Lexical strata & the Height Effect

Péter Rebrus,$^{\rho}$ Péter Szigetvári$^{\sigma}$ & Miklós Törkenczy$^{\rho\sigma}$

ρ = Research Institute for Linguistics, MTA & σ = Eötvös Loránd University

ICSH14, Potsdam June 11-12

Hungarian backness harmony (HBH)

	front (F)		back (B)
	neutral (N)	round (R)	
high	i, iː	y, yː	u, uː
mid	eː	ø, øː	o, oː
low	ɛ		ɑ, aː

stem-controlled suffix harmony   [..F]F   køɲøk-yŋk   'elbow-3PL'
                                 [..B]B   orː-ok   'nose-PL'

Suffixes: harmonically alternating vs. invariant

harmonic vowels cannot occur in invariant suffixes
neutral vowels can occur in invariant and alternating suffixes

		invariant	alternating
Neutral	i(ː)	haːz-**i**, føld-**i**	_😏
	eː	haːz-**eːrt**, føld-**eːrt**	føld-**neːl** (~haːz-naːl)
	ɛ	–	føld-**nɛk** (~haːz-nɑk)
Harmonic	B	_😏	haːz-**roːl**
	R	–	føld-**yŋk**

Variation in HBH: transparency

the context […BN] _ is harmonically ambiguous ⇒ vacillation & lexical variation

		vacillation		
		no	yes	
Lexical variation	[…BN] _	F		kontsɛrt-ɛk 'concert-PL'
			F/B	fotɛl-ɛk/ok 'armchair-PL'
		B		hɑvɛr-ok 'friend-PL'

Gradience in neutrality/transparency 1: The Height Effect (HE)

transparency (of N vowels) decreases from high to low: **i(ː) > eː > ɛ**

high vowels are always transparent: [Bi(ː)]B
forint-ok 'HUF-PL', pɑpiːr-ok 'paper-PL'

mid vowel may be transparent or vacillating: [Beː]B or [Beː]F/B
somseːd-ok 'neighbour-PL', sloveːn-ɛk/ok 'Slovenian-PL'

low vowel typically vacillates: [Bɛ]F/B
fotɛl-ɛk/ok 'armchair-PL'

NB: *lexical variation* (harmonic heterogeneity) increases from high to low

Gradience in neutrality/transparency 2: The Count Effect (CE)

multiple N vowels decrease transparency

[BN]   [Bi(ː)]B   forint-ok 'HUF-PL', papiːr-ok 'papeɾ-PL'

[BNN]   [BNi(ː)]F/B   salitsil-ɛk/ok 'salicyl-PL', bakɛlit-ɛk/ok 'bakelite-PL'

Gradience in neutrality/transparency 3: multiple HE

HE&CE

Bii	Bieː	Biɛ
Beːi	Beːeː	Beːɛ
Bɛi	Bɛeː	Bɛɛ

[BNi/eː]   vacillation: HE&CE apply cumulatively [Bii] > [Beːi] > [Bɛi] > [Bɛeː]

[BNi/ɛ]   no vacillation: [BNɛ]F

Paradigmatic Harmonic Uniformity, PHU

Multiply suffixed forms: HE & CE are "turned off" (PHU ≫ HE, CE)
                              harmony of root is preserved in suffixed form

[B]B   [[B]N]B   [BN]B
haːz-nɑk   haːz-i-nɑk   ≈ paːriʒ-nɑk
'house-DAT'   'house-ADJZ-DAT'   'Paris-DAT'
haːz-nɑk   haːz-eː-nɑk   ≈ taːɲeːr-nɑk   ≠ sloveːn-nɛk/nɑk
'house-DAT'   'house-POSS-DAT'   'plate-DAT'

[BN]B   [[BN]N]B   [BNN]F/B
madrid-nɑk   madrid-i-nɑk   ≠ salitsil-nɛk/nɑk
'Madrid-DAT'   'Madrid-ADJZ-DAT'   'salicyl-DAT'

Deriving/motivating the Height Effect

1 Phonologically nonexistent/irrelevant/performance effect   (Vago 1980, Siptár & Törkenczy 1999)

2 Phonetically grounded: (co)articulation   (Beňuš 2005)

3 Grammatical (encoded in constraint hierarchy/weighting)   (Hayes & Londe 2006, Hayes & al 2009)

4 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 harmonically invariable suffixes.

Transparency, vacillation & lexical subgroups

	[Bi(ː)]	[Beː]		[Bɛ]
transparency of N	+	+	±	±
vacillation	−		+	
subgroups/lexical variation	−		+	

choice between nonvacillation and vacillation in **[Beː]** stems is based on lexical class

❖ FAM: *"familiar" words* (high frequency words, nonrecent loans, words of Finno-Ugric origin) do not vacillate: eg **somse**ːd-ok 'neighbour-PL'

❖ REC: *recent loans* vacillate: eg **slove**ːn-ɛk/ok 'Slovenian-PL'

Lexical motivation of the Height Effect

[Beː] vs [Bɛ] words

❖ about half of the [Beː] roots are FAM, the other half are REC

   BUT

❖ 95% of [Bɛ] roots are REC

   the Height Effect follows from the difference of the size and distribution of the lexical classes of FAM and REC words within [Beː] vs [Bɛ] roots

Lexical motivation of the Height Effect & a question

lexical classes	high N	non-high N	
	[Bi(ː)]	[Beː]	[Bɛ]
FAM	+	+	(few +)
REC		±	±

Q: Why are [Bi(ː)] stems not variable by lexical strata?
     Why do recent *loan* [Bi(ː)] stems not show vacillation?

A: multiply suffixed vs   monomorphemic BN_ harmonic contexts
         [[B]N$_x$]_]   [[BN$_x$]_]

A consequence of Paradigmatic Harmonic Uniformity

❖ $[[B]N_x]\_]$ is more informative about harmonic behaviour than $[[BN_x]\_]$

$\{ [[B]N_x]B], [B]B_q], [B]B_y] \ldots \}_{paradigm}$
$\{ haːz-eː-nɑk, haːz-roːl, haːz-uŋk, haːz-nɑk \ldots \}$

❖ the influence of the more informative pattern on the less informative one

The more $[[B]N_x]\_]$ **>** $[[BN_x]\_]$ the more $[[B]N_x]\_]$ **≈** $[[BN_x]\_]$

The distribution of N-vowels in suffixes

N-suffix types	high N	non-high N	
	-i(ː)	eː	ɛ
invariant	+	(few +)	–
harmonizing	–	+	+
	[[B]i]B] [[F]i$_{invar}$]F] *[[F]i$_{\sim B}$]F]	[[B]eː]B] [[F]eː$_{invar}$]F] [[F]eː$_{\sim B}$]F]	*[[B]ɛ]B] [[F]ɛ]F]
	[[B]i]B] ≈ [Bi]__	[[B]eː]B] < [Beː]__	*[[B]ɛ]B] << [Bɛ]__

contextual harmonic consistency for **-i**(ː) while the unambiguous pattern is not strong enough for **e**ː and **ɛ**

A prediction for [BNɛ] stems

Q: Why is there no vacillation in the context [[BNɛ]_] when there is in [...Bɛ]_] and otherwise [[BNN]_] vacillates?
The more informative context does not exist in either case

$$*[B]ɛ_{invar}] \quad *[BN]ɛ_{invar}]$$

A: $\quad *[B]ɛ_{invar}] \quad *[B]ɛ_{\sim B}]$
BUT

$[BN]ɛ_{\sim B}]$ \quad There is a robust pattern $[[BN]ɛ_{\sim B}]F]$

Thanks to

❖ you

❖ the organizers