to phonological layers

- concatenation (ordinary morphology) $\Rightarrow$ HARMONIC
- truncation (diminutives) $\Rightarrow$ WEAKLY HARMONIC, rarely ALL
- identity (monomorphemic) $\Rightarrow$ WEAKLY HARMONIC, rarely ALL

Harmonic Uniformity fails in truncative morphology

multiply suffixed forms inherit the harmony of their root even against some harmony constraints (e.g., size restriction on antiharmonic roots) **but** there is no such inheritance after truncation (Rebrus et al. 2023)

- antiharmonic *híg-ak* $\Rightarrow$ *híg-ít-as*; *cél-hoz* $\Rightarrow$ *cél-é-hoz*
- but NN roots are all front harmonic: *tigriš-re/*ra*, *fétiš-nek/*nak*

	ordinary		truncative		monomorph.
	root+sfx	root+sfx+sfx	root+sfx	root'+sfx+sfx	only harmonic
harmonic	N+F ⇒ N+N+F frišš-ek = frišš-ít-es	NB+B ⇏ N⟨B⟩+N+F ribanc-ra ≠ rib-i-re	⇐ NN+F = tigriš-re		
antiharm.	N+B ⇒ N+N+B híg-ak = híg-ít-as	N+B ⇏ N⟨B⟩+N+F šim-ogat ≠ šim-i-re	*NN+B ∅		
	↓ HarUni		↓ no HarUni, root-like harmony		

HarUni

no HarUni, root-like harmony

Word length and likelihood of rootness

	sylls	mon.	all	ratio
truncation and diminutive				
suffixation create two-syllable	2	2151	4052	0.53
words, which are more likely to	3	1176	7070	0.17
be monomorphemic, i.e., roots,	4	460	6631	0.07
than longer words				

hand-counted types of L–Z-initial words

Other aspects of root-like-ness in truncation

the root is less identifiable, the output of truncation is less decomposable since in truncative morphology

- the phonological “distance” between a free and a bound root allomorph is much greater than in ordinary morphology
- the base (root) cannot be determined from the output of truncation (much higher degree of irrecoverability)
- the combinability of a bound allomorph is much more restricted than in ordinary morphology: it only occurs in diminutives

Conclusion

truncated forms are like roots because unlike ordinary morphology

- both can systematically access the weakly harmonic layer
- truncated forms are bisyllabic like the majority of roots
- truncated forms do not exhibit HarUni (i.e., harmony is computed from the vocalism of the word, like in bisyllabic roots)
- truncated forms cannot be decomposed with certainty



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