

## Moraic weight, extraprosodic word-final consonants, and morphophonological length alternations in Hungarian

Recently in the Hungarian phonology literature there has been some debate about precisely what the internal representation of the Hungarian syllable should be. Under discussion is whether word-final consonants are extraprosodic and whether the weight-by-position constraint (Hayes, 1989) is active for consonants occupying a coda position. Also relevant to this issue is whether geminate consonants should be represented analogously to consonant clusters, or whether an independent representation is justified for these segments. Despite having contrasting length for both vowels and consonants, Hungarian has apparently relatively few weight restrictions on the combinatorial possibilities of its phonemic inventory. Thus “superheavy syllables” containing both long vowels and geminate consonants are not difficult to find, though to this point a phonological account of the syllable structure of Hungarian has not been agreed upon.

In this presentation I begin by concentrating on the ideas of Vago (1989, 1992), who argues that a word-final consonant should be moraic. Against Vago’s proposal, I review phonetic evidence suggesting a final CVC syllable patterns as a light syllable. Morén (2001) and Ham (2001) independently suggest that a word-final consonant does not contribute to syllable weight and propose an alternate syllable structure. I will show that the reasons Vago gives to support the weight-bearing final consonant can also be seen to be consistent with final segment extraprosodicity.

Under the view that final consonants are not extraprosodic, words such as *sült* ‘baked’, *kód* ‘code’, and *függ* ‘hang’ are all assumed to be trimoraic. This is because short vowels and single coda consonants are assigned one mora, while long vowels, geminate consonants, and coda consonant clusters are assigned two moras – for each word, the mora count sums to three. Vago also assumes monosyllables of the type CVVCC are trimoraic, even though such a syllable contains yet one more segment. However, because syllables containing four moras are universally disallowed, or at least exceedingly rare, Vago assumes that the coda consonants would “share” a mora in this case.

In the above scenario, several problems arise. First, syllables containing a word-final consonant cluster are trimoraic regardless of whether the vowel is long or short – hence an important length distinction is lost in the representation. Also, coda consonants are given differing treatments based on the length of the vowel, even though vowel length does not appear to be a significant factor in the combinatorial phonotactics of Hungarian phonemes. Furthermore, it is somewhat awkward that there are so many possible syllable structures that are trimoraic. Finally, these proposals do not align with phonetic studies on syllable durations.

An alternative account proposed here treats geminates as monomoraic underlyingly, whether appearing word-finally or intervocally. As Ham argues, if we assume word-final geminates are monomoraic in this position, this immediately leads us to conclude that a word-final singleton consonant does not bear weight. A final singleton consonant must be extrametrical then, for if it were moraic, it would be indistinguishable in length from a geminate.

Phonetic studies of vowel and consonant duration consistently support the hypothesis of final consonant extrametricality. Magdics (1969) found that the quantity of

the preceding vowel has virtually no effect on the duration of the following consonant, a claim implicitly made by Vago's model. Ham (2001: 152) finds that final consonant cluster duration is the same following long and short vowels. Nádasy (1985) also describes data supporting this position. Additionally, according to Kerek (1971), word-internal CVC, CVCC, CV:C, and CV:CC syllables pattern as heavy, stress attracting syllables, while only CV syllables pattern as light (no indication is given for CV: syllables). However, word-finally, both CV and CVC are treated as light, giving support to the notion that a final coda consonant is extrametrical word-finally, but not word-internally.

Part of the reason Vago proposes that word-final consonants are weight-bearing is to give an account of /v/-stems, a closed class of monosyllabic, vowel-final words in Hungarian that take an unexpected /v/ when a suffixed with a vowel-initial morpheme. Instead of needing to suppose an underlying "empty" consonant placeholder and appealing to compensatory lengthening, I show that the alternations exhibited between *ló* 'horse' and *lonak* 'horse-DAT' can be subsumed under a more general phenomenon, the minimal word condition.

A topic of interest in the prosodic morphology literature has been the status of the minimum word requirement (cf. McCarthy and Prince, 1986/1996, 1993, Selkirk, 1980), which posits that all prosodic words contain at least one well-formed, bimoraic foot. In Hungarian, this condition would stipulate that monosyllabic content<sup>1</sup> words with a CV syllable structure (only containing a single mora) are not expected. Such words are in fact quite rare.

Furthermore, as word-final consonants have been argued to be extraprosodic, CVC words should also be in violation of the minimal word condition. To test this, I chose three phonemes, /p/, /d/, and /v/, and searched the Hungarian reverse-alphabetized dictionary (Papp, 1969) to find what percentage of monosyllabic words ending in these phonemes obeyed the minimal word condition. This search found that monosyllabic words containing a long vowel and closed by a consonant are ten times more common than monosyllabic closed words containing a short vowel (CVVC vs. CVC). A more instructive exercise to be completed will not consider type frequency, but rather token frequency in a corpus, as this would better show how extensive the effects of the minimal word condition are. My intuition is that the results would only exaggerate the ratio of heavy to light forms.

In summary, this talk will demonstrate that word-final consonants can be considered extraprosodic. This is not only logical phonologically, but several phonetic studies support this hypothesis as well. In a reanalysis of the well-known /v/-stem problem, a natural solution is proposed by appealing to word-minimality. Examples from the language illustrating syllable structure and the /v/-stem alternation will be given throughout. In any remaining time, I explore further ramifications of the minimal word condition on the morphophonology of the language and compare the syllable structure of Hungarian, including the representation of word-final consonants, to other languages.

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<sup>1</sup> The minimal word condition is assumed not to apply to function words such as *ki* 'who' and *mi* 'what', although these words are typically stressed. Other apparent exceptions, such as *fa* 'tree' are almost exclusively low vowels, something I address in the presentation.

## References

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