# THE REFLEXIVE-INTRODUCING NA- AND THE DISTINCTION BETWEEN INTERNAL AND EXTERNAL SLAVIC PREFIXES\*

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This paper discusses prefixed structures such as the Slovenian *na-gledati se filmov* (lit. on-watch self movies<sub>GEN</sub>) 'get one's fill of watching movies'. This use of *na-* behaves as an 'internal'/'lexical'/'resultative' prefix in some respects and as an 'external'/'superlexical' prefix in other respects. I argue, nonetheless, that it is resultative. I also argue that despite appearances, such constructions sometimes contain two VPs. The main evidence includes data with two unselected objects, perfectivity triggering, two scopes of the secondary imperfective and two scopes of various kinds of adverbials. Comparison is also briefly made with cases such as Slovenian *z-laufati se* (lit. out-run self) 'wear oneself out running' and English *run oneself exhausted*, which have simple resultative structures with a single VP. The findings of the paper cast serious doubt on the validity of the diagnostics that are widely used for distinguishing between the two types of prefixes.

#### 1. Introduction

This paper discusses prefixed structures such as the Slovenian *na-laufati se* (lit. on-run self) 'get one's fill of running', *na-gledati se filmov* (lit. on-watch self movies<sub>GEN</sub>) 'get one's fill of watching movies', *na-pre-igravati se Maradone* (lit. on-through-play self Maradona<sub>GEN</sub>) 'get one's fill of faking out Maradona'. The discussion is cast against the distinction commonly made with respect to Slavic verbal prefixes between internal/lexical/resultative and external/superlexical/adverb-like prefixes (section 1.1). The relevant *na-* is interesting because according to some widely used diagnostics, it is internal/lexical/resultative, while according to others it is external/superlexical/adverb-like (section 2).

I will argue that the relevant *na*- should be analyzed as internal/lexical/resultative. More specifically, I will propose that even though such 'verbs' overtly show only one verbal root, they sometimes actually contain a structure with two VPs (section 2, details in section 4). Support for a two-VP structure is drawn from data with two unselected objects (section 3.1), from aspectual patterning (perfectivity-triggering and scopal ambiguity of the secondary imperfective/progressive) (sections 3.2 and 3.3), from modification with the result adverbial and the restitutive 'again' (section 3.4), from locative and several other types of adverbial modification (section 3.5), and tentatively from cases with two accusatives (section 3.6). After laying out the two-VP analysis in section 4, I will go on to compare these *na*- structures with the partly related English adjectival resultatives with an unselected reflexive such as *run oneself exhausted* and with its Slovenian prefixed counterpart *z-laufati se* (lit. out-run self) 'wear oneself out running'(section 5). Unlike the *na*- examples, both of these have simpler structures with a single VP. This discussion also reveals, however, that some *na*- sentences are in fact ambiguous between a single-VP and a double-VP structure, thus complementing the picture drawn by the two-VP analysis proposed in section 4.

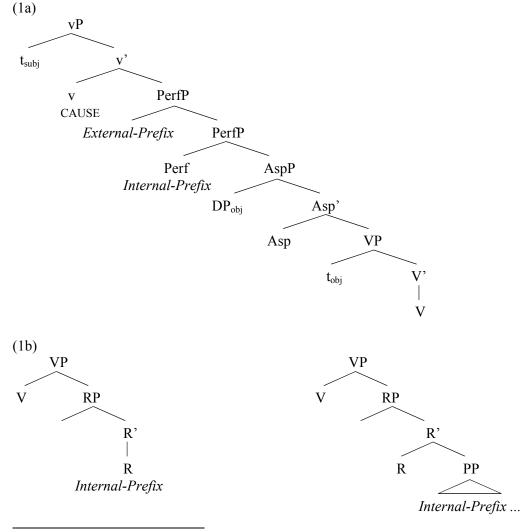
The findings of the paper have obvious consequences for the diagnostics that are widely used for distinguishing between the two types of prefixes. It follows from the analysis presented here that the diagnostics for external/superlexical/adverb-like prefixes are inconclusive, and that the claim that there can be only one internal/lexical/resultative prefix per verb has to be interpreted very literally, i.e. as a restriction to one such

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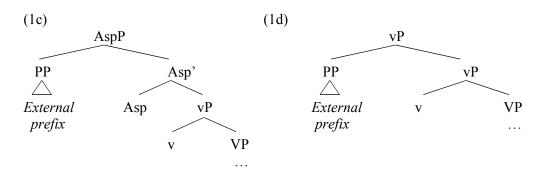
prefix per  $V^0$  but not necessarily per overt verbal stem. Moreover, this may call for a serious reconsideration of the very distinction between the two classes of prefixes, as several prefixes that are typically treated as external may yield to a reanalysis with double-VP structures (cf. Žaucer 2005b, 2008 and Arsenijević 2006, 2007 for some such proposals). This paper will, however, deal only with the relevant na-.

# 1.1 Background: internal and external prefixes

Slavic verbal prefixes are often said to fall into two classes, 'internal' and 'external' (also known as 'lexical' and 'superlexical'). This distinction can be traced back to the work of pre-generative Slavic linguists. In generative event-structure terms, the distinction has been advocated recently in works such as Schoorlemer (1995, 2004), Verkuyl (1999), Babko-Malaya (1999, 2003), Di Sciullo & Slabakova (2004), Svenonius (2004), Slabakova (2005), Istratkova (2006), Richardson (2006), etc. These authors argue that this classification reflects different morphosyntactic structures: internal prefixes are analyzed as originating lower in the tree, external prefixes are analyzed as originating higher up. In Slabakova's (2005) version, an internal prefix is located in a PerfectivityP just above the VP, while external prefixes sit above the internal one, adjoined to this PerfectivityP (Slabakova 2005: 332-333), as in (1a). In Svenonius's (2004) version, internal prefixes—which he argues are very similar to resultative particles in Germanic verb-particle constructions—are located below the VP, either directly in small-clause-like ResultP or in a PP embedded within ResultP, as in (1b)¹. Externals come in two kinds: one type is positioned above the VP/vP in (various) AspP(s) and the other is adjoined to vP (Svenonius 2004: 231), as in (1c)-(1d).



<sup>1</sup> On this account, internal prefixes then possibly move from RP to a higher AspP (Svenonius 2004: 242; also Ramchand 2004/2008a).



Although both classes of prefixes, when attached to an unprefixed base, can have some sort of aspectual effect, and although both seem to belong to the category of prepositions (cf. Matushansky 2002, Žaucer 2002, 2005a, Arsenijević 2006, Biskup 2007, Gehrke 2008, etc.), there are nonetheless a number of characteristics that distinguish, or so is claimed, the two classes from one another. These characteristics are taken to result directly from the different positions of the prefixes in the tree. For example, internal prefixation is said to typically contribute to an unprefixed verb either a spatial or idiosyncratic meaning, as in (2a)-(2b), and to often exert argument structure-changing effects, as in (2c)<sup>2</sup>; on the other hand, as shown in (3), external prefixation makes an adverb-like systematic meaning contribution (note the parenthesized parts of the translations in (3)) and does not affect the argument structure (Slabakova 2005, Svenonius 2004, etc.; cf. also Spencer & Zaretskaya 1998 in a Lexical Conceptual Structure format).

(2)	a.	<pre>pri-vezati b. at-tie 'attach'</pre>	<pre>pre-nesti over-carry 'stand, endure'</pre>	c. *(od-)-pisati avto off-write car 'write off a car'
(3)	a.	(do-)-žvižgati pesmico to-whistle song '(finish) whistl(ing) a so	b.	(do-)-igrati partijo šaha to-play game chess '(finish) play(ing) a game of chess'
	c.	(po-)-sedeti over-sit 'sit (for a little while)'	d.	(po-)-brundati over-hum 'hum (for a while)'
	e.	(za-)-pet pesnju behind-sing song '(begin) to sing a song'	<b>X</b>	an; from Babko-Malaya 2003: 25)

Moreover, an internal prefix attaches directly to the verbal root and cannot share the verb with another internal prefix, while an external prefix—or several—can stack on top of an internal one, as *pri*- does in (4) (Slabakova 2005, Svenonius 2004, etc.).<sup>3</sup> Additionally, it is often claimed that external prefixes do not allow secondary imperfectivization, while internal prefixes do (Svenonius 2004, Schoorlemmer 2004, etc.), and that external prefixes tend not to occur on gerunds and never on root nominalizations, whereas internal prefixes happily occur on both (Svenonius 2004).<sup>4</sup>

<sup>&</sup>lt;sup>2</sup> Unless marked otherwise, all non-English examples in this paper are from Slovenian.

<sup>&</sup>lt;sup>3</sup> Richardson (2006), for whom all prefixes head PrefixPs in-between VP and vP, is an exception here, claiming that lexical prefixes can also stack, but any lexical prefix will nonetheless sit lower than any superlexical prefix.

<sup>&</sup>lt;sup>4</sup> In addition to these two classes of prefixes, some authors syntactically distinguish a third class; Richardson (2006) mentions the VP-external class of "purely-perfectivizing prefixes" and Tatevosov (2008) the VP-external class of "intermediate prefixes". However, these are not important for our *na*-, since even in these three-class systems, this *na*- would seem to be a hybrid between internal and external, irrespectively of the third class, and it would not be a member of the "intermediate" class.

(4) (pri-)-vz-digniti mizo at-up-lift table 'lift up the table (a little)'

# 2. Puzzle and outline of proposal

The examples in (5) reveal that in light of the characteristics defining the two classes of prefixes (section 1 above), the prefix *na*- appears to be a hybrid (noted also by Furmanska 2006). For example, *na*- affects the argument structure of the base verb by introducing a reflexive clitic, in which it patterns with internal prefixes such as *za*- in (6). (That such reflexive clitics can indeed be considered a prefix-introduced argument, i.e. an 'unselected object' with respect to the base/unprefixed verb, is argued in Spencer & Zaretskaya (1998), Babko-Malaya (1997), Svenonius (2004), etc., and for similar cases in Germanic in Hoekstra (1988), Levin & Rappaport Hovay (1995), etc.)

(5)	a.	klepetati (*se) b. chat self 'chat'	on-cha	petati se t self he's fill of/come to have enough of chatting'
	c.	gledati (*se) filme watch self movies <sub>ACC</sub> 'watch movies'	d.	na-gledati se filmov on-watch self movies <sub>GEN</sub> 'get one's fill of/come to have enough of watching movies'
	e.	za-vezovati (*se) gojzarje behind-tie self boots <sub>ACC</sub> 'be tying up boots'	f.	na-za-vezovati se gojzarjev on-behind-tie self boots <sub>GEN</sub> 'get one's fill of/come to have enough of tying up boots'
	g.	pri-frfotavati (*se) at-flutter self 'arrive fluttering/flapping wing	h. s'	na-pri-frfotavati se on-at-flutter self 'get one's fill of arriving fluttering'
(6)	a.	govoriti (*se) talk self 'talk'	b.	za-govoriti se behind-talk self 'talk onself into a corner'

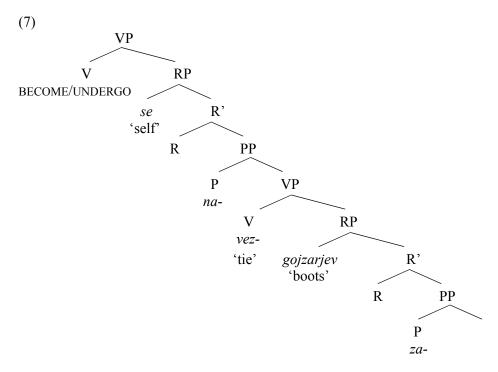
On the other hand, however, five features seem to place this *na*- in the category with external prefixes. To begin with, despite the unselected reflexive in the examples in (5), the argument-structure of the base verbs also seems to be retained; that is, the internal argument of the base verb is still there, but it is in the genitive rather than accusative, (5c)-(5f). Secondly, such *na*-verbs typically, or at least often, resist secondary imperfectivization (compare (5d) with its secondary imperfective form ??*na*-gledovati se filmov 'be getting one's fill of watching movies'). Thirdly, this *na*- does not occur on gerunds in spontaneous speech and seems to be simply impossible on root nominalizations (compare the verb in (5a) with *klepet* 'a chat' and the verb in (5b) with \**na*-klepet (se)). Fourthly, the meaning contribution of this *na*- to the meaning of the base verb is non-spatial, constant and adverb-like, often dubbed as something like 'V a lot/to excess'. And lastly, this *na*- patterns with external prefixes in that it can attach to the left of an internal prefix and scope over the internally-prefixed verb, as in (5d). In short, then, this use of *na*- shares some features with internal prefixes and some with external prefixes.

Focusing on its non-spatial, constant, adverb-like meaning and on its ability to stack over an internal prefix, Milićević (2004: 295) analyzes this use of na- as external prefixation. The works mentioned earlier as advocating the external/internal distinction do not seem to discuss this particular use of the reflexive-introducing

<sup>&</sup>lt;sup>5</sup> This holds to the extent that such forms often feel forced/unnatural, just as is typically the case with externally prefixed secondary imperfectives; in Žaucer (2005b), though, I argue that if such forms are forced, the scope of the secondary imperfective is predictable, and the same goes for our *na*- structures, so that such structures are not, in fact, structurally impossible (cf. also Biskup 2007).

na-, so it is not clear what their position would be, especially with respect to the examples with na- stacking over an internal prefix. Jabłońska (2007: e.g. 188-9) classifies this na- in Polish as internal simply due to its introduction of the reflexive, but does not discuss the prefix any further, nor does she mention cases where na- is stacked over another prefix.

In what follows, I will assume a small-clause account of internal prefixes (Dimitrova-Vulchanova 1999, Svenonius 2004, Ramchand 2004/2008a, etc.), placing them inside a Ramchandian (2008b) ResultP.<sup>7</sup> I will argue—contra Milićević (2004) and with Jabłońska (2007)—that all instances of this *na*- should be treated as internal/resultative. Furthermore, I will claim that at least in some cases—which certainly include cases like (5f) and (5h), in which *na*- appears stacked on top of another internal prefix, and perhaps only optionally cases like (5d)—the structure contains two VPs (cf. also Arsenijević 2007). The higher V is null, and the projection of the higher prefix, i.e. our *na*-, embeds a verbal structure. A simplified structure of (5f) is then as in (7). I will present and discuss a more detailed version of this structure in section 4, after section 3 presents the data that motivate it.



Note that presumably due either to its vaguely similar meaning of 'to excess' or to one of its possible English glosses, i.e. 'get one's fill of something', this type of *na*-prefixation is sometimes paralleled with English resultatives such as *run oneself exhausted/tired* (cf. Spencer & Zaretskaya 1998: 22). However, the two cases are semantically distinct after all, with our *na*-structures (sometimes) getting the interpretation of 'get one's fill of V-ing' or 'get sick of/tired of/fed up with V-ing' or 'come to have enough of V-ing', and with the English resultatives getting the interpretation 'get exhausted/tired (by running)' but not, crucially, 'get sick of/tired of/fed up with running'. I will try to derive this interpretational difference structurally.

Depending on the context, my translations of *na*- structures will vary, including templates such as 'get one's fill of V-ing', 'get sick of/tired of/fed up with V-ing', 'come to have enough of V-ing', etc. Similarly, the English *get one's fill of something* can be interpreted either positively, as in 'get enough/a good amount of

<sup>&</sup>lt;sup>6</sup> In a non-syntactic framework, Filip (2000, 2005a) sees this *na*- (as in Russian *na-guljat'sja* (lit. on-walk-self) 'come to have one's fill of walking') as a pure 'measure prefix' and the verb as combined with the prefix presyntactically. But if *na*- is essentially a quantifier, there is no insightful way of explaining the presence of the unselected reflexive. Now, Filip holds that the reflexive-introducing use of *na*- is the same as the one in, say, the Russian *na-rvát' cvetóv* (lit. on-pluck flowers<sub>GEN</sub>) 'pluck a (large) quantity of flowers', with which I disagree. While I would claim that both *na*-'s are resultative, they differ in several respects, including the obligatoriness/impossibility of an unselected reflexive. See Žaucer (2008), where verbs with this second *na*- are analyzed as resultatives very similar to the English *amass*.

<sup>&</sup>lt;sup>7</sup> The reason I opt for this account over accounts such as Slabakova's (2005) lies primarily in its clear advantage in dealing with unselected objects. However, the data that will be presented below would lead to the same conclusion (i.e. a structure with two VPs) in a model à la Slabakova (2005), so the main conclusions of the paper hold regardless of this choice.

something, so that one is satisfied', or negatively, as in 'get more than one can take, resulting in displeasure'. Crucially, though, this variation is not meant to suggest that there are any structural differences the between differently glossed examples.

# 3. Motivating data

# 3.1 Two unselected objects

Consider (8). The verbal stem is 'play', whose semantic selection (in its sports meaning, ignoring the theatrical reading) prohibits 'Maradona' from being its internal argument, (8a)-(8b). As (8c) shows, though, *Maradona* is a licit internal argument when the stem occurs with *pre*- 'through, past'. Example (8c) therefore exhibits a case of a prefix-licensed direct object, i.e., a case of an 'unselected object'. In models such as Svenonius' (2004) or Ramchand's (2008b, 2004/2008a), this necessarily means that we are dealing with a resultative prefix.

- (8) a. igrati fuzbal play soccer<sub>ACC</sub> 'play soccer'
- b. \*igrati Maradono play Maradona<sub>ACC</sub>
- c. pre-igrati Maradono through-play Maradona<sub>ACC</sub> 'fake out Maradona'

Now, keeping in mind that *Maradona* is an unselected object of *pre-igrati*, consider (9).

- (9) a. na-pre-igravati \*(se) Maradone
  on-through-play self Maradona<sub>GEN</sub>
  'get one's fill of faking out Maradona/get fed up with faking out M.'
  - b. *Hej, Sušić, a se še nisi na-pre-igraval Maradone?* yo Sušić Q self still not-are on-through-played Maradona<sub>GEN</sub> 'Yo, Sušić, haven't you had enough of faking out Maradona yet?'

Example (9) contains *pre-igrati*, which again comes with the unselected object *Maradona*, but *pre-* is now found under a second prefix, *na-*, which obligatorily co-occurs with the reflexive; example (9b) shows the phrase from (9a) used in a sentence. In (9), we thus see the prefix *na-* introducing an unselected reflexive and the prefix *pre-* introducing the unselected object *Maradona* (in this case in the genitive). In short, we have two prefixes and two unselected objects, and in models such as Svenonius' (2004) or Ramchand's (2008b, 2004/2008a), this can only signify that we have two resultative prefixes, which, in turn, can only mean that we have two VPs.

Other similar cases can easily be formed, e.g. *na-od-povedovati se prireditev* (lit. on-off-say self events<sub>GEN</sub>) 'come to have enough of calling events off', *na-na-padati se sovražnika* (lit. on-on-fall self enemy<sub>GEN</sub>) 'come to have enough of attacking the enemy' (verb form listed in Toporišič 2000: 216), *na-iz-kopavati se zakladov* (lit. on-out-dig self treasures<sub>GEN</sub>) 'come to have enough of digging up treasures', etc. And a special case of doubly-prefixed verbs with two unselected objects is represented by examples such as *na-pre-rekati se* (lit. on-through-say self) 'come to have enough of quarreling', where *se* realizes both the unselected *se* of *pre-rekati se* (lit. through-say self) 'quarrel' and the unselected *se* of our *na*- (bringing about the 'come-to-have-enough-of' meaning). However, as in other cases where one would expect two occurrences of *se* (e.g. an ordinary reflexive *se* and an impersonal *se*; see Marušič & Žaucer 2006a: 1133, Fn. 30 for illustration), we only see *se* realized once, a fact typically attributed to haplology (e.g. Rivero 2001: 175).

Note that if the genitival nominal is introduced by the prefix, it is an argument and not an adjunct, like any resultative predicate-introduced nominal. That this is indeed the case is supported by the obligatoriness of the genitive nominal. Example (10a) shows that when co-occurring with *ob-kopati* 'surround with a ditch, dig a ditch around sth', *šotor* 'tent' is an unselected object; (10b), in turn, shows that the object of this verb is not readily omissible. And, not surprisingly, this nominal likewise cannot be omitted when it is part of the doubly-prefixed *na-ob-kopavati* in (10c), suggesting that it is an genitive-marked argument, not adjunct.

#### REFLEXIVE-INTRODUCING NA- AND THE INTERNAL/EXTERNAL DISTINCTION

- - b. *Tone je ob-kopal/ob-kopaval* \*(*šotore*).

    Tone is around-dug/around-dug.impf tents<sub>ACC</sub>

    'Tone dug some ditches/was digging ditches around the tents.'
  - c. Tone se je na-ob-kopaval \*(šotorov).
     Tone self is on-around-dug treasures<sub>GEN</sub>
     'Tone came to have enough of digging ditches around the tents.'

One can produce many other examples that illustrate this point, such as *na-od-povedovati se* \*(*prireditev*) (lit. on-off-tell self events<sub>GEN</sub>) 'come to have enough of calling events off', *na-pre-klicevati se* \*(*njegovih nepremišljenih izjav*) (lit. on-over-call self his rash statements<sub>GEN</sub>) 'come to have enough of revoking his rash statements', *na-od-pisovati se* \*(*dolgov*) (lit. on-off-write self debts<sub>GEN</sub>) 'come to have enough of writing debts off', *na-za-govarjati se* \*(*pokvarjenih politikov*) (lit. on-behind-say self corrupt politicians<sub>GEN</sub>) 'come to have enough of defending corrupt politicians', etc.<sup>8</sup>

To sum up, two prefix-introduced unselected objects can only be made sense of if both prefixes are internal/resultative, and two internal/resultative prefixes are only possible if there are two VPs.

# 3.2 Perfectivity triggering

Another characteristic that sets this *na*- apart from several prefixes that seem to have more adverb-like characteristics is its perfectivity-triggering force. As is well known, internal/resultative prefixes in Slavic trigger perfectivity (11a)-(11b). For authors like Brecht (1985), Strigin & Demjjanow (2001), Bertinetto (2001), Žaucer (2005a), and Arsenijević (2006, 2007), all prefix-triggered perfectivity is actually a sign of a prefix-introduced resultative change of state. When such a prefixed structure is suffixed with the so-called secondary imperfective suffix *-va*-, the latter scopes over the prefix, as in (11c).

(11) a.  $frfotati^{IMPF}$  b.  $pri-frfotati^{PF}$  c.  $pri-frfota-va-ti^{IMPF}$  flutter at-flutter at-flutter 'flutter' 'arrive fluttering' 'be arriving fluttering'

Furthermore, when we combine a prefix with more adverb-like characteristics and a secondarily imperfectivized internal-prefixed structure, this has no effect on the aspectual characteristics of the input, as shown in (12) and (13): the imperfective suffix -va- still scopes over the doubly prefixed verb with the meaning 'plough through

8

(i) a. na-govoriti se neumnosti
on-talk self stupidities<sub>GEN</sub>
'get one's fill of talking bullshit'
b. \*za-govoriti se neumnosti
behind-talk self stupidities<sub>GEN</sub>
'get oneself in trouble by talking bullshit'

<sup>10</sup> The examples that I translate with the English progressive form could, in the right context, also recieve a simple tense translation. This is why such examples are often translated in the literature with '(be) lift(ing) up' (e.g. Filip 2004). I will only use the form that translates the most salient, context-independent reading of the example under discussion, leaving special cases (such as habitual contexts, etc.) aside. This is meant to reinforce the distinction that exists between examples whose most context-neutral translation would be with the simple-tense form and those whose most context-neutral translation would be with the progressive form.

<sup>&</sup>lt;sup>8</sup> If the genitive in these examples, or in (ia) below, were just an adjunct, then we might also expect to be able to use it in the reflexive-introducing prefixed structure from (6b) above, as in (ib); but this is completely impossible.

<sup>&</sup>lt;sup>9</sup> Some see the secondary imperfective suffix as the counterpart of the English progressive, e.g. Borer (2005), Arsenijević (2006b); more precisely, Borer (2005) holds the form in (11a) to be the counterpart of English atelic simple-tense structures, the form in (11b) as the counterpart of English telic simple-tense structures, and the form in (11c) as the counterpart of the English progressive. At least in marking, I will stick to the tradition in the Slavic linguistic literature, so both (11a) (i.e. simple imperfectives) and (11c) (i.e. secondary imperfectives) will be marked as 'imperfective', whereas in Borer's system they would be marked as '(simple-tense) atelic' and 'progressive'. Note that the superscript <sup>PF</sup> and <sup>IMPF</sup> marks refer to the interpretation rather than grammatical marking, so they are indicated on the Slovenian example rather than in the word-for-word gloss. (Łazorczyk 2006 analyzes the secondary imperfective -*va*- as the realization of an inner-aspect atelic head rather than a grammatical-aspect head; for the present argument, nothing would change with such an analysis, since this atelic head is still above the VP and is also separate from, and higher than, the telic head of internal prefixes.)

<sup>10</sup> The examples that I translate with the English progressive form could in the right context, also recieve a simple tense translation. This

again'/'lift up partly'. (See section 4 below for a brief discussion of the structural status of these 'prefixes with more adverb-like characteristics'.)

- (12) a. orati<sup>IMPF</sup> njivo b. pre-orati<sup>PF</sup> njivo plow field over-plow field 'plow the field' 'plow up the field'
  - c. pre-ora-va-ti<sup>IMPF</sup> njivo d. pre-pre-ora-va-ti<sup>IMPF</sup> njivo over-plow field over-over-plow field 'be plowing up the field' 'be plowing up the field again'
- (13) a. vz-digo-va-ti<sup>IMPF</sup> hlod b. pri-vz-digo-va-ti<sup>IMPF</sup> hlod up-lift log at-up-lift log 'be lifting up the log' 'be lifting up the log partly'

Now, as for the relevant use of na-, (14a)-(14b) shows that when this na- is combined with a secondarily imperfectivized internal-prefixed structure, na- does trigger perfectivity, scoping over the suffix. If prefixintroduced perfectivity is indeed a consequence of resultativity (as per references above), then this suggests—as also pointed out for some other 'external' prefixes in Arsenijević (2006, 2007)—that na- is a case of an internal/resultative prefix.

(14) a. pre-ora-va-ti<sup>IMPF</sup> njivo b. na-pre-ora-va-ti se<sup>PF</sup> njive over-plow field on-over-plow self field<sub>GEN</sub> 'be plowing up the field' 'get one's fill of plowing up the field'

Now, one might perhaps want to dispute the validity of comparing prefixes with meanings such as 'partly' and 'again' with *na*-, arguing that the latter—with its meaning of something like 'to excess' ('to one's heart content')—has a qualitatively different meaning contribution; however, such an objection becomes highly suspicious against the data in (15). In (15b), an adverbial prefix with a meaning very close to that of *na*- is combined with a secondarily imperfectivized internal-prefixed structure; and in contrast to *na*- in (14b), the outermost prefix, again, does not trigger perfectivity, just as in (12)-(13).

(15) a.  $na\text{-}polnje\text{-}va\text{-}ti^{\text{IMPF}}$   $\check{s}katlo$  b.  $pre\text{-}na\text{-}polnje\text{-}va\text{-}ti^{\text{IMPF}}$   $\check{s}katlo$  on-fill box over-on-fill box box 'be filling up the box' 'be filling up the box too much, be over-filling the box'

Moreover, the 'excessive' adverb-like *pre*- from (15b) can actually be stacked on top of our *na*-prefixed verbs, as in (16d), which directly juxtaposes the two 'to-excess' prefixes, with *na*- having the perfectivity-triggering effect and *pre*- lacking it. (Also, as (16b) shows, the adverb-like *pre*- can be prefixed to a perfective input, while our *na*- requires an imperfective input, whether a simple imperfective or a secondary imperfective.) And in addition to the evidence of their differing aspectual import, which I claim is related to their different structural positions, (16d) also shows that their lexical semantics cannot really be exactly the same, i.e. that they do not simply both contribute a meaning 'to excess'. *Na*- contributes the 'getting-one's-fill' reading, i.e. 'getting oneself in a state of having V-ed enough/a lot', and *pre*- contributes the more simply adverb-like meaning of 'excessively' ('too much', 'over-'). *Na*- is a typical internal/resultative prefix, while *pre*-, I would claim, modifies the result, i.e. 'getting oneself in a state of having V-ed more than enough', though the validity of this claim is mostly independent of the claims I make about *na*-.

(16) a. na-frfotati se on-flutter self over-on-flutter self 'get one's fill of fluttering' b. pre-na-frfotati se over-on-flutter self 'get more than one's fill of fluttering'

c. na-frfota-va-ti se on-flutter<sup>IMPF</sup> self over-on-flutter<sup>IMPF</sup> self obe getting/be about to get one's fill of fluttering' one's fill of fluttering'

Let me sum up. Firstly, our data show both a purely empirical parallel between *na*- and the internal prefixes in (11), in that they both trigger an aspectual change, as well as a lack of parallel between *na*- and the adverb-like prefixes stacked on top of an internal one in (12)-(13) and (15)-(16), which do *not* trigger an aspectual change. Secondly, if Slavic prefix-induced perfectivity is always a result of resultativity/change of state (as claimed in Brecht 1985, Strigin & Demjanow 2001, Bertinetto 2001, Žaucer 2002,2005a, Arsenijević 2006, 2007), then its perfectivizing force suggests that *na*- is indeed a resultative/internal prefix. These two points, then, constitute the second piece of data that seems to place this use of *na*-with internals rather than clear externals.

On its own, however, the aspect-related facts presented above are not conclusive, especially since several uses of various prefixes are sometimes claimed to be external and, at the same time, encode/trigger perfectivity. For example, Schoorlemmer (1995), Spencer & Zaretskaya (1998), Babko-Malaya (1999, 2003), Svenonius (2004), Ramchand (2004/2008a), etc., have claimed that while perfectivity is a result of resultativity/change of state with internally-prefixed verbs, external prefixes can also trigger perfectivity, although with these perfectivity arises in a different way. This is also why compatibility with the *in-x-time* adverbial—with which na- happily combines, unlike with the for-x-time adverbial—has been said not to be a reliable diagnostic for telicity in Slavic (Borik 2002/2006). The two external-prefix structures from Svenonius (2004) that were given in (1c)-(1d) above actually reflect this difference: the non-perfectivity-triggering, pure adverbial externals could be adjoined to vP, the perfectivity-triggering adverbial externals could be in the Spec of AspP (cf. also Tatevosov 2008). If this view is correct, then it could in principle be possible for na- to trigger perfectivity and still be an external prefix, so our aspect-related facts, though suggestive, may not settle the issue. But even if this remains a possibility, it should be stressed that neither of the two structures for externals from Syenonius (2004) seem suited to na-, since na- combines both an aspectual effect—suggestingSvenonius's (1c)—and an adverbial one akin to that of pre- 'over-'/'excessively'—suggesting Svenonius's (1d). Also, this structure would have to somehow accommodate the reflexive, which neither (1c) nor (1d) are devised to do. 11

#### 3.3 Two scopes of the imperfective suffix -va-

The next piece of data that I offer as support for treating *na*- as an internal prefix comes from the interpretation of aspect in examples such as (14b) above, repeated below as (17b).

(17) a.  $pre-ora-va-ti^{IMPF} njivo$  b.  $na-pre-ora-va-ti^{PF} se njive$  over-plow field on-over-plow self field<sub>GEN</sub> 'be plowing up the field' 'get one's fill of plowing up the field'

On the interpretation given in the translation of (17b) and marked in the Slovenian with the superscript <sup>PF</sup>, the imperfective suffix *-va-* is interpreted as scoping over 'plowing up', with the prefix *na-* therefore triggering perfectivity for the doubly-prefixed structure. However, while this interpretation is the most salient one, it is not the only one available. The imperfective suffix *-va-* can actually also be interpreted as scoping over the 'getting-one's-fill' part of the complex event. Example (18a) contextualizes the same form in such as way that it is interpreted as imperfective in its first occurrence and as perfective in the second occurrence. (18b) is a revised version of (17b), indicating that both interpretations are possible. Note that the imperfective interpretation of the *na-* structure is not available in the absence of *-va-*, that is, when *na-* attaches to a simple imperfective, as in (19); this is the same pattern that is found with ordinary internal prefixes, such as the spatial *pri-* in (11) above.

<sup>&</sup>lt;sup>11</sup> As mentioned above, Arsenijević (2006, 2007), discussing certain other prefixes, also capitalizes on the fact that his 'external' prefixes, when occurring on an internally prefixed verb that has been secondarily imperfectivized, trigger perfectivity; he does not, however, contrast such 'external' prefixes with what I have called 'more adverb-like', result-modifying prefixes, such as those in (12), (13) and (15), and it appears that his system cannot accommodate these. Similarly, these prefixes do not fit into the system of Biskup (2007), according to which all prefixes should behave the same in terms of perfectivity-triggering.

- (18) a. Ko sem prišel, se je Juš ravno počasi na-pre-ora-va-l<sup>IMPF</sup> njive, ampak se when am arrived self is Juš just slowly on-over-plow field<sub>GEN</sub> but self je v končni fazi ni na-pre-ora-va-l<sup>PF</sup>.

  it<sub>GEN</sub> in final stage not-is on-over-plow
  'When I came, Juš was just getting (was just about to get) his fill of plowing up the field, but eventually he did not get his fill of plowing up the field.'
  - b. *na-pre-ora-va-ti*<sup>PF/IMPF</sup> *se njive* [(18b) = revised (14b)/(17b)] on-over-plow self field<sub>GEN</sub> 'get one's fill of plowing up the field' [=PF interpretation] 'be getting/about to get one's fill of plowing up the field' [=IMPF interpretation]
- (19) na-orati<sup>PF</sup> se njive on-plow self field<sub>GEN</sub> 'get one's fill of plowing the field'

This piece of data shows that *na*- triggers perfectivity but can itself also occur in the scope of the secondary imperfective suffix -*va*-, thus paralleling other internal prefixes, such as those in (11c) and (12c) above. More importantly, however, consider the following pattern.

We know that *na*- requires an imperfective input, be it a simple imperfective, as in (19) above, or a secondary imperfective, as in (20a) below. In other words, if the input contains an internal prefix, i.e. a perfectivity-triggering prefix, then we can only attach *na*- if the internally prefixed input has been secondarily imperfectivized. As shown in (20b), the internally prefixed form without the secondary imperfective suffix *-va*—being perfective—is not a possible input for *na*-. <sup>12</sup>

(20) a. na-pre-ora-va-ti<sup>PF/IMPF</sup> se njive b. \*na-pre-orati se njive on-over-plow self field<sub>GEN</sub> on-over-plow self field<sub>GEN</sub> on-over-plow self field<sub>GEN</sub>

So, given that *na*- only attaches to imperfective inputs, and given that the internally prefixed *pre-ora*- can only be interpreted imperfectively if it has been secondarily imperfectivized with *-va*- (i.e. only if it is *pre-ora-va*-), we know that when *na*- attaches to *pre-ora*- (i.e. *pre-ora-va*-), *pre-ora*- is secondarily imperfectivized (i.e. it is *pre-ora-va*-); in other words, when *na*- co-occurs with *pre-ora-va*-, the suffix *-va*- certainly modifies *pre-ora-*. At the same time, we have seen that *na*- triggers perfectivity for its input, even when stacked on *pre-ora-va*-, as in (17b). However, in the context of (18) above, we also pointed out that the structure *na-pre-ora-va*- can be interpreted not just as a perfective but also as a (secondary) imperfective, that is, with the suffix *-va*- scoping over *na*-. Thus, we know that when *na-pre-ora-va*- is interpreted imperfectively, there must be two secondary imperfectives: a secondary imperfective of what serves as the input to *na*- and a secondary imperfective of the *na*- structure itself. That suggests that *-va*- is taking two scopes at the same time, which is only possible if, despite the fact that we are seeing just one, there are actually two instances of the VP-dominating AspP that contains the secondary imperfective/*-va*-.

Within a two-VP approach, the availability of the two interpretations is easy to explain. In the ambiguous cases, such as (20a), the imperfective suffix -va- can instantiate just the AspP that dominates the VP of 'plowing up'—in which case na- then triggers perfectivity for the 'getting-one's-fill' part of the complex event—or it can instantiate both the AspP that dominates the VP of 'plowing up' and the AspP that dominates the null-headed VP of 'getting one's fill of', which is then interpreted imperfectively. While such an account, with two VPs and

<sup>&</sup>lt;sup>12</sup> This imperfectivity restriction matches the restriction found with the paraphrase that such structures have in the overtly two-VP structure in (i); the restriction applies both if the complement of *na-žreti se* 'get fed up with' is a gerund, (i), or an infinitive, (ii).

<sup>(</sup>i) na-žreti se oranja njive / pre-ora-va-nja njive / \*pre-oranja njive on-eat self plowing<sub>GEN</sub> field<sub>GEN</sub> over-plowing<sub>GEN</sub> field<sub>GEN</sub> over-plowing<sub>GEN</sub> field<sub>GEN</sub>

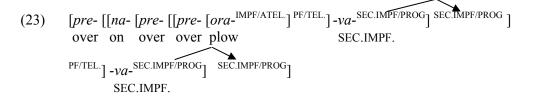
<sup>(</sup>ii) na-žreti se orati njivo / pre-ora-va-ti njivo / \*pre-orati njivo on-eat self plow<sub>INF</sub> field over-plow<sub>INF</sub> field over-plow<sub>INF</sub> field 'get one's fill of/get fed up with plowing (up) the field'

two (partial) sets of VP-dominating functional projections, has no problem deriving two instances of the same type of AspP, it is not clear how an external account of na- can explain the aspectual ambiguity of (18), since there should only be one (secondary imperfective) AspP in the extended projection of one verb.

It may be useful, at this point, to present the aspectual patterning just described in a more graphic format as well, in case the discussion above was hard to follow. In (21) below, we can follow the derivation of (18) above, step by step, from the simple *ora-* 'plow' to the perfective and imperfective readings of *na-pre-ora-va-* (the reflexive etc. are omitted; following the interpretation, the suffix *-va-* is indicated twice, although in reality it is only pronounced once).

```
ora-IMPF/ATELIC > pre-ora-PF/TELIC > pre-ora-va-SEC.IMPF/PROG. >
(21)
                                    over-plow
                                                       over-plow-SEC.IMPF.
                'plow/be plowing' > 'plow up'
                                                    > 'be plowing up'
                > na-pre-ora-va-^{PF/TELIC} > na-pre-ora-va-^{SEC.IMPF/PROG.}
                  on-over-plow-SEC.IMPF.
                                                on-over-plow-SEC.IMPF.
               > 'get one's fill of plowing up' > 'be getting one's fill of plowing up'
               [na-[pre-[ora-IMPF/ATEL.]]^{PF/TEL.}]-va-^{SEC.IMPF/PROG}]^{PF/TEL.}]-va-^{SEC.IMPF/PROG}
       b.
                 on over plow
                      { 'plow' }
{ 'plow up'
                     { 'be plowing up'
                 { 'get one's fill of plowing up'
                { 'be getting one's fill of plowing up'
```

If we also include the adverb-like/result-modifying prefix from (12d) above (i.e. <u>pre-pre-ora-va-ti</u> 'be plowing up <u>again</u>') in the input to *na*- (i.e. *na-pre-pre-ora-va-ti* se 'get one's fill/be getting one's fill of [plowing up again]'), or in addition also stack the 'too-much' adverb-like prefix from (15b) over *na*- (i.e. <u>pre-na-pre-pre-ora-va-ti</u> se 'get/be getting <u>more than</u> one's fill of [plowing up again]'), the bracketed step-by-step representation will be as in (22) and (23), respectively. The arrows are meant to signal that it is not the newly added element, i.e. the prefix, that supplies the secondary imperfective/progressive interpretation, but rather that the latter is carried over from the input form, where it is encoded with -va-.



<sup>&</sup>lt;sup>13</sup> Note that (22)-(23) are not syntactic structure; syntactically, resultative prefixes were said to originate below the verb. (22)-(23) represent the aspectual effects of the additions of elements following an intuitive view of what affix is being added before which other affix, just as one would represent the build-up of the (most typical) aspectual interpretation of *hammer the metal flat* as [[hammer the metal flat], even if the resultative adjective is analyzed as sitting below the VP.

In fact, (22) and (23) give only one possible intuition about the order of the attachment of the adverb-like/result-modifying prefixes. The 'again' *pre*- in (22) and (23) is ordered as if it attaches after secondary imperfectivization of *pre-ora*-; however, it can also be seen as attaching before, to yield 'plow up again', and then in the next step this complex would be secondarily imperfectivized, before being fed into *na*- (i.e. [[*pre*- [*pre-ora*- PF/TEL.] -*va*- SEC.IMPF/PROG], with the perfective value being carried over from *pre-ora*- to *pre-pre-ora*-). The same applies with respect to the 'too much' *pre*- in (23). The important thing is that the combination of *na*- and the secondary imperfective of an internally prefixed verb can be interpreted perfectively, whereas the combination of *pre*- and the secondary imperfective of an internally prefixed verb cannot.

Before concluding this section, let me briefly suggest an explanation for why the structures which I claim contain two instances of AspP overtly show only one rather than two -va- suffixes (cf. na-pre-ora-va-ti se vs. \*na-pre-ora-va-ti se). Just as I did in section 3.1 when discussing the single realization of the reflexive clitic in a structure that obviously contains two unselected reflexive objects, I will blame the non-realization of one of the two -va-'s on haplology, which should not be too controversial.

At the same time, let me also add that unlike the *na-pre-ora-va-ti se* structure, whose stem-final/thematic vowel is *-a-* (*na-pre-ora-va-ti*) and in which the stress falls on this *-a-*, cases whose stem-final vowel is *-o-* (e.g. *na-za-vezo-va-ti se gojzarjev* [on-behind-tie- self boots<sub>GEN</sub>] 'get one's fill of tying up boots') and in which the stress falls on the suffix *-va-*, tend to be harder to impose the imperfective reading on; that is, they tend to get only the perfective reading, at least for some speakers. However, such speakers find that the imperfective reading of this structure is more readily available if the thematic vowel is changed to a stressed *-a-*, so that the string will look like *na-za-veza-va-ti se*. While I would not want to make any firm claims about these morphophonological changes, it does not seem implausible that, since they affect the interpretation, they reflect a structural change, that is, that the co-occurrence of both *-va-* on the one hand and the change in the thematic vowel and place of stress on the other hand signals the presence of two instances of one and the same type of AspP. After all, it is well-known that some sort of vowel change/ablaut, often both in a root vowel and in the thematic vowel, is the realization of the secondary imperfective that replaces *-va-* in certain verbs, such as *voziti* 'drive', *pre-voziti* 'drive through', *pre-voziti* 'be driving through'

To summarize, we saw that *na*- triggers perfectivity but can also occur in the scope of the secondary imperfective -*va*-, which aligns it with internal prefixes and dissociates it from more adverb-like, result-modifying prefixes. Moreover, we saw that when *na*- is stacked onto an internally prefixed structure that had been secondarily imperfectivized, the result can be interpreted as either perfective or imperfective, and that the availability of the latter interpretation makes sense only if the structure contains two instances of the VP-dominating secondary imperfective AspP. This, in turn, works only of if we are dealing with two VPs.

## 3.4 Result-state adverbial and restitutive 'again'

Durative adverbials are known to split into two groups: those that modify the duration of a complex event, and those that modify the duration of the resultative subevent (Dowty 1979, Piñón 1999, etc.). In English, the *for-x-time* adverbial is ambiguous between the two interpretations, as in Piñón's (1999: 420) example in (24).

(24) *Manuela jumped into the pool for 20 minutes.* 

Typically, the adverbial in (24) is read as modifying the result-state subevent, that is, Manuela stays in the water for 20 minutes, and one has said nothing about the duration of the jumping event. The adverbial, however, can also be read as modifying the complex event, in which case the sentence gets a repetitive interpretation, whereby the jumping went on for 20 minutes, and we have said nothing about how long Manuela stayed in the water after each jump.

Like many other languages, Slovenian uses distinct adverbials for the two readings, namely, a bare nominal adverbial (e.g. 10 minut, lit. 10 minutes) for the complex-event durative reading and a prepositional adverbial (e.g. za 10 minut, lit. for 20 minutes) for the result-subevent durative reading. Thus, if a sentence admits the result-state adverbial, then its semantics must contain a result-state subevent which the adverbial modifies. Example (25) below juxtaposes two examples that differ minimally in the presence/absence of the prefix na-. The contrast in the acceptability of the result-state subevent suggests that the prefixed example does indeed contain a result-state subevent; (26) provides a contextualized example.

- (25) a. Gledal sem te risanke (\*za 10 minut). watched am these cartoons for 10 minutes 'I watched these cartoons.'
  - b. Na-gledal sem se teh risank <u>za 10 minut</u>.

    ON-watched am self these cartoons<sub>GEN</sub> for 10 minutes

    'I've come to have enough of watching these cartoons <u>for 10 mins</u>.'

(26) A si se končno na-gledal teh risank? Ja, ampak samo za par urc,
Q are self finally ON-watched these cartoons<sub>GEN</sub> yes but only for couple hours
pol me bo pa spet prjel, da bi jih gledu.
then I<sub>ACC</sub> will PTCL again grab that would they<sub>ACC</sub> watch
'Have you finally had enough of watching these cartoons? Yes, but only for a day or so, and then I'll get the craving to watch them again.'

The sentences in (25b) and (26) thus support the idea that *na*- structures contain a result-state subevent and that the contribution of *na*- is not simply that of an adverbial such as 'excessively'. The only element that can plausibly be encoding the result state in (25b) is the prefix, which suggests that we are dealing with an internal/resultative prefix. Moreover, as should be clear from the translations, what the result-state adverbial modifies is the duration of 'the state of having enough of watching these cartoons'. This suggests, once again, that we are dealing with a resultative predicate ('come to be in a state') whose result part is not a simple stative predicate (e.g. 'have enough'), but that, rather, the result part is a complex structure that contains a stative predicate which further embeds a constituent with the meaning of at least a VP, i.e., '(of) watch(ing) these cartoons'. Therefore, one way or another, the structure must have two VPs.

In the same spirit, one can make the point about the presence of a result state with the help of 'again'. As is well known, the presence of a result-state subevent often makes it possible for 'again' to be read not only repetitively but also restitutively. On the repetitive reading of again, the assetion John opened the door again has the presupposition that this is not the first time John opened the door. In this case, again adjoins above the external argument, so that the whole complex event is in its scope. On the restitutive reading of again, this sentence only presupposes that the door had been open before, thus allowing the scenario on which it was someone else who opened it, or even the scenario on which the door was mounted open and had never been opened before. In this case, again adjoins to the result-state constituent, scoping only over the result state. Therefore, if a predicate allows 'again' to be read restitutively, this is evidence that it contains a result state (Morgan 1969, McCawley 1976, Dowty 1979, von Stechow 1996, Beck & Johnson 2004, Bale 2007, etc.).

Now, since the *na*- structure obligatorily occurs with an unselected reflexive, the result state necessarily holds of the same argument which is also the external argument. This may make it harder than usual to see if 'again' can scope under the external argument: if after an event of 'causing oneself to have enough of something', the potential result state holds of the same individual as after a previous event of 'causing oneself to have enough of something' (i.e. if 'oneself' refers to the same individual in both states of 'having enough of something'), then the external argument (i.e. the causer of the state of 'having enough of something') must also have referred to the same individual in both occurrences of the causing subevent. However, imagine a scenario in which Peter's mother often ran when she was pregnant, and as a consequence, Peter was born 'having enough of/being sick of running'. In this case, Peter certainly would not be the initiator of this state, but it seems that after a subsequent period during which Peter did a lot of running, one can use 'again' to restitute the state of 'Peter's having enough of running' in a *na*-sentence like (27). This shows, then, that the *na*- clause in (27) contains not only an indivisible non-stative event but also a stative subevent of 'Peter having enough of running'.

Peter je imel ob rojstvu poln kufer laufanja, pol se je to mal nehal in je velik laufu,
Peter is had at birth full case running<sub>GEN</sub> then self is this a-little stopped and is a-lot run
lan se je pa (za nekaj časa) spet na-laufu.
last-year self is PTCL for some time again on-run
'Peter was born sick of running, then this stopped for a bit and he used to run a lot, but then last year (he ran so much that) he came to have enough of running again/to be sick of running again.'

To recapitulate, the *na*- structure accepts result-state adverbials and allows a restitutive reading of 'again', which suggests that it contains a stative subevent. As the only plausible candidate as the contributor of the result state in our *na*- sentences is the prefix, we must be dealing with an internal/resultative prefix. And secondly, as the result-state adverbial in (25b) and (26) modifies the duration of 'the state of having enough of watching these cartoons', it follows that the resultative predicate 'come to have enough of watching cartoons' contains a

complex result part which is made up of a state that embeds a constituent with the meaning of at least a VP ('watch these cartoons'). Therefore, such *na*- structures must have two VPs.

# 3.5 Scope of adverbials (locatives, etc.)

Further support for the double-VP analysis comes from other kinds of adverbials. *Na*-structures can host adverbials that modify the whole event of 'getting one's fill of something/coming to have enough of something', and they can also host adverbials that modify only the part that describes what one has gotten their fill of. In an example such as (28), the locative adverbial 'in Piran' (a coastal town) situates the event of Peter's getting his fill (of swimming). In (29), however, the locative adverbial 'in the sea' situates only the swimming event and not the getting-one's-fill event: what the addressee must have gotten his fill of is swimming in the sea.

- (28) Peter se je v Piranu na-plavu za ceu let naprej. 14
  P. self is in Piran on-swum for whole year on 'In Piran, Peter got enough swimming for the whole year to come.'
- (29) Zdej si se pa gotov že na-pl<u>a</u>vu v morju (, tko da se bova jutr preselila v bazen). now are self PTCL surely already on-swum in sea so that self will tomorrow move to pool 'You must've had your fill of swimming in the sea by now, so we'll move to the pool tomorrow.'

Indeed, since adverbials may situate either of the two events, one can also form pairs such as (30a)-(30b), where the same basic ingredients get quite a different interpretation; in such cases, it is the intonation pattern, the placement of the adverb, and contextual information such as the parenthesized parts in (30a)-(30b) that lead us to one or the other parse. On the assumption of a direct syntax-to-semantics mapping, (30a)-(30b) must have distinct structures despite their shared basic ingredients.

- (30) a. Peter se je že na-pl<u>a</u>vu v morju (zato bo šu zdej v bazen).

  P. self is already on-swam in sea so will go now to pool 'Peter has had enough of swimming in the sea, so he will go to the pool now.'
  - b. Peter se je na-plavu že v morju (zato zdej ne bo šu še v bazen).

    P. self is on-swam already in sea so now not will go also to pool 'Peter has already gotten his fill of swimming in the sea, so he won't also go to the pool now.'

Needless to say, a two-VP approach can easily explain two interpretations/scopes of the locative adverbial; in (28) and (30b), the locative is adjoined to the higher VP, and in (29) and (30a), the locative is adjoined to the lower VP. At the same time, these data are problematic if *na*- is external and if all of these structures only contain one VP.

Similarly revealing is the combination of a perfective *na*-prefixed verb and the locative adverbial with *po* 'around', as in (31) (or in Filip's 2000, 2005 Russian example *na*-guljat'sja po gorodu (lit. on-walk-self around town) 'get one's fill of strolling around town').

(31) Danes sem se pa res na-letal po uradih. [SSKJ (=Academy dictionary of Slovenian)] today am self PTCL truly on-fly around offices 'Today I really got my fill of running around offices'

<sup>&</sup>lt;sup>14</sup> The underscoring in the examples of this section signals the main stress of the utterance.

Compare (31) with (32a)-(32b), which contain the overtly biclausal paraphrase of the *na*-construction in (31), with a perfective matrix predicate 'get one's fill of' to match the perfectivity of the *na*-construction in (31).

- (32) a. Danes sem se pa (\*po uradih) res naveličal letat (naokol). today am self PTCL around offices truly grew-tired run<sub>INF</sub> around 'Today I really got my fill (\*around offices) of running (around).'
  - b. Danes sem se pa res naveličal letat po uradih today am self PTCL truly grew-tired run<sub>INF</sub> around offices 'Today I really got my fill of running around offices.'

Example (32a), in which *po uradih* 'around offices' is placed in the matrix clause, shows that *po uradih* 'around offices' is incompatible with a singular event such as 'get one's fill' in the perfective. On the other hand, (32b), in which *po uradih* 'around offices' is placed in the lower clause, shows that this adverbial is perfectly compatible with an imperfective 'running' embedded under 'get one's fill of'. Therefore, since the *na*-construction in (31) describes a singular event of 'getting one's fill' in the perfective, its *po uradih* 'around offices' can only be modifying the 'running' and not the whole of 'getting one's fill of running'. And if the constituent of (31) which encodes 'running', i.e., the constituent embedded under 'get one's fill of', can host such an adverbial, we know that this constituent must be at least a VP.

Adverbials that can modify what one has gotten their fill of are not limited to locatives. This is shown in (33) with a 'with'-adverbial, in (34) with a 'for'-adverbial, and in (35) with a directional.

- (33) *Ja pa kaj se še n<u>i</u>si na-govoru s polnimi usti?* well PTCL what self still not-are on-chatted with full mouth 'Oh for chrissake, haven't you had enough of talking with your mouth full yet?'
- (34) A se še n<u>i</u>si na-o-prezu za fazani?

  Q self still not-are on-at-strained for pheasants
  'Haven't you had enough of looking out for pheasants yet?'
- (35) A si se končno na-vozu Maše v šolo?
  Q are self<sub>ACC</sub> finally on-driven Maša<sub>GEN</sub> to school
  'Have you finally grown tired of driving Maša to school?'

Interestingly, though, it seems that manner adverbs cannot be used to modify only what one has gotten their fill of. Example (36), where 'slowly' attempts to modify 'swim', is judged bad by the same speakers that judge (30a), as well as the rest of the sentences above, as acceptable.

(36) \*Peter se je že na-plavu počas, tako da bo zdej plavu hitr.

Peter self is already on-swam slowly, so that will now swim fast 'Peter has had his fill of slow swimming by now, so he will now swim fast.'

This distinction in the acceptability of locative adverbials and manner adverbs can perhaps tell us something about the size of the lower portion of such *na*- structures. If locative adverbials are adjoined to VP (or the CAUSE vP), and manner adverbs are associated to VoiceP (Cinque 1999), then the lower part, i.e. the constituent expressing what one has gotten their fill of, contains a VP (or the CAUSE vP) but no VoiceP. And I assume that if a sentence like (36) is nonetheless forced, then we have expanded the lower part to include a VoiceP.

Durative adverbials ('for two hours') do not seem to be possible on the lower VP either. Much like our approach to manner adverbs, we can assume that this impossibility is a consequence of the lack of some higher HabitualityP in the lower clause. The reason why such modifiers would need a HabitualityP to be licensed comes from the fact that the only way one can, for instance, grow tired of running for two hours is if running for two hours expresses a habitual event of running for two hours. In fact, even such paraphrases tend to need an overt

frame-setting adverbial to allow a habitual reading, as in *grow tired of always running for two hours*. Similarly, the *na*- sentences do not seem to allow temporal adverbials ('in the evening') on the lower VP either, presumably due to the fact that the time of the 'growing-tired' event is necessarily included in the time of the event describing what one grows tired of; *na*- sentences only allow such temporal adverbials if the lower event is a habitual one (which is again just like clearly bi-clausal paraphrases such as *grow tired of doing something*), and so we return to the absence of HabitualityP. In fact, the absence of HabitualityP is probably also behind the requirement that the input of this *na*- be imperfective (cf. the discussion immediately preceding example (20) above), since the only way that 'growing tired of [doing something perfectively]' can make sense is if that perfectively described event is habitual (compare *grow tired of kicking the ball*, where a non-iterative/single-event reading of the lower event is ruled out).

To summarize, we saw that adverbials such as locatives can modify both the whole 'getting-one's-fill-of-x' meaning of *na*- structures, as well as the event one has gotten their fill of. This was further supported with the acceptability of *na*- sentences to host adverbials that can only be interpreted as modifying the event one has gotten their fill of but not the whole complex 'getting-one's-fill-of-x' meaning. These facts have a natural explanation on a two-VP analysis but are problematic if *na*- is treated as an external prefix and the structure as containing a single VP. Moreover, it was suggested that the unacceptability of manner adverbs, as well as durative and temporal adverbials, may be analyzed as a consequence of the defectiveness of the lower clause, in the sense that it is not dominated by the complete extended projection of the verb.

#### 3.6 Two accusatives

Examples with this *na*- contain a reflexive clitic, which was claimed to be an unselected object with respect to the verbal root, and typically also a genitival argument, which seems to match the semantic selection of the base that *na*- attaches to, as in (37a). Even though the reflexive clitic could in principle be either accusative or genitive (but not dative, which would be *si*), there are at least some tentative reasons for considering it accusative. The first one is that if we look at verbs which occur with a reflexive that is introduced by any other prefix, they can never occur with an accusative-marked nominal. The second reason is that this gives us a straightforward explanation for why the second internal argument is in the genitive. And the third reason is that the reflexive in English resultatives with an unselected reflexive (*He ran himself exhausted*, *He wore himself out*) is clearly not genitive. Note, however, that under some pressure, speakers also acknowledge transitive verbbased *na*- structures which contain the second, non-reflexive internal argument in the accusative. This is shown in (37) and (38) (cf. also Milićević 2004: 296 (her (39k)) for a similar Serbian case with an accusative in addition to the reflexive, which she marks with one question mark).

- (37) a. *A se je Kaja že na-za-vezovala tistih gojzarjev?* Q self<sub>ACC</sub> is Kaja already on-behind-tied those<sub>GEN</sub> boots<sub>GEN</sub> 'Has Kaja gotten her fill of tying up (of) those boots yet?'
  - b. ?? A se je Kaja že na-za-vezovala tiste gojzarje?
    Q self<sub>ACC</sub> is Kaja already on-behind-tied these<sub>ACC</sub> boots<sub>ACC</sub>
    'Has Kaja gotten her fill of tying up (of) those boots yet?'
- (38) a. A si se končno na-vozu Maše v šolo?

  Q are self<sub>ACC</sub> finally on-driven Maša<sub>GEN</sub> to school
  'Have you finally grown tired of driving Maša to school?'
  - b. ?? A si se končno na-vozu Mašo v šolo?
    Q are self<sub>ACC</sub> finally on-driven Maša<sub>ACC</sub> to school
    'Have you finally grown tired of driving Maša to school?'

Note also that despite the degradation, (37b) and (38b) are not comparable to a sentence that normally occurs with an 'inherent'/'lexical' reflexive clitic and an inherently genitive-marked argument in which the latter has been forced into accusative. In such cases, forcing the genitive into accusative is simply impossible, (39).

- (39) a. A se Peter res sramuje svojih gojzarjev?
  Q self Peter really shames his<sub>GEN</sub> boots<sub>GEN</sub>
  'Is Peter really ashamed of his boots?'
  - b. \*A se Peter res sramuje svoje gojzarje?
    Q self Peter really shames his<sub>ACC</sub> boots<sub>ACC</sub>
    'Is Peter really ashamed of his boots?'

Therefore, we have at least some tentative reasons to assume that the reflexive on our *na*- structures is accusative. And if this is the case, then our *na*- structures can marginally occur with two accusative arguments. Although one clearly cannot make a strong argument of this, I point out that on the assumption that there is just one accusative per VP, the presence of what appear to be two accusatives can be nicely explained if there are two VPs. Moreover, given that locative, directional and various other adverbials are possible and manner adverbs are not possible as modifiers of the event that one has gotten their fill of, we may even have a structural explanation for why (37b) and (38b) are marginal.

Above I showed that our *na*- structure allows locative adverbials in the lower clause, but that manner adverbs are normally impossible in the lower clause, which can be explained if we assume that the lower clause is deficient and does not contain VoiceP (and higher clausal structure). I also suggested that if manner adverbs are nonetheless forced in the lower clause, we can see this as adding extra syntactic structure to the otherwise deficient clause. Now we can apply the same reasoning to the case pattern. Normally, there is relatively little structure above the lower VP, so the lower clause holds no accusative. Since the accusative of the higher VP is taken up by the reflexive, the internal argument of the lower VP can find no structural case and thus has to have inherent case to be licensed. That this inherent case is genitive need not be surprising at all, as this is also the case of internal arguments of gerunds, argued by Alexiadou (2001) to contain a defective vP. And on the other hand, when the second accusative is forced into the structure, the speaker has added some extra structure on top of the lower VP (a VoiceP, let us assume). Just like with manner adverbs, though, such addition of structure always results in a degraded sentence.

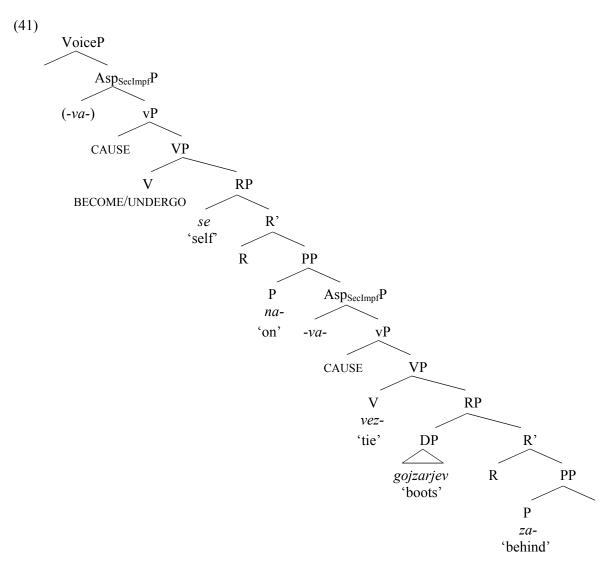
To summarize, there are tentative reasons for assuming that (37b) and (38b) contain two accusatives. If this is indeed the case, it can be nicely explained with a two-VP structure. In addition, the degradation of such examples supports the idea that they involve forced addition of structure on top of an otherwise defective lower VP, which is in congruence with the observations about adverbial modification in the previous section. On the other hand, if our *na*- structures do not have two VPs but instead only combine an external prefix and a single VP, then it seems that we will either not have an explanation for why there may be two accusatives, or if we do, we will not have an explanation for why they are degraded.

# 4. A more detailed structure

In section 3.1, we saw doubly-prefixed examples that exhibit two unselected objects. In 3.3, we saw doubly-prefixed examples that exhibit two scopes of the secondary imperfective. In 3.4, we saw examples with a result-state adverbial modifying the state of the subject's being tired of doing something. In 3.5, we saw examples that show adverbials which modify only the part describing what one has gotten their fill of, rather than the whole complex of someone getting their fill of something. And in 3.6, we saw examples in which the genitival argument, with degradation, can be turned into accusative so that the construction presumably ends up containing two accusatives. To accommodate these data in a standard syntactic framework, it seems well justified to posit some sort of structure with two VPs, and at least some clausal structure over the lower VP (and ordinary full clausal structure over the higher VP). For ease of reference, I repeat example from (5f) above in (40); (41) then gives the structure for (40). Note that (41) omits the details that are not relevant for our present

purposes; with respect to the prefixal part of the structure, for example, the ResultP-embedded PP may well have more structure than indicated in (41) (cf. Svenonius 2004). 15

(40) na-za-vezovati se gojzarjev on-behind-tie self boots<sub>GEN</sub> 'get one's fill of/come to have enough of tying up boots'



As is immediately obvious, the na- construction never contains two overt verbal stems. If the structure is such that one of the VPs is (inside) the complement of the other (and not, say, such that one of the VPs somehow sits inside the  $V^0$  of the other VP), then the only reason I can find for the lack of two verbal stems is that the upper V is phonologically null. On the one hand, this could mean that it is a phonologically null lexical root that has some basic meaning, such as BECOME or (following Ramchand's 2008b labeling of the structural meaning of the V node) UNDERGO. (Note that this is not the more widely posited null causative v that dominates an overt V, but rather a null V.) That there should exist such a phonologically null V need not in itself be a problem, especially when it has some basic/primitive meaning (cf. Marušič & Žaucer 2006a); phonologically null verbal roots have

<sup>&</sup>lt;sup>15</sup> Arsenijević (2007: 33) also gives a two-VP structure for this use of *na*-. But if I understand it correctly, his tree—if translated into a more standard tree of the type in (41)—would have the second VP in the Spec,RP position of the RP of *na*-. This would presumably give us a paraphrase such as 'someone's tying up boots caused there to be a lot of x's tying up boots', or 'someone tied up boots so that as a result there was a lot of that person's tying up boots'; it must have become clear from the discussion that this is not the interpretation that our *na*- structures have. The general idea of two VPs is there, however.

been proposed in the literature before, e.g. the null HAVE of McCawley (1979), Ross (1979), Larson *et al.* (2006), Marušič & Žaucer (2006b), etc., the null BE, GIVE and FIND of Larson *et al.* (2006), the null GO of van Riemsdijk (2002) and Marušič & Žaucer (2005), the null FEEL-LIKE of Marušič & Žaucer (2006a), and the several null verbs of Inkelas (1993). On the other hand, this could also mean that there is no null root in V at all, and that we are only interpreting the structural meaning of a functional node VP, in Ramchand's (2008b) system ProcessP; this would make VP/ProcessP a functional node, just like the causative vP/Ramchand's InitiationP. Compared to the option with a phonologically null but semantically specified lexical root, the difference could be that we are then positing a null functional element rather than a phonologically null lexical root, and null functional elements, of course, are even more common.

Although (41) only shows clausal structure up to VoiceP over the higher VP, in an ordinary sentence, the latter will be dominated by full clausal structure, up to the CP. However, the same does not hold with respect to the structure dominating the lower VP. We have seen examples with an internal prefix tucked in between the verb root and *na*-, as is the case with *za*- in (40); in (41), this prefix would sit in the lower result predicate (in the absence of such an internal prefix, i.e. when *na*- is the single prefix, as in (5b) above, the lower part stops at the VP level). Since we have seen that the lower VP, when containing a resultative prefix, can be modified by the secondary imperfective *-va*-, as in (40), the lower part contains an Asp<sub>SecImpf</sub>P dominating the VP. This Asp<sub>SecImpf</sub>P, however, seems to be the point at which the clausal structure of the lower VP normally stops. We know this because we saw that VoiceP-related manner adverbs are normally not possible, and that there is interpretative evidence that HabitualityP is not there (cf. section 3.5). Nor is there any morphological evidence of TenseP or SubjectAgrP, or any reason to assume that TenseP and SubjectAgrP are there covertly. Of course, if we force the judgments and accept manner adverbs on the lower VP, and if we accept the cases with the second internal argument in the accusative rather than genitive, then the structure dominating the lower VP extends to VoiceP; the higher clausal FPs, however, are still missing. So even in this case, we have a deficient clausal complement downstairs.<sup>16</sup>

Indeed, this structural impoverishment, and more specifically the absence of the CP, can be seen as the factor that makes it possible for the lower verbal root to surface with the inflection that belongs to the null V. Just like in the case of the complement to the null verb FEEL-LIKE in the Slavic FEEL-LIKE construction, as analyzed in Marušič & Žaucer (2006a), the absence of the CP can be taken to mean (irrespectively of LF-phases) the absence of an intervening PF-phase which would make sure that the lower clause with its overt verb would be spelled out to PF at that point. But in the absence of the CP, this does not happen. As a consequence, the inflection of the upper clause, which needs a verbal host to be realized, can be spelled out on the lower verb root.

As for the Asp<sub>SecImpf</sub>P of the higher VP, it has to be projected when a *na*- construction as a whole is interpreted imperfectively, i.e. with an interpretation like 'be getting one's fill of something' (cf. (21) above for details). In (41), I included the morpheme -*va*- in parentheses to indicate that when we have the imperfective interpretation 'be getting one's fill of something', we do not actually get two instances of -*va*- (i.e. -*va*-*va*-), which I ascribed above to haplology (section 3.3), but that there could sometimes be a vowel-change/ablaut reflex of the presence of the upper Asp<sub>SecImpf</sub>P. (Remember from section 3.3 that for some speakers, an imperfective reading of (40) is more readily available if there is a change in the thematic vowel.)

As for the origin of the genitive case on the second internal argument, I have already suggested above that it is assigned as the inherent case because the deficient structure of the lower clause cannot assign accusative, loosely following Alexiadou's (2001) proposal for the origin of genitive in gerunds. This internal argument cannot recieve the accusative of the higher clause because the latter is taken up by the closer reflexive clitic. But if, with degradation in the acceptability of the sentence, the accusative case is nonetheless forced on the second internal argument instead of the genitive, then we have added some extra functional structure on top of the lower VP. (For possible single-VP parses of certain *na*- examples, and for the different nature of the genitive in such cases, see the next section.)

The last thing that needs mentioning—and one that is unfortunately not really clear to me—is how the heads from (41) get linearized in the attested order. Simple left-adjoining head movement will not get us the correct

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<sup>&</sup>lt;sup>16</sup> The causer/initiator of the upper event ('causing oneself to be tired') and the causer/initiator of the lower event ('tying up boots') can only be the same. Note that the same holds in the clearly bi-clausal paraphrases. In *na-žreti se za-vezovati gojzarje/za-vezovanja gojzarjev* (lit. on-eat self behind-tie boots<sub>ACC</sub>/behind-tying boots<sub>GEN</sub>) 'grow tired of tying up boots', the causer/initiator of the tying up of boots can only be the same as the causer/initiator of the causing of oneself to be tired. When *na-žreti se* and *na-veličati se* take a CP complemet, the causers/initiators *can* be distinct; a complement of such size, however, is not possible in our *na-* construction.

result, since the higher prefix/na- should then surface as a suffix on za-vezava-. Assuming a head movement analysis for the realizations of suffixes, and remnant movement for prefix attachment will also not be successful, since the lower  $V^0$  would envelope the higher prefix in the process, again suffixing it onto za-vezava-. However, head movement could produce the right result if we assume that affixes are morphologically specified as either prefixes or suffixes. In this case, za- and na- would both be realized as prefixes in the correct relative order. This solution is not terribly attractive, but it is not completely unimaginable either.

So if linearization can indeed be made to work this way, then those 'more adverb-like' prefixes which, unlike our *na*-, do not trigger perfectivity and can stack over our *na*- (see section 3.2), also present no problem. Specifically, as has been suggested for another case of a stacked prefix in Žaucer (2002: 78, 2005a: 290, Fn. 13) and Gehrke (2008), I suggest that *pre*- in *pre-na-frfotavati se* (lit. over-on-flutter.sec.impf self) 'be getting/be about to get more than enough of fluttering' from (16d) modifies the result state of *na*-, and so it would be adjoined to the PP of the resultative *na*-. Assuming the kind of linearization mechanism mentioned in the previous paragraph, this gives us the right configuration for the attested order. This will also give the right configuration for the case of *pre-na-pre-pre-oravati se* (lit. over-on-over-over-plow self) 'get/be getting more than one's fill of [plowing up again]' from section 3.2: the stem-adjacent *pre*- would sit in a resultative PP under the lower VP; the second, result-modifying *pre*- would be adjoined to the PP of the resultative *pre*-; *na*- would sit in a resultative *PP* under the higher VP; and the outermost, result-modifying *pre*- would be adjoined to the PP of the resultativity/change of state (see section 3.2), then this result-modifier view of such adverb-like prefixes also explains why such prefixes do not trigger perfectivity.

# 5. *Na-* structures vs. *run oneself exhausted*, and the double-VP/single-VP ambiguity of some *na-*structures

The structure given in the previous section captures the behavior which was described in section 3 and which any *na*- sentence can exhibit. However, it turns out that it is not the case that a reflexive-introducing *na*-construction with the approximate meaning of 'get one's fill of something' *always* shows such behavior. In this section, I will first compare our *na*- structures with English adjectival resultatives such as *run oneself exhausted*, which at least at first sight seem similar to our *na*- structures but are standardly analyzed as containing a single VP; and then I will show that in some cases, our *na*- sentences can also get a more ordinary, single-VP resultative structure, coming very close to the English *drink oneself full of water*. The discussion will also turn up some additional evidence for the claims made in the previous two sections.

## 5.1 Na- structures vs. run oneself exhausted

It is often mentioned that our *na*- structures resemble certain English (and more generally, Germanic) resultative structures with unselected reflexives, such as *run oneself exhausted/tired*. As I mentioned before, however, the parallel is not perfect; while the interpretation of the Germanic cases is just that, i.e. 'make oneself exhausted/tired (by running)', the interpretation of the *na*- cases as discussed above seems to be 'make oneself tired of running/sick of running'. The Germanic cases also do not exhibit any scope ambiguities with adverbials. Therefore, it only makes sense to consider these as having a standard, small-clause resultative structure with a single VP, as in (42) (cf. e.g. Hoekstra 1988). In fact, Slovenian has a prefixed verb with an unselected reflexive which is a direct counterpart of the Germanic adjectival resultative, (43a). As a single-VP structure would predict, *z-laufati se* does not accept the 'around' adverbial from (31) above, as shown in (43b), and it also shows no ambiguity with adverbials.<sup>17</sup>

# (42) [V run [RP/SC oneself exhausted]]

<sup>&</sup>lt;sup>17</sup> Note, incidentally, that *z-laufati se* also fails at least two of the putative diagnostics for internally prefixed verbs; root nominalization from it seems impossible (*lauf* 'a run', \**z-lauf* (*se*)), and it resists secondary imperfectivization in spontaneous speech (??*z-laufavati se*), casting more doubt on the validity of these diagnostics.

- (43) a. z-laufati se out-run self 'wear oneself out by running, run oneself exhausted'
  - b. \*z-laufati se po uradih
    out-run self around offices
    intended: 'wear oneself out by running around offices'

# 5.2 Some ambiguous *na*- structures

The claim that our *na*- constructions have two VPs was based on their behavior as presented in section 3. However, some Slovenian examples with a reflexive-introducing *na*- show an interesting ambiguity that can be nicely explained if we assume that they can have either a single or a double VP. Sentence (44) below is ambiguous between the readings in (i) and (ii) ('drinking water' here is not to be read as 'potable water' but as 'drinking of water'). The existence of the ambiguity is supported, for example (see also below), by the fact that on the reading in (ii)—but not on the reading in (i)—it is felicitous to precede the question in (44) with something like 'I know that you haven't had your fill of water yet, but ...?' That is, one cannot have had their fill of water and not have had their fill of water, but one *can* have had their fill of water and at the same time not have had their fill of drinking water.

(44) A si se že na-pil vode?

Q are self already on-drunk water<sub>GEN</sub>

- i. 'Have you had your fill of water yet, by drinking?' ('caused yourself to be full of water')
- ii. 'Have you had your fill of drinking water yet?' ('caused yourself to become fed up with/have enough of drinking water')

On the reading in (i), (44) is structurally nearly parallel to *run oneself exhausted* (see (42) above), but with the difference that, unlike the intransitive resultative adjective *exhausted*, the prepositional prefix *na*- takes *water* as its complement in (45). Even closer to the structure of (44i), then, is the English *He drank himself full of water*, with both examples having a single VP and a transitive resultative head (an affixal preposition in the Slovenian case, an adjective in the English case). On the other hand, (44ii), with its interpretation of 'he caused himself to be "full" (=have his fill) of drinking water', has the two-VP structure proposed in (41) above. <sup>18</sup>

(45) [V piti [RP/SC se [na- vode]]] drink self on water<sub>GEN</sub>

Interestingly, note that if the genitive 'water' from (44) is—with degradation—forced to be realized in the accusative, as in (46), the sentence is no longer ambiguous. It only allows the reading in (ii).

(46) ?? A si se že na-pil to prokleto vodo?

Q are self already on-drunk this damned water<sub>ACC</sub>

- i. Impossible: 'Haven't you had enough of this damned water yet?'
- ii. 'Haven't you had your enough of drinking this damned water yet?'

The unselected reflexive from the Slovenian *na*- examples is null here, just as it is null in reflexively-interpreted cases such as *John washed* (cf. McIntyre 2006 for the claim that *John washed* has a null reflexive, and cf. also Oya 2002). The presence of the null reflexive explains the argument blocking of *read up*.

<sup>&</sup>lt;sup>18</sup> Almost the same structure as in (45) would probably be assigned to the "argument-blocking" particle verb (in the sense of McIntyre 2004) *read up* in (i), although *on semantics* is more probably an adjunct to the RP or to a null N complement of the RP thanthe particle's complement; that *on semantics* is not an adjunct to *read* is seen from the fact that *on* cannot be changed to *about* (\**read up about semantics*), even though *read about semantics* is fine.

<sup>(</sup>i) Cufka will have to read up \*(on) semantics.

And just as one would expect, the Slovenian superficial counterpart of *read up on semantics*, i.e. *na-čitati se o semantiki* (on-read self about semantics), has two possible interpretations, the dominant English-like 'read up on semantics' and the two-VP interpretation of 'get one's fill of/grow tired of reading on semantics'.

This disappearance of ambiguity supports the idea that the nature of the genitive case of (44) is different under the interpretation in (i) and under the interpretation in (ii); only in one case can the genitive, with degradation, be changed to accusative. When it can, it realizes inherent case that occurs in the presence of defective vP (cf. 3.6 above). If the nominal is then actually forced into accusative, we have added some extra structure on top of the lower VP. And when the genitive cannot be changed to accusative, it likely realizes either the genitive of possession (as in Russian *u Ivana X* [lit. in Ivan<sub>GEN</sub> X] 'Ivan has X'), the same genitive that we find in *o-čistiti* obleko madežev (lit. off-clean dress<sub>ACC</sub> stains<sub>GEN</sub>) 'clean the dress of stains', or the same genitive that we find in the AP poln vode (lit. full water<sub>GEN</sub>) 'full of water', assigned directly by the prepositional prefix na-.

Just like the ambiguity cannot be there in a *na*- example when the second internal argument is in the accusative, as this necessarily means two VPs, it is also not there whenever *na*- is stacked over another prefix, since two resultative prefixes also necessarily mean two VPs. Ambiguity is also not there, of course, whenever there is an adverbial that does not modify the whole 'getting-one's-fill-of-something' but just what one has gotten their fill of, which likewise requires a second VP embedded under the higher resultative structure.

## 5.3 A more general ambiguity of a certain type of *na*-structures?

We have seen that cases like (44) can be ambiguous, allowing either a two-VP or a single-VP parse, even though the general meaning of the two parses is, to some extent, the same, i.e. 'get one's fill of something', 'come to have enough of something', or 'cause oneself to be full/sick of something' (it is only in the nature of the 'something' that they differ, which is an entity/NP in one case and an event/VP in the other). We have also seen *na*- cases which do not show ambiguity. I will now mention some other *na*- examples that can presumably be parsed both ways, and suggest what makes the single-VP reading possible in these cases.

When *na*- occurs directly on the verbal root, there is a second argument in the genitive, and there are no adverbials, etc., the structure can in principle contain either two VPs or a single VP. The two VP option gives us a paraphrase along the lines of 'cause oneself to be "full"/sick of watching movies, come to have enough of watching movies'. The single VP option, on the other hand, gives us a paraphrase such as 'cause oneself to be full of x by V-ing'; consequently, this option is most obvious with cases such as *na-piti se vode* (lit. on-drink self water<sub>GEN</sub>), since 'cause oneself to be full of water by drinking' can be interpreted without any metaphoricity (cf. *drink oneself full of water*). At least on some kind of non-literal interpretation of the resultative prefix, however, this option could in principle be available in other similar examples. For instance, (5d) above, i.e. *na-gledati se filmov* (lit. on-watch self movies<sub>GEN</sub>), could then also be interpreted as 'get oneself (metaphorically) "full" of movies by watching' (i.e. one would 'get their fill of movies by watching'). Unless there is an adverbial that prevents a single-VP parse, such sentences, in which *na*- occurs directly on the verbal root and in which there is a second argument in the genitive, can perhaps always be parsed with a single VP as well.

Secondly, it seems plausible that whenever *na*- is found directly on the verbal root, and the construction contains neither a second argument nor an adverbial that can modify the whole 'getting-one's-fill-of-something', then such *na*- constructions could in principle also be parsed either with two VPs or a single VP. Examples of such cases are *na-laufati se* (lit. on-run self) 'get one's fill of running', *na-čitati se* (lit. on-read self) 'get one's fill of chatting' from (5b) above. Now, how to find the two-VP parse for these cases is clear, so let me say a few words about how such cases could have a single-VP parse.

The question is how *na-laufati se* (lit. on-run self) could be assigned a simple structure with a resultative prefix, i.e. [V *laufati* [RP/SC *se na-*]], and still have the interpretation 'get one's fill of running', i.e. an interpretation that basically matches the interpretation of the two-VP parse. In fact, there is probably more than one way of deriving this, but all methods rely on the fact that *na-* was said to be a transitive prefix, and so the structure would actually be [V *laufati* [RP/SC *se* [na-x]]]. Now, the x in this structure could be several things. Firstly, it could be a null nominal variable ( $e_N$ ) coindexed with  $V^0$ . Secondly, it could be a null nominal 'run', in the spirit of cognate objects (although, of course, we would be dealing with the complement of the prefix and not of the verb, so this would not be a case of real a cognate object). And thirdly, it could be a contextually-defined

null nominal variable (e<sub>N</sub>), in the spirit of Arsenijević (2006, 2007). Since one's state of being tired of some contextually relevant thing would have been brought about by one's running, it does not seem unreasonable to think that the variable would get interpreted as 'running'. Similarly, if one gets tired of running, it seems that it is necessarily the case that the result was a consequence of the person's running. All three options would presumably get us a paraphrase along the lines of 'get one's fill of running by running' (and in a sense, they may well be just notational variants of each other), so this is how a single-VP structure could give the same result as a two-VP structure—as long as the sentence contains no adverbials, etc., that would preclude a single-VP parse.

Thus, we have seen how one could derive a single-VP structure for singly-prefixed cases such as *na-gledati* se filmov (lit. on-watch self movies<sub>GEN</sub>) or *na-laufati* se (lit. on-run self) with a roughly comparable interpretation that a two-VP structure will yield. One could presumably 'get oneself (metaphorically) "full" of movies by watching', and 'get one's fill of running by running'. But a single-VP parse of such examples is possible only if there are, say, no adverbials to preclude it. In the next section, I will offer some data that may support the claim that examples such as *na-laufati* se (lit. on-run self) 'get one's fill of running' and *na-čitati* se (lit. on-read self) 'get one's fill of reading' can indeed also get a single-VP parse.

## 5.4 *Na-* in passive participles

Sometimes, the reflexive-introducing *na*- can be found on passive participle forms. The derivation of such forms is not fully productive, but is attested in dictionaries and on the internet, (47a)-(47b), and novel examples can be constructed, (47c)-(47d).

- (47) a. na-čitan b. na-span on-read<sub>PASS,PTCP</sub> on-slept<sub>PASS,PTCP</sub> on-slept<sub>PASS,PTCP</sub> 'well-read (i.e. who has read extensively)' 'who has had enough sleep (cf. well-rested)'
  - c. Tone je na-pit vode.

    Tone is on-read<sub>PASS,PTCP</sub> water<sub>GEN</sub>

    'Tone has drunk himself full of water.'
  - d. [after a week of running/skiing] *Tone je čist na-laufan / na-smučan*.

    Tone is totally on-run<sub>PASS,PTCP</sub>/ on-ski<sub>PASS,PTCP</sub>

    'Tone has run/skied himself totally full. / T. has run/skied to his heart's content.'

But interestingly, while *na-čitati se* (lit. on-read self) can have two readings, or rather, can certainly have the two-VP parse, the participle *na-čitan* only has one, or rather, only has the single-VP parse: it can only mean something like 'one who has read themselves full' but not 'one who has come to have enough of reading'. The same holds for (47c)-(47d); (47c), for example, cannot mean 'one who has come to have enough of drinking water', but only 'one who has drunk themselves full of water'. Furthermore, sentences such as in (48) are just not possible.

- (48) a. \*Tone je čist na-laufan po uradih.

  Tone is totally on-run<sub>PASS,PTCP</sub> around offices
  - b. \*Tone je čist na-lupljen (krompirja). Tone is totally on-peel $_{PASS,PTCP}$  potatoes $_{GEN}$

In other words, with the ambiguous *na-piti se vode* (lit. on-drink self water<sub>GEN</sub>), the participle can only have one reading, namely, the reading where 'water' is the complement of *na-* but not the reading where 'water' is an argument of 'drink'. Similarly, with the ambiguous *na-čitati se* (lit. on-read self) and *na-laufati se* (lit. on-run self), the participle only has the reading 'read oneself full' and 'run oneself exhausted' but not the other readings.

<sup>&</sup>lt;sup>19</sup> Arsenijević (2007) sees the complement of a spatial prefix such as *pri*- in *pri-laufati* (lit. at-run) 'arrive running' as a variable interpreted as a contextually relevant location.

In the case of *na-laufati se* (lit. on-run self), this is shown by the fact that (48a), which differs from (47d) only in the presence of the adverbial 'around offices', is out; that is, the reading 'make oneself sick of running around offices' is not possible, and in the presence of the adverbial, the other reading of *na-laufati se* (lit. on-run self) is not available because the second VP is needed to host the adverbial. Similarly, the passive participle of *na-lupiti se krompirja* (lit. on-peel self potatoes<sub>GEN</sub>) is impossible, so it seems that we can only parse *na-lupiti se krompirja* with a two-VP structure. A single-VP parse of this example could be unavailable on conceptual grounds, i.e. because the idea of someone 'causing themselves to be "full" of potatoes by peeling' is simply too far-fetched, or perhaps also for structural reasons, i.e. because *lupiti* 'to peel' is obligatorily transitive and it can thus only sit in a second VP, as its argument would be blocked by the unselected reflexive if it were part of the main-frame VP.

Now, as *na-čitati se* (lit. on-read self) and *na-laufati se* (lit. on-run self) do form passive participles, as in (47ai) and (47c), this seems to show that we can parse them with a single-VP structure. Therefore, we may have evidence for what we suspected in the previous section, namely, that expressions such as *na-čitati se* (lit. on-read self) 'get one's fill of reading' and *na-laufati se* (lit. on-run self) 'get one's fill of running', when there are no adverbials, etc., to preclude it, can indeed also have a single-VP structure. Since at present I cannot derive this restriction on passive participle formation, it is offered here only as a potential additional piece of evidence for the claim that some *na-* structures can get not only a two-VP parse but also a single-VP parse, and that these are not only those *na-* examples for which a single-VP seems perfectly unsurprising, such as *na-piti se vode* (lit. on-drink self water<sub>GEN</sub>) 'drink oneself full of water'.

Before closing section 5, let me summarize all structural options for our *na*- examples. If *na*- is stacked over another prefix, the structure certainly contains two VPs, since we have two resultative prefixes and therefore two VPs. If *na*- occurs directly on the verbal root and there is a second accusative argument in addition to the reflexive, then the structure certainly contains two VPs. If *na*- occurs directly on the verbal root and there is an adverbial that does not modify the whole 'getting-one's-fill-of-something' but just what one has gotten their fill of, then the structure also surely contains two VPs. But if *na*- occurs directly on the verbal root and there is a second argument in the genitive and there are no adverbials, etc., the structure can in principle contain either two VPs or a single VP. And if *na*- occurs directly on the verbal root and the construction contains no second argument as well as no adverbials, etc., the structure can in principle likewise contain either two VPs or a single VP.<sup>21</sup>

## 6. Conclusion

Perfectivity triggering, two scopes of the secondary imperfective -va-, result-state adverbial and restitutive 'again', two scopes of adverbials, double accusatives, and finally also an interpretational ambiguity with certain na- structures show that our reflexive-introducing na- is best treated as resultative/internal rather than adverbial/external. The data were accounted for by an analysis with two VPs, of which the upper V is phonologically null, and its morphology finds a verbal host for itself in the lower V, which is possible due to the deficiency of the lower clause.

One significant consequence of this paper is that some diagnostics that have been widely used to identify external prefixes, such as non-adjacency to the verb root/the possibility of stacking over an internal prefix, (non-

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<sup>&</sup>lt;sup>20</sup> Given what we just saw with respect to the passive participle in relation to the *na*-construction, it is not surprising that *z-laufati se* 'run oneself exhausted', for which we noted in section 5.1 that it never has two VPs, also allows the formation of the passive participle; again, participle formation is not too regular with these *z*-forms with an unselected reflexive, but *z-laufan* can be found on the internet, as in (i).

<sup>(</sup>i) Pot je dolga 6km, ravno prav strma in zaguljena, v pol ure si prijetno z-laufan. trail is long 6km just right steep and difficult in half hour are nicely on-run

<sup>&#</sup>x27;It's a 6 km trail, with the perfect amount of up and down, and of the perfect difficulty level; in half an hour, you'll have run yourself pleasantly tired.'

<sup>&</sup>lt;sup>21</sup> For the way the two VPs are combined, there might be an alternative to (41). If the interpretation of *na-pre-igravati se Maradone* (lit. on-through-play self Maradona<sub>GEN</sub>) is 'cause oneself to be "full" of Maradona<sub>i</sub> by faking out  $pro_i$ ,', where 'faking out  $pro_i$ ' is realized by pre-igravati (lit. through-play), then the VP of pre-igravati could also be located within the V<sup>0</sup> of the main frame—if a way can be worked out to have a VP in V<sup>0</sup>. Similarly, then, if na-od-frfotavati se (lit. on-away-flutter self) is something like 'to cause oneself to be full OF SOMETHING/OF E<sub>i</sub> by [departing fluttering]<sub>i</sub>', where 'depart fluttering' is realized by the prefixed od-frfotavati (lit. off-flutter), then the VP of od-frfotavati would also be located within the V<sup>0</sup> of the main frame. This may be an alternative to explore, but I will leave it aside here. And we would presumably still need the analysis from (41) for the double-accusative versions of such na- structures, since unlike the genitive, accusative could not be assigned by the prefix.

spatial) systematicity of the meaning contribution of a prefix, impossibility of occurring on root nominalizations and resistance to secondary imperfectivization, do not reliably identify external prefixes, even when they all point in the same direction. At the same time, though, I did not try to make any claims about what it is, then, that makes a prefix have these characteristics. Some may be derivable from the syntactic structure, and some, such as resistance to secondary imperfectivization, are most probably not and may be linked with phonology, processing, semantics/pragmatics, etc. Moreover, the findings reveal that the claim that there can be only one internal prefix per verb is only correct if interpreted as a restriction to one such prefix per V<sup>0</sup> but not necessarily per overt verbal stem.

Finally, by independently motivating a two-VP structure for some *na*- structures, we have offered indirect support for the general idea of two-VP internal-prefix accounts of some other prefixes that may appear to be external (see Žaucer 2005b, 2008, Arsenijević 2006, 2007). Future work will address the question of which other prefixes that have been analyzed as external might yield to a double-VP analysis.

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