



OV IS IN THE AIR: THE EXTREME MULTIFUNCTIONALITY OF THE SLOVENIAN AFFIX OV¹

1 INTRODUCTION

One of the classical features of Distributed Morphology (Halle/Marantz 1993, 1994) is the assumption that derivational affixes correspond to categorial heads (n, v, a). However, several recent proposals within Distributed Morphology (Lowenstamm 2014; Nevins 2015; Creemers et al. 2017) argue that (either some or all) derivational affixes should be analyzed as roots. As core evidence, these authors discuss affixes which are promiscuous both in terms of what categories they select and what categories they can realize (or, be selected by, if they are viewed as roots). We observe that such promiscuous affixes discussed in the literature have either highly abstract or highly unpredictable meaning, potentially pointing in the direction of no stored meaning at all. Working in a related approach, Simonović and Arsenijević (2020) argue that certain affixes in Serbo-Croatian function either as inflectional or as derivational, deriving either passive participles or adjectives. Importantly, in this case as well, once the categorial content is removed, the affix/root appears rather light in terms of its semantic content.

Testing the limits of the unification of affixes which appear both in inflection and derivation and with different categorial embeddings, we focus on the Slovenian affix *ov*, which can be found in nouns, adjectives and verbs. Based on this distribution, one could at first sight take these occurrences of *ov* as several different affixes which coincidentally have the same phonological form. However, considering the semantic contribution of *ov* as well as its prosodic effects, we will argue for a single, extremely multifunctional *ov*. As a result, we will provide a comprehensive analysis of the morpheme *ov* in Slovenian and give further support for the unification approach of affixes proposed in the literature. Furthermore, in dealing with the specific contexts where *ov* appears, we further elaborate the model initially proposed

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1 We acknowledge the financial support by the Austrian Science Fund FWF (grant I 4215) and the Slovenian Research Agency ARRS (grant N6-0113).

by Lowenstamm (2014), by answering the question what entry or entries for *ov* the Encyclopedia needs to contain.

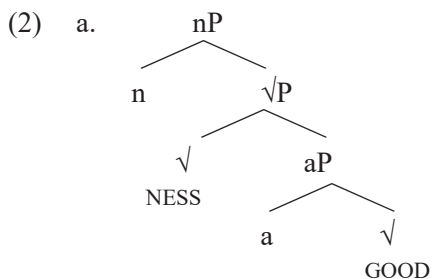
In what follows, we first give an overview of the account which treats affixes as roots in section 2. Then section 3 focuses on the morpheme *ov* in contexts which would be traditionally classified as derivational: derived verbs, possessive and kind adjectives and adjectives with the affix *ov(e)n*. Section 4 focuses on *ov* in nominal declensions. Section 5 is the conclusion.

2 DERIVATIONAL AFFIXES AS ROOTS

One of the postulates of Distributed Morphology is that roots do not carry information about the category of the word (Halle/Marantz 1993, 1994; Marantz 1996). Rather, the category of the word is determined by a categorial head. These heads can either have no phonological content (e.g. in *travel*, where the root $\sqrt{\text{TRAVEL}}$ is combined with a mute categorizer *v* or *n*) or they can be phonologically realized, as is the case in most derivational affixes (e.g. in *traveler*). Recently, however, Lowenstamm (2014) showed that the assumption that derivational affixes are exponents of categorial heads runs into problems and instead proposed that derivational affixes are a subset of roots. Put differently, Lowenstamm (2014) proposes that derivational affixes are like roots in that they do not carry information about their category, but receive a category by being merged into the complement position of a categorial head. This move entails a separation between phonological/semantic content, on the one hand, and categorial heads, on the other, for both ‘traditional’ roots and affixes. Roots (including derivational affixes) have phonological content and/or meaning, while categorial heads are mute and have no semantic contribution. In this revised picture, affixes such as the English *ic* (which can be found in adjectives such as *atomic* below) are not analyzed as in (1a), but rather as in (1b), both of which taken from Lowenstamm (2014: 232, (6)).



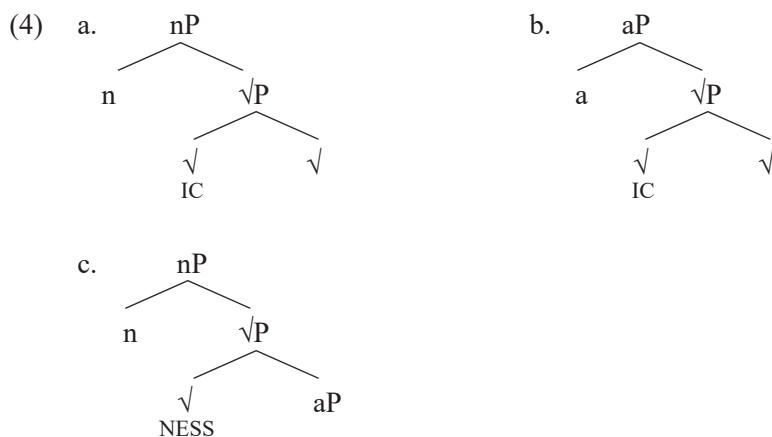
As (1b) already indicates, a crucial distinction between ‘traditional’ roots (e.g. $\sqrt{\text{TRAVEL}}$) and affixes comes from the affixes’ requirement to take complements. Crucially, affixes can select roots, as *ic* in (1b), or categories, as is the case for *ness*, shown in (2) below.



One argument for the ‘affixes are roots’ treatment comes from the observation that certain derivational affixes, such as the English *ic*, surface under different categorial embeddings, as shown in (3). Note that in this respect affixes are no different from regular roots such as √WORK or √TRAVEL.

- (3) a. n: comic, academic, basics, sceptic
 b. a: comic, academic, basic, atomic

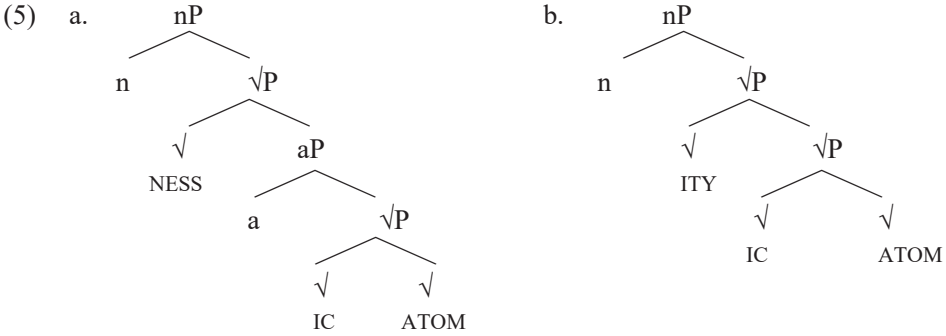
One consequence of treating derivational affixes as roots is the necessity of storing them as such, an issue not explicitly tackled by Lowenstamm. Simonović (2020) argues that the categorial embeddings of affixal roots need to be stored in the Encyclopedia. Storing the categorial embedding of roots is classically assumed in DM for ‘traditional’ roots (such as √CAT), as summarized in the title of Marantz (1996) ‘*Cat* is a phrasal idiom’. Extending this to affixal roots, Simonović suggests that the categorial embedding of affixal roots should not be stored for each derived word, but once in an abstract schema, which also specifies the selectional behavior of the root. The Encyclopedia entries for the nominal and adjectival *ic*, and for *ness* would look as represented in (4).



These Encyclopedia entries raise the further question of their stored meaning. Simonović suggests that, unlike ‘traditional’ roots, affixal roots are potentially stored without any meaning. This is compatible with the observation that the meaning of affixal roots is often extremely vague or unpredictable (especially of those that appear under different categorial embeddings). For example, as Creemers et al. (2017: 75) note, “[affixes such as *ic*] have, among other interpretations, meanings such as ‘of,’ ‘relating to,’ ‘engaged in,’ and ‘connected with.’”

Assuming (nearly) meaningless roots then leads to one further question, i.e. why such roots do not appear in all environments without any limitations. The tentative answer is that their insertion generally leads to well-formed items, but some items are dispreferred if a less complex structure is available. However, as will be shown, certain (nearly) meaningless roots do indeed appear in a variety of contexts, including inflection. One example of such an affixal root is *ov*, which we will consider in section 3.

The second argument for the root analysis of affixes comes from English stress. While we will not go into the details of Lowenstamm’s account here, suffice it to say that under his approach the combination of affixes-as-roots analysis and phrasal spell-out can account for the prosodic contrast between stress-affecting affixes, (e.g. *ity* in *atomicity*) and stress-neutral ones (e.g. *ness* in *atomicness*). The relevant trees are shown in (5) below. The stress-affecting behavior is not essentially a property of the affix *ity*, but of the structure it appears in. The structures with multiple roots heading each other, termed “radical cores” by Lowenstamm, always constitute a single phase and therefore a single stress-assignment domain. Here Lowenstamm assumes that phonological rules re-apply with each new root phrase, but the same result can be obtained by having the rules apply to the whole radical core at once, on the first spell-out.

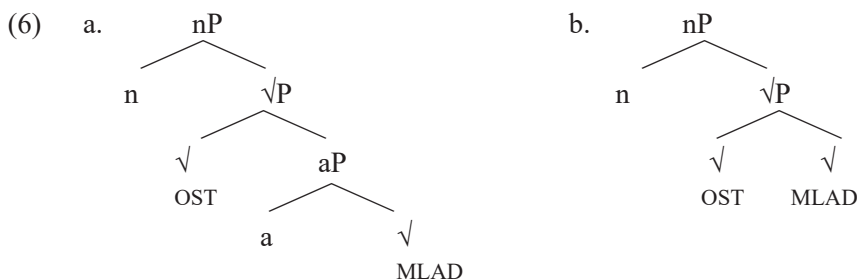


Crucially for what follows, Simonović (2020) extends this approach to Slovenian and shows how observations about word stress first made in Marvin (2003) can be accounted for if we treat affixes as roots. Marvin observes that there exists a prosodic contrast in (apparently) deadjectival *ost*-nominalizations, illustrated by minimal pairs

such as *mládost* ‘younghness’ (prosodically faithful to the adjective *mlád* ‘young’) and *mladóst* ‘youth, young years’. Marvin’s analysis, which Simonović follows, is that *mládost* is a deadjectival nominalization (i.e. the more productive type, compositionally interpreted and prosodically faithful to the base adjective), while *mladóst* is a root nominalization (i.e. the more rare, idiomatic type, characterized by stress-shifting). For Marvin, the stress-shifting behavior of *ost* is a consequence of a prosodic specification on the suffix, which is only realized phase-internally. Simonović dispenses with prosodic specifications on affixes altogether and proposes that the ‘idiomatic’ nominalization *mladóst* contains a radical core (a combination of two roots) and that radical cores always receive the default stress pattern.

In Slovenian, the default stress is stem-final. Stem-final stress is also the most common prosodic pattern in the language, as established based on the stress pattern of the 3,000 most frequent nouns, verbs and adjectives. For each of these 9,000 words, we marked the stress pattern and annotated whether stress is stem-final. Items which can either have stem-final stress or another stress pattern were excluded from the count. In each of the three categories the stem-final stress pattern is by far the most common one, and a majority of words have this pattern, specifically, 63% of verbs, 70% of nouns and 73% of adjectives receive the stem-final stress.

While *mladóst* has a default stress pattern, *mládost* is a deadjectival nominalization in which the root *ost* takes an adjective as its complement, which naturally leads to faithful prosody. The relevant trees are shown in (6).



To sum up the theoretical background presented in this section, we assume an approach under which derivational affixes can be treated as roots with potentially little or no meaning and according to which word stress is dependent on the structure of the word. In section 3, we show how this approach successfully captures the behavior of *ov* in the verbal and adjectival domain in Slovenian.

3 SLOVENIAN AFFIX *OV* IN THE DERIVATIONAL MORPHOLOGY

Before proceeding to the contexts in which *ov* can be found, we first need to note that *ov* surfaces either as *ov* or as *ev*, depending on the preceding consonant. This is a purely phonologically driven allomorphy, as illustrated in the possessive adjectives in (7).

- (7) a. Vid-ov b. Rok-ov c. Maj-ev
 ‘Vid’s’ ‘Rok’s’ ‘Maj’s’

In traditional grammars, *ov* was in some instances taken to be a morpheme, for example in possessive adjectives as in examples such as (7) above, but it was primarily treated as a part of larger morphemes. For example, Toporišič (2000: 184) lists several affixes that are used to derive collective nouns. Among these we can find *je* (as in *cvet-je* ‘flowers’, related to *cvet* ‘flower’) but also *evje* and *ovje* (as in *borovničevje* ‘blueberry plants’, related to *borovnica* ‘blueberry’, and *cvetovje* ‘flowers’, related to *cvet* ‘flower’), *stvo* (as in *članstvo* ‘members’, related to *član* ‘member’) and *ovstvo* (as in *judovstvo* ‘Judaism’, related to *jud* ‘Jew’), while *ov* is not listed as a morpheme in this context. Notably, such treatment suggests that *stvo* as a morpheme has nothing in common with *ovstvo*. Marvin (2003) makes a similar point regarding morphemes *ec* and *je* in deverbal nominalizations.

In order to avoid the undesirable reduplication of affixes, we assume as a null hypothesis that all instances of *ov* are instances of the same derivational affix, which can also combine with other derivational affixes. Especially illustrative of this behavior are the pairs with and without *ov* which have slightly different meanings and can be found among denominal adjectives (8), collective nouns (9) and denominal nouns (10). In each of these contexts, it is unclear what the semantic contribution of *ov* is or what conditions its presence.

- (8) a. jezik-ov-en b. jezič-en
 language-*ov-en* language-*en*
 ‘related to language’ ‘related to tongue’
- (9) a. grm-ov-je b. sad-je
 bush-*ov-je* fruit-*je*
 ‘shrubbery’ ‘fruit’
- (10) a. bank-ov-ec b. obraz-ec
 bank-*ov-ec* face-*ec*
 ‘banknote’ ‘form’

In the above contexts, the affix *ov* is sandwiched between other categorized elements, therefore revealing no category with which it is associated. There are, however, instances of *ov* which would be analyzed as categorizers in classical Distributed Morphology. Such is the *ov* in possessive adjectives illustrated in (7). A similar analysis is plausible for denominal verbs in (11).

- (11) a. pot-ov-a-ti (cf. pot) b. glas-ov-a-ti (cf. glas)
 travel-*ov*-THEME-INF vote-*ov*-THEME-INF
 ‘to travel’ ‘path, travel’ ‘to vote’ ‘voice, vote’

There appear to be no clear cases in which *ov* functions as a nominalizer (but we will argue that such cases actually exist in the inflectional domain in Section 4).

In sum, the derivational uses of *ov* point towards *ov* being an extremely multifunctional affix, comparable to the English *ic*, i.e. a root that has little to no semantic contribution, which can appear in various categorial contexts.

As is clear from the examples above, the contexts in which *ov* shows up are extremely numerous and analyzing all of them would go beyond the scope of this article. We therefore made a representative selection of the derivational uses of *ov*. In 3.1, we turn to the verbal *ov*, which functions as a verbalizer and as an imperfectivizer. In 3.2 we offer an analysis of the adjectival *ov* in denominal adjectives. Finally, in 3.3 we turn to a case where *ov* itself reveals no category, as it is followed by the adjectivizing affix *-n*.

In each case our discussion will be guided by the question what the prosodic and semantic effects of *ov* are and what needs to be stored in the Encyclopedia in order to obtain these effects.

3.1 The affix *ov* in verbs

Before turning to the combinatorial possibilities of the verbal *ov*, it should be pointed out that *ov* in verbal contexts is characterized by allomorphy. The version *ov* shows up in the non-finite forms, where it is accompanied by the theme vowel *a*, (12a), whereas the version *u* shows up in the non-finite forms, where it is accompanied by the theme vowel *je* (12b).

- | | |
|--|---|
| (12) a. pot-ov-á-ti
travel- <i>ov</i> -THEME-INF
'to travel' | b. pot-ú-je-mo
travel- <i>u</i> -THEME-1SG.PRES
'we travel' |
|--|---|

As the examples in (12) show, the two allomorphs display different prosodic patterns: while in the non-finite forms the theme vowel is stressed, the stem-final vowel receives the stress in the present tense. As argued by Simonović (2020), these prosodic patterns are not a feature of the morpheme *ov*, but rather imposed by the theme vowels, since they are also attested with other roots (e.g. *or-á-ti* 'to plough', *ór-je-mo* 'we plough').

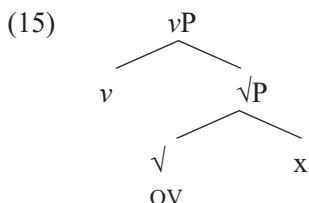
When it comes to the categories which the verbalizing *ov* selects and the effects it has, there seem to be two large classes. In most cases, *ov* shows up as an imperfectivizer, (13), which derives imperfective verbs (13a, c) from perfective ones (13b, d).

- | | |
|--|--|
| (13) a. kup-ov-ati
buy- <i>ov</i> -THEME-INF
'to buy.IMPERF' | b. kup-i-ti
buy-THEME-INF
'to buy.PERF' |
| c. pre-pis-ov-ati
over-write- <i>ov</i> -THEME-INF
'to copy' (imperf.) | d. pre-pis-a-ti
over-write-THEME-INF
'to copy' (perf.) |

In other cases *ov* shows up as a verbalizer, as illustrated in (14), taking bases of all other categories: nouns, (14a), adjectives, (14b), phrases, (14c) and roots which do not surface as independent words, (14d).

- | | | | | | |
|---------|-------------|--------------|--------------|---------------|---------------|
| (14) a. | pot-ov-a-ti | (cf. pot) | b. | modr-ov-a-ti | (cf. moder) |
| | ‘to travel’ | ‘travel’ | | ‘to theorize’ | ‘wise’ |
| | c. | vseb-ov-a-ti | (cf. v sebi) | d. | spošt-ov-a-ti |
| | | ‘to contain’ | ‘in oneself’ | | ‘to respect’ |

At first sight the imperfectivizing function seems to require a separate entry in the Encyclopedia. However, as proposed by Arsenijević (2018) for Serbo-Croatian, imperfectivizers can be analyzed as re-verbalizers, which reverse the value of the verbal aspect to its default, which is imperfective. If this is the case, then the verbalized *ov* is a good example of a universal selector, which can have any kind of element (phrase or root) in its complement. The Encyclopedia entry of the verbal *ov* is shown in (15), where *x* represents any element.



Before turning to the adjectivized *ov*, a remark is in order concerning the stress of *ov*-verbs. The stress pattern described above and imposed by the theme vowels is preferred for all *ov*-verbs by all Slovenian speakers, and a majority of the consulted speakers report not ever using any other stress pattern on these verbs. However, some speakers (from Upper Carniola, Lower Carniola and Ljubljana) allow the exceptional pattern with the stress on the syllable preceding *ov*. These speakers have realizations such as *pót-ov-a-ti* ‘to travel’ and *vér-ov-a-ti* ‘to believe’, next to more common *pot-ov-á-ti* and *ver-ov-á-ti*. We take this exceptional stress as evidence of the incorporation of an nP into the verb (in these cases of *pót* ‘travel’ and *vér-a* ‘faith’, respectively), which enables the preservation of the nominal stress. This is not unexpected given the cross-linguistic evidence that nominal lexical stress tends to be more strongly protected than that of verbs (Smith 2011). Assuming that the incorporation of nPs is the general way of capturing exceptional (i.e. not theme-controlled) stress in Slovenian verbs leads to the postulation of some nPs which do not surface independently. In our data set *var* and *napred* in the verbs *vár-ov-a-ti* ‘to guard’ and *napréd-ov-a-ti* ‘to make progress’ are instances of such non-attested nPs. However, while *var* and *napred* are not attested nouns, they are attested (with the expected stress pattern) inside adjectives *vár-en* ‘safe’ and *napréd-en* ‘progressive’, respectively.

3.2 The affix *ov* in possessive and kind adjectives

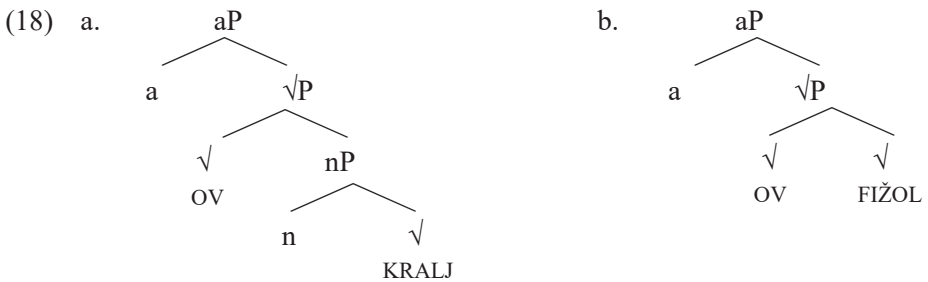
As already shown in the examples in (7), *ov* can be found in possessive adjectives, which are derived from either masculine or neuter animate nouns (but not feminine, which take the suffix *-in*). In (16) we provide further examples, together with bases, shown in the genitive singular form.

- | | | |
|----------------------------------|----------------------------------|------------------------------|
| (16) a. kralj-a
king.M.SG.GEN | b. vladark-e
ruler.F.SG.GEN | c. deklet-a
girl.N.SG.GEN |
| a'. kralj-ev
'king's' | b'. vladark-in/*-ov
'ruler's' | c'. deklet-ov
'girl's' |

Kind adjectives formed with *ov*, on the other hand, are derived from nouns of either masculine, feminine or neuter gender. Nouns in these cases are interpreted as mass nouns and the adjectives generally have the interpretation 'made of x'.

- | | | |
|----------------------------------|------------------------------|-------------------------------|
| (17) a. fižol-a
bean.M.SG.GEN | b. limon-e
lemon.F.SG.GEN | c. žvepl-a
sulfur.N.SG.GEN |
| a'. fižol-ov
'bean' | b'. limon-ov
'lemon' | c'. žvepl-ov
'sulfur' |

Given the two groups of adjectives, which behave differently with respect to the gender of the noun they are derived from, the first option to be considered is that (i) possessive adjectives are derived from nPs (18a), and (ii) kind adjectives are derived from roots, (18b).



However, as we have seen in section 2 and as proposed in Simonović (2020), radical cores (i.e. roots directly adjacent to roots) trigger default stress, which in Slovenian is stem-final stress. This means that we would expect adjectives such as *fižolov*, (17b'), to be pronounced as **fižolóv* (to be more precise, **fižol[ów]*), which is not the case. In fact, the stress pattern of the two kind and possessive *ov*-adjectivizations is the same (and faithful to the stress of the nominal base).

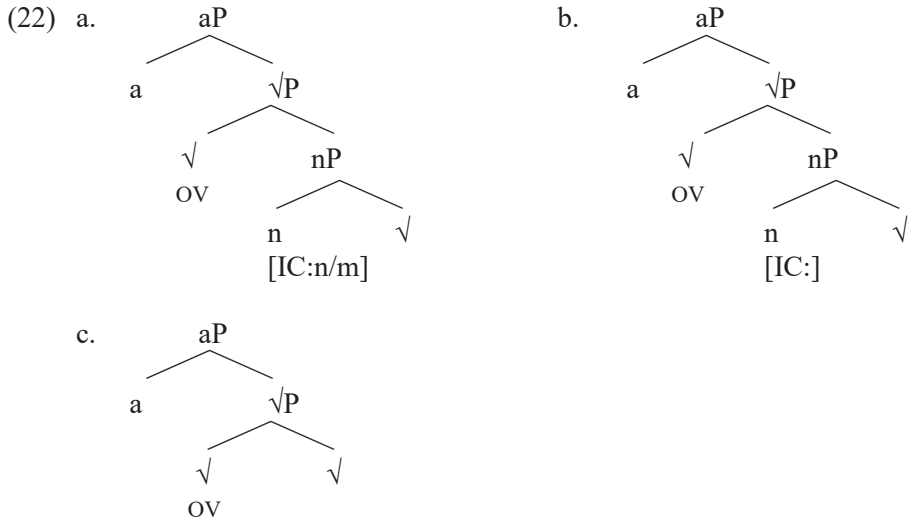
- (19) a. *králj-év* 'king's' b. *vladárk-in/*-ov* 'ruler's' c. *deklét-ov* 'girl's'

- (20) a. *fižól-ov* 'bean' b. *limón-ov* 'lemon' c. *žvépl-ov* 'sulfur'

Furthermore, kind adjectives always take nominal bases (and not bound roots or other categories), which again indicates that the structure in (18b) is not accurate. There is only a very small class of *ov*-adjectives which does have all the expected features of root adjectivizations (such as stem-final stress):

- (21) a. *kralj-év* 'royal' (cf. *kralj* 'king')
 b. *njeg-[ǫ]v* 'his' (cf. *nj-ega* 'him')
 c. *kak-[ǫ]v-ost* 'quality' (implying the unattested adjective *kak-óv*)

This means that we need three distinct structures in order to capture the three groups of adjectives and two of them need to include an nP. We suggest that nPs can be selected either with the inflectional class/gender specified or without such a specification. Then, the structure for possessive adjectives (*králj-év*) incorporates an nP with a declension class specified on the n, see (22a). On the other hand, the structure for kind adjectives (*fižól-ov*) incorporates an nP *without* a declension class specified on the n, (22b), which explains the fact that kind adjectives can also be derived from feminine bases. Finally, adjectives like *kralj-év* are genuine root adjectivizations and are all stored with a specific meaning.



As for the meaning of these adjectives, we argue that the morpheme *ov* has no concrete semantic contribution, but that the possessive and kind meanings are a consequence of the structure. That is, we suggest that the possessive meaning might be the default meaning for an adjective derived from an animate noun. This seems especially plausible given possessive constructions in other languages where no overt possessive morphology is used, but rather simple adjacency. Such a language is Egyptian Arabic in which possessive phrases have the structure as in (23).

- | | | | | | |
|---------|----------------|-------|----|------------------|----------|
| (23) a. | kitaab | Hasan | b. | kitaab | il-walad |
| | book | Hasan | | book | the-boy |
| | ‘Hasan’s book’ | | | ‘the boy’s book’ | |

Similarly, we suggest that the mass meaning of kind adjectives is essentially a default. This meaning is achieved by simple adjacency in a variety of languages, including English, as shown in (24).

- | | | | |
|---------|-----------|----|-------------|
| (24) a. | bean soup | b. | lemon juice |
|---------|-----------|----|-------------|

As for the third group, listed in (21), their meaning is simply stored.

3.3 The affix *ov* with *n* in adjectives

While staying in the adjectival domain, we now focus on a context in which *ov* does not appear to be immediately headed by any category, as it is selected by another root. The selecting root in this case is \sqrt{N} , which is part of the most general adjectivizer in Slovenian (surfacing as *en* in the citation form). As mentioned in Section 2, *en*-adjectives are one of the contexts in which minimal pairs with and without \sqrt{ov} are attested, as illustrated in (25).

- | | | | | | |
|---------|--------------------|----|--------------------------|----|---------------------|
| (25) a. | jezik | b. | jezik-ov-en | c. | jezič-en |
| | ‘language, tongue’ | | ‘related to language’ | | ‘related to tongue’ |
| | a’.plod | | b’.plod-ov-en | | c’.plod-en |
| | ‘fruit’ | | ‘related to a/the fruit’ | | ‘fertile’ |

Not surprisingly, in the face of such data, traditional grammars list three different affixes used to derive adjectives that express ‘the relation to what the noun (from which the adjective is derived) expresses’: *oven* (as in *časoven* ‘temporal’ related to *čas* ‘time’), but also *en* (as in *čajen* ‘tea [adjective]’, related to *čaj* ‘tea’) and *ov* (*ogljikov* ‘carbon [adjective]’, related to *ogljik* ‘carbon’) (Toporišič 2000: 197–198).

Our analysis only assumes roots \sqrt{N} and \sqrt{ov} , which can be in the complement of an adjectival head, but can also combine with each other in more than one configuration, as shown by the prosody. Adjectives in *oven* display prosodic variation with a major and a minor pattern, comparable to the situation in the verbs in *ovati* in 3.1 and

adjectives in *ov* in 3.2. The major pattern is stem-final prosody, while a few items have either optional or obligatory preservation of the prosodic pattern of the base noun. This once again points in the direction of the exceptional preservation of nominal prosody under other categorial embeddings. The three possibilities are illustrated in (26), where all the adjectives are in the definite form because the citation form (e.g. *posloven*), which has no ending, contains an epenthetic shwa vowel, which obscures the stem-final stress position.

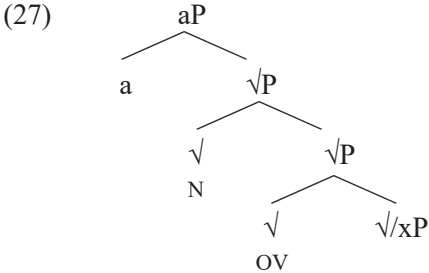
- (26) a. posl-[ǎ]v-n-i b. dél-ov-n-i c. blók-ov-n-i/blok-[ǎ]v-n-i
 ‘business-related’ ‘work-related’ ‘bloc-related’

In order to establish the quantitative relations between the three patterns, we extracted the adjectives in *-oven* attested more than ten times in the Slovenian national corpus Gigafida. The search yielded 210 adjectives which were plausibly analyzable as containing *ov+n*. The relevant figures are shown in the Table 1 below.

Table 1: Stress on *ov+n*-adjectives

Stress pattern	Stem-final	On the base noun	Either stem-final or on the base noun
Number of adjectives	195	11	4

Given the stem-final stress on the majority of the *oven*-adjectives, we propose that the structure in (27) is the stored structure. Note that we remain agnostic as to which category *ov* selects (a root or an nP), as we do not have enough data to tease apart these two options. More generally, the well-formedness of structures in which a category appears below a radical core and their predicted stress pattern need to be addressed by further research.



The instances of *ov* in what is traditionally considered to be derivation show that *ov* can be analyzed as a single root which has no specific meaning, can select different categories or roots and can in turn appear embedded under a root such as \sqrt{N} or different categories. In the next section, we turn to *ov* in inflection.

4 THE AFFIX *OV* IN THE NOMINAL DECLENSION

In inflection we can observe *ov* acting as the genitive case ending in dual and plural of the main masculine declension:

(28)		‘hill’	‘address’
	NOM.SG	hrib	naslov
	GEN.SG	hrib-a	naslov-a
	NOM.DU	hrib-a	naslov-a
	GEN.DU	hrib-ov	naslov-ov
	NOM.PL	hrib-i	naslov-i
	GEN.PL	hrib-ov	naslov-ov

Additionally, we can also observe *ov* in about 40 monosyllabic nouns, which take an *ov* augment in dual and plural (see Mirtič 2016 for a recent list of nouns taking the augment).

(29)		‘edge’
	NOM.SG	rob
	NOM.DU	rob-[ǒ]v-a
	NOM.PL	rob-[ǒ]v-i

The genitive and the augment *ov* display an interaction. In the plural dual/paradigms where there is an augment, the genitive form only contains one *ov*, as shown by the genitive dual/plural form *rob*-[ǒ]v in (30).

(30)		‘hill’	‘address’	‘edge’
	NOM.SG	hrib	nasl[ǒ]v	rób
	GEN.SG	hrib-a	nasl[ǒ]v-a	rób-a
	NOM.DU	hrib-a	nasl[ǒ]v-a	rob-[ǒ]v-a
	GEN.DU	hrib-ov	nasl[ǒ]v-ov	rob-[ǒ]v (^{??} rob-ov-ov)
	NOM.PL	hrib-i	nasl[ǒ]v-i	rob-[ǒ]v-i
	GEN.PL	hrib-ov	nasl[ǒ]v-ov	rob-[ǒ]v (^{??} rob-ov-ov)

Crucially, this is not due to haplology, as examples such as *nasl*[ǒ]v-*ov* ‘address.GEN.DU/PL’ show. The natural question is then which of the two *ovs* is pronounced in *rob*-[ǒ]v ‘edge.GEN.DU/PL’. The stress pattern provides a clear clue. The augment *ov* is always stressed, as can be seen from the augmented forms of *rob* in the table above. On the other hand, the genitive *ov* is never stressed, as can be seen from the forms *hrib*-*ov* ‘hill.GEN.DU/PL’ and *nasl*[ǒ]v-*ov* ‘address.GEN.DU/PL’ (the only exceptions being the few nouns in which the ending contains the only stressable syllable nucleus in the word, e.g. *ps*-a ‘dog.NOM.DU’, *ps*-i ‘dog.NOM.PL’, *ps*-[ǒ]v ‘dog.GEN.DU/PL’). The stress pattern in *rob*-[ǒ]v ‘edge.GEN.DU/PL’ is the same as in all the forms with the augment, but different

from all forms with just a case ending (e.g. the genitive singular *rób-a*), from which we can infer that it is the genitive *ov* that is deleted and hence that it is the augment *ov* that survives.

(31)		SINGULAR	DUAL	PLURAL
	NOMINATIVE	rób	rob-[ǰ]v-a	rob-[ǰ]v-i
	GENITIVE	rób-a	rob-[ǰ]v	rob-[ǰ]v
	DATIVE	rób-u	rob-[ǰ]v-oma	rob-[ǰ]v-om
	ACCUSATIVE	rób	rob-[ǰ]v-a	rob-[ǰ]v-e
	LOCATIVE	rób-u	rob-[ǰ]v-ih	rob-[ǰ]v-ih
	INSTRUMENTAL	rób-om	rob-[ǰ]v-oma	rob-[ǰ]v-i

The question is then how we can account for the two instances of *ov* in the nominal declension, as well as their interaction. Starting with the genitive *ov*, our proposal is that *ov* is the Elsewhere allomorph in the nominal paradigm and that its insertion is conditioned by phonological constraints. The Vocabulary Item for this item is as shown in (32).

(32)	/ov/ ↔ []
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The assumption that there is no specialized genitive dual or plural ending in Slovenian is confirmed by the broader picture. The genitive dual and plural form is typically the form with no ending in both most common feminine (e.g. *ženska* ‘woman’) and most common neuter (*delo* ‘work’) declensions, but also in some nouns of the masculine declension class to which nouns such as *hrib* ‘hill’ belong. In addition to the ones that receive the augment *ov*, we find zero genitive plural/dual ending in *otrok* ‘child’, *konj* ‘horse’, *las* ‘hair’, *zob* ‘tooth’ etc. (Toporišič 2000: 283).² Below we show examples of plural paradigms with a zero ending in the genitive form.

(33)		‘teeth’	‘women’	‘works’
	NOMINATIVE	zob-je	žensk-e	del-a
	GENITIVE	zob	žensk	del
	DATIVE	zob-em	žensk-am	del-om
	ACCUSATIVE	zob-e	žensk-e	del-a
	LOCATIVE	zob-eh	žensk-ah	del-ih
	INSTRUMENTAL	zob-mi	žensk-ami	del-i

In sum, based on this lack of an overt genitive ending in two major feminine and neuter declension classes and in several exceptions in the masculine class, we can

² Additional evidence for this claim comes from plurale tantum nouns such as *možgan-i* ‘brain’, which can have a bare genitive plural *možgan* (but also *možgan-ov*).

assume that Slovenian has no specialized genitive dual/plural ending, and that what shows up in *gen.du/pl* is the Elsewhere allomorph.

Importantly, the insertion of the Elsewhere allomorph is restricted to very few cases, while being generally blocked. The competition between forms including the Elsewhere allomorph and those without it can be modeled in an Optimality Theory model. The issue of the relation between Lexical Insertion and phonology proper is a complex one (see Wolf 2013 for an overview). For the simplicity, we assume here that phonology (construed as an OT grammar) evaluates the candidates which are results of Lexical Insertion. Since Lexical Insertion is guided by the Subset principle, there is, as far as the Subset principle is concerned, no limit on inserting Elsewhere allomorphs. What filters those Elsewhere allomorphs out in most forms is a phonological constraint. One of the constraints that can be used to model this is the Optimality Theory's classic *STRUCTURE (Zoll 1992; Prince/Smolensky 1993). This constraint militates against structure in general, always picking the candidate that has less structure. Given the Vocabulary Item in (32), any number of additions of *ov* are lexically sponsored, so they will never incur a violation of Faithfulness. However, each of them will incur a violation of *STRUCTURE, which, for the purpose of this example we assume to assign a violation mark for each morpheme. In (34) this is illustrated using the tableau for the Instrumental Singular form of *hrib*.

(34)	hrib + om	FAITHFULNESS	*STRUCTURE
	a. ▣ hribom		**
	b. hribovom		***!
	c. ovhribovom		***!*
	d. hribomovovov		***!**
	e. hrib	*!	

The only situations in which the elsewhere allomorph can survive in Slovenian are cases in which its addition prevents a violation of another constraint. In this case, the relevant constraint is one militating against syncretism with the citation form.

- (35) Contrast-Citation (CONC): Incur a violation if an output form A is segmentally identical to the citation form of the lexeme that A belongs to. (Pertsova 2015)

Pertsova (2015) proposed this constraint based on Russian Genitive plural. Interestingly, Pertsova shows that, diachronically, Slavic genitive plural *ov* became generalized as a consequence of homonymy avoidance.

In Slovenian, the problem of syncretism of genitive dual/plural with nominative singular does not arise in declensions of the type *žensk-a* and *del-o* (as they have overt nominative singular endings). The situation in the type *hrib* is different, since leaving the genitive dual/plural without an overt ending would lead to a violation of CONC. This violation is avoided by allowing the Elsewhere allomorph in genitive dual/plural. The full picture obtained this way is that no big declension class in Slovenian violates CONC, as can be verified from (36).

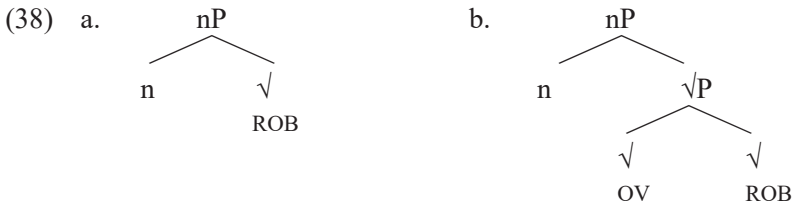
(36)		‘hill’	‘linden’	‘work’	‘thing’
	NOM.SG	hrib	lip-a	del-o	stvar
	GEN.SG	hrib-a	lip-e	del-a	stvar-i
	NOM.DU	hrīb-a	lip-i	deli	stvar-i
	GEN.DU	hrīb- ov	lip	del	stvar-i
	NOM.PL	hrīb-i	lip-e	del-a	stvar-i
	GEN.PL	hrīb- ov	lip	del	stvar-i

The tableau below shows the evaluation of the genitive dual/plural form of *hrib* form assuming the citation form *hrib*.

(37)	hrib	FAITHFULNESS	CONTRAST-CITATION	*STRUCTURE
	CF: hrib			
	a. hrib		*!	*
	b. \blacksquare hribov			**
	c. hribovov			***!

The affix *ov* in the genitive dual/plural is therefore the Elsewhere morpheme used to avoid a CONC violation.

As for the always-stressed augment *ov*, we propose that nouns like *rob* ‘edge’ have two stored allomorphs and the phonological constraints choose between them (as in various phonological models of root allomorphy, e.g. Kager 2008). One allomorph is the root *rob* with its category, the second is the root *rob* in a root complex with the root \sqrt{ov} . As we have seen above, the augment *ov* is always stressed (*rob- $\acute{o}v$ -i*), which provides evidence for the root complex structure:



A crucial point for the evaluation below is that phonology does not have access to the internal structure of complex roots so it will consider the two stem allomorphs (*rób* ~ *rob $\acute{o}v$*) as introducing the same amount of structure. As a result, the two allomorphs will be deployed to cover the two different positions in which no overt ending is inserted.

(39)	rób ~ robóv	FAITHFULNESS	CONTRAST-CITATION	*STRUCTURE
	CF: rob			
	a. rob		*!	*
	b. ▣ robóv			*
	c. róbov			**!
	c. robóvov			**!

Note that in the forms with an overt case ending, no preference can be established by the constraints. As a consequence, we assume that the forms which do have a preference (NOM.SG and GEN.DU/PL) impose their selected allomorphs upon the remainder of the number sub-paradigm through a uniformity constraint, which leads to the entire singular sub-paradigm taking the root allomorph *rob* and the entire dual and plural sub-paradigms taking the root allomorph *rob[ó]v*.

(40)		SINGULAR	DUAL	PLURAL
	NOMINATIVE	rób	rob- <i>óv</i> -a	rob- <i>óv</i> -i
	GENITIVE	rób-a	rob- <i>óv</i>	rob- <i>óv</i>
	DATIVE	rób-u	rob- <i>óv</i> -oma	rob- <i>óv</i> -om
	LOCATIVE	rób-u	rob- <i>óv</i> -ih	rob- <i>óv</i> -ih
	INSTRUMENTAL	rób-om	rob- <i>óv</i> -oma	rob- <i>óv</i> -i

In sum, in this section we have shown that \sqrt{ov} figures as a root with no specific meaning and as the Elsewhere allomorph in the nominal declension.

5 CONCLUSION

In this paper we have focused on the Slovenian affix *ov*, which can be found in nouns, adjectives and verbs. While these occurrences of *ov* appear *prima facie* to be several different affixes which only coincidentally have the same phonological form, we argue for a single multifunctional *ov*, which can appear both in inflection and derivation. In line with proposals within Distributed Morphology which claim that derivational affixes should be analyzed as roots, we have treated *ov* as a potentially meaningless root which can take as a complement other roots (thus forming a “radical core”) or phrases, resulting in different structures and consequently different stress patterns and meanings. In the nominal declension, *ov* acts as an Elsewhere allomorph, whose insertion is guided by an interplay of phonological and morphological constraints. Such a treatment of *ov* enables us both to give further support for the unification approach of affixes proposed in the literature and to further elaborate the affixes-as-roots model by addressing the question what the Encyclopedia entry or entries for *ov* need to contain.

Our consideration of the multifunctional morpheme *ov* in Slovenian is by no means intended as a definitive account (of this morpheme or of multifunctional morphemes in general). We therefore hope that further research will address our claims and predictions and broaden the data set, but also provide formal modeling of aspects we have

not explored here. One aspect of the account which has not been entirely formalized is the ability of the (semantically light) root to surface as the Elsewhere allomorph in the nominal paradigm. While semantically light roots are more plausibly expected to appear as Elsewhere allomorphs than roots with a fully specified meaning, we leave it to future research to account for the relevant mechanism. Slovenian seems a good starting point for such an account, as the same kind of parallelism is attested in the verbal domain (see Simonović, this volume).

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Abstract

√OV IS IN THE AIR:

THE EXTREME MULTIFUNCTIONALITY OF THE SLOVENIAN AFFIX *OV*

In this paper we consider several instances of the Slovenian affix *ov*, which surfaces in many, apparently unrelated contexts. Here we focus on (i) *ov* in verbs, where it can act as an imperfectivizer or a verbalizer, (ii) *ov* found in possessive adjectives and kind adjectives derived from nouns, (iii) *ov* which precedes the adjectiviser (*e*)*n* in denominal adjectives, and (iv) *ov* in nominal declension (acting as a genitive case ending in dual and plural or as a dual/plural augment). Building on the observation that certain affixes function either as inflectional or as derivational (see Simonović and Arsenijević 2020), and working within a Distributed Morphology approach which postulates that derivational affixes should be analyzed as roots (e.g. Lowenstamm 2014), we argue for a single multifunctional *ov*. This *ov* is a potentially meaningless root that can take as a complement other roots (thus forming a “radical core”) or phrases, resulting in different structures and consequently different stress patterns and meanings, but can also act as an Elsewhere allomorph, whose insertion is guided by an interplay of phonological and morphological constraints.

Keywords: morphology, Distributed Morphology, Slovenian, multifunctional affix, roots

Povzetek
EN ALI VEČ MORFEM- \sqrt{OV} :
IZJEMNA VEČFUNKCIJSKOST SLOVENSKEGA MORFEMA *OV*

V prispevku obravnavamo več funkcij slovenskega morfema *ov*, ki se pojavlja v številnih, med seboj navidezno nepovezanih okoljih. Osredotočamo se na (i) *ov* v glagolih, v katerih določa nedovršnost ali samo besedno vrsto, (ii) *ov*, ki ga najdemo v svojilnih in vrstnih pridevniki, izpeljanih iz samostalnikov, (iii) *ov*, ki se v izsamostalniških pridevniki pojavlja pred pridevniškim morfemom (*e*)*n*, in (iv) *ov* v samostalniških sklanjatvah, kjer služi kot rodilniška končnica v dvojini in množini ali za podaljšanje osnove. Na osnovi trditve, da so nekateri morfemi bodisi oblikotvorni bodisi besedotvorni (gl. Simonović in Arsenijević 2020), in v skladu s pristopom, ki v okviru t. i. razpršene morfologije predlaga, da je treba besedotvorne morfeme analizirati kot korene (npr. Lowenstamm 2014), trdimo, da obstaja v slovenščini en sam večfunkcijski morfem *ov*. Gre za potencialno brezpomenski koren, ki lahko za svoja dopolnila izbira druge korene (in tako tvori korenski skupek) ali zveze, kar vodi v različne strukture in se posledično odraža v različnih naglasnih vzorcih in pomenih. Poleg tega ima lahko morfem *ov* tudi vlogo zapolnjevalnega alomorfa, katerega rabo določajo tako fonološke kot morfološke omejitve.

Ključne besede: morfologija, razpršena morfologija, slovenščina, večfunkcijski morfem, koreni