Systematic vacillation in vowel–zero alternation in Hungarian

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Vowel–zero alternation as phonological repair. In verbal paradigms of Hungarian a vowel may crop up in two sites, breaking up potential CCC (or in the second case also CC#) clusters: (1) suffix initially (traditionally known as a "linking vowel"), e.g., *ráz-ni* 'shake-INF', *hat-s* 'act-NDF.2SG' vs. *ajz-**a**ni* 'elate-INF', *tart-**a**s* 'keep-NDF.2SG', and (2) stem internally (traditionally known as an "epenthetic stem"), e.g., *term-ünk* 'produce-NDF.1PL', *term-ek* '-NDF.1SG', *mozg-ó* 'move-PS.PTCP', *mozg-at* '-CAUS' vs. *ter**e**m* 'produce.NDF.3SG', *ter**e**m-ve* '-ADV.PTCP', *moz**o**g* 'move.NDF.3SG', *moz**o**g-j* '-SBJV.NDF.2SG' (accents mark vowel length).

Lexically defined suffix and stem types. Vowel–zero alternation defines three suffix types and at least three stem types, which cannot be distinguished based on other phonological properties. The three suffix types are the following:
- V-initial suffixes: e.g., *fed-**e**d* 'cover-DEF.2SG', *fed-**e**get* '-FREQ' and *kezd-**e**d* 'start-', *kezd-**e**get*
- C/V-initial suffixes (V-initial after cluster-final stem allomorphs, C-initial otherwise): e.g., *fed-s* '-NDF.2SG', *fed-nek* '-NDF.3PL' vs. *kezd-**e**s, kezd-**e**nek*
- C-initial suffixes: e.g., *fed-d* '-SBJV.DEF.2SG', *fed-het* '-POT' and *kezd-d, kezd-het*

The three relevant stem types are the following:
- stable VC-final stems: e.g., *sám**o**l* 'count', *sám**o**l-ok* '-NDF.1SG', *sám**o**l-s* '-NDF.2SG', *sám**o**l-hat; šor**o**l* 'list', *šor**o**l-ok, šor**o**l-s, šor**o**l-hat*
- epenthetic stems (CC-final before V-initial suffix alternants, VC-final otherwise): e.g., *öm**ö**l-ve* 'pour-ADV.PTCP' — *öml-ök* '-NDF.1SG', *tör**ö**l* 'wipe' — *törl-ök*
- stable CC-final stems: e.g., *réml-es* 'suspect-NDF.2SG' — *réml-ek* '-NDF.1SG'

The problem. As epenthetic stems and C/V-initial suffixes *both* alternate, potentially two patterns are equally possible when they combine: …CC-V… (CC-final stem alternant with a V-initial suffix alternant) and …VC-C… (VC-final stem alternant with a C-initial suffix alternant). Interestingly, epenthetic stems do not behave uniformly with these suffixes. There are two subclasses of epenthetic stems: in one both patterns occur systematically (intraspeaker vacillation/overabundance): *öml-es/öm**ö**l-s* 'pour-NDF.2SG', *öml-ötök/öm**ö**l-tök* '-NDF.2PL'; in the other only the latter pattern is licit: *tör**ö**l-s* (*törl-es) 'wipe-NDF.2SG', *tör**ö**l-tök* (*törl-ötök) '-NDF.2PL'. It is not immediately obvious why some epenthetic stems, which have both CC- and VC-final allomorphs, systematically fail to allow the former in some contexts (before C/V-initial suffixes), while other epenthetic stems show up with both allomorphs.
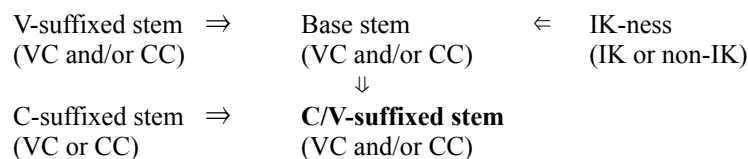
The generalisation. A phonological explanation for this difference based on underlying representations that are different from surface forms will not only have to involve abstract and ad hoc representational distinctions (more than one UR for the alternating vowel), but also misses an important generalisation. The difference of the two subclasses of verbs systematically corresponds to a morphological difference, inducing a phonological difference, in a designated cell of the paradigm: the base form. (i) Verbs exhibiting this type of vacillation are suffixed in this form (present indicative nondefinite 3sg) by *-ik* (*öml-**ik***). We will call these IK verbs. (ii) Verbs without vacillation before C/V-initial suffixes do not have a suffix in this form (*töröl*); these are the non-IK verbs. (Being an IK or a non-IK verb is an unpredictable lexical property of the stem in present-day Hungarian.) Thus, the base form is either the verb stem without any (overt) person/number, tense, or mood suffix, or it is a form suffixed by a V-initial suffix, *-ik.* The bare verb stem in epenthetic non-IK verbs contains the stem-internal vowel that occurs before C-initial suffixes (*tör**ö**l, tör**ö**l-ve*), while the form suffixed by *-ik* does not contain this vowel (*öml-ik*) in accordance with the regularities we

discussed above. We argue that the stem alternant occurring before a C/V-initial suffix must be one that occurs in the base form and/or before a C-initial suffix. In the case of non-IK verbs these uniformly end in VC (*töröl, töröl-het*), but for IK verbs they are different, CC and VC final, respectively (*öml-ik* vs. *ömöl-het*). This accounts for vacillation in epenthetic IK stems, but no vacillation in epenthetic non-IK stems. Crucially, it is not the case that non-IK verbs do not alternate: an epenthetic non-IK verb ends in CC before *V-initial* suffixes: e.g., *törl-öm, törl-öd,* etc., as shown above.

The analysis. This systematic relationship between C/V forms and two designated other cells in the paradigm can be analysed as the effect of a paradigm-based output–output constraint, Paradigmatic Support, requiring that the stem allomorphs of the forms in the designated cells should occur in the target, i.e., the C/V form (paradigm uniformity, cf. Kenstowicz 1996, 2005, Albright 2008; lexical conservatism, cf. Steriade 1997). The stem classes discussed above are summarised in the table below, completed with a further class that shows additional vacillation in its stem-final consonant. The behaviour of this verbal class is similar to that of the epenthetic IK class with two modifications: nonphonological *s~d* alternation takes place stem finally and vacillation affects not only C/V-suffixed forms but also V-suffixed forms. Thus, the base form (which is one of the sources of Paradigmatic Support) also vacillates, which induces variation in C/V-suffixed forms. This subclass of stems provides further evidence that listed stem allomorphs are required in a paradigm-based analysis.

stem classes	**Base** *-∅/-ik* 'NDF.3SG'	**V suffixes** *-Vk* 'NDF.1SG'	**C/V suffixes** *-(V)nak* 'NDF.3PL'	**C suffixes** *-va* 'ADV.PTCP'
stable VC	VC: *sámol* 'count'	VC: sámol-ok	VC: sámol-nak	VC: sámol-va
VC~CC (non-IK)	**VC**: *töröl* 'wipe'	CC: törl-ök	**VC**: töröl-nek	**VC**: töröl-ve
VC~CC (IK)	**CC**: *öml-ik* 'pour'	CC: öml-ök	**VC**: ömöl-nek / **CC**: öml-enek	**VC**: ömöl-ve
Vd~Cs (IK)	**Vd**: *mošakod-ik* / **Cs**: *mošaks-ik* 'wash'	Vd: mošakod-ok / Cs: mošaks-ok	**Vd**: mošakod-nak / **Cs**: mošaks-anak	**Vd**: mošakod-va
stable CC defective CC	CC: *ring* 'rock' CC: *réml-ik* 'suspect'	CC: ring-ok CC: réml-ek	CC: ring-anak CC: réml-enek	CC: ring-va —

The interaction of morphological/phonological properties associated with paradigm cells is shown in the following chart.

V-suffixed stem $\Rightarrow$ Base stem $\Leftarrow$ IK-ness
(VC and/or CC)   (VC and/or CC)   (IK or non-IK)
                        $\Downarrow$

C-suffixed stem $\Rightarrow$ **C/V-suffixed stem**
(VC or CC)   (VC and/or CC)

This analysis accounts for the systematic variation (overabundance) in vowel–zero alternation found in the C/V suffixed forms of epenthetic verbs (a phenomenon hitherto disregarded and unanalysed in the generative literature on Hungarian phonology, e.g., Siptár & Törkenczy 2000) using an output–output constraint that assumes paradigmatic conservatism and a version of base identity without making reference to underlying forms.

References. Adam **Albright. 2008**. Inflectional paradigms have bases too: evidence from Yiddish. In: Asaf Bachrach and Andrew Nevins (eds.), *The Bases of Inflectional Identity.* Oxford: Oxford University Press. 271–312. ∗ Michael **Kenstowicz. 1996.** Base-identity and uniform exponence: alternatives to cyclicity. In: Jacques Durand and Bernard Laks (eds.), *Current Trends in Phonology: Models and Methods.* European Studies Research Institute, University of Salford Publications. 363–393. ∗ Michael **Kenstowicz. 2005.** Paradigmatic Uniformity and Contrast. In: Laura J. Downing, T. A. Hall, Renate Raffelsiefen (eds.), *Paradigms in Phonological Theory.* Oxford: Oxford University Press. 145–169. ∗ Péter **Siptár and** Miklós **Törkenczy. 2000.** The Phonology of Hungarian. Oxford: Oxford University Press. ∗ Donca **Steriade. 1997.** Lexical conservatism. In: Linguistic Society of Korea (ed.), *Linguistics in the morning calm, Selected Papers from SECOL 1997.* Seoul: Hanshin Publishing House. 157–179.