

Vacillation and lexical variation in Hungarian front/back harmony*

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1 front/back harmony (HBH)

- ◆ stem-controlled suffix harmony

	front (F)		back (B)
	neutral (N)	round (R)	
high	i, i:	y, y:	u, u:
mid	e:	ø, ø:	o, o:
low	ɛ		ɑ, ɑ:
[..F]F	∫ør-yŋk	∫ør-nɛk	'beer-POSS1PL, DAT'
[..B]B	bor-uŋk	bor-nak	'wine-POSS1PL, DAT'

2 neutrality

- ◆ root phonotactics: free combination [BN], [NB]
- ◆ transparency: [BN]B
- ◆ suffix invariance [B]N ([F]N)

3 transparency: variation

- ◆ the context [...BN]_ is harmonically ambiguous ⇒ vacillation & lexical variation

lexical variation	[...BN]_	vacillation		
		no	yes	
	F			kontsɛrt-ɛk 'concert-PL'
	F/B			fotɛl-ɛk/ok 'armchair-PL'
	B			havɛr-ok 'friend-PL'

- ◆ The **Height Effect (HE)**: gradience in neutrality/transparency: **i(:) > e: > ɛ** (Hayes & Londe 2006)

transparency (of N vowels) decreases from high to low

high vowels **i(:)** are always transparent: **[Bi(:)]B**

forint-ok 'HUF-PL', papi:r-ok 'paper-PL'

mid **e:** may be transparent or vacillating: **[Be:]B** or **[Be:]F/B**

somse:d-ok 'neighbour-PL', slove:n-ɛk/ok 'Slovenian-PL'

low **ɛ** typically vacillates: **[Bɛ]F/B**

fotɛl-ɛk/ok 'armchair-PL'

lexical variation (# of lexical subclasses) increases from high to low

	[Bi(:)]	[Be:]	[Bɛ]
transparency of N	+	+	±
vacillation		-	+
lexical variation/subclsses	-		+

- ◆ The **Count Effect (CE)**: **[BN] > [BNN]**

multiple N vowels decrease transparency

[BN]	[Bi(:)]B	forint-ok 'HUF-PL', papi:r-ok 'paper-PL'
[BNN]	[BNi(:)]F/B	salitsil-ɛk/ok 'salicyl-PL', bakɛlit-ɛk/ok 'bakelite-PL'

4 suffix invariance

- ◆ harmonic vowels do not occur in invariant suffixes
- ◆ neutral vowels occur in invariant & alternating suffixes

		invariant (inv)	alternating (alt)
neutral	i(:)	ha:z-i, fɔld-i	-
	e:	ha:z-e:rt, fɔld-e:rt	fɔld-ne:l (~ha:z-na:l)
	ɛ	-	fɔld-nɛk (~ha:z-nak)
harmonic	B	-	ha:z-ro:l (~fɔld-rø:l)
	R	-	fɔld-yŋk (~ha:z-uŋk)

	neutral		
invariant	i(:)	e:	ɛ
	11 <9>	9 <4>	0

<bold>=can be followed by further suffixes>

5 transparency in roots & invariance

	[Bi(:)]	[Be:]	[Bɛ]
fully transparent N	yes	yes	no
vacillation	no	no	yes
lexical variation / subgroups	NO	YES	YES
invariant N suffixes	YES	YES	NO

Q1 connection between variation in roots & invariance in sfx: influence of multiply suffixed forms [B]N_ on roots [BN]_

6 deriving/motivating the Height Effect

- phonologically irrelevant/performance effect (Vago 1980, Siptár & Törkenczy 1999)
- phonetically grounded: (co)articulation (Beňuš 2005)
- grammatical but arbitrary (constraint ranking/weighting) (Hayes & Londe 2006, Hayes & al 2009)
- lexical: the transparency of neutral vowels (vacillation) depends on

- (i) the distribution of [BN] stems in lexical strata &
- (ii) the distribution of neutral vowels in invariable suffixes.

7 "OLD" vs. "NEW"

OLD: "familiar" words (high frequency words, nonrecent loans, words of Finno-Ugric origin) **do not vacillate**
 somse:d-nak 'neighbour-DAT', ta:pe:r-nak plate-DAT

NEW recent loans **vacillate**
 slove:n-nɛk/nak 'Slovenian-DAT'

(reclassification by frequency)

'OLD' → 'NEW' ga:tje:r-nɛk/nak 'drake-DAT' <143 tokens>
 'NEW' → 'OLD' konkre:t-ak 'specific-PL' <79690 tokens>

8 lexical classes & the Height Effect

Lexical classes	high N	non-high N	
	[Bi(:)]	[Be:]	[Bɛ]
OLD	transparent	transparent ~50%	-
NEW		vacillating ~50%	vacillating ~100%

- ✓ **[Be:] vs [Bɛ] roots**

Height Effect follows from the difference of the size and distribution of the lexical classes of OLD and NEW words within [Be:] vs [Bɛ] roots

- x **[Bi(:)] roots**

Q2 Why do [Bi(:)] roots not show lexical variation and Why do NEW [Bi(:)] stems not show vacillation?

9 Paradigmatic Harmonic Uniformity (PHU)

(Rebrus & Szigetvári 2016, Rebrus & Törkenczy 2017, Rebrus & al. 2017)

harmony of root is preserved in suffixed forms: all the harmonic suffixes have identical harmonic values (F, B or F/B) within the (extended) paradigm of a stem.

in multiply suffixed forms PHU may override harmony: PHU >> HE, CE

[B]B	[[B]N]B	compare	[BN]_
ha:z-nak 'house-DAT'	ha:z-i-nak 'house-ADJZ-DAT'		≈ pa:ri:z-nak 'Paris-DAT'
ha:z-nak 'house-DAT'	ha:z-e:-nak 'house-POSS-DAT'		≈ slove:n-nɛk/nak 'Slovenian-DAT'
[Bi]B	[[Bi]N]B		[BiN]F/B
madrid-nak 'Madrid-DAT'	madrid-i-nak 'Madrid-ADJZ-DAT'		≈ salitsil-nɛk/nak 'salicyl-DAT'

10 a consequence of PHU

- **[BN_x]_** is harmonically unambiguous comp. to **[BN_x]_**
 { [BN_x]B, [B]B_q, [B]B_y ... }_{paradigm}
 { ha:z-e:-nak, ha:z-ro:l, ha:z-uŋk, ha:z-nak ... }

- assumption: analogical influence of the unambiguous pattern on the more ambiguous one

the more **[BN_x]_** word forms (types) the more **[BN_x]_** patterns after **[BN_x]_**

11 N vowels in multiply suffixed forms

N	suffixable suffix		multiply suffixed forms	reliable [B]N_ pattern
	inv	alt		
i(:)	+	-	[B]i]B * [B]i]F	strong: [B]N]B
e:	+ _{few}	+	[B]e:]B * [B]e:]F	weak(er) [B]N]B
ɛ	-	+	* [B]ɛ]B * [B]ɛ]F	none

strong reliable pattern suppresses lexical variation (OLD vs NEW class-specific behaviour), but in the absence of such a pattern lexical variation prevails

12 possible extension to the Count Effect

- there is no vacillation in the context [BNɛ]_ in spite of the Count Effect

no reliable pattern for [Bɛ] since * [B]ɛ]B, * [B]ɛ]F

BUT

there is for [Bɛɛ], [Be: ɛ] * [BN]ɛ_{inv}
 * [BN]ɛ_{alt}]B * fotɛl-ɛk-nak
 [BN]ɛ_{alt}]F fotɛl-ɛk-nak 'armchair-PL-DAT'

robust reliable [BN]ɛ_{alt}]F pattern suppresses vacillation

13 problems & questions & further research

- Problems with the Count Effect

there is no reliable multiply suffixed pattern for [Biɛ] roots since * [Bi]ɛ_{alt}] (thus * [Bi]ɛ_{alt}]F, * [Bi]ɛ_{alt}]B). This predicts vacillation, as there is nothing to suppress vacillation. BUT: [BNɛ] do not vacillate

How can vacillation by the Count Effect exist at all for [Bi] roots when the robust reliable pattern is [Bi]i]B without vacillation (due to PHU)? madrid-i-nak/*nɛk

- Quantification, further research

How to measure the robustness of a pattern; ongoing corpus study (Szószablya Webcorpus v0.9. 2014) [http://szotar.mokk.bme.hu/szoszablya/searchq.php] 541 million tokens of words

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