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

Background In Strict CV, a lateral autosegmental approach to phonology, stress has received an appropriately local incarnation – empty CV slots (Larsen 1998). Empty CVs are also taken to represent morphemic boundaries (Scheer 2012). If Strict CV phonology is on the right track in assuming empty CVs to represent boundaries, we expect various domain- and boundary-sensitive phenomena to correlate in a way that is attributable to the CVs' presence, and they do. For instance, Scheer (2012) shows that left-edge effects (restrictions on initial clusters, strength of initial consonants, the ability of the first vowel of the word to alternate with zero) tend to co-occur and are manifestations of word-initial CVs. Enguehard (2015) demonstrates that boundary CVs are responsible for boundaries as well as stress in Old Norse. This paper is dedicated to another piece of evidence that supports the above mentioned correlation – the interaction between stress and glide epenthesis in Moksha.

Data In Moksha (<Mordvin<Uralic), epenthetic consonants /v/ and /j/ appear after base-final /u/ and /i/ respectively, when a schwa-initial suffix is attached (1, 4).[1] The initial schwa of the suffix disappears after vowels other than /u i/ (/a ɛ e o/; see 2, 5) but surfaces after base-final consonants (3, 6).

(1) jožu + əl' → jožuv-əl' (2) ava + əl' → ava-l' (3) ruz + əl' → ruzəl'
'(3SG was) smart-IPF' '(3SG was a) woman-IPF' '(3SG was) Russian-IPF'

(4) t'ɛči + ən' → t'ɛčij-ən' (5) ava + ən' → ava-n' (6) ruz + ən' → ruzən'
'today-GEN' 'woman-GEN' 'Russian-GEN'

The glide insertion, as pointed out by Kukhto (2018), does not happen with monosyllabic bases (7–9).[2]

(7) ši + ən' → ši-n' (8) mu + əms → mu-ms (9) vi + əms → vi-ms
'day-GEN' 'find-INF' 'bring-INF'

The glide epenthesis rule does not affect loanwords (10–12) and hence is synchronically non-productive.

(10) žurí + ən' → žurí-n' (11) sóči + ən' → sóči-n' (12) li + ən' → li-n'
'jury-GEN' 'Sochi-GEN' 'Li-GEN'

However, (a) merely putting the glides into the lexical representation would be equivalent to giving up on making a generalisation, and (b) if we do try to make one, the rule's curious ability to count syllables is problematic for a lateral theory of phonology. So, the theoretical goal I pursue is to find a non-lexical motivation for the distribution of the glide epenthesis in Strict CV.

Analysis I propose to link the absence of the glide epenthesis in monosyllabic words to stress. The Moksha stress is conditioned by vowel quality. Syllables can be divided

[1] The part of the gloss in parentheses is not a part of the actual translation and serves to indicate that these forms are used as nominal predicates. The epenthetic /v/ and /j/ will be referred to as glides for the sake of simplicity, despite /v/ not being a glide. The data sources are the Moksha corpus and Kukhto's (2018) chapter on Moksha phonology.

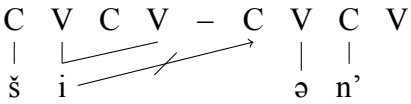
[2] *Ksti* 'berry' is the only exception to this rule: it does trigger the epenthesis despite being monosyllabic.

into *heavy* (featuring /a ɛ e o/ as nuclei) and *light* (featuring /u i ə/). The stress is borne by the leftmost heavy syllable, or, in words without heavy syllables, by the leftmost light one (e.g. *t'éd'ɛ, kuváka, kúdu*; Kukhto 2018). Note that both of the vowels that trigger glide insertion base-finally – /u/ and /i/ – appear in light syllables.

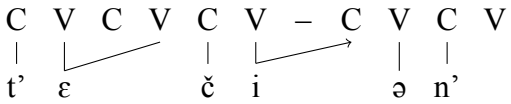
After Larsen (1998), I assume that stress is represented by an empty CV slot inserted to the right of the stressed syllable (considering that stress does not affect the onset of the stressed syllable in Moksha, there is no reason to put the CV to the left). Vowel quality as a factor influencing the stress assignment can be captured by endowing all heavy syllables with an extra CV, thus the key property of the 'heavy' vowels would be the ability to associate to two V-slots. The algorithm of stress assignment would then function via leftward incorporation of syllable weight in the spirit of Faust & Ulfsbjorninn's (2018) proposal for Moroccan Arabic, where empty nuclei are not counted, since closed syllables are equivalent to the open ones in terms of stress assignment (which is a possibility, according to Szigetvári & Scheer 2005).

The epenthesis-free contexts thus form a natural class: their shared attribute is the base-final empty CV. Heavy syllables feature an extra CV by definition, and light syllables are only stressed, and hence endowed with an empty CV, in monosyllabic words. The association of /u/ or /i/ to the empty initial C of the suffix is impossible over a CV-boundary (13) but OK in its absence (14). A similar analysis has been proposed to differentiate between two types of affixes in French in regard to glide insertion (Scheer 2012:154). It is the source of the empty CV that distinguished the case of Moksha – the boundary is provided by stress rather than an affix class.

(13) ši + ən' → [ši-n']



(14) t'ɛči + ən' → [t'ɛčij-ən']



Where no epenthesis occurs, there is either vowel coalescence or schwa alternating with zero: what is crucial for my proposal is that the behaviour of the suffix's schwa is, again, a common property of stressed light syllables and the word-final heavy ones.

Implications The connection between stress and glide insertion in Moksha widens the body of empirical evidence for the unified representation of stress and boundaries. Also, while the glide epenthesis rule appears to be dependent on syllable count on the first glance, Strict CV possesses the means of capturing this pattern without introducing any non-local mechanisms.

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