

## Roots pretending to be theme vowels: e/i in Slovenian

Petra Mišmaš<sup>1</sup> and Marko Simonović<sup>2</sup>

(<sup>1</sup>University of Nova Gorica, <sup>2</sup>University of Graz,)

Unaccusative verbs in Slovenian display surprising uniformity with respect to their theme vowel-classes, with the most unaccusatives belonging to the e/i-class (where *e* is the theme vowel (TV) in the non-finite and *i* in the finite forms). This is rather surprising with respect to the standard understanding of TVs as purely morphological markers which “determine the verb’s morphophonological surface shape but not its syntactic or semantic properties” (Oltra-Massuet 2020: 1). Rather, it is corroborating the claims that, at least in Slavic, there is some interaction between the theme vowel and argument structure, prosody or the interpretation of the verb (Jabłońska 2007, Arsenijević 2020). In this talk we focus on the e/i-class and give a proposal for its analysis.

To create a list of unaccusatives, the ‘l-participles as adjectives’-test was used (based on Aljović 2000, proposed for BCS), since only l-participles of unaccusatives can be used as adjectives in Slovenian, (1). This test is similar to the previously proposed ‘l-participles in reduced relative clauses’-diagnostic from Ilc & Marvin (2016), according to which only l-participles of unaccusative verbs can appear in reduced relative clauses. While Ilc & Marvin’s test indeed works, as shown in (2) based on the contrast between unergatives and unaccusatives, acceptability judgements vary between speakers and the same speakers often give different judgements for the same verb on two different occasions. On the other hand, the ‘l-participles as adjectives’-test can be used in a corpus search, which is why we opted for this test.

- (1) a. \*telefonira-l-i                      otroci                                      b. odras-l-i                                      otroci  
       telephone-PTCP-M.PL children                                      grow-up-PTCP-M.PL children  
       Intended: “children who telephoned”                                      “grown up children”
- (2) a. \* Otroci, telefonira-l-i                      staršem, so                      zdaj                      šli spat.  
       children telephone-PTCP-M.PL parents AUX now go sleep  
       Intended: “Children who telephoned their parents have now gone to sleep.”
- b. Otroci, odras-l-i                      v devedesetih, so                      danes že                      zagrenjeni.  
       children grow-up-PTCP-M.PL in nineties are today already bitter  
       “Children grown up in the nineties are already bitter now.”

Using the l-participles as adjectives’-test, a sample of 109 unaccusative verbs was created based on the Slovenian national corpus Gigafida (we have searched for l-participle forms which end in the Genitive Dual/Plural form of the adjectival declension, i.e., verbal forms ending in *-lih*). We classified the resulting list with respect to their theme vowel class. In the table below, we combine these results with the data from 3000 most frequent Slovenian verbs, assumed to be representative of all Slovenian verbs.

TV-CLASS	% UNACC V	% ALL V	RATIO UNACC/ALL INCLUDING 0	RATIO UNACC/ALL EXCLUDING 0	% OF VERBS WITH ACC
e/i	52.25%	4.17%	12.54	2.67	24.60%
∅/ne	4.50%	0.83%	5.40	1.15	56.00%
e/e	5.40%	1.5%	3.60	0.77	64.44%
ni/ne	15.32%	4.8%	3.19	0.68	65.28%
∅/e	20.72%	9.97%	2.17	0.46	75.17%
a/je	0%	12.6%	0		78.31%
a/a	0	34.87%	0		73.33%
a/e	0	1.17%	0		91.43%
a/i	0	1.23%	0		43.24%
deffective	0	0.07%	0		0%
i/i	0	28.8%	0		86.23%

The table compares the distribution of theme-vowel classes in unaccusative verbs (based on the 109-verb sample) to their distribution in all verbs (based on the 3000-verb sample). The column ‘% UNACC V’ shows the percentage of unaccusative verbs belonging to each TV-class and the column ‘% ALL V’ shows the percentage of verbs belonging to specific TV-classes in the 3000-verb sample. The column ‘RATIO UNACC/ALL INCLUDING 0’ shows the ratio between the previous two values including the classes

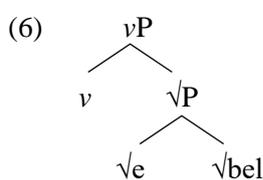
which have no unaccusative verbs, whereas the column ‘RATIO UNACC/ALL EXCLUDING 0’ only takes into account the TV classes with accusative members. All the differences are statistically significant ( $\chi^2$  test:  $p < 0.0001$ ), which means that the distribution of TV classes is crucially different in the class of unaccusative verbs and in all verbs. The column (% OF VERBS WITH ACC) is based on the coding of the 3000 verbs in our database, the relevant question being whether a verb *can* get an accusative argument. Three observations can be made based on this table: (i) no unaccusative verbs belong to the two largest theme vowel classes in Slovenian (a/a and i/i, previously described as the default TVs in Marvin 2002), (ii) the two big TV-classes tend to get accusative arguments quite frequently (73.33% and 86.23%, respectively), and (iii) the e/i-class stands out since more than one half of the unaccusative sample falls into it and it is generally also not associated with accusative arguments (only 24.60% of this group can get an accusative argument). We focus on the e/i-class due to its strong correlation with unaccusativity.

The e/i-class was previously identified as the class to which deadjectival inchoative verbs belong (Marvin 2002). (3) and (4) show the crucial contrast between inchoative and causative pairs of deadjectival verbs, respectively. Note that inchoative verbs pattern with unaccusatives in that they do not take an accusative argument (the subject being an undergoer), but they do not pass the unaccusativity test since they are, when unprefixed, imperfective. As noted in Ilc & Marvin (2016) and Aljović (2000), imperfective verbs do not pass any of the proposed unaccusativity tests, see the contrast in (5).

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| (3) a. bel-é-ti<br>white-TV-INF “to become white”                | b. bel-i-mo<br>white-TV-1PL “we become white”                  |
| (4) a. bel-í-ti/bél-i-ti<br>white-TV-INF “to make x white”       | b. bél -i -mo<br>white-TV-1PL “we make x white”                |
| (5) a. *modr-e-l obraz<br>blue-TV-PART face “face becoming blue” | b. pomodr-e-l obraz<br>po-blue-TV-PART face “face turned blue” |

For a closer look into the dynamic of the e/i-class, we turn to our 3000-verb database. The e/i-class consists of 125 verbs, 42 have no prefix and are imperfective. Out of these, only 7 can get an accusative complement. 83 e/i-verbs are prefixed and perfective and only 23 of these can get an accusative argument (note that prefixation can change argument structure). Interestingly, most of these transitive verbs are derivatives of the verb *vid-e-ti* ‘to see’, which is exceptional for having stem-final stress and in many varieties of Slovenian belongs to another TV-class, specifically *vid-i-t* or *vid-Ø-t*. Abstracting from this one verb, this class has stress on the TV, which indicates that the TVs e/i are merged in the deepest cycle (Mišmaš & Simonović 2021). In sum, the e/i-group displays consistent tendencies with respect to influencing the argument structure and prosody, which indicates that its TVs do not fit into the definition according to which TVs have no influence on the properties of the verb.

Based on this we propose that the combination e/i should not be treated as TVs but rather as a verbal suffix, on par with the imperfective suffix *-ov*. Building on this we will apply Antonyuk et al.’s (2020) proposal for secondary imperfectivisation to e/i. That is, we assume that e/i is a verbalized root that merges with the lexical root, (6). Crucially, since e/i is the last syllable of the cycle (which gets spelled out once a categorial head is merged, Marvin 2002), it gets stressed (Simonović 2020). And since no further structure is projected, the structure essentially behaves like an unaccusative verb.



To conclude, we propose that e/i should be treated separately from theme vowels, as a verbal suffix. Potentially, there are other candidates that are typically assumed to be theme vowels that could be treated as suffixes, for example the a/e-class which is the exact opposite of e/i – it typically gets an accusative complement and is stressed on the root. Still, we do not claim that all TVs should be treated as suffixes – the default a/a and i/i, for example,

seem to be proper TVs, that possibly get inserted as ornamental morphemes.

**References:** Aljović, N. 2000. Unaccusativity and aspect in SerBoCroatian. *ConSole VIII Proceedings*. • Antonyuk S. et al. 2020. Allomorphy, morphological operations and the order of Slavic verb-prefixes. Talk at FASL 29. • Arsenijević B. 2020. How arbitrary/deterministic is the theme vowel assignment? Quantitative insights from Serbo-Croatian. Talk at SlavLingColl. • Ilc, G. & T. Marvin. 2016. Unaccusatives in Slovenian from a cross-linguistic perspective. *Formal Studies in Slovenian Syntax: In honor of Janez Orešnik*. • Jabłońska, P. 2007. Radical decomposition and argument structure. PhD Thesis. • Marvin, T. 2002. *Topics in the stress and syntax of words*. PhD Thesis. • Mišmaš, P. & M. Simonović. 2021. Why kl-kolj, br-ber, v-ved, but never kl-br or kolj-ber? Restrictions on the phonological shape of root allomorphs in Slovenian. Talk at 18th OCP. • Oltra-Massuet, M. I. 2020. Conjugation Class. *Oxford Research Encyclopedia of Linguistics*. • Simonović, M. 2020. Derivational affixes as roots in a lexical stress system. Ms.