A case for stress as empty CVs: glide epenthesis in Moksha

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CVCV

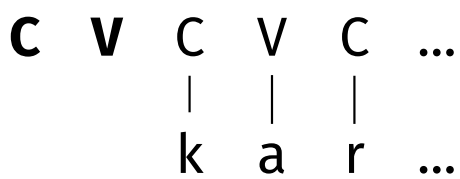
- A lateral autosegmental theory of phonology (Kaye, Lowenstamm & Vergnaud 1990, Scheer 2012)
- Two tiers: syllabic and melodic
- Uniform syllable structure – CV
- Melody associated to the syllabic skeleton or floating

Empty CVs

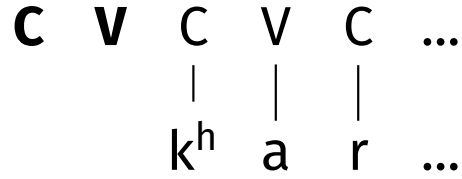
Syllabic space in Strict CV can correspond to:

- morphosyntactic boundary
- stress
- length

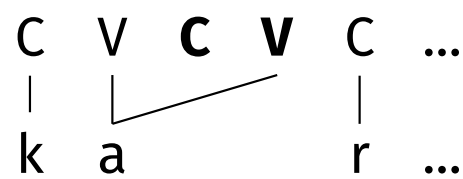
Boundary



Stress



Length



Empty CVs

- The empty CV should show its presence
- In Moksha, stress pattern helps model a superficially syllable-counting rule **locally**
- if assumed that stress corresponds to length (extra CV)
- and vowel-glide alternation is caused by spreading

Moksha

- Moksha < Mordvinic < Uralic
- Mordovia republic, European part of Russia, endangered
- Data comes from the Moksha corpus, Kukhto (2018), Kozlov & Kozlov (2018) and online fieldwork

Some Moksha suffixes

Vowel-initial suffixes

Moksha vowel inventory:

i		u
e	ə	o
ɛ	a	

There are two vowels that suffixes can start with:

- /ə/: *ən'* 'GEN', *əl'* 'IMPF'
- /a/: *an* 'NPST.1SG', *at* 'NPST.2SG'

Two more possible suffix-initial vowels alternate with /j v/:

- /i/: *i/j* 'NPST.3SG'
- /u/: *u/(ə)v* 'PASS', *u/v/i* 'LAT'

Schwa-initial suffixes

Schwa-initial suffixes trigger glide insertion when combined with bases ending in /i u/ (Kozlov & Kozlov 2018).

(1) jožu + əl' → jožuv-əl'
'(3SG was) smart-IMPF'

(2) t'ɛči + ən' → t'ɛčij-ən'
'today-GEN'

With other vowels, the schwa disappears; with C# bases schwa is retained

(3) ava + ən' → ava-n'
'woman-GEN'

(4) ruz + ən' → ruzən'
'Russian-GEN'

Schwa-initial suffixes

Monosyllabic bases do not participate in the glide insertion (just like A# bases)

(5) ši + ən’ → ši-n’
‘day-GEN’

(6) mu + əms → mu-ms
‘find-INF’

	C#	A#	u#	i#
monosyllabic	ən’	n’	n’	n’
polysyllabic			vən’	jən’

Table: Suffix *ən’* ‘GEN’ with different kinds of bases

/a/-initial suffixes

The same glide-insertion with polysyllabic /u i/-final bases:

(7) jožu + an → jožuvan
'(I am) smart-1SG'

(8) vidi + an → vidijan
'(I am) a sower-1SG'

Only /j/-insertion in monosyllabic /u i/-final bases:

(9) mu + an → mujan
'(I) find-1SG'

(10) li + an → lijan
'(I) fly-1SG'

/a/-initial suffixes

With A# bases, the /a/ of the suffix coalesces with the /a/ of the base:

(11) jaka + at → jakat
'(you) go-2SG'

(12) at'ɛ + an → at'an
'(I am) an old man-1SG'

But not in monosyllabic bases:

(13) sa + an → sajan
'(I) come-1SG'

(14) šna + an → šnajan
'(I) praise-1SG'

/a/-initial suffixes

Monosyllabic /i u/-final bases are like the A# bases, but only the monosyllabic ones

	C#	A#	u#	i#
monosyllabic	an	jan	jan	jan
polysyllabic		n	van	

Table: Suffix *an* 'NPST.1SG' with different kinds of bases

The puzzle

- Does the epenthesis rule actually count syllables?
- Are the inserted glides floating segments?
- How are schwa-initial and /a/-initial suffixes different?

Glide epenthesis is conditioned by stress

Moksha stress rule

- **Heavy syllables**: /a o e ɛ/ as nuclei
- **Light syllables**: /u i ə/ as nuclei
- Leftmost heavy syllable stressed
- No heavy syllables ⇒ leftmost light syllable stressed

(15) ˈtʼɛdʼɛ
‘mother’

(16) kuˈvaka
‘long’

(17) ˈkijə
‘who’ (Kukhto 2018: p. 34)

Disclaimer

- ≫ Neither the stress rule nor the epenthesis rule are synchronically productive
- ≫ Any generalisation would have to hold some time in the past

(18) žu'ri + ən' → žuri-n'
'jury-GEN'

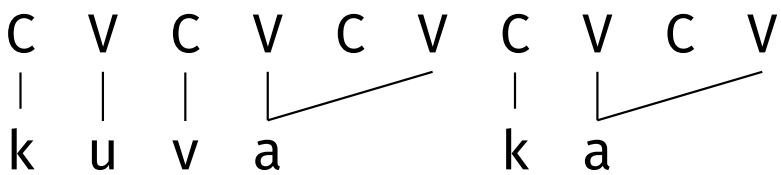
(19) 'soči + ən' → soči-n'
'Sochi-GEN'

(20) li + ən' → li-n'
'Li-GEN'

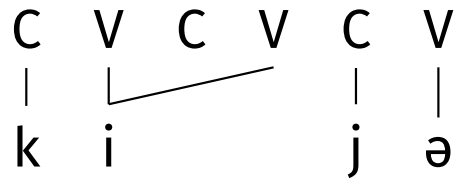
Proposal: stress is length

- Heavy syllables are long
- Stressed vowels are long as well

(21) [kuˈvaka]



(22) [ˈkijə]

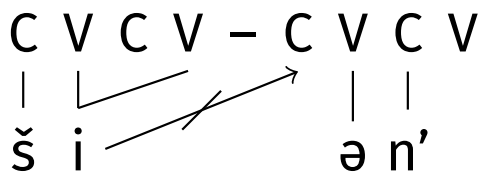


- /u i ə/ are long only when stressed
- Base-final /u i/ are only stressed in monosyllabic bases
  ⇒ they form a natural class with base-final /a o e ɛ/
- We expect similar behaviour!

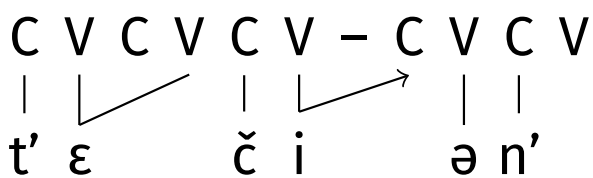
No glides after long vowels

- Glide insertion is vowel spreading
- Long vowels do not spread
- Consistent with the non-occurence of super-long segments (Chekayri & Scheer 2004, Enguehard 2018)

(23) ši + ən' → [ši-n']



(24) t'ɛči + ən' → [t'ɛčij-ən']



Glides before /a/-initial suffixes

- Glides before /a/-initial suffixes have nothing to do with stress
- No difference between stressed and unstressed heavy vowels

(25) juma + an → juman
'(I am) lost-1SG'

- Epenthetic /j/ may be genuinely floating
- Monosyllabic bases have it, polysyllabic bases do not

(26) sa<j> + s' → sas'
'come-PST.3SG'

(27) iz' sa<j> → iz' sa
'NEG.PST.3SG come.CN'

(28) sa<j> + əl' → sal'
'come-IMPF'

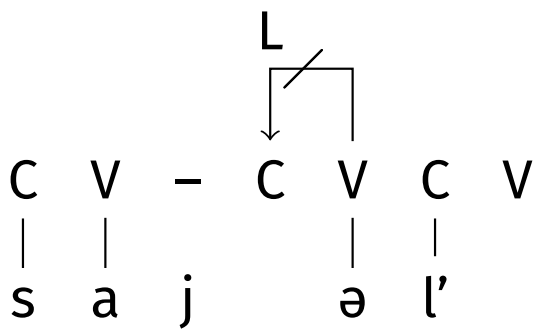
(29) sa<j> + an → sajan
'come-1SG'

Glides before /a/-initial suffixes

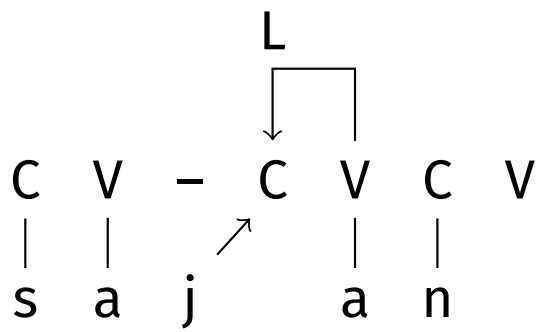
Why does /j/ appear before /a/ but not before schwa?

- The floating /j/ can only associate to a licensed slot
- Schwa cannot license
- Schwa-initial suffixes lose the schwa
- /a/-initial suffixes allow the association of the floating /j/

(30) sa<j> + əl’ [sa-l’]



(31) sa<j> + an [sa-jan]



Floating glides are a problem

- With the polysyllabic /i u/-final bases, the vowel spreading occurs
- We expect monosyllabic /i u/-final bases to behave similarly (/u i/ are unstressed before /a/)
- They do not: rather, it seems like there is a floating /j/ there

	C#	A#	u#	i#
monosyllabic	an	jan	jan	jan
polysyllabic		n	van	

Table: Suffix *an* 'NPST.1SG' with different kinds of bases

Floating glides are a problem

- The analysis that assumes floating glides everywhere fares better here: /j/ just appears before /a/, irregardless of the base-final vowel
- It does not fare better elsewhere
- If the glide epenthesis is due to floating segments, there must be two kinds of floating segments
- (one does appear before schwa and one does not)

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- Kukhto, Anton. 2018. Fonologija [Phonology]. In Svetlana Toldova & Maria Kholodilova (eds.), *Èlementy mokšanskogo jazyka v tipologičeskom osveščenii [Elements of the Moksha language in a typological perspective]*, chap. 3, 19–37. Moscow: Buki Vedi.

References II

 Scheer, Tobias. 2012. *A Lateral Theory of phonology*. Vol. 2. *Direct Interface and One-Channel Translation*. Berlin: De Gruyter Mouton.