

Zero morphemes as instructions to final empty nuclei (zero case markers in Czech)

In this paper, I investigate how zero morphemes can be interpreted by the Phonological component. I will focus on zero case markers in the Czech declension.

It is well known that the theory of Distributed Morphology is notorious for employing a big amount of zero Vocabulary Items. Although DM is a theory of the syntax–phonology interface, the phonological status of such VIs has not been yet examined (as far as I know). If we go to the literature, we can find that their phonological form is annotated simply as \emptyset ; see VIs in (1).

Considering the Czech data in (2), all zero endings (without reference to morphosyntactic features they realize) behave phonologically alike: they provoke vocalisation of alternating e in the preceding Nucleus. It follows that they should represent the same phonological object. However, Halle & Nevins (2004) in their analysis of Czech declension employ two phonologically different zero case markers. According to them, the marker in SG have the underlying structure \emptyset (sic!) or it is an abstract vowel (a yer), depending on a declension paradigm, and the marker in PL is always a yer. These two objects surface phonetically as silence - word final yers because of Yer Deletion rule, \emptyset because of ?. Furthermore, they assume that all case forms have the following structure: $\sqrt{\text{ROOT+THEME VOWEL+CASE MARKER}}$.

To receive the appropriate surface forms, they need a battery of ordered phonological rules; see (3). If we go to the details, their analysis has odd consequences. Take f.e. two roots $\sqrt{\text{LEN}}$

‘flax’, masc. and $\sqrt{\text{HRA}}$ ‘game’, fem., both containing an e which alternates with zero.

Masculines that don’t end with palatals are assumed to have a theme vowel /o/, feminines /a/.

The zero markers in traditional sense are in complementary distribution: $\sqrt{\text{LEN}}$ takes zero in

NOM SG [lɛn] and the positive marker in GEN PL [lnu:], $\sqrt{\text{HRA}}$ shows the opposite situation: NOM SG [fɪra] vs. GEN PL [fɪɛr]. However, in Halle & Nevins’s model the positive markers aren’t in fact case markers but surface forms of the theme vowels /o/ or /a/. For the underlying case structures see (4). Such an analysis is implausible because: a) it predicts systematic syncretism of NOM SG and GEN PL forms (see the third row in the table), which has no parallel in adj. declension, b) it allows the same underlying structure to receive different surface forms (in the case of $\sqrt{\text{LEN}}$ the surface forms in NOM SG vs. GEN PL differ because of application vs. inapplication of Jakobson’s law).

I argue for that there are no nominal theme vowels in Modern Czech and only two zero VIs for case markers: $\emptyset \leftrightarrow [+str, +pred]$, $\emptyset \leftrightarrow [+str, -pred, PL]$. These two zeros will be interpreted by the Phonological component in the same way – they are something like an instruction to the phonology: “Govern the final empty Nucleus, which is not followed by any further phonological constituent!” The same will hold for all zero endings; see (5).

My analysis is done in the CVCV, an offspring of *Government Phonology*, and adopts Scheer’s model of *Direct Interface* (Scheer 2004, 2006). Here, final codas aren’t in fact codas, but onsets of *domain final empty Nuclei*. It means that the phonological form of each VI ends either with a full Nucleus or with an empty nucleus. Empty Nuclei can remain empty iff they are *governed* (i.e. phonological version of syntactic ECP). So, if a domain final empty Nucleus is not followed by another phonological constituent, the only way for it to be governed is via the instruction proposed above. Because governed empty Nuclei cannot govern, e , which alternates with \emptyset in the preceding Nucleus, must be vocalised; compare the examples in (2). Alternating vowels are floating phonological expressions, which also have to be governed to float, otherwise they have to attach to the nuclear constituents dominating them.

(1) A few examples of zero VIs

∅ ↔ [2. Person] / governed by [+PL] (Halle & Marantz (1994), Spanish pronominal clitic)

∅ ↔ [PL] / {√MOOSE, √FOOT, ...} _ (Embick & Noyer (2005), PL in English)

/∅/ ↔ {[+N], [-β], [-obl]} (Müller (2004), NOM/ACC SG in I./III. class in Russian)

(2) Zero endings in Czech: different morphosyntactic features, but the same phonology

features	zeros	√ROOT ,gloss‘
[NOM/ACC SG]	den-∅	√DEN ,day‘
[GEN PL]	karet-∅	√KARTA ,card‘
[NOM MASC SG]	hoden-∅	√HODNÝ ,worthy‘
[MASC SG]	šel-∅	√JÍT ,go, past participle‘
[ADD SG]	der-∅	√DRÁT ,pluck, imperative‘

(3) Rules for deriving case forms in Czech (Halle & Nevins, 2004)

Vowel Lengthening: [-high, V] → [VV] / _ C₀ ɤ #

Jakobson’s rule: V → ∅ / _ V

Vowel Raising: [VV, -low] → [+high]

Lower: [V, +high, -tense] → [-high] / _ C₀ [V, +high, -tense]

Yer Deletion: [V, +high, -tense] → ∅

(4) Underlying structures: NOM SG [fɪra], [lɛn] and GEN PL [fɪɛr], [lnu:]

√ROOT	NOM SG	GEN PL
√HRA	hɪr-a-∅ [fɪra]	hɪr-a-ɤ [fɪɛr]
√LEN	lɛn-o-ɤ [lɛn]	lɛn-o-ɤ [lnu:]

(5) Zero endings and their phonological interpretation

Morphology: VIs	Phonology
∅ ↔ [NOM/ACC SG]	
∅ ↔ [GEN PL]	
∅ ↔ [NOM MASC SG]	
∅ ↔ [MASC SG]	
∅ ↔ [ADRESÁT SG]	

References

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